2018 Report of the Species Survival Commission and the Global Species and Key Biodiversity Area Programme

ISSUE 59
2018 Report
of the Species Survival Commission
and the Global Species and
Key Biodiversity Area Programme
Coordination, compilation and proofreading
Jafet M. Nassar and Orlando Salamanca.
Special thanks to: Simeon Bezeng, Rob Bullock, Nahomy De Andrade, Olivier Hasinger, Rachel Hoffmann, Kira Mileham, Dao Nguyen, Domitilla Raimondo, Mayerlin Ramos, Aritzaitz Rodríguez, Jon Paul Rodríguez, Bibiana Sucre and Edgard Yerena, for their assistance contacting the SSC groups’ chairs. Rebecca Miller proofread the SSC groups’ reports.

Graphic design
Aixa Díaz

Cover
Overwintering cluster of monarch butterflies (Danaus plexippus) in California, US. © Xerces Society / Carly Voight.
Dedicated to the memory of Homero Gómez González and Raúl Hernández Romero, monarch butterfly activists assassinated in early 2020. Both men worked protecting the winter habitat of this butterfly in Mexico.

Insets
Propagules of Aegiceras floridum, Near Threatened © John Yong (page 2)
Male Great Hornbill (Buceros bicornis), Vulnerable © Aparajita Datta (page 2)
Female and kid of Southern Chamois (Rupicapra pyrenaica), Least Concern © Javier Ara (page 3)
Prehensile Green Tree Skink (Prasinohaema prehensicauda), Least Concern © Fred Kraus (page 3)

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IUCN Species Survival Commission (SSC)
SSC Chair’s Report

Our network of nearly 9,000 volunteer experts lives in more than 160 countries, occupying the majority of ecosystems on Earth’s surface. We have the privilege to count with top species scientists, practitioners and enthusiasts, who generously contribute their time and expertise to the Commission. A back-of-the-envelope estimate of their work places it at 120,000 person/days annually, valued at 61 million US dollars per year. IUCN is deeply grateful to the dedication of SSC Members, responsible for the creation of the knowledge that underpins the *IUCN Red List of Threatened Species*, the development of systematic plans to reverse biodiversity decline, and supporting evidence-based conservation action around the world.

The core content of this report are the individual accounts of SSC groups, which start on page 48. Prior to that, we summarize the work of the SSC Chair’s Office, follow it with an analysis of the activities of SSC groups derived from SSC DATA, and close these introductory sections with the annual report of the Global Species and Key Biodiversity Area Programme.

SSC Chair’s Office team

Our team nearly doubled in 2018, expanding to 18 members in seven countries. Part of the growth was to fill three key positions identified in 2017: network coordinator, partnerships and grants officer, and communications officer. Additionally, five new professionals joined as Red List officers and as SSC Sumatran Rhino Coordinator. We benefitted from very generous and productive partnerships with The Deep, Georgia Aquarium, Oceanário de Lisboa, and Albuquerque BioPark, allowing us to contribute to thousands of species assessments for the *IUCN Red List of Threatened Species* (see page 11). Sumatran Rhino Rescue (page 12), our alliance with Global Wildlife Conservation, International Rhino Foundation, National Geographic Society and WWF, continues to move swiftly forward.

Jon Paul Rodríguez, Chair

He holds a degree in biology from Universidad Central de Venezuela, and a Ph.D. in ecology and evolutionary biology from Princeton University. As Chair, he guides the activities of the Commission, assuring that SSC effectively delivers its strategic plan, and that the Commission works closely with our partners, the other IUCN Commissions, the Union’s members, its national and regional committees, and the Secretariat.
Domitilla Raimondo, Deputy Chair
She holds a Master’s degree in conservation biology from the University of Cape Town, South Africa. She plays a lead role in catalysing national red listing. In addition to her extensive support to particular red list assessment projects, Domitilla, focuses on developing the IUCN Red List as a reliable tool for the private and public sector. As a botanist, she works hard within the IUCN so plants are well represented on the red list. She is dedicated to ensuring that species information feeds into land-use decision making.

Rachel Hoffmann, Director of Oversight and Conservation Outcomes
Zoology graduate from Nottingham University, with a Master’s by research in ecology and environmental management, York University. Rachel has over 10 years of experience with the SSC and is the primary focal point for the SSC network. She has a lead role in strengthening the work of the SSC in providing independent scientific advice, focusing on the delivery of conservation action, and developing high quality initiatives to achieve the SSC’s mission.

Kira Mileham, Director of Strategic Partnerships
With degrees in both conservation biology and public relations and journalism, she also has a Ph.D. in human behaviour change all from the University of Newcastle, Australia. Kira is responsible for strategically connecting the SSC to external partners to foster stronger collaboration for improved species conservation. Kira works closely with the zoo, aquarium and botanical garden community in particular.

Bibiana Sucre, Executive Director of the Chair’s Office
Biologist from Universidad Simón Bolívar, with additional courses in ecology, and a Master’s degree in public management from Instituto de Estudios Superiores de Administración. Bibiana has a leading role in managing the activities of the Chair’s Office in Caracas, supporting, guiding and facilitating the activities of the team

Anwar Purwoto, Sumatran Rhino Coordinator
Anwar is a forestry engineer in forest management from Bogor Agriculture University, with a Master’s of science in environmental management from Griffith University. The Sumatran Rhino Coordinator is SSC’s representative in Indonesia regarding the Sumatran Rhino Recovery Project. He coordinates project implementation partners, secures project permissions, oversees the implementation of project activities together with his government counterpart, and works closely with the Project Steering Committee.

Edgard Yerena, Network Coordinator
Edgard is a biologist from Universidad Simón Bolívar, with a Master’s in ecology from the same university, and a law degree from Universidad Central de Venezuela. Edgard has been a long time member of SSC Bear Specialist Group, focused on biodiversity conservation policy and planning. As Network Coordinator, he supports the management of SSC Conservation Committees, Specialist Groups, Red List Authorities and Task Forces, particularly for the delivery of the IUCN Species Strategic Plan 2017-2020, appointment of roles, creation of new groups, and integration with other components of IUCN, as well as channeling enquiries and requests.
Rob Bullock, Red List Partnership Coordinator
Having completed a degree in marine and freshwater biology at Hull University, Rob went onto study for a Ph.D. whilst conducting conservation research at Bimini Shark lab in the Bahamas. Employed by The Deep in partnership with SSC, Rob is involved in the establishment, training and support of partnerships with zoos and aquaria to advance the Red List. Rob also works with the IUCN’s Marine Biodiversity Unit to carry out Red List assessments of marine species.

Orlando Salamanca, Strategy and Operations Manager
He holds an undergraduate degree in international relations from Universidad Central de Venezuela, a Master’s degree in public management and a Master’s degree in finance, both from Instituto de Estudios Superiores de Administración. Passionate about implementation, Orlando has a lead role supporting planning and follow-up, identifying areas for improvement, and addressing the biggest operational challenges in order to stay focused on the most impactful elements.

Jafet M. Nassar, SSC & GSP Annual Report Coordinator
Biologist from Universidad Central de Venezuela, with a Ph.D. in tropical biology from University of Miami. Jafet is in charge of coordinating, compiling, and preparing the Species Annual Report, through integration between IUCN’s Global Species Programme and the SSC.

Simeon Bezeng, Regional Red List Programme Officer
He holds a degree in botany and environmental sciences from the University of Buea, Cameroon, followed by Masters and Ph.D. degrees in botany from the University of Johannesburg, South Africa. Based at BirdLife South Africa, Bezeng has key responsibilities in the promotion of Red Listing of species, ecosystems and the identification of KBAs in three African Countries, as well as to support the Red List Committee and the National Red List Working Group Alliance more generally.

Nahomy De Andrade, Partnerships and Grants Officer
Nahomy is an economist from Universidad Central de Venezuela with a Master’s degree in public management from Instituto de Estudios Superiores de Administración, and additional courses in leadership and coaching. She is responsible for overseeing the ongoing management and operation of partnerships and conservation grants programs, ensuring projects are implemented and managed according to best practices, in order to produce high standard outcomes in a timely manner.

Mayerlin Ramos, Administrative Officer
Mayerlin is a lawyer graduated from Universidad Metropolitana with a Master’s degree in public management from Instituto de Estudios Superiores de Administración and additional courses in leadership and social projects development. She is in charge of administration, supports, guides and facilitates activities of SSC staff by accomplishing results.

Aritzaith Rodríguez, Communications Officer
Aritzaith is a journalist graduated from Universidad Católica Andrés Bello with postgraduate studies in corporative communication from Universidad Monteávila, and
additional courses in marketing. As the IUCN Species Survival Commission’s Communication Officer, she is in charge of developing and implementing communications strategies and products for SSC, in close collaboration with IUCN’s Global Species Programme and Global Communications Unit.

**Katelyn Herman**, Red List Officer, Chondrichthyans
Katelyn’s background is in marine conservation and policy, the field in which she earned her M.A. She is a Research Project Coordinator for the Research and Conservation Department at the Georgia Aquarium, and has worked in collaboration with the SSC since 2017. Katelyn works with the SSC Shark Specialist Group as part of the Global Shark Trends project.

**Catarina Fonseca**, Red List Officer, Marine
Catarina is the Marine Red List Officer at Oceanário de Lisboa in Portugal, where she works as part of the SSC Red List Partnerships team. She started her career focusing on cetacean ecology and moving to marine conservation after obtaining an MSc in conservation science from Imperial College London. Catarina is working on the assessment of species held in aquarium collections to improve conservation actions for these species, as well as working with IUCN’s Marine Biodiversity Unit on the Global Marine Species Assessment project.

**Tim Lyons**, Red List Officer, Freshwater Fishes
Tim has a M.S. in fisheries and aquatic sciences from the University of Florida’s Tropical Aquaculture Laboratory, where he focused on tropical invasion ecology. He is a full-time staff member at the New Mexico BioPark Society, working in collaboration with the SSC Freshwater Fish Specialist Group and the IUCN Global Programme Freshwater Biodiversity Unit on priority Red List assessment projects for freshwater fishes.

**Clayton Meredith**, Red List Officer, Medicinal Plants
Clay’s background is in human behavioural ecology and archaeology, in which he holds a master’s degree. Clay is a full-time staff member at the New Mexico BioPark Society working in collaboration with the chair of the SSC Medicinal Plants Specialist Group. Current projects in this area include Red List assessment of economically important North American medicinal plants, and imperilled species from the US Southwest, Appalachia, the Great Lakes region, and the Vancouverian Floristic Province.
**SSC Steering Committee**

The **SSC Steering Committee** is composed of 28 people, 11 women and 17 men. At least two members reside in each of the eight IUCN Statutory Regions. Institutional observers, plus representatives from the Secretariat, bring the total number of participants to 38.

<table>
<thead>
<tr>
<th>Chair and Deputy Chair</th>
<th>Country</th>
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<tbody>
<tr>
<td>Jon Paul Rodríguez</td>
<td>Venezuela</td>
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<td>Domitilla Raimondo</td>
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<tr>
<th>Steering Committee Members</th>
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<tr>
<td>Luigi Boitani, Regional Vice-Chair for West Europe</td>
<td>Italy</td>
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<td>Onnie Byers</td>
<td>US</td>
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<tr>
<td>Claudio Campagna</td>
<td>Argentina</td>
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<td>Topiltzin Contreras MacBeath</td>
<td>Mexico</td>
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<td>Rosie Cooney</td>
<td>Australia</td>
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<tr>
<td>John Donaldson</td>
<td>South Africa</td>
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<tr>
<td>Ehab Eld, Regional Vice-Chair for West Asia</td>
<td>Jordan</td>
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<tr>
<td>Dmitry Geltman, Regional Vice-Chair for East Europe, North and Central Asia</td>
<td>Russian Federation</td>
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<td>Piero Genovesi</td>
<td>Italy</td>
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<td>Brahim Haddane</td>
<td>Morocco</td>
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<td>Ian Harrison</td>
<td>US</td>
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<td>Axel Hochkirch</td>
<td>Germany</td>
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<td>Mike Hoffmann *</td>
<td>United Kingdom</td>
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<td>Jonathan Hutton</td>
<td>Switzerland</td>
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<td>Vololoniaina Jeannoda</td>
<td>Madagascar</td>
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<td>Olga Krever</td>
<td>Russian Federation</td>
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<tr>
<td>Mirza Kusnina, Regional Vice-Chair for South and East Asia</td>
<td>Indonesia</td>
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<tr>
<td>Frédéric Launay</td>
<td>Abu Dhabi, UAE</td>
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<tr>
<td>Gabriela Lichtenstein, Regional Vice-Chair for Meso and South America</td>
<td>Argentina</td>
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<tr>
<td>Vivek Menon</td>
<td>India</td>
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<td>Russell Mittermeier</td>
<td>US</td>
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<td>Gregory Mueller, Regional Vice-Chair for North America and the Caribbean</td>
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<tr>
<td>Nunia Thomas</td>
<td>Fiji</td>
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<tr>
<td>Pricelia Tumenta, Regional Vice-Chair for Africa</td>
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<tr>
<td>Amanda Vincent</td>
<td>Canada</td>
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<td>Yan Xie</td>
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<tr>
<td>BirdLife International</td>
<td>Stuart Butchart</td>
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<tr>
<td>Conservation International</td>
<td>Will Turner</td>
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<tr>
<td>Fondation Franklinia</td>
<td>Jean-Christophe Vié</td>
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<td>Global Wildlife Conservation</td>
<td>Wes Sechrest</td>
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<td>TRAFFIC</td>
<td>Steven Broad</td>
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<td>Wildlife Conservation Society</td>
<td>Elizabeth Bennett</td>
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<tr>
<td>World Association of Zoos and Aquariums</td>
<td>Doug Cress</td>
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<tr>
<td>Zoological Society of London</td>
<td>Mike Hoffmann *</td>
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* Is both a member and an institutional observer
The **SSC Steering Committee met in Bangkok**, Thailand, between 15 and 19 October 2018. The IUCN Asia Regional Office, who also actively engaged in the meeting, provided major logistical support. Many thanks to Aban Marker Kabraji, and her team, especially Alessandro Badalotti, Scott Perkin, Jake Brunner, and Waraporn Khantasiri. We also welcomed the participation of three additional IUCN Secretariat staff: Ana Nieto, Dao Nguyen and Remco Van Merm,

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**Building partnerships for red listing**

In 2018, we saw substantial growth in the partnership model created a couple of years back to increase species assessments for the IUCN Red List. The SSC Chair’s Office has now formal links with four leading zoos, aquariums and botanic gardens, who are the first of ten proposed IUCN SSC Red List hubs. Each organization commits to employing fulltime staff devoted to working with Specialist Groups. In the future, these assessors will also become trainers focused on schooling and increasing the cadre of partner-based Red List Officers.

It all began in 2016, when The Deep Aquarium employed Rob Bullock to work in collaboration with the IUCN Marine Biodiversity Unit. Within his first year, Rob helped assess over 600 species and supported the facilitation of three red listing expert workshops. His role evolved to help SSC grow, train and mentor similar partnerships with other zoo and aquarium staff around the world.
The Georgia Aquarium joined the initiative in 2017 by allocating time of their staff member, Katelyn Herman, to work with the SSC Shark Specialist Group. She supports the priorities laid out by the Global Shark Trends project, which aims to assess all species by 2020.

In July 2018, Oceanário de Lisboa appointed Catarina Fonseca to work with the Marine Biodiversity Unit, with an initial focus on species held in aquariums across Europe. At about the same time, Albuquerque BioPark, employed two full-time Red List Officers, Tim Lyons, working with the IUCN Freshwater Biodiversity Unit, and Clayton Meredith, supporting the SSC Medicinal Plant Specialist Group. BioPark’s plan is to increase this partnership to three Red List Officers.

Our goal is that once ten hubs are in place, they will help contribute around 5,000 species assessments for the Red List per year. This would support the ambitious “Barometer of Life” target that IUCN set of reaching 160,000 species assessed by 2020, and to improve the sustainability of the Red List well beyond this.

Our motivation is to better connect the expertise and conservation efforts of leading zoos, aquariums and botanic gardens, with those of the SSC network. While the partnerships have initiated with red listing as their focus, they will evolve into working collaboratively on planning and implementing priority conservation actions, ultimately increasing our collective ability to save species.

**Sumatran Rhino Rescue:**

**convening for emergency species conservation**

The **Sumatran Rhino** (*Dicerorhinus sumatrensis*) is a species in urgent need for coordinated action. It is the smallest of all rhinos, and is the most endangered land mammal on the planet. With an estimated 80 individuals left, rhino experts from around the world and officials of the Government of Indonesia have reached a consensus that the only way to bring the Sumatran Rhino back from the brink is to relocate the widely dispersed wild populations to managed conservation breeding facilities designed specifically for their care.

With the objective to support the Government of Indonesia’s national Sumatran Rhino conservation breeding program, SSC worked throughout 2018 in helping establish an ambitious new partnership called **Sumatran Rhino Survival Alliance (SRSA)**.

SRSA is a coalition of stakeholders across the Government of Indonesia, local and international implementing agencies and founding partners, Global Wildlife Conservation, International Rhino Foundation, National Geographic Society, Species Survival Commission and World Wildlife Fund.

The Alliance aims to provide fundraising, coordination and communication support to the project **Sumatran Rhino Rescue** launched on September 20, in advance of World Rhino Day. This project includes a three-year collaborative fundraising target of approximately US$ 30 million, with each founding Alliance partner (excluding SSC) committing a minimum of US $1 million each.

The work will begin with a multi-year emergency plan to secure the remaining rhinos and develop the infrastructure to care for and grow their population. The plan builds on decades of scientific research and proven successes in captive breeding.
programs. Experts from these efforts as well as breeding specialists around the world are engaged in this initiative and are ready to lend a hand.

SRSA will help the Government of Indonesia save the species from extinction. By working hand-in-hand with Indonesia’s top environment officials, the Alliance strives to ensure the long-term viability and success of our effort. Through this innovative partnership, SSC convenes scientists, conservationists, and government to facilitate both rapid progresses to relocate rhinos in the near-term and sustained stewardship of future generations of rhinos over the long-term.

Specifically, SRSA will focus on three key areas:

- Relocate as many rhinos as possible from isolated populations across Sumatra and Indonesian Borneo and move them to managed conservation breeding facilities.
- Establish two new Sumatran Rhino Sanctuaries in Indonesia, one in Indonesian Borneo and the other in northern Sumatra, and expand the existing facility in Way Kambas National Park.
- Manage a single conservation breeding program for Sumatran rhinos in Indonesia, designed to maximize the population growth rate.

The efforts to save this species are not guaranteed and throughout the rescue process, the team and the rhinos face numerous risks. Nevertheless, it is time to act — and to do so as one united conservation community.

From SSC, our hope is that this model will not only secure the future for Sumatran rhino but also pave the way for similar united emergency efforts to recover other species on the brink.

### Recovery of Species on the Brink of Extinction

This was the first year of an exciting and generous partnership between National Geographic Society (NGS) and SSC. Recovery of Species on the Brink of Extinction is a grant opportunity that supports reversing the declining trend of species through the implementation of SSC Species Conservation Action Plans.

The first year’s balance was encouraging. US$ 1,378,506 supported 40 conservation projects, selected among 285 proposals received. Primates, amphibians, vultures, bats, crocodiles, birds, and freshwater fishes, are just some of the taxa covered by the different award-winning projects.

#### Figure 1

Proposals received (blue), pre-selected (yellow), winning (green) and success rates per taxonomic group, during the first three rounds of Species Recovery in 2018.
Projects benefitted more than 26 species and covered a large taxonomic diversity (Fig. 1). Fungi and lichens were unrepresented, as no proposals were received. In terms of the project leaders, we saw more males than females, and a larger proportion of SSC members than non-members (Fig. 2). The majority of winning proposals were located in the Americas (47%), followed by Asia, Africa and Europe almost in the same proportion (~18%).

Towards the end of 2018, SSC and NGS co-organized two webinars to provide advice and answer questions from potential applicants. The response was positive, with more than 110 participants. We developed a frequently asked questions file, available here. Stay tuned to our Facebook page for more information and future requests for proposals.

**Figure 2**
Grant winners by gender, SSC membership and region, during the first three rounds of the Species Recovery in 2018.

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Female</th>
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<tr>
<td>SSC Members</td>
<td>43%</td>
<td>18%</td>
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<tr>
<td>Non-Members</td>
<td>65%</td>
<td>47%</td>
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<tr>
<td>Africa</td>
<td>17%</td>
<td>47%</td>
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<tr>
<td>America</td>
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<tr>
<td>Asia</td>
<td>18%</td>
<td>18%</td>
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<tr>
<td>Europe</td>
<td>57%</td>
<td>18%</td>
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**SSC Quarterly Report**

SSC Quarterly Reports aim to provide timely advances of the work of the Chair’s Office and the Commission in general to SSC Members, partner organizations, colleagues at the Secretariat, the SSC Steering Committee, and the world outside IUCN. We welcome articles from the network and beyond, and are especially interested in thought-provoking pieces that raise controversial issues or spark a discussion. Please do reach out to us if there is a topic that you would like to cover or a subject that you believe we should address.

Ultimately, these reports facilitate communication and exchange within the SSC network and IUCN. For additional details on the activities of SSC and our partners, please visit the [SSC Quarterly Reports archive](#).
High Level Interventions

High-level interventions address conservation issues of serious concern, through letters to governments or companies, which highlight species and habitats under threat, and propose actions on their behalf. Each letter provides the necessary background and technical information, following a thorough review process that engages with SSC groups, experts across the network, and the IUCN regional offices and programmes.

Increasing pressure on the Critically Endangered Pehuenche Spiny-chest Frog (*Alsodes pehuenche*). On 19 February 2018, Jon Paul Rodríguez, Ana Di Pangracio (Executive Director of Fundación Ambiente y Recursos Naturales, and Chair of Argentinian National Committee and South American Regional Committee of IUCN) and Ariadne Angulo (Co-Chair, IUCN SSC Amphibian Specialist Group and Interim Executive Director, Amphibian Survival Alliance), sent a letter to Humberto Mingorance (Environment Secretary of Mendoza Province) and Mabel Chambouleyron (Director of Renewable Natural Resources of Mendoza Province), to call their attention to increasing pressure on the less than 9 km² that make up the geographical distribution of the Pehuenche Spiny-chest Frog, located in Argentina, very close to the border with Chile. During the last few years, creek beds were modified by road building, and habitat has been altered due to trampling by cattle and solid waste deposition from annual bi-national gatherings that take place there. Population has declined by 40% from 500 individuals estimated in 2008. The letter recommended: (1) build wildlife tunnels to facilitate movement of frogs and other animals under the road, (2) modify the winter road salt collectors to avoid pollution of frog habitat, (3) return flow to creeks whose flow has been diverted, (4) exclude cattle, and (5) periodically collect all solid waste, especially after bi-national gatherings.

Inclusion of the Atewa Forest at Kyebi in current plans to develop an integrated bauxite industry in Ghana. On 30 April 2018, Inger Andersen (IUCN Director General) and Jon Paul Rodríguez, sent a letter to His Excellency Nana Addo Dankwa Akufo Addo, President of the Republic of Ghana, to express their concern for the loss of a natural asset of enormous national importance and great global significance that could result from the development of bauxite in the Atewa Forest at Kyebi. Atewa was designated by the Ghanan government as a Globally Significant Biodiversity Area, and it is now also recognized internationally as a Key Biodiversity Area, as it is home to many thousands of species of which over 100 are at some risk of global extinction. Among them are the Endangered White-naped Mangabey (*Cercocebus lunulatus*), a primate whose global range is almost entirely within Ghana; the Critically Endangered (CR) Togo Slippery Frog (*Conraua derooi*), found only in Atewa Forest and in the Togo-Volta hills; and the plant *Aubregrinia taiensis* (CR). Two species of butterfly, *Mylothris atewa* and *Anthene helpsi*, a frog *Phrynobatrachus afabirago* and a plant *Monanthotaxis atewensis* live in Atewa Forest and nowhere else in the world (and are very likely to be CR due to their severely limited geographical range). Recent work undertaken by IUCN members in Ghana has reinforced the significance of Atewa Forest for the livelihoods and welfare of many millions of Ghanaians living downstream of the forest, which is vi-
tal for providing water to the citizens of Accra. Analysis of a range of development scenarios has shown that effective protection of the forest yields the greatest economic value over a 30-year period – an estimated US$ 1,157 million – to local communities, downstream residents and the national treasury when compared to scenarios that include mining. These benefits would be severely compromised if bauxite were exploited in Atewa Forest. The letter respectfully requests the government to consider extending the current level of protection in perpetuity, for the benefit of all Ghana, by upgrading the forest to a National Park.

Proposed guanaco (**Lama guanicoe**) commercial harvest in Santa Cruz Province, Argentina. On 14 May 2018, Ana Di Pangracio (Executive Director of Fundación Ambiente y Recursos Naturales, and Chair of Argentinian National Committee and South American Regional Committee of IUCN), Jon Paul Rodríguez, Benito A. González (Chair, South American Camelids Specialist Group) and Javier Pereira (President, Argentinian Society for the Study of Mammals), sent a letter to Rabino Sergio Bergman (Minister of the Environment and Sustainable Development), Diego Moreno (Secretary of Environmental Policy for Natural Resources), Carlos Merenson (National Biodiversity Director), Guillermo Bernaudo (Ministry of Agroindustry), Mariano Mayer (Ministry of Production), Jorge Aguado and Fernando Javier Ocampo (Ministry of Science, Technology and Productive Innovation), Carlos Ospital (National Council for Scientific and Technical Investigations), Nicolás Quintana (Jefatura de Gabinete de Ministros), Mariano Ortega (National Institute of Industrial Technology), Gustavo Adolfo Soto Kruse and Anabel Soulès (National Service of Health and Agricultural Product Quality), and Javier de Urquiza (Agrarian Council of Santa Cruz), to express their concern for news of expansion of a commercial harvest of guanacos to initiate within the next few days. The proposal was to increase the harvest from 200 authorized exceptionally in October 2017, to 6,000 in 2018. Historically, guanacos have declined by more than 90% in population size and 70% in geographical distribution. The letter called for better documentation and monitoring of guanaco abundance, clear and transparent traceability rules for guanaco products, engagement with all stakeholders, better understanding of the interaction between sheep farming and guanaco wild populations, and explicit agreement between the different provinces where guanacos live under different conditions and use policies.

Proposed Koukoutamba Hydroelectric Project and its impacts on the Critically Endangered Chimpanzees of Guinea. On 6 July 2018, Inger Andersen (IUCN Director General) and Jon Paul Rodríguez, sent letters to H. E. Mr Alpha Condé, President of the Republic of Guinea, H.E. Hamed Diane Semega, High Commissioner, Immeuble OMVS (the Senegal River Basin Organization), and Dr Jim Yong Kim, President, World Bank Group, to express their concern about the proposed Koukoutamba Dam Hydroelectric Project and its impact on the Critically Endangered chimpanzees of Guinea. The SSC Primate Specialist Group evaluated the project and concluded that it could result in the death of up to 1,500 chimpanzees, a species listed as Endangered on the *IUCN Red List of Threatened Species*. The dam is situated in a high density area of chimpanzees in the middle of the recently created Moyen Bafing National Park. This one project would be the single most devastating development
project ever in terms of impact on great apes. The letters respectfully requested that the Government of Guinea works with OMVS and the World Bank to revise the feasibility studies, and in identifying a new site for the dam so that power generation and development can be pursued without having these catastrophic impacts on the environment that sustains both people and chimpanzees.

Cull of the Mauritius Fruit Bats (*Pteropus niger*). On 25 October 2018, Jane Smart (Global Director Biodiversity Conservation Group) and Jon Paul Rodríguez, sent a letter to the Ministry of Agro-Industry and Food of Mauritius, regarding the third proposed cull of Mauritius Fruit Bats. Since 2015, IUCN has written to the Mauritius Government to express concern about the culls implemented in response to the damage bats cause to commercial and backyard fruit crops across the island. The letter acknowledged the positive steps that have recently been taken by the Government to seek resolutions to mitigate crop-damage by the bats, while also highlighting the ongoing engagement of SSC representatives from the Human-Wildlife Conflict Task Force (HWCTF) and Bat Specialist Group (BSG) who have been providing expertise and advice where needed. However, IUCN wished to highlight that the culls of 2015 and 2016 led to a reassessment of the bat’s Red List status and, based on the available evidence, the threat status increased from Vulnerable to Endangered. IUCN is increasingly concerned about the cull of Mauritius Fruit Bats as a lethal method of control on a species whose risk of extinction has recently increased. Following the letter, the Government proceeded to implement its third cull, so it was agreed that a statement would be written to clarify SSC’s position on the issue, which could also be used to raise awareness with the media. The document, available [here](#), was carefully crafted with inputs from the Mauritian Wildlife Foundation, BSG and HWCTF.

Proposed exploration for hydrocarbons on the coastal plain of the Arctic National Wildlife Refuge in Alaska. On 6 December 2018, a letter was sent to Ryan Zinke, Secretary of the U.S. Department of the Interior, jointly signed by Inger Andersen (IUCN’s Director General) and Jon Paul Rodríguez, to express concern about the proposed exploration for hydrocarbons on the coastal plain of the Arctic National Wildlife Refuge in Alaska. The Polar Bear Specialist Group (PBSG) raised this urgent issue because this proposed activity will compromise the already threatened population of polar bears in the Southern Beaufort Sea. The letter was drafted with the expertise of the PBSG and finalized following a thorough consultation with its members. It urged a reconsideration of the survey since the proposed seismic testing to go forward in this area would be inconsistent with the polar bear’s threatened status and with agreed recovery objectives.

**Guidelines, standards and action plans**

SSC continues to build the scientific foundations for evidence-based species conservation through various types of publications. Many more SSC outputs are described in the individual reports of SSC groups (starting on page 48). There is a selection of publications, however, that I would like to highlight here, as they represent key contributions from SSC to the global conservation community and seek to catalyse conservation action.
Also available in Spanish and French, the SSC Invasive Species Specialist Group led the publication of the Guidelines for invasive species planning and management on islands. ‘Invasive species’ (often called pests, weeds and diseases) are plants, animals, disease agents and other organisms taken beyond their natural range by people, deliberately or unintentionally, and which become destructive to the environment or human livelihoods. Islands are particularly vulnerable to invasive species, owing to the evolution of their native animals and plants in isolation from predators and diseases, and the dependence of island peoples on imports, travel and tourism, which lead to high rates of arrival of new pests. These Guidelines assist anyone planning and programming the management of invasive species on islands, with the aim of reducing the negative impacts on islands’ rich and fragile natural heritage, communities and livelihoods.

Edited by Pritpal Soorae of the SSC Reintroduction Specialist Group and Environment Agency-Abu Dhabi, Global Reintroduction Perspectives 2018 is the sixth release of a series that continues to document reintroductions around the world. This latest volume provides 59 case studies of invertebrates, fishes, amphibians, reptiles, birds, mammals and plants.

Published by the Singapore Pangolin Working Group, which includes the SSC Pangolin Specialist Group, Conservation Planning Specialist Group and Asian Species Action Partnership, the Sunda Pangolin (Manis javanica) National Conservation Strategy and Action Plan, proposes five goals to operationalize conservation action for this Critically Endangered Asian species.

Edited by David Mallon of the SSC Antelope Specialist Group and Violeta Barrios of the IUCN Mediterranean Office in Málaga, in 2018, Conservation strategy and action plan for Cuvier’s gazelle (Gazella cuvieri) in North Africa 2017-2026 was published in English and French. This species is endemic to North Africa, with its distribution restricted to Morocco, Algeria and Tunisia. The aim of this strategy is to ensure that by 2050 there are viable, connected populations of Cuvier’s gazelle, occupying natural habitats in an area close to its historic range.

Led by the SSC Hornbill Specialist Group in collaboration with numerous stakeholders, including the Asian Species Action Partnership and the Conservation Planning Specialist Group, Helmeted Hornbill (Rhinoplax vigil): Status Review, Range-wide Conservation Strategy and Action Plan (2018-2027) was published in 2018. The helmeted hornbill faces a conservation crisis that requires an urgent response. This action plan brought together a multistakeholder group consisting of government agencies, non-government organisations, academia, field experts, donors and a zoological organization.

Edited by Nicole Duplaix and Melissa Savage, The Global Otter Conservation Strategy, focusses on the 13 species of otters worldwide. An overall conservation vision sets the stage, followed by detailed accounts on the status and threats of each species. Fantastic photographs complement the authoritative text, contributed by Otter Specialist Group members.
Securing additional funding to support the activities of the SSC

Fiscal sponsorship of SSC

As SSC does not have formal fiscal status, external donations and funds are generously administered by Global Wildlife Conservation (GWC), who provides banking, accounting and contracting services at zero overhead cost to SSC, and contribute to the SSC Chair’s Office (US$ 50,000). We are very grateful to all, but especially to those that we interact with regularly and are clearly part our team: Wes Sechrest, Russ Mittermeier, Don Church, Barney Long, Robin Moore, Penny Langhammer, Jennifer Luedtke, Alex Quintero, Reagan Steppe, Tinisha Hancock and Jessica Argubright.

We look forward to continuing working together on saving species!

Funding of the SSC Chairs’ Office

Most of the funding that supports the SSC Chair’s Office is provided by external donors. In addition to GWC, mentioned above, and EAD, mentioned below, in 2018, the following organizations contributed an aggregate of US$ 523,000 to SSC: Al Ain Zoo, Disney’s Animal Kingdom, Chicago Zoological Society, San Diego Zoo Global, Wildlife Reserves Singapore, Environment and Global Change Canada, Woodland Park Zoo, World Association of Zoos and Aquariums (WAZA), Georgian Aquarium, The Deep, Association of Zoos and Aquariums (AZA), Beauval Nature, Columbus Zoo, Copenhagen Zoo, Detroit Zoological Society, European Association of Zoos and Aquaria (EAZA), Jacksonville Zoos and Gardens, Sea World, Saint Louis Zoo, Indianapolis Zoo, Chester Zoo, British and Irish Association of Zoos and Aquariums (BIAZA), ABQ Biopark, Milwaukee County Zoo, Oregon Zoo, Santa Barbara Zoo, Smithsonian National Park, Zoo Leipzig, Honolulu Zoo, and Oklahoma City Zoo.

SSC Commission Operations Fund

The SSC was granted a Commission Operations Fund of CHF 235,000 in 2018, the same amount as in 2017. This was allocated as follows: CHF 65,000 for Chair’s Office travel and representation costs, CHF 50,000 salaries and consultants, CHF 47,000 SSC meetings, CHF 21,000 office and general administration costs, and CHF 9,000.00 for technology and communications (e.g. publication of Species). The remainder was carried over to 2019.

EAD-SSC-GWC Memorandum of Agreement

In October 2017, we had the honor and the privilege to sign a Memorandum of Agreement between the Environment Agency – Abu Dhabi (EAD), the IUCN Species Survival Commission (SSC) and Global Wildlife Conservation (GWC) concerning Support for the office of the Chair of the IUCN Species Survival Commission 2017-2020. This is a significant agreement, that provides CHF 750,000 per year for four years (2017-2020) to be administered by GWC as fiscal sponsor or SSC, distributed as follows: CHF 50,000 per year as partial funding for the office of the Chair of SSC, CHF 400,000 per year as partial funding for the implementation of the 2017-2020 IUCN Species Strategic Plan by SSC, and CHF 300,000 per year to support the contribution of the IUCN Global Species Programme towards the implementation of the 2017-2020 IUCN Species Strategic Plan. We are grateful to all our EAD colleagues for their support, advice and encouragement, but are especially indebted to Razan Khalifa Al Mubarak, Shaikha Al Dhaheri, Hanan Ibrahim Al Abed, Salim Javed and Frederic Launay.
SSC DATA: Second year of successful implementation

Already familiar to all the leaders in our network, the SSC Chair’s Office implemented SSC DATA for the 2017-2020 quadrennium, consisting of an Excel spreadsheet to compile SSC groups’ targets, activities and results, track their dynamics, and identify main needs. With this approach, SSC groups can summarize the relevant information related to past, current and projected activities, as well as outputs and achievements during the current quadrennium. The data provided by each group are used to: (1) generate SSC Annual Reports, (2) describe and monitor the targets proposed for the quadrennium, and (3) identify the support/partnership needs to explore ways and strategies to help address them. With this information, we are able to deliver assertive support, report to our donors and partners, and provide inputs to the IUCN Secretariat, as they compile all the contributions that Commissions, Members and staff make to the IUCN Programme.

After two years implementing SSC DATA, we have gained valuable experience compiling and analysing information provided by SSC groups. Now, we have a three-year database (2016-2018) that allows us and SSC groups to track the progress achieved in pursuing each of their targets for 2017-2020. This database is a key resource, available at the request of anyone interested to generate a broad variety of analyses and reports.

In 2018, we simplified SSC DATA reducing it from nine Excel worksheets to four, thus facilitating data input. Here, we briefly summarize and describe each worksheet and its purpose:
Group information. Contains the general description of the group, including co-chairs, locations/affiliations, Red List Authority coordinator, mission statement, projected overall impact on the species’ conservation status by the end of the 2017-2020 quadrennium, number of members, host organization, social networks, program officer, focal point for ex-situ expertise, focal point for conservation planning, and core partnership needs.

Targets and activities for the quadrennium. Contains the list of specific targets proposed by the group for the 2017-2020 quadrennium, the activities undertaken during 2018 and results or products derived from them. For each target, the chair can report its status (e.g. achieved, on track, behind schedule). Targets link to a component of the Species Conservation Cycle (Table 1), a general activity category, a specific activity category, and the main Key Species Results (KSR, Table 2) derived from the implementation of the target. The KSRs were approved in 2016 by the IUCN General Assembly, during the World Conservation Congress in Honolulu, Hawai‘i. For targets under the ‘Act’ component of the Species Conservation Cycle, groups can indicate the target species. It is also possible to designate the geographic region and location where the activities conducted are having impact. Finally, for each target, the chair can indicate if results obtained helped support actions requested in any 2016 World Conservation Congress Resolutions.

Acknowledgements. In this worksheet the group recognizes individuals, institutions and organizations that significantly contributed to the achievement of the targets proposed during 2018.

Report attachments for 2018. In this worksheet the group identifies all the images available to be used in the report, including image labels, captions and credits.

Table 1
Components of the Species Conservation Cycle

<table>
<thead>
<tr>
<th>Component</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assess</strong></td>
<td>Focus on monitoring species and informing the world about the status and trends of biodiversity, thus providing measures for the health of our biosphere.</td>
</tr>
<tr>
<td><strong>Plan</strong></td>
<td>Aims to enhance collaborative, inclusive, and science-based strategies, including policy change, to ensure the most effective species conservation actions.</td>
</tr>
<tr>
<td><strong>Act</strong></td>
<td>Improve the status of biodiversity, by convening and mobilizing actions involving governments, academia, civil society, and the private sector.</td>
</tr>
<tr>
<td><strong>Network</strong></td>
<td>Enhances and support the SSC network to further significant outcomes across the Species Conservation Cycle.</td>
</tr>
<tr>
<td><strong>Communicate</strong></td>
<td>The effectiveness of IUCN’s species conservation work is enhanced through strategic and targeted communications.</td>
</tr>
<tr>
<td>Key Species Result</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1</td>
<td>IUCN Red List taxonomic and geographic coverage is expanded. Taxonomic coverage of the Red List is expanded so that it better informs biodiversity conservation.</td>
</tr>
<tr>
<td>2</td>
<td>More IUCN Red List Assessments are prepared at national and, where appropriate, at regional scales. The ongoing development of national and regional Red Lists is catalysed.</td>
</tr>
<tr>
<td>3</td>
<td>IUCN Red List Index is widely used as an effective biodiversity indicator. Wide use of the Red List Index (RLI) as an indicator for monitoring trends in the status of different species groups is developed and promoted at multiple geographical scales, from national to global.</td>
</tr>
<tr>
<td>4</td>
<td>The IUCN Red List is a scientifically rigorous tool for conservation. The Red List contains the necessary information to make it a reliable tool for informing biodiversity conservation.</td>
</tr>
<tr>
<td>5</td>
<td>IUCN Red Listing capacity built through expanded training programmes. Capacity developed to ensure that the IUCN Red List Criteria are applied rigorously and consistently to increase further the credibility of the Red List and its implementation at the national level.</td>
</tr>
<tr>
<td>6</td>
<td>The IUCN Red List is underpinned by cutting-edge information management technologies. The information technology infrastructure to support Species Strategic Plan objectives is enhanced.</td>
</tr>
<tr>
<td>7</td>
<td>The IUCN Red List is used effectively to inform policy and action. The IUCN Red List data and information is increasingly used to inform policy and action in private and public sector.</td>
</tr>
<tr>
<td>8</td>
<td>The IUCN Red List is widely communicated and recognised. The Red List is further developed as a global brand, applicable at multiple geographical scales, from national to global.</td>
</tr>
<tr>
<td>9</td>
<td>The IUCN Red List is sufficiently and sustainably financed. Funds are secured to ensure the sustainability of the Red List. Strategic oversight is provided to the IUCN Red List. Strategic oversight for delivering the Red List is provided by Red List Committee.</td>
</tr>
<tr>
<td>10</td>
<td>Measuring Conservation Success. State-of-the-art methods for measuring and categorising the success of conservation are in place.</td>
</tr>
<tr>
<td>11</td>
<td>Population-level Monitoring and Analysis. Monitoring programmes are established for selected species and groups of species.</td>
</tr>
<tr>
<td>12</td>
<td>Invasive Species. Measures to manage invasive species are greatly enhanced through focused efforts involving knowledge, policy and action.</td>
</tr>
<tr>
<td>13</td>
<td>Integrating IUCN Knowledge Products. IUCN’s key biodiversity knowledge products (e.g. Red List and World Database on Protected Areas) are fully integrated to allow interoperability, promote cost-effectiveness and maximize the delivery of information to guide conservation decisions.</td>
</tr>
<tr>
<td>14</td>
<td>IUCN SSC species conservation planning efforts are significantly expanded, especially for priority species. A method for prioritisation of species planning is developed and more conservation action planning is undertaken to halt the loss of biodiversity, and protect and prevent the extinction of threatened species.</td>
</tr>
<tr>
<td>15</td>
<td>IUCN SSC species conservation planning efforts are monitored for impact and effectiveness. Evaluation approaches are developed and implemented to measure, improve and report on the impact and effectiveness of IUCN SSC’s species conservation planning efforts.</td>
</tr>
<tr>
<td>16</td>
<td>Species conservation planning capacity is built through expanded training programmes. Capacity is developed to expand effective species conservation planning efforts throughout the SSC network and beyond, and ensure that these efforts are considered valuable and accessible to all relevant parties.</td>
</tr>
<tr>
<td>17</td>
<td>IUCN SSC provides rigorous guidance for species conservation planning through the continued development and application of cutting-edge, science-based tools and processes. IUCN SSC Species Conservation Planning features best practices using an adaptive, evidence-based approach, with application of tools and processes that contribute to, and are informed by, emerging scientific and technological advances in conservation biology and related fields.</td>
</tr>
<tr>
<td>18</td>
<td>IUCN SSC species conservation planning is sufficiently and sustainably resourced. Funding and human resources are secured to ensure the growth and sustainability of IUCN SSC’s species conservation planning.</td>
</tr>
</tbody>
</table>
The discipline of "Species Conservation Planning" is formally embedded in the SSC’s organisational framework in a way that reflects its increasing importance to the SSC’s work. A Species Conservation Planning structure is put in place, catalysing and guiding the governance and implementation of species conservation planning in the SSC.

IUCN SSC is recognised as a leader in species conservation action planning. IUCN SSC Species Conservation Planning processes are increasingly adopted or built upon, and evidently guide conservation actions and influence policy.

Applying IUCN standard for identification of sites of global biodiversity conservation significance. Biodiversity conservation action is improved through the application of Key Biodiversity Area Standard.

Wildlife Health. Wildlife health monitoring is in place where needed, and advice given on remedial actions required.

Re-introductions. Information and advice service is in place to support species reintroductions.

Conservation Breeding, and links to ex situ community. Advice and facilitation is in place to support ex situ species recovery programmes.

Global and regional policy for biodiversity conservation. Global and regional policy mechanisms are influenced to enhance the effectiveness of biodiversity conservation.

Policy and action at national and cross-boundary levels. Scientific advice from SSC used to drive actions and policies for species and sites are implemented at the national level (linking to NBSAPs and national red lists).

Communicating species conservation. The effectiveness of IUCN’s species conservation work is enhanced through strategic and targeted communications.

Building mutually-beneficial institutional partnerships for SSC Specialist Groups and the wider work of the SSC. Institutional partnerships enable species conservation efforts that are more strategic, sustainable, and integrated.

Fostering conservation on land and in water. Conservation is supported through existing and novel funding mechanisms.

Special initiatives to tackle major conservation crises. Focused attention is brought to resolving major crises in biodiversity conservation.

Analyses and investigations into pressing conservation issues. High profile scientific analyses and investigations that have wide implications are completed and published.

Understanding and communicating sustainable use. Greater common understanding is achieved of the theory and practice of sustainable use of biodiversity, and key linkages to human livelihoods; the importance of species to supporting livelihoods, particularly of the poor, is demonstrated; and innovative, experience-based and adaptive approaches to sustainable use are explored.

Conservation decisions and livelihood impacts. Livelihood impacts of conservation decisions affecting human use of wild resources are analysed and communicated.

Traditional knowledge and species management. Traditional knowledge is integrated with science in approaches to species assessment and management.

Enabling and implementing strategies for sustainable use. Any use of living natural resources is legal and sustainable; sustainable use is recognized as a positive tool for achieving long-term conservation; and the importance of species to supporting the livelihoods of the poor is recognized by key stakeholders, leading to improved governance for people and nature.

Human wildlife interaction (including marine). Livelihoods of people and species conservation are enhanced through improved human-wildlife interactions.

Biodiversity and climate change understanding. Impacts of climate change on species and the response of species to climate change are documented, analysed and their vulnerability is better understood.

Biodiversity and conservation practice under climate change. Approaches for conservation under changing climates are developed, tested and shared.

Biodiversity and climate change policy. Biodiversity considerations are taken into account in public and private sector adaptation and mitigation policies and practices at global and regional levels.

Biodiversity and food production. Biodiversity considerations are introduced into emerging policies in the food production sector (agriculture, fisheries, and aquaculture).

Maintaining genetic diversity of wild relatives of crops and domesticated animals. The long-term supply of food resources is secured through the conservation of wild relatives of crops (CWR) and domesticated animals.

Biodiversity information for public, private and financial sectors increases their commitment to nature conservation. Biodiversity information is contributed to reduce the negative impacts of these sectors’ activities on biodiversity.
Global response to the SSC DATA information gathering process

SSC DATA 2018 was launched in February 2019, and from then until October 2019, SSC groups submitted their information, followed by an exhaustive process of data curation that ended with the creation of each group’s report (page 48). The assembled reports went through an editing and proofreading process to obtain the version for publication. Each single-group report was delivered to the respective group for their use and uploaded to SCC Specialist Group Directory.

During 2018, 161 groups were part of the SSC network: 132 Specialist Groups (91 Animalia, 28 Plantae, 5 Fungi and Lichens, and 8 Disciplinary), 1 Action Partnership, 1 Working Group, 13 Red List Authorities, 8 Task Forces, and 6 Committees. Of these, 146 (90.7%) submitted their SSC DATA files for data analysis and preparation of 2018 reports. Across all these group categories, response to the SSC DATA process was consistently high (Fig. 3).

Figure 3
Completion level of SSC DATA submission per group type (%).

Figure 4
Completion level of SSC DATA submission per zoological category (%).
Within Animalia groups, which comprises the category with the largest number of SSC groups (36 Mammals, 18 Birds, 12 Amphibian and reptiles, 9 Fishes and 16 Invertebrates), all zoological categories responded massively to the data gathering process (Fig. 4).

For the analyses that follow on targets and activities reported by SSC groups, we exclude the six Committees, because they overlap substantially with the activities reported by Specialist Groups, Red List Authorities and Task Forces. The information on the targets, activities and results reported by Committees is in the core section of this document, together with the individual reports of each SSC group.

**SSC groups’ targets for the 2017-2020 quadrennium**

SSC groups reported 1524 targets for the 2017-2020 quadrennium. This is considerably more than the 1032 reported in the 2016-2017 Species Report, because many SSC groups included additional targets during 2018. The allocation of these targets into the five components of the Species Conservation Cycle was not evenly distributed (Fig. 5). Close to 35% of targets link to Assess, which indicates that actions related to Red List assessments, reassessments and Red List Indices dominate the Species Strategic Plan of the current quadrennium. Network and Communicate follow in numerical importance, each one with approximately 19% of all the formulated targets. This underlines the priority that SSC groups give to activities aimed to support the SSC network and to facilitate the strategic communication and global projection of all the actions conducted and results achieved in favour of species conservation. The Plan component closely followed, with 17% of all targets. In last place, we find targets related to Act, with only 9% of all the proposed activities for the quadrennium.

The proportion of targets associated to each component of the Species Conservation Cycle varied depending on the type of group analysed. In the case of taxonomic groups (Animalia, Plantae, and Fungi and Lichens), Assess dominated across all of them (Fig. 6). Network and Communicate had similar relative weights within each taxonomic group, covering together between 30% and 50% of all targets. Plan and Act represented together less than 8% of all targets in Fungi and Lichens. In the case of Plantae and Animalia, those two components added to 28%, however, in plant groups the targets more evenly distributed between Act and Plan than in animal groups, in which targets allocated to Plan doubled those allocated to Act. In Disciplinary groups, targets distributed evenly between Assess, Plan, Act, and Network, which summed 90% of all targets; on the other hand, Act targets were less frequent.
ly formulated (10%). For the only Action Partnership, targets mostly allocated to Plan (42.9%) and Network (42.9%). Communicate targets were of lesser importance for this group. The only Working Group concentrated its targets in two components, Assess (78%) and Act (22%). In the case of the Stand-alone Red List Authority groups, concordant with their focus of action, about 75% of the targets corresponded to Assess, followed by the other four components, all of them in low proportion (5-13%). Finally, Task Forces distributed most of their targets (94%) proportionally among Assess, Plan, Network, and Communicate; with only 6% of the targets allocated to Act.

Figure 6
Targets of the different SSC group types as a function of the five components of the Species Conservation Cycle (%).
The targets proposed by SSC groups translate into 15 focal activities. For the 2017-2020 quadrennium, the main activities included, in order of importance, research activities (18.6%), red listing (16.3%), communication (14.1%) and planning (9.8%) (Fig. 7). A second group of less frequently conducted activities (3.7% - 6.7%) included conservation actions, synergy, policy, capacity building, technical advice, scientific meetings and membership. Finally, the less frequent activities (0.6% - 2.3%) included proposal development and funding, Green List, documents review and agreements.

At a finer scale, the main activity types associated with the targets of Specialist Groups (Animalia, Plantae, Fungi & Lichens and Disciplinary) included red listing (13-30%), research activities (17-19%), and communication (16-23%) (Table 3). In the case of Disciplinary Groups, technical advice was also of top importance (23%). For the Action Partnership, the activity of major relevance was planning (43%). In the case of Red List Authority Groups, the most frequently conducted activities corresponded to red listing and research, which together represented 73% of all the activities reported. The only Working Group concentrated on red listing (78%) and technical advice (22%). Finally, in the case of Task Forces, the three main kinds of activities linked to their targets were research (26%), policy (19%) and synergy (15%).

Figure 7
Activity categories of targets proposed by the SSC groups for the 2017-2020 quadrennium (%). N= 1524.
Degree of completion of targets by the SSC Network

The chairs of the SSC groups indicated the level of completion of targets for the quadrennium based on the progress achieved by the end of 2018. Level of completion of the targets fell into three categories: (1) **Achieved**, for those completely accomplished by the end of the year, (2) **Ongoing**, for those showing progress in their associated activities or in some cases already presenting results, and (3) **No significant progress**, for those not yet initiated or postponed due to a variety of reasons.

For the five components of the Species Conservation Cycle, the majority of targets proposed (47-62%) showed some level of progress by the end of 2018, especially in the case of the Assess and Act (Fig. 8). Percentage of targets totally achieved varied between 14 and 27%, with the lower values associated with Act. The percentage of targets without significant progress was evenly distributed across the five components, at about one-fourth (23-26%).

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**Figure 8**
Completion degree of targets by the end of 2018 as a function of component of the Species Conservation Cycle. Numbers within coloured bars indicate number of targets.
For the majority of SSC group types, a relatively large percentage of targets (46-89%) are ongoing; only in the case of Task Forces, more than 50% of the targets originally formulated were achieved by the end of 2018 (Fig. 9). In the case of Fungi and Lichen groups, the percentage of ongoing and achieved targets were the same and added to 76% of all targets originally formulated. Percentage of targets without significant progress varied between 11% and 26% across group types.

**Figure 9**
Completion degree of targets by the end of 2018 as a function of SSC Group types. Numbers inside coloured bars indicate number of targets.

**SSC groups’ activities in 2018**

**Global overview of activities**

A total of 1197 activities were conducted and their associated results reported by SSC groups for 2018 (Fig. 10). They mirrored the targets proposed for 2017-2020 (Fig. 5). The dominant activities were research (N= 212, 17.7%), red listing (N= 192, 16.0%), communication (N= 172, 14.4%), and planning (N= 116, 9.7%). On average, each SSC group conducted activities related to 3.2 (1.3 SD) components of the Species Conservation Cycle. Concordant with their central objective, many Stand-alone Red List Authorities concentrated their activities on Assess. A substantial proportion (18.4%) of SSC groups reported activities covering the five components of the Species Conservation Cycle, while a significant fraction (12.5%) reported activities related to a single component.

**Figure 10**
Activities conducted by all SSC groups during 2018 (%) N= 1197.
Research activities of SSC groups included the following: production of scientific publications (27.6%), population and ecology assessments (19.5%), production of databases (12.4%), research programs and projects (10.5%), identification of natural areas with conservation needs (9.1%), taxonomic evaluations (6.7%), expeditions and field survey collections (5.2%), data analysis (4.8%), understanding sustainable use (2.4%), integration of IUCN knowledge products (0.9%), biodiversity information for public and private financial sectors (0.5%), and workshops for data analysis (0.5%). Red List activities primarily focused on species assessments and reassessments (91.7%), with only a few groups reporting production of documents and tools to support red listing (4.2%), quality control of red list assessments (2.6%), technological improvements of the process (1.0%) and improvements in Red List partnerships and governance structures (0.5%).

Communication activities were also quite diverse, including 13 different types: media and outreach (e.g. press, radio, social networks) (35.5%), production of group publications (e.g. guidelines, newsletters) (32.0%), on-line forums and discussion mailing lists (8.1%), production of technical reports on group issues (5.8%), position statement releases (4.7%), virtual libraries (4.1%), promotion of use of the Red List and knowledge products (2.9%), communicating sustainable use (2.3%), promotion of SSC species conservation planning approach (1.7%), biodiversity information for public and private financial sectors (1.2%), communication strategy planning (0.6%), internal organizational issues of SSC groups (0.6%), and organization or coordination of scientific meetings (0.6%).

Planning activities included conservation action planning (75.0%), conservation action planning guidance (12.1%), conservation action planning monitoring (7.8%), conservation action planning organization (2.6%), and planning conservation action (2.6%).

Of the eleven remaining activity categories identified in Fig. 10, those frequently reported by the groups included: advice for policy and decision making at global, regional and national level (N= 80), technical advice to organizations and institutions (N= 60), capacity building (N= 54), membership recruitment (N= 42), and organization and/or coordination of scientific meetings (N= 33).

Out of 43 KSRs, 41 were reported by the SSC groups as the main KSRs derived from the activities conducted in 2018 (Fig. 11). From them, 11 KSRs stand out for the number of times reported (> 3% of total). The top result mentioned was KSR 28, which refers to strategic and targeted communications and their positive effects on effectiveness of IUCN’s species conservation work; then several KSRs follow in decreasing order of importance: KSR 1 (expansion of the taxonomic coverage of the Red List), KSR 15 (expansion of conservation planning efforts, with emphasis on priority species), KSR 26 (enhancement of effectiveness of biodiversity conservation through global and regional policy mechanisms), KSR 2 (emphasis on Red List assessments at national and regional scales), KSR 27 (use of SSC’s scientific advice at national level to drive actions and policies for species and sites), KSR 12 (population-level monitoring and analysis for selected species and groups of species), KSR 32 (completion and publication of high profile scientific analysis and research on pressing conservation issues), KSR 29 (building of mutually-beneficial institutional partnerships), KSR 18 (guidance for species conservation planning through the
continued development and application of cutting-edge, science-based tools and processes), and KSR 43 (contribution of biodiversity information to public, private and financial sectors to help reduce their negative impact on biodiversity).

Figure 11
Key Species Results associated to activities (N = 1309).
Activities by main SSC group types

Specialist Groups in Fungi and Lichens reported 22 activities in eight categories, with a clear dominance of red listing and communication, followed by three activities with relatively equal weight: research, synergy and capacity building (Fig. 12). Plantae Specialist Groups reported 141 activities with red listing as the dominant one, followed by conservation actions and research. Other nine activities were reported for plant groups, but with comparatively lower representation among them. Together, Animalia groups reported 840 activities and the highest number of activity categories (N= 15); however, only four of them stand out in numerical importance: communication, research, red listing, and planning. Disciplinary Specialist Groups reported 82 activities in 13 categories with two dominant ones, research and technical advice. The Action Partnership Group emphasized planning. Red List Authority groups reported 47 activities in eight categories, but most of their effort was concentrated on red listing and research. The only Working Group assisted Red List assessments and reassessments. Finally, Task Forces reported 49 activities in 11 different activity categories, with three dominant ones, research, policy and synergy.

Figure 12
Activities conducted by main Specialist Group types in 2018. Activities are indicated for each activity category in percentage.
Activities by Animalia SSC groups

Animalia Specialist Groups make up 56.5% of the SSC network; thus, their activities and results allow for more detailed analysis, disaggregated according to Mammals, Birds, Amphibia and Reptiles, Fishes, and Invertebrates (Fig. 13). Depending on the group, between 12 and 15 activity categories were identified. Although all zoological groups concentrated on a few categories, their relative investment varied.

Mammal groups led with 404 activities, focused on communication (16.3%), research (16.1%), and planning (11.1%). Communication activities were mainly related to media and outreach and production of publications of the specialist group (e.g. guidelines, newsletters, etc.); research activities were led by population and ecology assessments and production of scientific publications; and planning activities were led by conservation action planning. These groups reported 93% of 43 possible KSRs (for description of KSRs, see page 22): 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 42, and 43.

Bird groups reported 103 activities and also emphasized research (22.3%), communication (16.5%), and planning (13.6%). Research activities stressed on population and ecology assessments and production of scientific publications; communication activities focused on production of specialist group publications, media and outreach, and on-line forum and discussion mail lists; while planning activities were led by conservation action planning. These groups reported 58% of 43 possible KSRs: 1, 2, 4, 11, 12, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 37, and 43.

Amphibian and Reptile groups reported 106 activities with major emphasis on communication (19.8%), research (14.2%), Red List (13.2%), and planning (11.3%). Communication activities mainly focused on media and outreach and production of specialist group publications and technical reports; research concentrated on databases, identification of natural areas for conservation and production of scientific publications; red listing consisted essentially of species assessments and reassessments; and planning focused on conservation action planning. These groups reported as main KSRs related to their activities 53.5% of 43 possible KSRs: 1, 2, 4, 5, 8, 11, 12, 15, 17, 18, 19, 20, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32 and 43.

Fish groups reported 95 activities and their main emphasis was on Red List (17.9%), communication (16.8%), research (14.7%), planning (13.7%), and policy (13.7%). Red listing concentrated on assessments and reassessments; communication activities focused on media and outreach, and production of specialist group publications and technical reports; research activities mainly included production of scientific publications and development of research projects and programs; planning consisted mainly of conservation action planning; and policy consisted mainly of policy advice and decision-making. These groups reported as main KSRs related to their activities 44.2% of 43 possible KSRs: 1, 2, 3, 11, 12, 15, 16, 17, 18, 19, 22, 26, 27, 28, 29, 31, 32, 33, and 43.

Invertebrate groups reported 124 activities mainly focused on Red List (30.6%), research (18.5%), and communication (16.9%). Red listing concentrated on species assessments and reassessments; research included a significant investment on
identification of natural areas with conservation needs, production of scientific publications, and creation of databases. These groups reported as main KSRs related to their activities 58.1% of 43 possible KSRs: 1, 2, 3, 4, 5, 7, 11, 12, 14, 15, 17, 18, 20, 21, 22, 26, 27, 28, 29, 32, 33, 34, 35, 39, and 43.

Figure 13
Activities conducted by Zoological Groups in 2018. Activities are indicated for each activity category in percentage.

Activities in relation to 2016 World Conservation Congress resolutions
SSC groups reported activities and results achieved during 2018 in connection with 21 (21.9%) of the 96 IUCN Resolutions adopted during the 2016 World Conservation Congress in Honolulu, Hawai‘i.

Resolutions reported by SSC Groups were, as follows: 011, 015, 016, 017, 019, 021, 027, 039, 041, 060, 061, 068, 085, and 093 for Animalia; 016, 040, 041, and 045 for Plantae; 014 and 064 for Disciplinary; 009 for Action Partnership; 016 for Working Group; 018 and 045 for Red List Authorities; 041, 061, 068, 085, and 086 for Task Forces.

A total of 32 (21.9%) SSC Groups out of 146 reporting results for 2018 indicated that their activities helped support actions requested in the 2016 WCC Resolutions. The group that reported the top amount of resolutions addressed was the Sirenia SG (4), followed by Freshwater Plant SG (3), Crocodile SG (2), Flamingo SG (2), Seahorse, Pipefish and Seadragon SG (2), Wildlife Health SG (2), and Human-Wildlife Conflict Task Force (2).
Resolution 085 – “Connecting people with nature globally” was linked to the highest number of activities reported (18), followed by Resolution 041 – “Identifying Key Biodiversity Areas for safeguarding biodiversity” (17), Resolution 015 – “Greater protection needed for all pangolin species” (15), Resolution 016 – “The IUCN Red List Index for monitoring extinction risk” (14), and Resolution 068 – “Prevention, management and resolution of social conflict as a key requirement for conservation and management of ecosystems” (13).

**Core support and partnership needs of SSC groups**

Out of 146 SSC groups that completed their SSC DATA, 29 (19.9%) did not provide any information related to their core partnership needs, and 6 (4.1%) noted that they do not have any core partnership needs for the development of their operations. Regarding the types of support and/or needs reported by the SSC groups, 62 groups expressed that they need partnership or funding support, followed by 44 groups that pointed out their interest in increasing group’s core capacities, 40 groups expressed their needs of workshops and training courses, and 17 groups indicated that require technical expertise (Fig. 14).

In relation to partnership and funding, the most frequent activities that require this type of support included: red listing assessments and reassessments (26.8%), host organization(s) for core support (11.3%), meetings (9.9%), core operations (9.9%), conservation actions (9.9%), conservation planning (6.9) and hiring or funding of staff (5.6%). Within this category, 14 groups (19.7%) did not specify the activity that they plan to cover. Regarding the interest for increasing groups’ core capacities, some groups require administrative support, expressed mainly in the need of program officers (46.9%), others want to enhance their website and social media platforms (20.4%), as well as to improve or develop their communications strategies (20.4%), while other groups expressed their interest in improving their capacities in group management (10.2%).

In the category of workshops and training needs, there is a special interest in SSC groups for being trained in fundraising (38.3%), red listing (34.0%), and conservation planning (25.5%) as the main training requests within the network.

Finally, in relation to technical expertise, the main interests pointed out by SSC groups are in conservation strategy planning (57.9%), red listing (15.8%), fundraising (10.5%), and policy (10.5%).

It is important to highlight that the results obtained are used as a guideline for the SSC Partnership Team to analyze and make decisions to better allocate resources and match needs with different SSC partners.
Concluding remarks

The implementation of SSC DATA during its second year of existence has relied on the cooperation and positive criticism provided by SSC groups, who recognized the value of the tool to organize, analyse and share information on their activities. Only 15 of 161 SSC groups did not provide information for 2018. This represents a small but significant advance in our quest to accomplish 100% participation in reporting the results of the SSC network at the end of each year.

We continue strengthening our interaction with SSC leaders through our regular meetings with the Chair’s Office team and GSP colleagues, to support the process of SSC DATA reporting, and to provide assistance with any question or request the chairs could have. The line of communication with SSC leaders is maintained throughout the entire year thanks to the report preparation process, which consists of several steps that require the intervention of the chairs.

Thanks to the SSC DATA database generated from the reports obtained for year 2018, we were able to launch the first program of internal grants, specifically aimed at supporting the SSC groups with some of their needs. The idea is to establish a growing system of support to the network, based on their proposed targets, their declared needs, and their demonstrated progress pursuing each target. Only by properly evaluating the level of achievement of the groups, based on their own set of proposed targets and degree of accomplishment, we will be able to increase the level of direct assistances our network can provide to its members.
The Integrated Tiger Habitat Conservation Programme continued to fund projects across Asia to improve tiger conservation, contributing to the Global Tiger Recovery Programme, a global effort to double tiger numbers in the wild by 2022.

Photo: IUCN Sugoto Roy

In 2019, we expanded multiple of our ongoing IUCN Save Our Species initiatives by adding 30 new projects. This Endangered African Wild Dog (*Lycaon pictus*) was photographed while on a mission to one of our projects in Zambia.

Photo: IUCN Remco van Merm
Species are critical for the survival of the planet but face threats to their survival: habitat destruction, invasive alien species, overexploitation, illegal wildlife trade, pollution and climate change. IUCN’s Global Species and Key Biodiversity Area Programme (GSP) works hand in hand with the Species Survival Commission (SSC) at the forefront of the global fight to save species from extinction. The IUCN Red List of Threatened Species is used to guide decision making and conservation action and GSP also supports conservation projects on the ground and provides, in close collaboration with SSC, technical expertise on most species groups and issues affecting wildlife, such as invasive species or sustainable use and trade. The Global Species Programme works on the following:

**Assess:** Knowledge for species conservation - species conservation is directed to priority taxa, sites and places based on biodiversity knowledge.

**Plan:** Policy and planning for species conservation - the status of species is improved through decisions that limit further significant declines in wild species and their habitats, and catalyse population recoveries across all scales.

**Act:** Species conservation action - improved status of wild species and habitats in key conservation sites through targeted interventions.

**Knowledge for species conservation (Assess)**

**The IUCN Red List of Threatened Species**

The IUCN-Toyota Red List Partnership supported a major increase in the number of species assessments published on The IUCN Red List, as well as delivering the new IUCN Red List web platform. Several IUCN biodiversity assessment activities occurred in 2018, including two major updates to The IUCN Red List. The **first major update** was released on 5 July and the **second major update** was released on 15 November. Media releases accompanied both updates (see links provided). The first update coincided with the meeting of the Subsidiary Body on the Implementation of the Convention on Biological Diversity held in Montreal, Canada. During 2018; 5,527 new species assessments were processed and published on The IUCN Red List (just less than the 5,991 published in 2017) and the majority of these new assessments were for invertebrates (769 species), plants (3,296 species), reptiles (866 species), and marine fishes (303 species). At the end of 2018, The IUCN Red List included assessments for 96,951 species, of which 26,840 are threatened with extinction (i.e.
they are listed as Vulnerable, Endangered, or Critically Endangered) compared with 91,523 species (25,821 threatened species) in 2017. The two media releases received significant global media coverage.

A significant milestone achieved in 2018 was the launch (in November) of the new IUCN Red List website. The new website is significant because it puts The IUCN Red List onto a robust and modern technological platform and includes a number of new features:

**One site for all:** catering for different audience types (academics, general public, journalists) all in one place (this was a tremendous challenge to get right).

**Single platform:** previously we had four web platforms; now everything is combined into a single platform, thereby delivering major cost savings, efficiency gains and performance improvements.

It allows for the easy addition of new sections and resources to the website.

**Familiarity:** the main features of the new website are similar to those used by modern-day shopping and lifestyle websites thereby maximizing users’ opportunity to quickly locate (or browse) the information they need using a familiar format.

**Consultation:** major effort was invested in consultation with users, stakeholders and beneficiaries so that the final design best matches the combined needs of our community.

**Reaching users everywhere:** whether one is using a smartphone, tablet or desktop machine, the new website is equally able to display and function.

**Power tools:** the new site has powerful functionality, allowing users to view the Red List data and interrogate it in multiple ways; quick filters to sift through the data, a real-time geospatial search, which is unique and has never been achieved by the IUCN Red List before, visual representation of the data to appeal to journalists, school students, etc.

**Downloads:** the ability to quickly download Red List data in multiple ways to use in different types of projects.

**Imagery:** Species images are showcased wherever possible, along with clear text and summaries, making Red List data easily accessible and used.

**Advanced technology:** importantly, the IUCN Red List portal is now on a technologically advanced and modern platform to support the addition of new features and integration with other knowledge products.

**Integrated:** the new website is integrated with other important species portals such as Species+, which contains information on the listing of species on the Appendices of the Convention on International Trade in Wild Fauna and Flora (CITES) and the Convention on Migratory Species (CMS).

**Synergy:** the advancements are shared with other IUCN biodiversity tools like IBAT.

A service has been implemented to allow IBAT to do spatial searches and bring results into their own system using technology from the new website.

**Languages:** the website is internationalized and aligned with IUCN’s languages; since the audience is global, it is important that there is support for more than just English, as was the case with the old site.

Reporting on user statistics for 2018 is difficult because we were running two Red List websites in parallel for almost three months and turned off some of the for-
mer sub-sites during the year, which we have reported on previously (e.g. the Map Browser Platform). The figures reported here are the combined results for the old main Red List website and for the new Red List website. In 2018, the IUCN Red List website received over 5.3 million unique visitors, over 8.9 million visits (over 6 million every year since 2015), and over 26 million page views (over 20 million every year since 2013). Downloads from the Red List website are tracked as another indicator of use: in 2018 there were 7,141 downloads of tabular data; 43.7 million downloads of individual spatial data files; 328,719 downloads of the PDF versions of the species assessments; and over 4 million downloads of the Digital Object Identifier (DOI) information for the PDFs by search engines. While some of the download figures are down from those reported for 2017 others are markedly higher. It is impossible to identify any particular reason for the drop in some of the download figures, but it may have been related to the switch from the old to the new website or because no major taxonomic groups were reassessed in 2018 or even a combination of both. Overall, the user statistics remained very high and are significantly higher than those reported by other similar conservation-related websites.

**Marine species assessments and unsustainable fishing**

We are making substantial progress with the ongoing efforts to assess all marine vertebrates. In 2018, in collaboration with the Grouper and Wrasse Specialist Group, we completed the first reassessment of a complete marine clade, the groupers. These reassessments deliver an essential index of changes in extinction risk through time and the effects of targeted conservation and management. The original assessments, completed over a decade ago, provided key indications of status and data gaps for this iconic group of commercially and recreationally valuable fishes. Since then, many data gaps in life history and population information were filled, allowing several species previously assessed as Data Deficient to be placed in a proper category.

We also finished the first global assessment of all clupeoid fishes, which encompasses small, coastal, schooling species such as herrings, sardines, shads, menhaden species and anchovies. These species are highly important to the overall function of marine ecosystems, serving as a vital energy transport between primary producers and other marine species. Given their dependence on coastal ecosystems, inherent value to fisheries and naturally fluctuating population sizes, there is concern that harvest and habitat degradation may pose significant threats. Our newest initiative, started in 2018, focuses on the flatfishes (Order Pleuronectiformes). These species are key components of the extensive bottom communities of the world’s ocean floor. Targeted species, such as plaice and sole, form the basis for many community livelihoods. However, overexploitation of traditional fish stocks has led to the utilization of a broader diversity of flatfishes to meet rising demands for seafood products. Regionally, we are working on global assessments of Western Indian Ocean fishes, particularly coral-associated species and those that are exploited in artisanal and commercial fisheries. Many species, including snappers, grunts and rabbitfishes, are important to local economies and also rely on healthy coral ecosystems during parts of their life history, potentially increasing their risk. In addition, we began working on a national Red Listing project in the United Arab Emirates, to assess the status of sharks and rays, corals and selected exploited bony fishes.
We were also supporting a dedicated initiative to complete assessments for deep-sea fishes. The deep-sea is the largest environment on Earth, but is also one of the least known, with technology to rigorously explore these depths expensive and difficult to deploy. IUCN Red List assessments will provide a baseline from which future changes can be measured and are an essential tool to evaluate the long-term effects of anthropogenic activities, particularly in species that have evolved to exploit a stable physical and chemical environment.

**Freshwater Biodiversity**

For the freshwater realm the main focus continues to be completion of the global assessment of freshwater fishes, molluscs, dragonflies, crustaceans and selected plants. Funding by The IUCN-Toyota Red List Partnership also came on line in 2018 to initiate work towards a near globally comprehensive assessment of all freshwater fish species by 2021. In 2018 assessments and reassessments were published for freshwater fishes (842 spp.), dragonflies and damselflies (277 spp.), freshwater decapods (20 spp.), molluscs (40 spp.), and 379 plants classified as being dependent upon freshwater habitats. Overall, for all taxa classified on the Red List as being freshwater dependent, 2,469 assessments were published in 2018.

The regional focus on freshwater species for this period included Sulawesi Malili Lakes (all freshwater taxa), the Lake Malawi Basin (all freshwater taxa), and for which, respectively, 35, and 722 freshwater species assessments were published during 2018. Regional Red List Indices were calculated for Madagascar’s freshwater fishes and for all freshwater species assessed in the Lake Victoria Basin.

**Key Biodiversity Areas (KBAs)**

Focusing on freshwaters the following sites were proposed through stakeholder consultations as freshwater KBAs according to the new KBA standard: 23 in Madagascar, 18 in the Lower Mekong, 39 within the Lake Victoria Basin. These proposed freshwater KBAs were submitted and approved by the KBA Secretariat in 2018, with the exception of some sites which had complicated boundary overlaps with existing IBAs or Protected Areas. These sites, together with the freshwater KBAs delineated back in 2015 in the Mediterranean, Canada and the Tropical Andes before the publication of the new standard are known as “Legacy KBAs” and they are currently under review and update to meet the new guidelines published in 2019 by the KBA Secretariat.


**The Environmental Impact Classification of Alien Taxa (EICAT)**

The IUCN SSC Invasive Species Specialist Group (ISSG) together with GSP has continued to develop and apply The Environmental Impact Classification of Alien Taxa...
IUCN Resolution WCC-2016-Res-018-EN, “Toward an IUCN standard classification of the impact of invasive alien species,” adopted at the 2016 IUCN World Conservation Congress in Hawaii, requested IUCN to undertake an IUCN-wide consultation before submitting the methodology to the IUCN Council to be considered for adoption as an IUCN standard. Over 2018 IUCN has refined the EICAT Categories and Criteria in response to a consultation that was undertaken in 2017, and through lessons learned through a number of EICAT assessments. The next step will be to run a workshop to finalise the second version of EICAT and run a second consultation round with the IUCN membership in 2019, before submitting the final standard to IUCN Council in 2020. Work has also continued on the integration of EICAT into the ISSG Global Invasive Species Database, which will provide the data structure and interface to display EICAT results and data.

**Policy and planning for species conservation (Plan)**

**Our Wildlife trade programme**

GSP continued to harness the expertise within the IUCN SSC’s Specialist Groups to deliver a coordinated global response to issues regarding illegal wildlife trade and the sustainable use of species. GSP and the SSC network supported legal mechanisms such as CITES, and contributed to work addressing illegal wildlife trade more broadly. GSP and key SSC leaders attended the 24th CITES Plants Committee and 30th Animals Committee meetings in July 2018, as well as the 70th meeting of the CITES Standing Committee in November 2018, and provided a number of technical contributions to inform the Parties’ decision-making at these meetings. Two SSC-authored reports were presented to the Animals Committee, one on Banggai cardinalfish and another on great apes, evaluating the impact of international trade on the conservation status of these species to inform recommendations made by the Committee. At the Standing Committee, SSC-authored documents were submitted on strategies to enhance community awareness of the impacts of wildlife trafficking, guidance for identification of tortoise and freshwater turtle specimens in trade, leopard hunting trophy quotas, the seahorse trade from Viet Nam, and enforcement challenges regarding trade in humphead wrasse. A further contribution to CITES decision-making in 2018 was the development of a methodology that uses The IUCN Red List of Threatened Species to identify potential candidate species for inclusion in the CITES Appendices, which will be submitted for publication as a scientific paper. GSP and SSC representatives also participated in the London Conference on Illegal Wildlife Trade in October 2018, and supported side-events to highlight the illegal trade in plants and the importance of engaging local communities in enforcement efforts.

**The Convention on the Conservation of Migratory Species of Wild Animals (CMS)**

IUCN signed an MOU with CMS in 2003. IUCN Secretariat and many of the relevant IUCN SSC Specialist Groups (SGs) have been engaging with CMS processes. IUCN’s role, in general, is to provide scientific and technical advice on the status and conservation needs of particular migratory species as well as scientific evaluations of proposals to amend the listing of species on CMS appendices. GSP carried out a survey within the SSC Network on CMS engagement so far. The feedback from the specialist groups who have engaged with CMS processes was
positive. The SGs advised IUCN Secretariat and SSC to continue to support and work with CMS processes, and to provide the overall IUCN’s engagement in a more coordinated manner.

GSP in collaboration with the IUCN SSC Chair’s Office briefed the survey results to the SSC Steering Committee in October 2018 and the continuation of IUCN’s engagement with CMS. GSP will work closely with the SSC Network to engage more with CMS processes in the coming years, especially leading up to The Thirteenth Session of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP13) to be held in India.

**The Post 2020 Global Biodiversity Framework**

GSP in close collaboration with the IUCN SSC and other Commissions to increase its engagement with the Convention on Biological Diversity (CBD) to influence the Post-2020 Global Biodiversity Framework discussions. GSP led the development of various resources and position papers to help shape a relevant and impactful Post-2020 Global Biodiversity Framework, as well as facilitating coordination and alignment of policy messages between the IUCN Delegation and the IUCN Members present at the CBD Fourteenth Conference of Parties (COP-14) in Sharm El-Sheikh, Egypt in November 2018.

**Invasive Species**

IUCN GSP continued its technical support to the European Commission on the implementation of the EU Regulation 1143/2014 on Invasive Alien Species, directly linking SSC science and expertise to policy implementation. Through its EU funded Inva’Ziles project, IUCN also published a Guidance for invasive alien species (IAS) planning and management on islands.

**Species conservation action (Act)**

GSP works to improve the long-term survival prospects of threatened species in line with IUCN’s mission of a just world that values and conserves nature. Key to this is the process of translating species knowledge, policy and planning into results-oriented conservation action. To facilitate this, IUCN has developed a competency in coordinated grant making and grant management through its regranting programmes, IUCN Save Our Species and the Integrated Tiger Habitat Conservation Programme, launched in 2010 and 2014, respectively. Together these programmes support both landscape scale and site-based conservation projects that benefit species, habitats and communities alike. To date these programmes have invested in more than 140 projects across 68 countries helping protect over 430 threatened species. The long-term goal is to increase this investment and scale up grant-making work even further.

The *IUCN Save Our Species* portfolio reached a total of 133 projects in 2018. With additional funding from a private foundation based in Geneva, IUCN Save Our Species expanded its SOS Lemurs initiative by launching a second Call for Proposals. A further 16 projects were selected for funding, bringing the SOS Lemurs portfolio to a total of 36 projects. In June 2018, Terre Sauvage, a magazine devoted to nature and wildlife, celebrated IUCN’s 70th birthday with a special edition, which also featured multiple projects from the SOS Lemurs initiative.
In 2017, IUCN Save Our Species launched African Wildlife, a €12 million initiative, co-funded by the European Union, aimed at halting the decline of lions, leopards, cheetahs, wild dogs and Ethiopian wolves and related prey species. The first call for proposal of the SOS African Wildlife initiative was launched in 2017 and in 2018 contracts for the selected projects were being negotiated. Grant agreements for the first three projects under this initiative were signed in December 2018.

In addition to projects on the ground, IUCN Save Our Species also supported a workshop, organised by the IUCN SSC Primate Specialist Group and SOS Lemur grantee Fanamby, to assess or re-assess the IUCN Red List status of all known Lemur species. This will feed into the ongoing update of the Lemur Conservation Strategy.

IUCN Save Our Species’ partnership with Lacoste launched during Paris Fashion Week with a unique collection of polo shirts. The famous Lacoste crocodile made way for ten Critically Endangered species to be featured on ten limited edition polo shirts. The number of shirts produced for each species corresponded to the estimated number of individuals left in the wild. Species featured included the Endangered Burmese Roofed Turtle (*Batagur trivittata*) as well as the Vaquita (*Phocoena sinus*), Northern Sportive Lemur (*Lepilemur septentrionalis*), Javan Rhino (*Rhinoceros sondaicus*), Kakapo (*Strigops habroptila*), Cao-Vit Gibbon (*Nomascus nasutus*), California Condor (*Gymnogyps californianus*), Saola (*Pseudoryx nghetinhensis*), Sumatran Tiger (*Panthera tigris ssp. sumatrae*) and the Anegada Ground Iguana (*Cyclura pinguis*). At the end of the year, a Call for Proposals was launched to fund one project targeting any of the ten species featured in the campaign. Planning also commenced for the second year of the campaign, due to launch in 2019.

The Integrated Tiger Habitat Conservation Programme (ITHCP), funded by the German Government (BMZ), through the German Development Bank (KfW), has a current portfolio of 12 projects across six tiger range countries. The countries are; India, Nepal, Bhutan, Bangladesh, Myanmar and Indonesia. The portfolio represents a total financial undertaking of €17 million. Projects mainly focus on the interaction between humans, wildlife and habitats in key Tiger Conservation Landscapes (TCLs), with community-based activities to improve livelihoods and reduce the unsustainable dependency on natural resources underpinning all projects. As a result of these projects, a more harmonious coexistence of people living alongside tigers should ensure their survival in the long term, while maintaining integrity and quality of

In 2019, we expanded multiple of our ongoing IUCN Save Our Species initiatives by adding 30 new projects. This Vulnerable Lion (*Panthera leo*) was photographed while on a mission to one of our projects in Zambia. Photo: IUCN Remco van Merm
habitats. In addition, projects are strengthening the management of protected areas by providing better infrastructure, equipment and training to frontline staff. In 2018, in addition to traditional landscape scale site-based projects, two additional commissioned studies were ongoing, including a study looking at best practices in human wildlife conflicts drawing on information from across the entire portfolio, and a study on high altitude habitat usage by tigers in India, Bhutan and Nepal.

The independent external mid-term review of the ITHCP was delivered in February 2018 and its main recommendations have been taken into account in order to improve the delivery of the programme. Amongst those, we can note a greater involvement of IUCN’s Regional and Country Offices, simplified reporting as well as learning opportunities across projects. The document is publicly available on IUCN’s website.

One of the highlights of 2018 was the decision by the German Government to contribute to a second phase of the programme, with the provision of an additional €7.5 million. The agreement was signed in December and the funding will be used to extend and scale up most impactful activities of certain existing projects. IUCN is grateful to the German Cooperation for its renewed confidence.

Funding from a private donor also enabled two further projects to be established to complement the ITHCP portfolio. These include a project in Nepal looking at habitat use by tigers at higher altitudes, and a project with components in both Thailand and Myanmar that complements projects already funded under ITHCP. At the end of 2018, the ITHCP was worth €30 million that are directly contributing to the Global Tiger Recovery Programme, which aims to double tiger numbers in the wild by 2022.

**Acknowledgements**

We would like to thank our many generous partners and donors, including Toyota Motor Corporation, the European Commission, The German Cooperation via KfW Development Bank, Environment Agency Abu Dhabi, Global Wildlife Conservation, National Geographic Society, Lacoste, Coq en Pâte, private foundations and other companies who continue to fund our species conservation work.
This section contains the individual reports of all SSC groups that submitted their information through SSC DATA. The reports have been ordered by major SSC groups, each marked with a specific coloured band: Animalia (dark blue), Fungi & Lichens (brown), Plantae (green), Disciplinary (grey), Action Partnership (purple), Working Group (light blue), Stand-alone Red List Authority (red), and Committee (yellow). Within Animalia, the reports have been ordered alphabetically by major zoological groups and within them, also alphabetically, by zoological groups. Following, is a succinct explanation of the structure of the individual reports and what information is found in each part of it.

### Title of the SSC group

### Photograph(s) of the Chair / Co-Chairs

### Group information
Includes names of Chair / Co-Chairs, Vice-Chairs, Deputy Chairs and Red List Authority Coordinator(s), their institutional affiliations, number of members and social networks (currently active).

### Logo of the SSC group

### Mission statement

### Projected impact for the quadrennium 2017-2020

This narration indicates how the planned activities, as a whole, will impact on the conservation status of species during the 2017-2020 quadrennium.

### Targets for the 2017-2020 quadrennium

Targets planned by the SSC group for the 2017-2020 quadrennium, first ordered alphabetically by component of the Species Conservation Cycle, and second by Activity Category. For each Activity Category listed, all the planned targets are indicated.

### Activities and results 2018

Activities conducted during the 2018 period, ordered alphabetically first by component of the Species Conservation Cycle (see page 21 for description of each component), and second by Activity Category. Under each Activity Category, succinct descriptions of each activity and result achieved are listed. Each activity and result described, if applicable, includes the Key Species Result to which it is mainly associated (see page 22 for complete description of KSRs).

### Acknowledgements

### Summary of activities 2018

Numerical summary of the achievements of the SSC group in terms of components of the Species Conservation Cycle addressed (Species Conservation Cycle ratio: # components addressed/total # of components), activities conducted per Activity Category, main KSRs addressed and 2016 WCC Resolutions linked to the activities.
Mission statement
The Amphibian Specialist Group (ASG) provides the scientific foundation to inform effective amphibian conservation action around the world. More specifically, the ASG stimulates, develops and conducts scientific research to inform the conservation of amphibians and their habitats around the world, supports the assessment of the conservation status of amphibian biodiversity and informs the general public of amphibian conservation-related issues and priorities. This is attained by supporting and mobilising a global network of members to develop capacity, improve coordination and integration so as to achieve shared, strategic amphibian conservation goals.

Projected impact for the 2017-2020 quadrennium
Resources permitting, by 2020 we envision conclusion of the update of global amphibian assessments on The IUCN Red List, conclusion of the 2017-2020 ASG Strategic Plan, update of the Amphibian Conservation Action Plan (ACAP) for the next four years and an increased uptake of this tool by the amphibian conservation community. At the ASG membership level, we envision a more proactive and engaged specialist group, with greater participation, more cross-pollination within and between regions and thematic groups and collaborations with other specialist groups with cross-cutting issues.

Targets for the 2017-2020 quadrennium

Assess
Policy: the ASG Red List Authority (RLA) provides advice and expertise for national Red List processes.
Proposal development and funding: ASG has a fully-funded Global Amphibian Assessment (GAA2) update project.

Red List: (1) completion of the Global Amphibian Assessment update (GAA2); (2) ASG RLA provides technical feedback and expertise to the Red List Committee and Red List Technical Working Group, as necessary.
Research activities: (1) ASG supports the update of Alliance for Zero Extinction (AZE) sites; (2) ASG actively contributes to the production of scientific publications related to amphibian research and conservation.

Plan
Planning: (1) ASG Secretariat, Regional Chairs and members contribute towards single- or multi-species conservation action plans at the international or national levels; (2) update of the Amphibian Conservation Action Plan (ACAP); (3) completion of Amphibian Reintroduction Guidelines; (4) a framework for single- and multi-species amphibian action planning is created through collaboration with the Conservation Planning Specialist Group’s efforts to develop multi-species planning guidance; (5) the ASG has a Strategic Plan for the remainder of the 2017-2020 quadrennium.
Policy: (1) ASG provides scientific advice and information for the identification and conservation of species of concern in national and international contexts.

Act
Proposal development and funding: increasing uptake of ACAP among donors.
Technical advice: ASG provides technical advice to organisations and institutions globally.

Network
Agreements: ASG has donors that provide financial and institutional support to ASG RLA staff time.
Capacity building: (1) development of the Grant Writing Mentorship Program; (2) ASG RLA will provide Red List training through its Red List workshops and other venues when the opportunity arises; training day(s) may be open to the public or an audience wider than amphibian experts.

Membership: (1) ASG membership and regional and thematic leadership are renewed, new members are brought on board and regional representation is improved; (2) ASG proactively recruits new members, focusing on regions with little or no representation at the start of the quadrennium.

Proposal development and funding: ASG has donors that provide financial and institutional support to ASG staff time.

Synergy: ASG is a key ally of Amphibian Ark and the Amphibian Survival Alliance with the shared vision of “Amphibians thriving in nature”.

Communicate
Communication: (1) ASG reports its activities to SSC DATA; (2) ASG will participate in, and in some cases organise, public presentations to communicate the work of IUCN, SSC, ASG, and the Red List; (3) ASG will develop and launch its own website (we have shared our site with the Amphibian Survival Alliance (ASA) since 2013) to continue providing information about our work and amphibian conservation globally; (4) the IUCN Red List is used to inform the project and funding priorities of NGOs and funding mechanisms with the aim of ensuring that effective amphibian conservation is taking place globally; (5) ASG develops a communications plan that will lay out the intended use of each of its communications tools (email, FrogLog, website, social media [Facebook, Twitter]); (6) together with ASA, ASG continues to produce FrogLog.

Research activities: create and establish a Repository for Amphibian Conservation literature (RAC).

Scientific meetings: (1) ASG actively participates in scientific meetings; (2) ASG actively contributes to the organisation of scientific meetings; (3) ASG will participate in, and in some cases organise symposia to communicate the work of IUCN, SSC, ASG, and the Red List.

Activities and results 2018
Assess
Green List
I. In 2018, the Amphibian Red List Authority (ASG RLA) participated in interviews and feedback sessions towards the development of the Green List; the ASG RLA contributed test cases for the Red List Technical Working Group Extinction Guidelines testing with Resit Akçakaya. (KSR #11)

Proposal development and funding
I. Total budget to achieve the Global Amphibian Assessment update (GAA2) has been raised. (KSR #30)

Red List
I. Fifty percent of all amphibian species described through December 2018 have an assessment dated between 2009-2018. (KSR #1)

Research activities
I. ASG RLA supports the Amphibian Survival Alliance (ASA) in the identification of AZE sites. (KSR #22, 31)

II. In 2018, scientific articles related to amphibian research and conservation were published (one by Ariadne Angulo and two by Jennifer Luedtke). (KSR #32, 43)

Plan
Planning
I. An ASG Programme Officer and a Co-Chair facilitated a Rhinoderma conservation planning workshop in 2017. The ASG Regional Chair for Colombia produced a national action plan.
in 2018 with government endorsement for the amphibians of Colombia. (KSR #15, 17)

**ii.** The potential partnership with California Conservation Society (Oakland Zoo) to hold an ACAP workshop unfortunately did not materialise. We are now planning on updating ACAP remotely. (KSR #15, 17)

**iii.** Completion of the Amphibian Reintroduction Guidelines is being led by the Conservation Translocation Specialist Group (CTSG) with support from the ASG. A first draft was shared with ASG Secretariat members and returned with feedback. A revised draft is currently available for public consultation. (KSR #18)

**iv.** ASG Programme Officer, Sally Wren, has collaborated with the Conservation Planning Specialist Group and Amphibian Ark towards the development of a framework for single- and multi-species amphibian action planning. (KSR #15, 17, 18, 20)

**Policy**

**i.** ASG input was collated into CITES provisions relating to the trade in specimens of animals and plants not of wild source. (KSR #26)

**Act**

**Proposal development and funding**

**i.** Two funding entities are formally adopting ACAP to inform their granting priorities. (KSR #19, 30)

**Technical advice**

**i.** ASG provided feedback and contacts to the Amphibian Survival Alliance regarding the update of Alliance for Zero Extinction sites, and Lina Valencia at Global Wildlife Conservation toward the creation of an Atelopus Survival Alliance. (KSR #29)

**Network**

**Capacity building**

**i.** The Grant Writing Mentorship Program was advertised to ASG membership and reviewers solicited; reviewers identified and enrolled in the programme; guideline development initiated. (KSR #30)

**ii.** The ASG RLA provided basic Red List training at three workshops in 2018 (Penang and Sarawak, Malaysia, and Colombia). (KSR #5)

**Membership**

**i.** Membership reinstated; leaders are in place to advance various conservation priorities.

**ii.** We have an increased number of ASG members with an understanding of needs and how they can contribute to amphibian conservation in the framework of ASG.

**Proposal development and funding**

**i.** ASG Co-Chair support secured for 2017-2018; discussions with a potential partner took place in 2018 for a planning programme officer, but unfortunately support did not materialise as expected. (KSR #30)

**Synergy**

**i.** ASG remained actively engaged with its allies, participating in monthly calls between the three organisations. (KSR #29)

**Communicate**

**Communication**

**i.** ASG reported its activities to SSC DATA.

**ii.** ASG Secretariat discussed URL and other related matters through internal Skype conversations, conversations with the Amphibian Survival Alliance leadership, and through external consultation with a branding expert. ASG Secretariat appointed a Webmaster, Amaël Borzée, in 2018 to develop a new site with support from the Amphibian Survival Alliance Communication Director and ASG member, Candace Hansen. (KSR #28)

**Research activities**

**i.** The context around the originally envisioned Repository for Amphibian Conservation literature (RAC) has changed, and with it, the ability to achieve the original target. However, with a small amount of funds, it has been possible to hire someone to compile an updated and hyperlinked list of the most recent amphibian conservation literature, providing the information needed to populate a future database, should a new opportunity arise in the future. The lists are uploaded to the ASG, ASA and AmphibiaWeb websites and are available to members and the wider public. The ability to maintain this list will depend on finding resources to continue beyond the end of the year.

**Scientific meetings**

**i.** In 2018, the ASG Co-Chairs and RLA attended seven scientific meetings: Phil (5 – Australia, New Zealand, Argentina, USA, Brunei), Ariadne (1 – Brazil), Jennifer (0), Kelsey (0), Louise (1 – UK). (KSR #28)

**ii.** 2018-2020: Phil Bishop is leading the coordination of the 2020 World Herpetology Congress; there are also plans for a joint amphibian event at the next World Conservation Congress. (KSR #28)
Acknowledgements

We thank Synchronicity Earth and Global Wildlife Conservation who act as our fiscal sponsors; we thank Synchronicity Earth, Global Wildlife Conservation, Amphibian Survival Alliance, Kering, and Detroit Zoological Society for their generous financial support towards the positions of our Co-Chair, Ariadne Angulo, and the Amphibian RLA team, Jennifer Luedtke, Kelsey Neam, and Louise Hobin. Furthermore, we are deeply grateful for the friendship and collaboration of the Amphibian Survival Alliance, Amphibian Ark, and all the ASG members who lend their time, expertise, and goodwill to the cause of amphibian conservation.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

<table>
<thead>
<tr>
<th>KSR</th>
<th>Value</th>
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<tbody>
<tr>
<td>Assess</td>
<td>5</td>
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<tr>
<td>Plan</td>
<td>5</td>
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<tr>
<td>Act</td>
<td>2</td>
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<tr>
<td>Network</td>
<td>6</td>
</tr>
<tr>
<td>Communicate</td>
<td>9</td>
</tr>
</tbody>
</table>

Main KSRs addressed: 1, 5, 8, 11, 15, 17, 18, 19, 20, 22, 26, 28, 29, 30, 31, 32, 43

KSR: Key Species Result
Mission statement

The Boa and Python Specialist Group (BPSG) mission is to provide expert opinion and scientific advice to IUCN and other conservation organisations, government and non-government agencies, applicable to the conservation of boas and pythons and snakes in general.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision: (1) an improved knowledge of the trade of Southeast Asian reptiles; (2) a change in the supply chain of skins from Southeast Asian reptiles due to a better interaction with traders and local governments; (3) a substantial advance in CITES provisions related to snake trade; (4) a better knowledge on the status of several threatened species but particularly of the Endangered Cropani’s Boa (*Corallus cropani*); (5) a significant advance in Red List assessments of the species of our remit; and (6) a more integrated and communicated group which will redound in more effective conservation actions worldwide.

Targets for the 2017-2020 quadrennium

Assess

Red List: complete assessment of Boidae and Pythonidae species.

Research activities: (1) develop a standard reference for BPSG species taxonomy; (2) improve knowledge and status of Cropani’s Boa; (3) develop research programmes on priorities established under Southeast Asian Reptile Conservation Alliance (SARCA) cooperation.

Plan

Planning: develop BPSG Strategy Planning.

Proposal development and funding: increase number of grants delivered.

Network

Capacity building: train two BPSG members in Red List assessments.

Membership: increase BPSG membership in species’ range countries.

Synergy: (1) keep participating in international forums (e.g. CITES); (2) attend Southeast Asian Reptile Conservation Alliance (SARCA) Steering Committee meetings.

Communicate

Communication: (1) increase frequency of *Serpens* Newsletter to twice a year; (2) publish scientific and technical reports.

Membership: improve communication with membership.

Scientific meetings: organise the first BPSG global members meeting.

Activities and results 2018

Assess

Red List

1. Four new assessments were completed directly by BPSG members. Under the Global Reptile Assessment initiative, 20 new boa and python species assessments were published in 2018 after review and final approval by the BPSG Red List focal point. (KSR #1)

Research activities

1. BPSG members Bruno Rocha and Everton Miranda continue with the project “Building a Conservation Strategy for the Cropani’s Boa (*Corallus cropanii*)”. Several educational talks were given and educational material was disseminated at the community level, to foster
the environmental education focused on the species and to increase the chances of finding a second specimen alive after 70 years. (KSR #12)

**ii.** SARCA provided a scientific lead to use the network to collect data on wild harvest for several python species from Southeast Asia. Led by the BPSG member and SARCA technical coordinator, Daniel Natusch, seven trips were carried out to Malaysia and Indonesia. Experts were identified in Malaysia for ongoing monitoring work. Work included engagement with national authorities, industry representatives and international experts. Scientific lead was also provided under SARCA work to develop a technical manual for ongoing monitoring of wild reptile trade, as well as for fact finding missions to Cambodia, Indonesia and China. (KSR #32)

**Plan**

**Proposal development and funding**

i. One new grant was awarded in 2018 to continue supporting the project “Building a Conservation Strategy for the Cropani’s Boa (**Corallus cropanii**)**.

**Network**

**Membership**

i. BPSG reached 92 members.

**Synergy**

i. Daniel Natusch represented the BPSG and the snake conservation agenda in the IUCN delegation at CITES Standing Committee and Animals Committee meetings during 2018. (KSR #29)

ii. During 2018, Tomás Waller was invited to join and represent the BPSG at the SARCA Steering Committee and participated in a SARCA webex Steering Committee meeting on 23 July, and an in-person Steering Committee meeting held in Paris on 4 December 2018. (KSR #29)

**Communicate**

**Communication**

i. A new issue of the BPSG newsletter *Serpens*, Volume 6, Issue 1, was published and disseminated in February 2018. (KSR #28)

ii. BPSG compiled a Reptile Welfare Principles Guidance, a report that will be a great contribution in improving reptile welfare in Southeast Asia and elsewhere.


**Acknowledgements**

We thank the following entities for supporting the work of the BPSG during 2018: IUCN Species Survival Commission, Fundación Biodiversidad, CITES Secretariat, BSR and the Southeast Asian Reptile Conservation Alliance (SARCA) membership. Thanks to Phil Bowles, who did extraordinary work under the Global Reptile Assessment initiative. Finally, I am especially grateful to Victoria Lichtschein, Daniel Natusch, Jess Lyons, and Mark Auliya for their dedicated service to the progress of our group.

**Summary of activities 2018**

<table>
<thead>
<tr>
<th>Species Conservation Cycle ratio: 2/5</th>
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<tbody>
<tr>
<td>Assess 3</td>
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<tr>
<td>Plan 1</td>
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<tr>
<td>Network 3</td>
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<tr>
<td>Communicate 3</td>
</tr>
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Main KSRs addressed: 1, 12, 28, 29, 32

KSR: Key Species Result
Mission statement
The mission of the Chameleon Specialist Group is to improve the conservation status and sustainable use of wild chameleons.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision having developed a comprehensive picture of the conservation status of the world’s chameleons, so that conservation efforts can be targeted effectively. Specifically, we have focused on assessing all described chameleon species on the IUCN Red List, most for the first time, and on ensuring that these assessments are current, so that we can identify conservation focal points. Further, by supporting the implementation of CITES and assisting in national management efforts, we aim to improve the conservation status and sustainable use of wild chameleons.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) ensure all newly described chameleons are assessed on the IUCN Red List; (2) ensure all chameleon assessments are re-assessed before 10 years old.
Research activities: Alliance for Zero Extinction (AZE) sites for chameleons identified and approved.

Plan
Technical advice: support implementation of CITES.

Network
Technical advice: expand membership to improve geographic coverage and representation of taxonomic experts.

Communicate
Technical advice: establish and develop a new website for the group.

Activities and results 2018
Assess
Red List
i. In 2018, assessments for 17 species of Badypodion were published. In total, 95% of described chameleon species are currently assessed and published on the IUCN Red List. Of the remaining taxa (10 species described or revalidated in 2017 and 2018), assessments are currently in progress for publication in the near future. (KSR #1)

ii. All chameleon assessments on the IUCN Red List are less than 10 years old. (KSR #1)

Research activities
i. Chameleon AZE sites were identified as part of a BirdLife International/American Bird Conservancy project and included on the new AZE web platform in 2018. (KSR #22)

Plan
Policy
i. We provide regular contributions (e.g. at the 30th meeting of the CITES Animals Committee AC30, and 70th meeting of the Standing Committee) on chameleon-related issues in support of the implementation of CITES, particularly the Review of Significant Trade. (KSR #27)

Network
Membership
i. Provisional list of new members compiled.

Communicate
Communication
i. Potential host servers identified for new website. (KSR #28)
Summary of activities 2018

Species Conservation Cycle ratio: 4/5

| Assess | 3 |||| |
|--------|-----|
| Plan   | 1   |
| Network| 1   |
| Communicate | 1   |

Main KSRs addressed: 1, 22, 27, 28

KSRI: Key Species Result

Perret’s Montane Chameleon (Trioceros perreti), Endangered
Photo: Christopher V. Anderson

Natal Midlands Dwarf Chameleon (Bradyprion thamnobates), Endangered
Photo: Christopher V. Anderson

Bakossi Two-horned Chameleon (Trioceros pfefferi), Endangered
Photo: Christopher V. Anderson
Mission statement

The Mission of the IUCN SSC Crocodile Specialist Group (CSG) is to assist the International Union for Conservation of Nature (IUCN) and the Species Survival Commission (SSC) to meet their missions with regard to the conservation, management and sustainable use of world crocodilians.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envisage: (1) increased reintroductions and improved status of wild populations of Critically Endangered (CR) crocodilian species (e.g. *Alligator sinensis* in China, *Crocodylus siamensis* in Cambodia and Thailand, *C. mindorensis* and *C. porosus* in the Philippines, *C. rhombifer* in Cuba and *C. intermedius* in Venezuela and Colombia); (2) improved legal protection status of habitat for *C. siamensis* and *Tomistoma schlegelii* in Mesangat Lake, East Kalimantan, Indonesia; (3) publication of “CSG Conservation Priorities for World Crocodilians” and species action plans.

Targets for the 2017-2020 quadrennium

**Assess**
Red List: review and progress Red List assessments for crocodilians.

**Plan**
Planning: (1) update and review Species Action Plans; (2) improve protection status of Lake Mesangat, Kalimantan, Indonesia, for Siamese Crocodile (*Crocodylus siamensis*) and False Gharial (*Tomistoma schlegelii*). Policy: (1) complete at least two country/species reviews; (2) maintain involvement at international forums (e.g. CITES); (3) develop “CSG Conservation Priorities for World Crocodilians”; (4) update “Crocodile Capacity Building Manual”.


**Act**
Conservation actions: improve the status of wild Siamese Crocodile populations through reintroduction programmes (Cambodia, Viet Nam, and Thailand).

**Network**
Capacity building: (1) fund up to 20 postgraduate students per annum through the CSG Student Research Assistance Scheme; (2) continue promoting the CSG Future Leaders Program.

Communication: investigate the concept of a “Junior CSG”.


Proposal development and funding: establish a fundraising advisory group.

Technical advice: develop updated standard reference source for crocodilian taxonomy and phylogenetic relationships.

**Communicate**
Synergy: improve communication with membership.

**Activities and results 2018**

**Assess**
Red List

1. Four people have undertaken IUCN Red List training; Red List assessments for six species were completed: *Gavialis gangeticus*, *Paleosuchus trigonatus*, *P. palpebrosus*, *Crocodylus niloticus*, *Alligator mississippiensis*, and *C. novaeguineae*. (KSR #5)
Proposal development and funding

**Planning**

i. Six Action Plans updated in 2018. (KSR #15)

ii. The Ecosystem Essential Areas status currently in place is not considered sufficient. Crocodile population surveys were carried out in late 2017. Draft Action plan is in preparation. (KSR #15)

**Policy**

i. Reviews of Queensland Government population monitoring programme, and egg harvesting programme, were carried out. (KSR #27)

ii. Attendance at the 30th meeting of CITES Animals Committee and 70th meeting of CITES Standing Committee. (KSR #26)

iii. Some Action Plans have been incorporated into the draft CSG Conservation Priorities for World Crocodilians document. (KSR #28)

iv. The “Crocodile Capacity Building Manual” is updated regularly. (KSR #26)

**Research activities**

i. In September 2018, a research team visited the Apaporis River, Colombia, and rediscovered the Rio Apaporis Caiman; the species had not been seen in the wild for 22 years. (KSR #43)

**Act**

**Conservation actions**

i. In Cambodia, wild populations of the Siamese Crocodile have been enhanced; captive breeding of pure Siamese Crocodiles is ongoing. In Thailand, plans for reintroduction are being implemented. (KSR #24)

**Network**

**Capacity building**

i. Twenty-nine postgraduate students were funded (US$ 1,000 each) through the CSG Student Research Assistance Scheme. (KSR #17)

ii. Members of the Future Leaders Program attended the 30th meeting of CITES Animals Committee (AC30) and the 70th meeting of CITES Standing Committee (SC70), and a workshop at the 25th CSG Working Meeting. (KSR #17)

**Communication**

i. The concept of a “Junior CSG” was kindly advanced by two CSG members in the US, and its progress is being monitored by CSG. The broad concept initially articulated by the CSG has not been established, and ways in which it can be more broadly implemented are currently being addressed.

**Documents review**

i. No updates to the *Best Management Practices (BMP) for Crocodilian Farming* were required in 2018. (KSR #25)
Mission statement

The mission of the IUCN SSC Iguana Specialist Group (ISG) is to prioritise and facilitate conservation, science, and awareness programs that help ensure the survival of wild iguanas and their habitats. To achieve this, we implement, advise and fundraise for programs that include population surveys, protected areas management, invasive species control, field research, genetic studies, education and captive breeding/headstarting initiatives. Headstarting, in which hatchling iguanas are raised in a safe, captive environment until they reach a larger, less vulnerable size, is proving invaluable in rescuing several Critically Endangered iguanid taxa from the brink of extinction.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision improved status for many of our threatened species in Central America, the Caribbean, Fiji, and the Galapagos. Most of our programs focus on species that are Critically Endangered (CR) or Endangered (EN) due to habitat alteration and invasive alien species (IAS). The Jamaican Rock Iguana, Cyclura collei, is a flagship species for our group and one of the most threatened species of iguana in the world. Efforts are underway to expand the area of occupancy through intensive IAS control efforts. Due to recent devastating events, intensive efforts are underway to prevent the extinction of Iguana delicatissima by hybridisation with Iguana iguana. Capacity building is ongoing for several species in Honduras, listed in a threatened category. Taxonomic work is underway to better understand the diversity within Iguaninae and thus guide our management and conservation actions.

Targets for the 2017-2020 quadrennium

Assess
Red List: Complete Red List assessments for 40 species of iguanas.

Plan
Planning: (1) complete action plans for 22 species of iguana; (2) compile and curate public outreach assets that can be modified and used by group members; (3) develop a rapid response protocol for assisting partners impacted by hurricanes.

Network
Membership: maintain and increase the use of the membership listserv by 50%.

Communicate
Communication: (1) publish four annual issues of Iguana Specialist Group Newsletter; (2) increase publications in virtual library by 50 articles; (3) update Invasive Iguana Position Statement.

Scientific meetings: convene four annual meetings.

Activities and results 2018

Assess
Red List
i. Thirteen assessments were completed in 2018 (4 published, 9 in the submission queue held over from IUCN Red List update 2018.2). (KSR #1)

Plan
Planning
i. A Recovery Plan workshop was held for Fijian Iguanas and a draft of the published plan is in progress. In 2018, planning started for the
following two items: a workshop to revise the Species Recovery Plan for Turks and Caicos Rock Iguana (Cyclura carinata) will be held summer 2019; a Species Recovery Plan workshop for Roatan Spiny-tailed Iguana (Ctenosaura oedirhina) and Utila Spiny-tailed Iguana (Ctenosaura bakeri) will be held in November 2019. (KSR #15)

ii. Public outreach assets continue to be collected after an additional request at the 2018 ISG meeting and through the listserve. Next step includes creating an online and dynamic repository. (KSR #18)

iii. Rapid-response technology assets and communication strategies were discussed at the 2018 ISG meeting. There was a strong support response for post Hurricane Maria needs in early 2018 for Dominica. We are investigating means to mobilise funding to activate response to action. (KSR #18)

Network

Membership

i. Sixty-one messages were shared within the ISG listserve during 2018, including contributions by members beyond the Co-Chairs and Program Officer.

Communicate

Communication

i. We have completed the 2017 newsletter and are working on the 2018 newsletter. (KSR #28)

ii. Four hundred and five iguana-related publications added to the Virtual Library in 2018. (KSR #28)

iii. The ISG position statement on non-native invasive iguanas was updated with collective input and is posted on the ISG website. (KSR #28)

Scientific meetings

i. An annual meeting in Fort Worth, Texas (US) was organised and convened by over 50 ISG members; more than 30 presentations were given, and 10 in-depth discussions had by the group; the ISG organised an auction and raised more than US$ 3,000 for our travel grant program; a code of conduct for ISG members was shared; Red List assessments were conducted.

Acknowledgements

We thank the International Iguana Foundation, and their donors, for the financial support of eight projects conducted in 2018, totalling US$ 66,463, focused on iguana conservation in Central America, the Caribbean, Fiji, and the Galapagos. We also acknowledge the efforts of Ty Park for organising the Iguanafest – a fundraiser to support iguana conservation in 2018. We also thank those members who made donations in 2018 to our annual meeting travel fund, contributed to Red List assessments, participated in our meeting auction to raise funds for our travel awards, and participated in other ISG activities.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

| Assess | 1 |
| Plan   | 3 |
| Network| 1 |
| Communicate | 4 |

Main KSRs addressed: 1, 15, 18, 28

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC Marine Turtle Specialist Group (MTSG) is to develop and support strategies, set priorities, and provide tools that promote and guide the conservation of marine turtles, and their ecological roles and habitats.

Projected impact for the 2017-2020 quadrennium
By 2020, we envision vastly improved global and first-ever subpopulation Red List assessments being completed for six of the seven sea turtle species, providing greater focus and clarity to conservation planning for marine turtles.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete global Red List assessments of the Kemp’s Ridley (Lepidochelys kempii), Olive Ridley (Lepidochelys olivacea), and Hawksbill (Eretmochelys imbricata) turtles; (2) complete 11 subpopulation assessments of the Green Turtle (Chelonia mydas).
Research activities: ten Regional Reports (at least partially completed) covering >50% countries where sea turtles occur.

Activities and results 2018
Assess
Red List
i. Kemp’s Ridley assessment was completed in 2018; Northwest Atlantic Ocean Leatherback (Dermochelys coriacea) subpopulation assessment was also updated in 2018. Both assessments will be submitted to IUCN in January 2019. (KSR #1)
ii. Three subpopulation assessments (South Atlantic, North Indian Ocean, Central North Pacific) completed in 2018. They will be submitted to IUCN in January 2019. (KSR #1)

Summary of activities 2018
Species Conservation Cycle ratio: 1/5
Assess 2
Main KSRs addressed: 1
KSR: Key Species Result
Hatchlings of Critically Endangered hawksbill sea turtles (*Eretmochelys imbricata*) in a nesting beach at Bonaire, Caribbean Netherlands

Photo: Bruce Hood

Hatchling of Critically Endangered hawksbill turtle (*Eretmochelys imbricata*) about to enter sea water for the first time at Bonaire, Caribbean Netherlands

Photo: Bruce Hood
Mission statement

Knowledge of the conservation status of monitor lizards (Varanus spp.) is essential for the formulation of appropriate conservation measures that would also support the protection of demarcated ecosystems. In gaining this knowledge, it is elementary to work hand in hand with national authorities and local communities.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we wish to have greatly improved networking with Monitor Lizard Specialist Group (MLSG) members to reach the following goals, as a baseline for achieving the resulting impacts:

Goal 1: compile a species reference and image database including information on the distribution of natural history traits, population status and threats of single species. Impact 1: development of more efficient and accurate communication and sharing of current data on the species among group members.

Goal 2: nomination of new members to the group, particularly from range states in Africa and Asia. Impact 2: enrichment of knowledge and refinement of, e.g. national assessments.

Goal 3: continuing investigation of the taxonomic status of several species/species groups with unresolved diversity. Impact 3: establishment of regional species management plans, e.g. based on Evolutionary Significant Units (ESUs).

Goal 4: initiation of field studies, particularly on species from insular Southeast Asia and New Guinea, due to uncertainties regarding population densities and conservation status of wild populations, in cooperation with local students and scientists. Impact 4: rising public awareness for the species group, and reduction in current uncertainties to improve assessments of the conservation status of Varanus species.

Goal 5: establishment of collaborations with scientific/management authorities to improve current management schemes to maintain the viability of species/populations. Impact 5: improvement and implementation of conservation measures together with authorities of range states that harbour Varanus species.

Goal 6: based on collaborative projects, the inclusion of non-detriment findings (NDFs) and evaluation of other mechanism tools to assess the threat status of a species, e.g. environmental vulnerability scores and refining population viability analyses (PVAs). Impact 6: see impact 4 (reduction of uncertainties).

Targets for the 2017-2020 quadrennium

Assess

Red List: completion of all assessments and updating earlier assessments (e.g. Varanus komodoensis).

Research activities: support research in monitor lizards, especially early-career researchers from range states.

Network

Membership: growth of the Specialist Group by invitation of new members.

Scientific meetings: organisation of the Second MLSG Meeting.

Communicate

Communication: (1) production of an identification guide for customs and authorities of all monitor lizard species involved in the pet and leather trade; (2) provide essential information about all monitor lizard species via our homepage.
Technical advice: (1) support CITES authorities, customs officers and other organisations entrusted with law enforcement and conservation of monitor lizards worldwide by providing expert knowledge from our Specialist Group.

Activities and results 2018

Assess
Red List
i. Of 81 recognised species, currently 53 have been assessed and reviewed by several MLSG members. (KSR #1)

Research activities
i. We commented on and improved a proposal for an application by a Dutch-Indonesian student to the National Geographic early career grant, with the aim to prepare a PhD project with exploratory trips to New Guinea to evaluate the conservation status of *Varanus macraei*, which is a target-species of the international pet trade. We also wrote an endorsement letter for our MLSG member K.M. Mijanur Rahman for a project on *Varanus* spp. from Bangladesh for a National Geographic Society Request for Proposals (RFP) grant. (KSR #12)

Network
Membership
i. Invitation of further members to the Monitor Lizard Specialist Group from range states of varanid lizards, i.e., Benin, India, Australia, and non-range states, such as Austria and Spain.

Scientific meetings
i. A second MLSG meeting to be held in Indonesia was discussed at the inaugural meeting in 2015; however, in December 2016 we were advised to have the meeting in another location due to administrative/bureaucratic constraints. Alternatively, Sri Lanka was proposed, but this plan was not in favour of all members.

Communicate
Communication
i. The Federal Agency for Nature Conservation in Germany finally launched the project to compile an Identification Guide of all monitor lizard species involved in the pet and leather trade for customs, enforcement officers and stakeholders; this project is carried out by the two Co-Chairs. (KSR #28)
ii. We amended and improved the MLSG website. (KSR #28)

Technical advice
i. We provided information on availability and breeding success of *Varanus kingorum* for the local German CITES authority in Hannover. In addition, we provided expert knowledge on *V. exanthemticus* and *V. timorensis* for the 30th CITES Animals Committee meeting on behalf of IUCN, answered a request to distinguish and identify *Varanus* skins from iguanid skins by Dutch CITES authorities, and identified three illegally imported Philippine *Varanus* spp. on behalf of the airport customs in Dresden, Germany. We were asked by IUCN for our opinion on the taxonomic validity of two recently described and revalidated monitor lizard species, viz. *V. semotus* and *V. dourrha*. Moreover, we provided a critical review of a document entitled “Welfare Principles for Reptiles in Trade - A guide for Stakeholders”, that was not approved, and contributed information and photos of monitor lizards to a blog on illegal wildlife trade (http://preview.shorthand.com/VFcKsYFOqV9sBLxEx) on the occasion of the Illegal Wildlife Trade Conference in London (https://www.gov.uk/government/topical-events/london-conference-on-the-illegal-wildlife-trade-2018). (KSR #26)

Acknowledgements

At this stage, we thank the Federal Agency for Nature Conservation in Germany, which recognised the need to produce an Identification Guide of all *Varanus* spp., a reptile group that is highly sought after within the international commercial trade.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

Assess 2

Network 2

Communicate 3

Main KSRs addressed: 1, 12, 26, 28

KSR: Key Species Result
Mission statement
The IUCN Skink Specialist Group aims to complete Red List assessments for all skink species to identify species with high extinction risk, determine the factors underlying high extinction risk, develop strategies to manage risk and improve the status of threatened skink species, and coordinate conservation management for threatened skink species.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we anticipate making substantial progress towards assessing all remaining non-assessed species, coordinating re-assessment of species as their assessments expire, and coordinating the assessment of newly described species. We aim to promote and Foster collaboration among the world’s skink experts, and provide an avenue for regular interaction and collaboration (annual newsletter, website, email list, assessment workshops, skink conferences). We aim to (i) conduct analyses to determine the factors underlying extinction risk in skinks, (ii) identify regions, and taxonomic groups within skinks, that have elevated extinction risk, and (iii) determine the intrinsic and extrinsic factors that are associated with extinction risk in skinks. This will be communicated via scientific publications, regional assessment reports, our website, and through the popular media.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete assessment of all described skink species; (2) complete re-assessment of all skink species with expired assessments; (3) complete assessments for all newly described skink species.
Research activities: (1) assess the current conservation status of skinks globally; (2) determine the biogeography of skinks globally.

Communicate
Communication: launch a website for the specialist group (Internal Grants 2019).

Activities and results 2018
Assess
Red List
i. We are working with our taxonomic coordinator to compile an agreed list of described skink species. Once this is in place, we will develop a plan for assessing the remaining unassessed species. (KSR #1)
ii. We will review the recent re-assessments for New Caledonian skinks. We are working on compiling a list of agreed skink species. This will be used as the starting point to determine what skink assessments have expired, or are due to expire, and these will be prioritised for re-assessment in the next 3 years. (KSR #1)
iii. We have set up Google Scholar and Web of Science alerts to inform us of new skink papers (including taxonomic papers). All Specialist Group members have also been requested to email new taxonomic papers to the Chair, and we have outlined to Specialist Group members the key information to include in taxonomic descriptions so that Red Listing of newly described species can be fast tracked. We will initiate assessments for newly described species soon after their description. (KSR #1)
Research activities

i. The lead authors have prepared a plan and outline for a scientific paper on current conservation status of skinks globally. (KSR #4)

ii. The lead authors have prepared a plan and outline for a scientific paper on the biogeography of skinks globally. (KSR #4)

Communicate

Communication

i. The proposed structure for the website of the Skink Specialist Group has been developed. (KSR #28)

Acknowledgements

Monash University (School of Biological Sciences), and Tel Aviv University (Steinhardt Museum of Natural History, and School of Zoology).

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 4, 28

KSR: Key Species Result
Mission statement
The Mission of the IUCN SSC Tortoise and Freshwater Turtle Specialist Group (TFTSG) is to identify and document threats to the survival of all species of tortoises and freshwater turtles, and to help catalyse conservation action to ensure that none become extinct and that sustainable populations of all species persist in the wild.

Projected impact for the 2017-2020 quadrennium
The TFTSG is in the process of assessing or reassessing all species of tortoises and freshwater turtles; we expect to have completed these assessments by mid-2020. These assessments will allow us to focus our attention, grant funds and new projects on species whose status was not as clearly understood until now.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete regional Red List assessments (Asia, South America, Madagascar and Mexico/Central America; 50% total species assessed).
Research activities: (1) publish “The top 25 world’s rarest tortoises and freshwater turtles”; (2) publication of a top tier scientific journal article analysing patterns of extinction risk for chelonians; (3) encourage publications by other TFTSG members.

Plan
Planning: planning and publication of global/regional action plans.

Act
Conservation actions: site visits to conservation projects for species of concern.

Network
Membership: increase international and gender diversity within TFTSG.
Communicate
Communication: increase visibility of TFTSG through public lectures and fundraising.

Activities and results 2018
Assess
Red List
i. We held a Red Listing Workshop at Singapore Zoo in February 2018; 35 participants attended and 93 species were assessed. Results are pending, and a new Action Plan for Asia is in preparation. (KSR #2)

Research activities
i. We published Turtles in Trouble: The World’s 25+ Most Endangered Tortoises and Freshwater Turtles – 2018 February 2018. (KSR #43)

Plan
Planning
i. Publication of global/regional action plans is in progress, expected by late-2019. (KSR #15)

Act
Conservation actions
i. Nine site visits in the US and overseas in 24 months so far. (KSR #32)

Acknowledgements
We thank the Turtle Conservation Fund for helping with some of the Chair’s activities; the Turtle Conservancy which funded some of the Chair’s site visits; and the Turtle Survival Alliance.
Summary of activities 2018

Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 2, 15, 32, 43

KSR: Key Species Result
Mission statement

The Viper Specialist Group (VSG) is a platform from which conservation biologists can work to increase our scientific understanding of viper biology and can implement conservation actions to prevent declines and extinctions.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we will have strengthened the organisation and effectiveness of the Viper Specialist Group in order to have a more meaningful impact on the conservation of vipers globally. We will do that by supporting the individual activities of the members, increasing the membership, repositioning the VSG officers, continuing to publish the VSG newsletter, launching a new website, reactivating the presence of the VSG in social media, continuing to support Red List assessment activities, participating more in academic meetings to network with academic institutions, zoos, NGOs and other actors interested in the conservation of vipers, continuing to explore the possibilities to purchase land for the conservation of vipers, and publishing scientific and divulgative work done on vipers, among other things.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) complete Red List assessments for as many species of vipers in the world as possible; (2) complete assessments for European and North Asian vipers; (3) consider the assessment of Montivipera kuhrangica (Kuhrang Mountain Viper) for the IUCN Red List.

Research activities: (1) identify priority sites for the conservation of vipers; (2) identify Black-headed Bushmaster (Lachesis melanocephala) distribution in relation to human presence; (3) promote the creation of areas for the conservation of vipers in each region; (4) update the distribution maps for vipers in the Western Hemisphere; (5) obtain missing ecological information for poorly known viper species in Mesoamerica; (6) project the impact of climate change on selected species of vipers in Mesoamerica.

Plan

Planning: (1) define regional priority species for European and North Asian vipers; (2) develop a Viper Action Plan with specific actionable items; (3) complete and publish the VSG Strategic Plan; (4) complete conservation action plans for at least 50% of VSG regions.

Policy: (1) support the proposal to include the Spider-Tail Viper (Pseudocerastes urarachnoides) in CITES Appendices in Iran; (2) support the in-country Memorandum of Understanding regarding the harvesting of vipers in Iran.

Act

Conservation activities: define regional priority species for European and North Asian vipers.

Network

Document review: identify knowledge gaps in species assessments.

Membership: increase representativeness in membership.

Synergy: develop effective partnerships between zoos and the VSG.

Communicate

Communication: (1) create a webpage about the VSG with taxonomic updates to make this information more widely available; (2) continue to publish the Viper Specialist Group newsletter;
(3) restructure the editorial board of the newsletter; (4) create outreach materials that can be customised by region for living with vipers; (5) increase the efficiency and amount of internal and external communication; (6) implement subpages for each region in the VSG website.

Scientific meetings: (1) determine how to develop and implement focal species initiatives; (2) hold regular virtual meetings among the Regional Coordinators; (3) hold at least one in-person meeting with most of the Regional Coordinators in this quadrennium.

Activities and results 2018

Assess

Red List

i. Johannes Penner, our Red List Authority Coordinator, has been supporting Phil Bowles with all the questions and inquiries for vipers. The assessments for all species are nearly completed; we plan to have them all on the Red List by next year. (KSR #1)

ii. The members that were behind the assessment of Montivipera kuhrangica did not follow it through and we did not complete the evaluation. However, the species will be evaluated by next year with all the other reptiles remaining to assess. (KSR #2)

Research activities

i. A map of updated Black-headed Bushmaster distribution was generated. (KSR #12)

ii. Following the success of 2018, when the Rainforest Trust provided some funding to the Endangered Wildlife Trust for scoping a protected area for Bitis albanica (Albany Adder), we want to encourage something similar for other regions. We have identified several areas in Mexico that could serve for this purpose. (KSR #43)

iii. We generated new maps for viper distribution in the Western Hemisphere using the information obtained from visits to many Collections in Mesoamerica and North America, and a few in South America, and from information in Collections databases available on the internet. (KSR #12)

iv. We are still in the process of obtaining ecological information for poorly known viper species in Mesoamerica, and plan to have the results published next year. (KSR #12)

v. We selected two species from the several that were potentially available from Mesoamerica to project the impact of climate change and have nearly obtained the results of the climate impact. We will use these species as pilots and, depending on the results, will continue with more species. (KSR #32)

Plan

Planning

i. We want to enlist the help of the membership to define regional priority species for European and North Asian vipers and generate a better action plan. (KSR #15)

ii. The Deputy Chair has made advances with the VSG Strategic Plan, and we are close to having a first draft for all the regions in the second semester of 2019. (KSR #31)

iii. The Deputy Chair has made advances to complete and publish regional VSG Strategic Plans, which will contain action plans for the regions with better and more complete information. (KSR #31)
Environmental authorities in rattlesnake conservation study area in Mexico
Photo: Ernestina Meza-Rangel

Cerrophidion tzotzilorum, a Meso American pitviper with a small distribution area
Photo: Jesús Sigala
Network

Document review
i. Marcio Martins, the South American Regional Coordinator, published a book about snakes on islands and is preparing a publication about conservation and ecology of viperid snakes on islands. This will be taken into account for the action plan for viperid snakes.

Synergy
i. Stephen Spear moved to The Wilds, securing a way to develop more effective partnerships with zoos.

Communicate

Communication
i. We bought a domain, web hosting and web constructing software with donated funds, and created a new website for the group in the GoDaddy platform. However, we are in the midst of moving that platform to a new domain. (KSR #28)

ii. There was no agreement on continuing the publication of the newsletter, but we will publish a newsletter in 2019 and decide if we want to continue working with the publication of the bulletin. (KSR #28)

iii. The proposal to attempt to convert the newsletter into a more formal publication outlet (similar to a peer-reviewed journal), was not received well by several Regional Coordinators, because of the increase in workload; however, we agreed to discuss it further and decide once we restart the publication of our regular newsletter. (KSR #28)

iv. We have not yet produced outreach materials that can be customized by region for living with vipers, but hope to make some advances by the end of 2019. (KSR #28)

v. Increasing the efficiency and amount of internal and external communication was partially achieved, as we have not yet changed our communication channels or frequency of meetings. (KSR #28)

vi. We created subpages for each region on the new VSG website (viperspecialistgroup.org). However, we are moving that website to another place and will restructure it as it contained information that did not comply with the personal data policies of IUCN. (KSR #28)

Scientific meetings
i. We had two regular virtual meetings among the Regional Coordinators in 2018.

ii. We are considering having a face-to-face meeting with most of the Regional Coordinators in this quadrennium, either at the World Congress of Herpetology in New Zealand in 2020 or in a country suggested by any Regional Coordinator, based on availability of funds.

Acknowledgements

We have received economic support from Universidad Autónoma de Aguascalientes and Orianne Society and invaluable guidance and support from the IUCN Species Survival Commission, particularly Orlando Salamanca, Bibiana Sucre and Jon Paul Rodriguez. Thanks also to The Wilds, University of Freiburg, Rainforest Alliance, University of Nis, San Diego State University, Nanjing Forestry University, Bangor University, Environmental Agency – Abu Dhabi, University of the Western Cape and University of São Paulo.

Summary of activities 2018

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<td><strong>Network</strong> 2</td>
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Main KSRs addressed: 1, 2, 12, 15, 26, 28, 31, 32, 43

KSR: Key Species Result
Mission statement
In process of creation.

Projected impact for the 2017-2020 quadrennium
Detailed status review of all six Asian species of bustard, and enumeration and promotion of appropriate necessary interventions. Consultation with Rajasthan officials over the preservation of the Great Indian Bustard (Ardeotis nigriceps). Continuing programme of research on the Asian Houbara (Chlamydotis macqueenii).

Targets for the 2017-2020 quadrennium
Assess
Red List: feed information into Red List reassessments of all bustard species. Research activity: (1) inspire immediate management interventions on a grand scale for all six species of Asian bustards; (2) generate key data on Asian Houbara (Chlamydotis macqueenii).

Act
Technical advice: provide advice on the conservation of the African Houbara (Chlamydotis undulata) in Lanzarote.

Communicate
Communication: (1) deliver weekly news and research output updates; (2) create a website for the Asian Houbara project.

Activities and results 2018
Assess
Red List
i. Red List reassessments of all bustard species are ongoing. (KSR #2, 4)

Research activity
i. A large and detailed multi-authored paper was published and widely circulated to promote a better understanding of threats to the species and the interventions needed to reduce the threat. (KSR #12)
ii. Generation of key data on the Asian Houbara is ongoing. (KSR #12)

Act
Technical advice
i. Policy advice on the Asian Houbara continues. (KSR #27)

Communicate
Communication
i. A weekly news and research output update is provided. (KSR #28)
ii. A website for the Asian Houbara project has been created and launched. (KSR #28)

Acknowledgements
I would like to thank Rachel Hoffmann for her dedicated and generous help, for always being there for advice and guidance when needed. I would also like to thank Sara Hallager for her commitment to the excellent weekly news round-up, and BirdLife for its general support.
Summary of activities 2018

Species Conservation Cycle ratio: 3/5

Assess  3  ||
Act   1  |
Communicate  2  ||

Main KSRs addressed: 2, 4, 12, 27, 28

KSR: Key Species Result

Lesser Florican (Sypheotides indicus), Endangered
Photo: Gobind Sagar Bhardwaj
Mission statement

The main aim of the Cormorant Specialist Group (CSG) is to facilitate the exchange of information on both ecology and biology of the ca. 30 different species of cormorants, shags and darters worldwide, and on resolving possible conflicts between cormorants and human fisheries’ interests. The CSG was officially founded in 1993 and has always been aware that cormorants constitute an ecologically important group of species, as predators indicative of the water system they are part of, either freshwater or marine. Due to the continuous discussion about the perceived damage by the Great Cormorant, most attention of our group has been dedicated to this issue. However, rather than focusing on the management issues of this species alone, we feel the necessity to highlight the existence of other, rare and vulnerable species. By comparing the extensive knowledge that has been collected on the Great Cormorant, we hope to apply this for the better understanding of the other species and combine the knowledge with other fish-eating birds like the pelicans.

Projected impact for the 2017-2020 quadrennium

Following a series of European Union (EU) based projects to which the CSG contributed, the period 2017–2020 will be used to compile scientific and outreach documents and papers about the Great Cormorant (Phalacrocorax carbo). These will include: (1) substantial contribution to the reporting in the EU project INTERCAFE (2017) and (2) compilation and editing of a special issue about the Great Cormorant in the journal Ardea (30 papers, 2020). Organisation of two scientific and group meetings in Kerkini (Greece, 2017) and Tulcea (Romania, 2020) are also a priority.

Targets for the 2017-2020 quadrennium

Assess

Red List: start Red List work on cormorants, shags and darters; complete first species assessment for the present state of the global populations of cormorants and shags. Research activities: (1) disseminate data, reports and scientific papers on the status of Great Cormorant in Europe and beyond, with a focus on ecological studies and information about the interaction with fisheries; (2) organise Pan-European counts of breeding census and winter distribution, based on a systematic 50*50 km grid; (3) organise and maintain a database on colour ring projects on cormorants and shags in Europe; (4) publish Working Group reports of the EU project INTERCAFE about Great Cormorants and fisheries.

Act

Conservation actions: (1) contribute to conservation and management issues for Great Cormorants in Europe; (2) contribute to conservation of Socotra Cormorants (Phalacrocorax nigrogularis) in the United Arab Emirates and King Cormorants in New Zealand. Technical advice: provide technical advice on reports focused on guidance to managers, policy makers and conservationists who are dealing with the long-lasting human-wildlife conflict of Great Cormorants.

Network

Membership: (1) expand membership to experts on species other than Great Cormorant; (2) recruit members and contacts working in Austral-Asian countries, Africa and the Americas. Synergy: enhance interaction with the SSC Pelican Specialist Group.
Communicate

Communication: (1) maintain the official website of the IUCN Wetlands International Cormorant Research Group (CRG) website; (2) publish the newsletter and Cormorant Research Group Bulletin.

Documents review: publish a special issue about cormorants in the journal Ardea.

Scientific meeting: organise international scientific meetings on cormorants in Greece (2017) and Romania (2020).

Activities and results 2018

Assess

Red List

i. Some preparatory activities on global Red List work in cormorants, shags and darters is underway. (KSR #1)

Research activities

i. Our research activities mainly concern Great Cormorants. Besides Pan-European census of breeding and wintering birds, continuous effort is spent on colour ring projects aiming at better understanding movements and survival (http://cormorants.freehostia.com/co_rings/cormo_cr_project3.htm). Long-term data on food choice in some areas are informative about changes in fish populations, which in turn depend on both water quality issues (nutrients, pesticides) and fisheries (both sports and commercial). (KSR #43)

ii. Hard copies of reports from the EU project INTERCAFE about Great Cormorants and fisheries have been widely disseminated. (KSR #43)

Act

Conservation actions

i. Contributed significantly to conservation and management issues for Great Cormorants in Europe in three EU projects, Cost action INTERCAFE and the projects CorMan and CorDist, providing ecological and Pan-European census data. (KSR #43)

ii. We are raising awareness about the conservation aspects of Socotra Cormorants (UAE) and King Cormorants (New Zealand).

Technical advice

i. With the contributions of many members of the group, we added significantly to five reports which were distributed widely as hard copies recently (see www.intercafeproject.net/COST.html). These reports, together with input in the EU projects CorMan and CorDist, provide important guidance to managers and policy makers but also conservationists who are dealing with the long-lasting human-wildlife conflict of Great Cormorants. These products served to many as an important background resource and helped to alleviate the conflict. (KSR #26, 27)

Communicate

Communication

i. The CRG website can be found at: http://cormorants.freehostia.com. (KSR #28)

ii. Newsletters are regularly issued, on average once a year, aiming at providing news, developments on status and conservation issues of cormorants at a global level. Newsletter No. 6 was issued in 2018. (KSR #7)

iii. The Cormorant Research Group Bulletin, which is now appearing in a digital format only, is designed to allow small publications and raise awareness about species conservation.

Documents review

i. Twenty-five manuscripts for publication in the special issue of Ardea are in progress; five remain to be written. (KSR #43)

Acknowledgements

The EU-projects INTERCAFE and CorMan provided additional funds for carrying out Pan-European censuses on Great Cormorants, meeting up facilities and publication of scientific papers. The scientific meeting in Kerkini 2017 was sponsored by the Hellenic Agricultural Organization (DEMETER), Forest Research Institute, Lake Kerkini Management Authority, Society for the Protection of Prespa, Regional Unit of Serres, Municipality of Serres, Municipality of Sintiki, Environmental Education Center of Poroia, Axios Delta Management Authority. Thanks to the institutions of UK Centre for Ecology & Hydrology (CEH), Edinburgh; Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA), Milano; University of Natural Resources and Life Sciences (BOKU), Vienna; and Rijkswaterstaat, Lelystad for supporting the core team of the Specialist Group.

Summary of activities 2018

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Main KSRs addressed: 1, 7, 26, 27, 28, 43

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC Crane Specialist Group is to promote the study of cranes and their threats, develop and disseminate solutions to those threats and enhance conservation of cranes and their habitats worldwide.

Targets for the 2017-2020 quadrennium

Assess
Research activities: (1) publish and disseminate the Cranes and Agriculture Handbook; (2) estimate the impact of poisoning on threatened crane species and identify strategies; (3) implement the 1000 Crane Tracking Project; (4) set up the Research and Monitoring Working Group, starting with crane tracking and movement studies.

Plan
Planning: (1) publish the Crane Conservation Strategy; (2) implement the Crane Conservation Strategy; (3) develop a user friendly resource of the Cranes and Agriculture document.

Policy: (1) advocate for reduced poisoning at hot spots; (2) secure or upgrade level of legal protection for three or more crane sites.

Act
Conservation actions: (1) implement the Single Species Action Plan for Grey Crowned Cranes (Balearica regulorum); (2) implement the Conservation Plan for the Eastern Population of the Siberian Crane (Leucogeranus leucogeranus); (3) estimate the impact of power lines on threatened crane species and work with power utilities in high impact areas to reduce/mitigate their impact.

Network
Capacity building: complete four field training courses.
Synergy: hold regular meetings of species level networks for Red-crowned Crane (Grus japonensis), White-naped Crane (Antigone vipio), Hooded Crane (Grus monacha) and Black-necked Crane (Grus nigricollis).

Activities and results 2018

Assess
Research activities
i. The IUCN Crane Specialist Group published Cranes and Agriculture: A Global Guide for Sharing the Landscape. This has been distributed widely in electronic and hard copy format to crane, waterbird and flyway networks across the world. It brings together published literature, experiences and lessons synthesised by 59 authors from 14 countries around the world into eight chapters and 18 case studies. (KSR #43)

ii. Several poisoning incidents of Blue Cranes (Anthropoides paradiseus) and Grey Crowned Cranes have been investigated in South Africa by local NGOs and the relevant government conservation agency. Almost all the cases investigated confirmed organophosphates as the cause of poisoning. Unfortunately, no arrests or prosecutions were made in connection with any of the poisoning incidents. Reports in the media of deaths of Red-crowned and Siberian Cranes in China from eating poisoned grains indicate that poisoning is an important mortality factor requiring closer attention. (KSR #32)
ii. We have established that Grey Crowned Cranes are being poisoning around the South Luangwa National Park in Zambia due to the freely available access to agrochemicals for the cotton industry. As a result, we developed a project in collaboration with local stakeholders to address this threat and are looking for funds now to implement the project. (KSR #27)

Policy

i. Documents are completed and under review to upgrade the core Siberian Crane breeding area at Kytalyk from a provincial level wildlife refuge to a Russian Federation level national park. Negotiations are in progress with the Ministry of Environment and Tourism to upgrade the core breeding area for White-naped Cranes in the Khurkh and Khuiten River Valleys in Mongolia to a federal level wildlife reserve. In South Africa, over 32,000 ha of key crane habitat for breeding and foraging of Blue, Grey Crowned and Wattled Cranes (Bugeranus carunculatus) has been legally protected through South Africa’s National Environmental Management: Protected Areas Act. This legislation allows for the legal protection of important conservation sites through a legally binding agreement between the landowner and government. The land in most instances can remain a working landscape, provided it is managed effectively for biodiversity as well. (KSR #27)

Plan

Planning

i. The IUCN Crane Specialist Group is nearing completion of the updated Crane Conservation Strategy for publication and distribution in 2019. This comprehensive report assesses 19 direct and 8 indirect threats to cranes and defines objectives and priority actions to address these threats over the next five years. It also provides updated assessments of the status and conservation priorities for each of the 15 species of cranes, bringing together expertise of more than 200 specialists. (KSR #15)
**Act**

**Conservation actions**

i. The first International Grey Crowned Crane Working Group meeting of the African-Eurasian Migratory Waterbird Agreement will be held in July 2019 in Uganda. In the interim, significant progress has been made on the action plan. The International Crane Foundation/Endangered Wildlife Trust (ICF/EWT) Partnership has now established community-based crane conservation projects in the Drakensberg and Highveld regions of South Africa, around the Kafue Flats and Liuwa Plain National Park in Zambia, in western Kenya, in south-western Uganda and around Rugezi Marsh, Nyabarongo and Akanyaru Wetlands in Rwanda, with regional offices set up in South Africa (in partnership between the ICF and the EWT), Zambia (in partnership between the ICF/EWT Partnership and BirdWatch Zambia) and Uganda (in partnership between the ICF/EWT Partnership and Nature Uganda). Together with the ICF/EWT Partnership, Ezemvelo KwaZulu-Natal Wildlife conducted the 23rd aerial survey of cranes in KwaZulu Natal, once again showing an increasing trend in Grey Crowned Crane numbers. Wamiti Wamyoika, under the National Museums of Kenya, is in the middle of his PhD aimed at better understanding Grey Crowned Cranes around Lake Ol’ Bolossat in Kenya, and co-led with Nature and Biodiversity Conservation Union (NABU) a National Crane Census in Kenya in 2018. In addition, NABU and Crane Conservation Volunteers are collaborating in a community-based project to secure Grey Crowned Cranes around Lake Ol’ Bolossat in Kenya. The Rwanda Wildlife Conservation Association (RWCA) has continued its groundbreaking work on addressing the illegal Grey Crowned Crane...
Network

Capacity building

i. A field training course on the application of hydrology and ground water dependent wetland system assessment and data collection was organised in Mongolia. This was co-hosted by the Wildlife Science and Conservation Center of Mongolia and ICF, and led by two experts from the US Forest Service. (KSR #17)

Synergy

i. A six-country meeting is being planned for migratory Red-crowned, White-naped, Siberian, and Hooded Cranes to be held in China in 2019. An annual meeting by the Black-necked Crane Network assessed progress on research of factors affecting breeding success and incorporating curricula into schools near key sites. (KSR #29)

Acknowledgements

We thank the host organisation, International Crane Foundation, which provided salaries for the Co-Chairs and Programme Officer as well as administrative support, and also the Endangered Wildlife Trust that supported activities by Kerryn Morrison. We also thank well over 200 Specialist Group members who volunteered their time and knowledge for our activities. We would like to also thank the various government departments who assisted us with several of the project activities, and in particular those that resulted in land being secured under the protected area network. We had numerous sponsors for the activities completed in 2017–2018, and we want to thank them all for their support.
Mission statement
The mission of the Diver/Loon Specialist Group is to contribute to increase current knowledge on the ecology of all five species across their entire geographic range of distribution and promote long-term conservation.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision that the population and distribution of all species of divers/loons will remain strong. Breeding populations are generally in protected areas (although stressors such as mercury pollution and oil drilling may have impacts in some areas), while wintering populations are potentially in conflict with stressors associated with marine ecosystems (e.g. oil spills, cyanobacteria outbreaks, degraded fisheries). To assess the status of each of the five loon species, an international symposium will occur in late 2022 (see: http://www.briloon.org/2020-loons), followed by a “State of Global Loon Populations” publication in a special issue of a peer-reviewed journal. A global stressor of particular concern for global loon populations is mercury. That concern will be assessed through the international symposium as well as through a new initiative to better understand mercury exposure and effects on loon populations and other IUCN SSC Groups.

Targets for the 2017-2020 quadrennium

Act
Conservation actions: establish 1-2 new breeding population of Common Loons in Wyoming, US.

Network
Synergy: initiate and network with other SSC Groups the new project called “The Global Footprint of Mercury: Understanding the patterns of exposure and effects to biota”.

Communicate
Scientific meetings: complete one international diver/loon conference.

Activities and results 2018

Act
Conservation actions
i. Assessment of one translocation site where 24 loons have been translocated found 5 individuals had returned and one territorial pair has formed. (KSR #24, 27)

Communicate
Scientific meetings
i. Scientific and local host committees are established for the international diver/loon conference. (KSR #18, 20, 25, 28, 29)

Acknowledgements
We would like to thank the Loon Symposium Steering Committee: Deb McKew, Lucas Savoy, Jim Paruk and Mark Pokras, and interest by the Seaduck Joint Venture. Thank you to Deb McKew for organising the April 2019 kick-off event, which featured the work of nine professional artists who exhibited a selection of species listed as Endangered on the IUCN Red List.
Summary of activities 2018

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<td>Act</td>
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<td>Communicate</td>
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Main KSRs addressed: 18, 20, 24, 25, 27, 28, 29

KSR: Key Species Result
Mission statement
The Duck Specialist Group (DSG) works to generate and disseminate knowledge and best practice between members and others with an interest in duck conservation and management, and to ensure priority issues for duck conservation are identified and addressed.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envisage: (1) significant improvements in the implementation of action plans for key threatened taxa (working with partners including the Threatened Waterfowl Specialist Group): Baer’s Pochard (Aythya baeri), Scaly-sided Merganser (Mergus squamatus), Long-tailed Duck (Clangula hyemalis) and Velvet Scoter (Melanitta fusca); (2) improved knowledge of the conservation status of ducks in key flyways, particularly the East Asian-Australasian flyway; (3) improvements in sustainable management of huntable ducks in Europe, especially Common Pochard (Aythya ferina), through collaborative projects with game management organisations and authorities; (4) improved understanding of the scale of duck hunting in other global flyways; (5) development of a more diverse membership, particularly in under-represented regions such as South America and Australasia; (6) maintenance of communication tools; (7) provision of guidance on best practice for fieldwork methods, particularly telemetry techniques.

Targets for the 2017-2020 quadrennium
Assess
Research activities: (1) support the development of monitoring in East Asia; (2) support the development of monitoring in Africa; (3) status assessment of migratory ducks in the East Asian-Australasian flyway; (4) status assessment process embedded into the East Asian-Australasian Flyway Partnership; (5) support the development of national duck wing schemes in Europe; (6) support the development of national hunting bag monitoring schemes in Europe; (7) undertake assessment of the status of global duck hunting; (8) support Arctic seaduck monitoring in East Asia.

Plan
Planning: (1) support the implementation of action plans for Baer’s Pochard, Scaly-sided Merganser, Long-tailed Duck and Velvet Scoter; (2) develop action plan for Common Pochard with the African-Eurasian Migratory Waterbird Agreement (AEWA).

Network
Capacity building: develop guidance on the use of telemetry techniques for ducks.
**Activities and results 2018**

**Assess**

**Research activities**

i. Data management and trend analysis training is ongoing in the Yangtze floodplain, China (a key wintering region for migratory ducks), with the next coordinated survey planned for January 2020. Baer’s Pochard Task Force is supporting surveys for Baer’s Pochard which also supports baseline monitoring of all water-birds. (KSR #12)

ii. The status assessment of migratory ducks in the East Asian-Australasian flyway was completed as a paper for the East Asian-Australasian Flyway Partnership (EAAFP) 10th Meeting of Partners (MOP10) in December 2018, in collaboration with Wetlands International, Wildfowl and Wetlands Trust and WWF China. The paper supported the establishment of a formal status assessment process for all EAAF migratory waterbird populations under EAAFP, which will begin at MOP11. (KSR #12)

iii. A new duck wing scheme has been initiated in the UK by the British Association for Shooting and Conservation (BASC) in 2018/19, and translation of the Office National de la Chasse et de la Faune Sauvage (ONCFS) wing guide into Italian and Finnish is underway. (KSR #33)

iv. Work is ongoing to develop advanced statistical methods, establish national schemes in UK and France, and work with AEWA to prioritise huntable duck species for flyway-scale harvest management. (KSR #33)

v. Planning is underway for an assessment of the status of duck hunting in the East Asian-Australasian flyway. (KSR #33)

**Plan**

**Planning**

i. Action Plans for Baer’s Pochard and Scaly-sided Merganser: good progress with a number of actions, as well as the first international workshop on Baer’s Pochard held in China in March 2018 and third international Scaly-sided Merganser workshop held in China in December 2018. Action Plans for Long-tailed Duck and Velvet Scoter: Velvet Scoter action plan adopted by AEWA Parties in 2018 and the first European Seaduck International Working Group meeting will be held in Germany in March 2020. (KSR #31)

**Summary of activities 2018**

Species Conservation Cycle ratio: 2/5

| Assess | 5
| Plan | 1

Main KSRs addressed: 12, 31, 33

KSR: Key Species Result

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**Acknowledgements**

We would like to thank the following long-term supporters of the Duck Specialist Group: the Wildfowl and Wetlands Trust, Office National de la Chasse et de la Faune Sauvage and the Institute of Biological Problems of the North. We would also like to thank the following key project supporters: BANCA (Myanmar), Beijing Forestry University, Hengshui National Nature Reserve, Hengshui University, KfW Entwicklungsbank, Wildlife Conservation Society and WWF China. Scottish Natural Heritage, Tour du Valat, Scottish Ornithologists’ Club, RPS Group and Bloomsbury Publishing sponsored the 5th Pan-European Duck Symposium in 2018.
Mission statement
The mission statement of the Wi-IUCN SSC Flamingo Specialist Group (FSG) is to actively promote flamingo research and conservation worldwide by developing conservation action plans for the most threatened species, and by encouraging information exchange and cooperation amongst flamingo specialists, and with other relevant organisations, particularly the IUCN Species Survival Commission (SSC), Wetlands International, Ramsar Convention, WWF International and BirdLife International.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we hope to have succeeded in our aims of re-launching the FSG website and newsletter (as an online publication). We hope to have strengthened and developed links within the membership to identify roles that individuals can play in the running of the FSG. We plan to recruit new members from specific areas of the world (i.e. the Middle East and Asia) and attempt to build our links with existing in-situ flamingo conservation / management / ecology organisations. We aim to build capacity across our membership by encouraging interaction with online forums and across group email discussion, as well as encourage members to submit papers to the new, re-launched newsletter. Finally, we hope to provide a new resource centre of flamingo-centred information (both in and ex situ) in the form of a website, for all (members and non-members) to engage with. Promoting the work of conservation scientists and flamingo biologists will result in increased exposure for these species, and therefore, a better chance of secured populations for the future. We hope that by continuing to support the work of scientists and flamingo biologists in the field, the conservation status of all six species does not deteriorate, and that those species currently Vulnerable or Near Threatened can be more secured in their habitats, so that future assessments of populations show an upward trend in numbers, rather than a decline. The good work currently undertaken with the Andean and Puna Flamingos (Phoenicoparrus andinus and P. jamesi, showing a stable population trend) needs to be monitored, as current Red Lists assessments suggest potential declines due to past poor breeding success and human-caused impacts on populations. Continued observation of mining activities around breeding locations of Lesser Flamingos (Phoeniconaias minor) in East Africa is required, as this is potentially the biggest threat to the largest wild population of this Near Threatened species.

Targets for the 2017-2020 quadrennium
Assess
Green List: assess flamingos as part of the IUCN Green Listing test.

Network
Membership: renew and over-haul membership, including collecting details on individual member roles in FSG.
Proposal development and funding: develop funding opportunities and availability of grants for in situ flamingo conservation. Advertise and promote funding options for in situ flamingo...
conservation and work on the Wildfowl and Wetlands Trust (WWT) small grants fund.

Synergy: (1) identify and recruit a programme officer for the FSG; (2) maintain collaboration with field-based programmes (e.g. Grupo Conservación de Flamencos Altoandinos - Peru / Tour du Valat) and continue to help, support and promote in situ flamingo conservation strategies with those organisations working in the field.

Communicate
Communication: (1) re-launch the Flamingo newsletter in the form of an online scientific publication; (2) develop a new website for the FSG to link to current activities and social media campaigns; (3) build a social media presence across various platforms to promote wider education on flamingo conservation issues, and to use as a platform for fundraising or capacity building.

Scientific meetings: (1) organise a workshop for flamingo keepers to increase awareness of current science in flamingo management (provide information based on best practice to zoo professionals); (2) integrate the role of the FSG with the European Association of Zoos and Aquaria (EAZA) (FSG aims at annual EAZA meetings to encourage links between different flamingo stakeholders).

Activities and results 2018

Assess
Green List
i. Completed Green List assessment. (KSR #11, 12)

Network
Membership
i. Continuing to review membership, but it is a large database to go through.

Proposal development and funding
i. Details on how the FSG will work, previously written by the former FSG chair in 2012, have been recirculated to the FSG’s steering group for comment and update. (KSR #30)

Synergy
i. Still in discussion over the appointment of a programme officer and the role that this person may have in the FSG. Currently, FSG outcomes are being demonstrated by the steering group.
ii. Continue to work with in situ partners and promote their work, which is now more tangible based on the re-launch of the FSG’s journal and the work towards getting the Small Grants Fund active. (KSR #29)

Communicate
Communication
i. The Flamingo journal has been re-launched as an electronic open access publication, available on the FSG’s website. (KSR #28)
ii. FSG’s website is up and running and available at www.flamingo-sg.org. Pages are still to be built and populated but the core of the website is active. (KSR #28)
iii. The FSG Facebook page is now nearly at 5,000 followers and engagement is high, with posts often reaching 1,500 people. (KSR #28)

Scientific meetings
i. A UK flamingo keepers’ workshop was run on 26 July 2018 and attended by ca. 25 delegates. The British and Irish Association of Zoos and Aquariums (BIAZA) certified training means it was accredited for zoo keepers to add to their skills in flamingo husbandry. (KSR #18, 25)

Acknowledgements
We thank the Association of British and Irish Wild Animal Keepers (ABWAK) and ZSL London Zoo for hosting the Flamingo Keepers’ Workshop in July 2018, for providing financial assistance and logistical support. We thank members of the Conservation Directorate at WWT (especially Robin Jones) for help maintaining the FSG’s membership database and email list serve. Finally, we thank WWT IT and media for helping develop the website and for providing the platform for the website. Thanks to former chair Rebecca Lee for assisting with the creation of the basic website layout and providing admin support for content creation. A big thank you to Molly Grace at the University of Oxford for all of her help with trialling the Green Listing process.

Summary of activities 2018
Species Conservation Cycle ratio: 3/5

| Assess | 1 |
| Network | 4 |
| Communicate | 4 |

Main KSRs addressed: 11, 12, 18, 25, 28, 29, 30
Resolutions addressed: WCC 2016 Res 041, WCC 2016 Res 085

KSR: Key Species Result
Mission statement

The Galliformes Specialist Group (GSG) is committed to the worldwide conservation and sustainable management of all native populations of Galliformes species and their habitats.

Projected impact for the 2017-2020 quadrennium

We expect to improve the protection of a suite of Galliformes species in Southeast Asia through a regionally focused action planning approach. This will be designed to influence conservation policy in this region, securing better protection for species and their habitats and leading to population recovery. In addition, we aim to use the expertise of the conservation breeding community together with field conservationists and partners to develop a ‘one plan’ approach that will enhance the population of the Critically Endangered Edwards’s Pheasant (*Lophura edwardsi*, probably our most threatened extant species). Enhanced communications and support provided by the GSG will stimulate new conservation project work on the ground for threatened Galliformes in other regions of the world, designed to raise awareness and improve protection that will ultimately lead to population recovery. We aim to use the green listing process to predict and evaluate success.

Targets for the 2017-2020 quadrennium

Assess

Green List: active participation in the development of the Green List by offering Galliformes species for piloting and being at the forefront of the introduction of the green listing process.

Plan

Conservation activities: production of one regional action plan covering Galliformes species.

Act

Conservation activities: bring together the captive (conservation) breeding community and field conservationists by encouraging the development of more ‘one plan’ thinking towards the conservation of Galliformes.

Network

Proposal development and funding: development and implementation of a proactive scheme for encouraging the Galliformes community to secure funding for the conservation of our species, including provision of a service to review, improve and endorse funding proposals. Synergy: more formalised relationship between GSG and related groups, especially the Grouse Group.

Communicate

Communication: improved communications via online and virtual methods.

Activities and results 2018

Plan

Conservation activities

i. Discussions initiated on developing a regional plan for Myanmar with Nay Myo Shwe (Fauna & Flora International and Friends of Wildlife). No further progress during the year. (KSR #15)

Act

Conservation actions

i. Conservation planning meeting for Edwards’s Pheasant held in Antwerp, December 2018, with both in situ and ex situ members present. We are working towards an integrated conservation plan for this species with in situ partners in Viet Nam. (KSR #31)
ii. Support for research and field work to secure the future for the Green Peafowl in SE Asia, including modelling occurrence probability of the species across the whole of mainland SE Asia to determine focus areas for conservation action; and development of a long-term project in agricultural area of Myanmar to understand and promote local community-based conservation practices (see photos). (KSR #30)

Network
Proposal development and funding
i. GSG endorsement provided for two funding applications, through its own process accessible via the website. Simon (Co-Chair) represents the GSG on the Scientific Advisory Committee for the World Pheasant Association (WPA), which reviewed over 10 funding applications during the year, and also initiated a review of the funding application form and process for WPA, assisted by the GSG. (KSR #30)

Synergy
i. Further improvement of the relationship between the World Pheasant Association (WPA) and the GSG. The Co-Chair (Simon) hosted the WPA annual convention in September at Chester Zoo and reported on the plans for the group. Within GSG, there is a very strong ad hoc Grouse Group. We have tried to be more proactive with the group and our effort in getting several groups to test the Green List on their species has been successful. (KSR #29)

Communicate
Communication
i. We have an active Facebook site, regularly monitored, posts are added on an almost daily basis and we have 867 followers, views typically up to 38 per day, reach on our posts are often more than 200 and up to 1,200; Twitter is regularly used by our membership for news and photos; the GSG website is active; no newsletter produced during the year. (KSR #28)

Summary of activities 2018
Species Conservation Cycle ratio: 4/5

| Plan | 1 |
| Act | 2 |
| Network | 2 |
| Communicate | 1 |

Main KSRs addressed: 15, 28, 29, 30, 31

KSR: Key Species Result

Female green peafowl (Pavo muticus) and four growing chicks, taken near to the village of Pwe Hla in Shan state, Myanmar – which is where we are studying a population that utilises agricultural areas close to forest
Photo: Simon Dowell

The green peafowl survey team in the study area near Nan Kone monastery, Pwe Hla village – left to right: Nay Myo Shwe (FFI Myanmar and Friends of Wildlife), Mr Pom Chit (Pwe Hla village), Dr Simon Dowell (GSG Co-Chair and Science Director, Chester Zoo), Dr Tommaso Savini (King Mongkut University of Technology Thonburi, Thailand), Khin Maung Oo (Pwe Hla Environmental Conservation and Development), Dr Niti Sukumal (King Mongkut University of Technology Thonburi, Thailand)
Photo: GSG archives

Female green peafowl (Pavo muticus) and four growing chicks, taken near to the village of Pwe Hla in Shan state, Myanmar – which is where we are studying a population that utilises agricultural areas close to forest
Photo: Simon Dowell
Mission statement
The Goose Specialist Group (GSG) seeks to strengthen contacts between all researchers of migratory goose populations in the Northern Hemisphere by organising regular scientific conferences, and stimulating research on the dynamics of goose populations.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we will make a revision of current IUCN Red List status of goose species of concern in Europe. Addressing the conservation and management of declining, as well as growing, goose populations in Europe calls for a coordinated flyway approach amongst all range states concerned. To facilitate and implement such an approach, a European Goose Management Platform was established under the African-Eurasian Migratory Waterbird Agreement (AEWA), as called for by the AEWA Parties through Resolution 6.14. By the end of 2020, we expect acceptance of the Platform in most AEWA countries.

Targets for the 2017-2020 quadrennium

Assess
Research activities: to estimate the abundance, status and distribution of natural wild goose populations in the Northern Hemisphere.

Communicate
Scientific meetings: to organise the 18th Conference of the Goose Specialist Group.

Activities and results 2018

Assess
Research activities

i. The review of the abundance, status and distribution of 68 natural wild goose populations in the Northern Hemisphere was published and can be downloaded here: https://www.caff.is/assessment-series/all-assessment-documents/458-a-global-audit-of-the-status-and-trends-of-arctic-and-northern-hemisphere-goose. (KSR #12)

Communicate
Scientific meetings

i. The 18th conference of the Goose Specialist Group was held in March 2018 in Lithuania, where the main results of population assessments were reported. (KSR #28)

Acknowledgements
We thank Anthony D. Fox and James O. Leafloor and all of the authors of the population profiles for collating their text and present data on each of the goose populations presented in the report. Moreover, we want to thank Tom Christensen at the Department of Bioscience Aarhus University, who has supported the idea from its inception and was instrumental in securing funding from the Danish Ministry of the Environment under the programme Danish Cooperation for Environment in the Arctic (DANCEA) and the Nordic Council of Ministers to support this work under the CBMP. Thanks also to Tom Barry, Executive Director of CAFF (Conservation of Arctic Flora and Fauna), for his unfailing support for the publication of this report through its very many challenges, Jana Kotzerka (Bioscience, Aarhus University) for her tireless curation of data, standardisation of figures, graphs and maps, and to Kari Fannar Larusson (CAFF) for final layout and production of the report.
**Summary of activities 2018**

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 12, 28

KSR: Key Species Result

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Birds

Flock of Greater White-fronted geese
Photo: Petr Glazov

Ringing of Barnacle geese on Kolguev Island
Photo: Petr Glazov

Neckbanded Greater White-fronted geese
Photo: Petr Glazov
Co-Chairs
James Kushlan (1)
Clay Green (2)

Red List Authority Coordinator
BirdLife International

Location/Affiliation
(1) Key Biscayne, Florida, US
(2) Texas State University, Department of Biology, San Marcos, Texas, US

Number of members
65

Social networks
Facebook: HeronConservation
Flickr: HeronConservation
Twitter: @HeronCons
Website: www.HeronConservation.org

Mission statement
The mission of the Heron Specialist Group (HSG) is to promote the conservation of herons and their habitats worldwide by encouraging research, inventory, monitoring, and conservation action. To achieve its mission, the HSG maintains worldwide communication linkages among heron specialists, assesses the conservation status of heron populations, provides syntheses of information and action plans for the conservation of heron populations, and otherwise facilitates conservation action on behalf of herons and their habitat.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision significant progress made towards range mapping and status update for all of our species, especially those species under categories Vulnerable, Endangered or Critically Endangered. Through agreements with zoos and other Specialist Groups (e.g. Crane Specialist Group and Stork, Ibis, and Spoonbill Specialist Group) and the 2nd Herons of the World Symposium, the HSG will be better positioned to leverage resources to support species working groups and implementation of various aspects of the conservation action plan.

Assess
Red List: update population status of Egretta rufescens (Reddish Egret) in Meso/Central America (Belize, Guatemala, El Salvador, Honduras).

Plan
Planning: (1) update the Heron Action Plan;
(2) plan for Herons of World Symposium.
Policy: restore functioning of the Waterbird Conservation for the Americas initiative.

Network
Agreements: zoo sponsorship for HSG or species working groups.
Capacity building: coordination of Agami Heron Working Group.
Synergy: (1) connect with the Crane Specialist Group and the Stork, Ibis and Spoonbill Specialist Group to facilitate communications between Specialist Groups and for capacity-building potential; (2) recruit editor and establish editorial board for HSG’s journal (Journal of Heron Biology and Conservation).

Communicate
Scientific meetings: organise next Herons of World Symposium.

Activities and results 2018
Plan
Planning
i. Discussions took place between the Co-Chairs (Kushlan and Green) about the process of updating the Heron Action Plan. We will pursue this in conjunction with the Heron Symposium at the Pan African Ornithological Congress (PAOC) in 2020. (KSR #15)
Policy

i. Clay Green communicated with Sara Schweitzer (US Fish and Wildlife Service) about the status of federal funding for the Waterbirds Chair to represent waterbirds within the North American Bird Conservation Initiative. Several agencies have begun discussions to jointly fund the position. More information will be known by Fall 2019. (KSR #27)

Network

Agreements

i. Discussion with IUCN SSC leadership initiated on possibilities for zoo sponsorship for HSG or species working groups. We will communicate with IUCN SSC and World Association of Zoos and Aquariums (WAZA) to seek potential sponsorship from zoos. (KSR #29)

Synergy

i. Initial contact has been made with other bird Specialist Groups. We are working on a potential joint meeting with HSG and the Stork, Ibis and Spoonbill Specialist Group at the 2020 PAOC meeting. (KSR #29)

ii. HSG recruited Dr. Chip Weseloh to serve as Editor for the HSG journal (*Journal of Heron Biology and Conservation*). Katsutoshi Matsunaga was recruited as Layout Editor. The 2018 volume (Volume 3) was published.

Communicate

Scientific meetings

i. Doug Harebottle, Chip Weseloh and Clay Green submitted a proposal to the Pan African Ornithological Congress (PAOC) for hosting a Heron Symposium at the PAOC meeting in Victoria Falls, in November 2020. The proposal was accepted and planning is underway. (KSR #28)

Acknowledgements

We thank Chip Weseloh and Katsutoshi Matsunaga for volunteering to serve as Editor and Layout Editor for the HSG’s journal. We thank Doug Harebottle for taking the lead on organising the next Herons of the World Symposium and communicating with the Pan African Ornithological Congress local meeting committee. We thank Sara Schweitzer for representing herons and waterbirds in general and her ongoing efforts in trying to re-establish the funding for Waterbirds for the Americas chair (US Fish and Wildlife Service). We thank Kelli Stone (Reddish Egret Working Group) and Anna Stier (Agami Heron Working Group) for their ongoing efforts as chairs of their respective species working groups.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 15, 27, 28, 29

KSR: Key Species Result
Mission statement
The Hornbill Specialist Group (HSG) aims to use our combined knowledge and skills for evidence-based conservation action of hornbills and their habitats.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, the HSG will have definitive conservation plans in place for all Critically Endangered (CR) and Endangered (EN) hornbill species in both Asia and Africa, with implementation agencies supported by the HSG to meet their targets. Asia already has a strong and active hornbill conservation network, and by 2020 we aim to have initiated and developed an African hornbill conservation network. Effort will be made to ensure that conservation planning takes into account Indigenous Knowledge Systems to ensure that cultural data is also considered and used in designing bespoke conservation actions where the threats are anthropogenic in nature.

Targets for the 2017-2020 quadrennium
Assess
Red List: review Red List status and information for all 62 hornbill species.

Plan
Planning: (1) prioritise species requiring formal conservation plans; (2) initiate an action plan workshop for Critically Endangered Sulu Hornbill (*Anthracoceros montani*).

Network
Capacity building: hold annual regional capacity building workshops.
Membership: increase African membership.

Communicate
Communication: (1) produce two newsletters per year; (2) website and social media established and maintained.
Scientific meetings: support the International Hornbill Conference, scheduled for 2021 in Bhutan.

Activities and results 2018
Assess
Red List
1. Revised and updated accurate Red List information on the IUCN Red List for all hornbill species. (KSR #1, 4)

Plan
Planning
1. Through the Steering Committee meeting, we have prioritised the Critically Endangered and Endangered hornbill species that need formal plans. The Helmeted Hornbill (*Rhinoplax vigil*) plan was completed in 2018; Sulu Hornbill and Walden’s Hornbill (*Rhabdotorrhinus waldeni*) will be completed by 2019; the remaining will be done by 2020. (KSR #15)

Network
Membership
1. We have 141 members from 29 countries (127 Active, 14 Friends of HSG): 17 African members, 106 Asian members, and 18 Others.

Communicate
Communication
1. Planning for production of a newsletter is still in progress; editorial board members have been identified, and guidelines and format are being developed. (KSR #28)
ii. We have established one website (www.iucnhornbills.org), one Facebook group (IUCN Hornbill Specialist Group) and one internal Google groups list serve for internal member communications. (KSR #28)

Scientific meetings
i. Planning is in progress for the International Hornbill Conference scheduled for 2021 in Bhutan. (KSR #28)

Acknowledgements
We thank Dr Sonja Luz (Wildlife Reserves Singapore) for supporting the Hornbill Specialist Group in several ways: by supporting our Steering Committee meetings and the Sulu Hornbill Conservation Strategy and Action Plan workshop. This workshop would not have been possible without the help of Caroline Lees, Bee Choo Strange, Jessica Lee, Nicky Icarangal, Colonel Bim Quemado and Lisa Paguntalan. We thank our colleagues in the Hornbill Specialist Group Steering Committee – Koen Brouwer, Yoki Hadiprakarsa, Chin Aik Yap, Vijak Chimchome, Divya Mudappa and Paul Schutz – for their work and support for the Specialist Group. We thank Anuj Jain and Jessica Lee, the coordinators of the Helmeted Hornbill Working Group and the leads of the group, for their work to ensure coordination and implementation of the Helmeted Hornbill Action Plan. We also thank Veena Rai and Janhavi Rajan at Nature Conservation Foundation, India for their assistance with developing the website, and Veena Rai also for helping manage communications. We thank our advisors Drs Alan Kemp, Pilai Poonswad, Margaret Kinnaird and Tim O’Brien for their support and advice at various times. We also thank many of our members for their enthusiasm and participation in the hornbill network.

Summary of activities 2018

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<th>Species Conservation Cycle ratio: 4/5</th>
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<td>Assess</td>
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Main KSRs addressed: 1, 4, 15, 28

KSR: Key Species Result
**Co-Chairs**
Giorgos Catsadorakis (Old World) (1)
Tommy King (New World) (2)

**Red List Authority Coordinator**
BirdLife International

**Location/Affiliation**
(1) Society for the Protection of Prespa, Environmental NGO, Lemos Prespa, GR - 530 77 Agios Germanos, Greece
(2) United States Department of Agriculture, Wildlife Services, National Wildlife Research Center, P.O. Box 6099, Mississippi State University, Mississippi, 39762, US

**Number of members**
76

**Social Networks**
Website: https://www.wetlands.org/our-network/specialist-groups/pelican-specialist-group/

**Mission statement**
The mission of the Pelican Specialist Group (Old World and New World Sections) is to carry out, support and promote scientific research and conservation activities aimed at Old World and New World pelicans and enhance cooperation and diffusion of knowledge.

**Projected impact for the 2017-2020 quadrennium**
By the end of 2021, we envision to increase our membership (both Old World and New World sections) and be able to collect and compile better data on the global status and populations of the two (out of five) Old World pelicans which are classified as Near Threatened: the Dalmatian Pelican (*Pelecanus crispus*) and the Spot-billed Pelican (*Pelecanus philippensis*). Particularly, we will strive to assist in obtaining more knowledge about the status (distribution, populations and threats) of the highly endangered Mongolian sub-population of the Dalmatian Pelican of the East Asian flyway. In parallel, this knowledge will allow us to plan and implement necessary conservation measures. We would also like to have a better understanding of what is happening with the breeding populations of the Great White Pelican (*Pelecanus onocrotalus*) in its Eurasian range, as important changes have been observed in recent years. Finally, we would like to contribute to the maintenance of the small and dwindling populations of Dalmatian Pelican in Southeastern Europe and Turkey.

**Targets for the 2017-2020 quadrennium**

**Assess**
Red List: improve the assessment of the global population of the Dalmatian Pelican. Research activities: (1) collect and disseminate data on the status of pelicans in Kazakhstan; (2) review publication on the causes of morbidity and mortality for the Dalmatian Pelican in Southeastern Europe.

**Plan**

**Network**
Membership: (1) we will strive to recruit more members working on all the other species of pelicans besides; (2) recruit more members working in Central Asian countries and the Russian Federation.
Proposal development and funding: provide substantial support to individuals and organisations keen to set up new conservation projects for pelicans.

Synergy: enhance interaction with the WI-IUCN SSC Cormorant Research Group.

**Communicate**
Communication: enhance the degree of contact and information exchange between our members.

Scientific meetings: organise and chair a ‘Pelicans of the World Symposium’, jointly with both Old World and New World Pelican Specialist Group sections, at the 2019 Waterbird Society Annual Conference and General Meeting.
Activities and results 2018

Assess
Red List
i. During 2018, we continued working on a paper which compiled all available data for the Dalmatian Pelican for the countries of the former USSR. (KSR #1)

Research activities
i. During 2018, we continued working on the paper on morbidity and mortality causes of the Dalmatian Pelican. (KSR #32)

Plan
Planning
i. During 2018, we finished the International Single Species Action Plan for the Dalmatian Pelican. (KSR #15)

Network
Membership
i. We increased the members of the group from 62 to 76, adding people from Australasian countries.

Communicate
Scientific meetings
i. During 2018, we continued with preparation contacts for the organisation of the International Pelican Symposium in the US, with participation of both Old World and New World sections of the Pelican Specialist Group. (KSR #28)

Acknowledgements

The work by Giorgos Catsadorakis as the Old World Pelican Specialist Group is supported by the Society for the Protection of Prespa, Greece. The overall programme of the Society for the Protection of Prespa is funded by the MAVA Foundation through the Prespa-Ohrid Trust Fund (PONT).

Summary of activities 2018

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Main KSRs addressed: 1, 15, 28, 32

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC Penguin Specialist Group (PSG) is to provide scientific advice that informs policy and engages people in effective conservation action.

Projected impact for the 2017-2020 quadrennium
The disconcerting and rapid population decreases reported for most of the world’s penguin species will be reversed only through immediate and affirmative action on the part of the global community of researchers, governmental entities, conservation organisations, fisheries’ managers and the general public. If we address the identified threats, undertake priority research needs using an interdisciplinary and integrated approach, and begin to implement appropriate conservation actions, management could perhaps slow or stop the observed decreases in penguin populations. We wish to call attention to the plight of this important and charismatic taxonomic group, whose dire situation is a clear reflection of the current escalating crisis facing the world’s marine ecosystems and as indicators of future global warming scenarios.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete assessment of Little Penguin (*Eudyptula minor*); (2) reassess Red List status of penguin species.

Research activities: (1) publish a paper with the most recent update on the ecology and conservation of all penguin species; (2) identify priority areas of research needed; (3) identify the three penguin species in most critical need of help; (4) publish a paper on the priority conservation and research needs for all species and the identification of three species in need of most help.

Plan
Planning: (1) convene a meeting of the PSG Steering Committee focused on catalysing a Wild Penguins in Perpetuity Conservation Strategy; (2) convene a meeting of the PSG Steering Committee to define priorities for global penguin conservation prior to the International Penguin Congress in New Zealand; (3) define priority conservation actions needed.

Policy: (1) hold a Steering Committee meeting in May 2018 to define priorities for global penguin conservation; (2) hold a Steering Committee meeting in August 2019 to update status of PSG, suggest new members and define future goals.

Network
Membership: continue to add expert members as needed.

Activities and results 2018
Assess
Red List
i. Updated information to complete the assessment of the Little Penguin has been identified. The assessment will be completed at the International Penguin Congress in New Zealand in September 2019. (KSR #1)

ii. Information on all penguin species to be updated and compiled at a workshop at the International Penguin Congress, New Zealand, September 2019. (KSR #1)
Research activities
i. Paper published with the most recent update on the ecology and conservation of all penguin species. (KSR #32)
ii. Priority areas of research needed have been identified.
iii. The three penguin species in most critical need of help have been identified.
iv. Paper published with the priority conservation and research needs for all species and the identification of three species in need of most help. (KSR #32)

Plan
Planning
i. PSG Steering Committee meeting organised and penguin conservation strategy discussed. (KSR #15)
ii. The meeting of the PSG Steering Committee to define priorities for global penguin conservation has been organised and will take place in August 2019, prior to the International Penguin Congress in New Zealand. (KSR #18)
iii. Priority conservation actions defined.

Policy
i. Meeting of the PSG Steering Committee completed. (KSR #26)
ii. Steering Committee Meeting is organised and will be held in August 2019. (KSR #26)

Network
Membership
i. Expert members to be added identified.

Acknowledgements
We deeply thank the members of the PSG Steering Committee for their time and dedication and especially to Susie Ellis for facilitating our events and leading our planning processes. We are indebted to our partner organisation, The Global Penguin Society, for supporting our workshops, meetings and transportation of all Steering Committee members. We are very grateful to The Deep for their invaluable support to organise our workshop in May 2018.

Summary of activities 2018

| Species Conservation Cycle ratio: 3/5 |
|---|---|
| Assess | 6 |||||
| Plan | 5 |||||
| Network | 1 |

Main KSRs addressed: 1, 15, 18, 26, 32

KSR: Key Species Result
Mission statement
The Stork, Ibis and Spoonbill Specialist Group (SIS-SG) is a global network of scientists, conservationists, governmental and non-governmental institutions and people committed to the scientific understanding and conservation of SIS species and their habitats.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision a substantial advance in creating a strong network, and a sustainable and active Specialist Group based on participation of the best specialists on our species of concern worldwide. Specifically, our focus will be to raise enough resources to maintain the activity of the Specialist Group, creating a scientific network and promoting scientific research, meetings and conservation actions among members and partners, including other Specialist Groups, who will contribute to improve the knowledge of our species of concern and their threats.

Targets for the 2017-2020 quadrennium

Network
Capacity building: organise the First World Symposium of Stork, Ibis and Spoonbill.
Proposal development and funding: obtain sponsorship for the functioning of the SIS-SG.
Synergy: facilitate communications with related waterbird Specialist Groups to help with capacity building.

Communicate
Communication: enhance wider communication and share research and conservation findings related to Stork, Ibis and Spoonbill (SIS) species worldwide.
Scientific meetings: establish at least two new working groups.

Activities and results 2018

Network
Proposal development and funding
i. We designed a proposal based on our need assessment in 2018, which will be submitted for an internal grant to SSC (First Round) at the beginning of 2019. (KSR #19)

Synergy
i. We worked to enhance synergy among the Groups and Committees of the SSC working with freshwater species, and help guide the work of the Freshwater Conservation Committee (FCC) so that it can better support the work of the other Groups, Committees, etc. (KSR #27)

Communicate

Scientific meetings
i. Twenty-five Black Stork specialists from Western Paleartic countries participated in the VII International Conference on Black Stork Ciconia nigra at Doñana National Park, Spain, from 28–30 November 2018. A Chinese team sent their research, but they could not participate due to lack of passports. (KSR #28)
Acknowledgements

We thank Alejandro Torés for help with maintaining the website. We also thank the volunteers who designed the logo for the International Glossy Ibis Network (IGIN). Thanks to Simone Santoro, who is coordinating the IGIN with the SIS-SG. We also thank the Biological Station of Doñana (EBD) and Junta de Andalucía for co-organising the VII International Conference on Black Stork with the SIS-SG in November 2018 in Spain.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

- Network: 2
- Communicate: 2

Main KSRs addressed: 19, 27, 28

Resolutions addressed: WCC-2016-Res-027

KSR: Key Species Result

Glossy Ibis, Plegadis falcinellus, Tavira
Photo: Jesús Camacho

(Above) Glossy Ibis flock in flooded field, Kheda
Photo: Gopi Sundar

African Openbill, Anastomus lamelligerus, at Okavango
Photo: Luis Santiago Cano
Mission statement
The Swan Specialist Group (SSG) is an international network of swan specialists who undertake monitoring, research, conservation and management of swan populations. Its mission is to facilitate effective communication between members and others with an interest in swan management and conservation worldwide, in order to improve national and international links for cooperative research, to identify gaps in knowledge and to provide a forum for addressing swan conservation issues.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we will have undertaken a further census of the Northwest European Bewick’s Swan (Cygnus columbianus bewickii) population to determine whether we have achieved the initial target of the African-Eurasian Migratory Waterbirds (AEWA) Bewick’s Swan Action Plan, of halting the ongoing decline in the Northwest European population and, if necessary, begin recovery of the population to its 2000 level. By 2020, we also envisage having a better understanding of the environmental factors contributing to the decline, and to have started addressing these where necessary. For the other swan species, which are currently classed as Least Concern by IUCN, we will maintain our monitoring of population trends, or collect such information where the monitoring is being undertaken by other organisations, to identify any conservation issues that may arise for the swans.

Targets for the 2017-2020 quadrennium

Assess
Research activities: (1) AEWA Bewick’s Swan Action Plan: reasons for the population decline identified; (2) population monitoring: international censuses of migratory swan populations in the Northern Hemisphere.

Plan
Planning: (1) AEWA Bewick’s Swan Action Plan: implementation workshop held; (2) AEWA Bewick’s Swan Action Plan: actions to reduce threats to Bewick’s Swans put in place; (3) AEWA Bewick’s Swan Action Plan: population decline halted and reversed.

Policy: provide information and technical advice in support of the programmes of IUCN SSC, Wetlands International, BirdLife International, Ramsar and others as necessary.

Act
Conservation actions: implementation of AEWA Bewick’s Swan Action Plan: actions to reduce threats to Bewick’s Swans put in place.

Network
Membership: improve knowledge of population trends and threats to swan species in the Southern Hemisphere.

Communicate
Communication: (1) publish Swan News newsletter annually: 4 issues in years 2017–2020; (2) launch Swan Specialist Group website; (3) maintain Swan Specialist Group listserve.


Activities and results 2018

Assess

Research activities


ii. Compilation of 2015 migratory swan census data for Europe completed in 2018; preliminary results disseminated and analyses underway for more formal publication in 2019. (KSR #12)
iii. Ongoing monitoring of trends in migratory swan populations in North America, coordinated by the US Fish and Wildlife Service (USFWS), also continued with 2017 census results published in 2018. (KSR #12)

Plan
Planning
i. AEWA Bewick’s Swan Action Plan workshop held during the 6th International Swan Symposium; a review of actions undertaken within each range country was compiled from experts and AEWA focal points during 2018 and presented during the workshop; a list of future actions was generated, to be confirmed and rolled out in 2019–2022. (KSR #15)

ii. National Action Plan for Bewick’s Swans in Estonia updated. (KSR #18, 29)

Policy


Act

Conservation actions
i. A collaborative project, tracking and modeling Bewick’s Swan flight in relation to wind farms, was agreed by British and Dutch ornithologists, under the UK government’s SEA programme. (KSR #18, 29)

ii. The Swan Champions Project, which aims to raise awareness and reduce levels of illegal hunting, is being taken forward by Russian colleagues in Russia (see www.swansg.org/projects/swan-champion-project/). (KSR #18, 29)
Communicate

Communication


ii. The Swan Specialist Group website launched on www.swansg.org and was updated with news items during 2018. (KSR #28)

iii. The SSG-forum listserv was maintained throughout 2018, hosted by WWT, and used to disseminate information about the 6th International Swan Symposium, call for newsletter items, and other matters. (KSR #28)

Research activities

i. A call for papers was put out during the 6th International Swan Symposium in October 2018. (KSR #32)

Scientific meetings

i. The 6th International Swan Symposium was held from 16–19 October 2018. (KSR #28)

Acknowledgements

The Swan Specialist Group is grateful to the University of Life Sciences, Tartu, Estonia, for hosting the 6th International Swan Symposium, the Estonian Ornithological Society for co-organising the meeting and the Estonian Environmental Board, the City of Tartu and WWT for financial support. We also thank those funding work within the Bewick’s Swan Action Plan, including the Peter Scott Trust for Education and Research in Conservation, Peter Smith Charitable Trust, Olive Herbert Charitable Trust, D’Oyly Carte Charitable Trust, N. Smith Charitable Settlement, Robert Klin Charitable Trust, estate of the late Prof. Geoffrey Matthews, WWT’s ‘Hope for Swans’ appeal, Royal Netherlands Academy of Arts and Sciences, Netherlands Organisation for Scientific Research, Schure-Beijerinck-Popping Fund, Russian Foundation for Basic Research - Yamalo-Nenets Autonomous District (RFBR-YANAD), YANAD Department of Natural Resource Regulation, YANAD Department for Science and Innovation, Arktika Interregional Expedition Centre, AEWA, Goose, Swan and Duck Study Group of Northern Eurasia, Royal Institute of Natural Sciences of Belgium, Bird Ringing Centre of Russia and the Russian Academy of Sciences. Analysing Bewick’s Swan movement in relation to wind farm sites is funded by the UK’s Department for Business, Energy and Industrial Strategy. Swan Specialist Group members remain immensely grateful to the colleagues, volunteers and host institutes for supporting swan research and conservation programmes.

Summary of activities 2018

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<td>Act 2</td>
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<td>Communicate 5</td>
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Main KSRs addressed: 12, 15, 18, 28, 29, 32

KSR: Key Species Result
Mission statement

The IUCN SSC Vulture Specialist Group (VSG) aims to advocate and create greater awareness of the plight of vultures and coordinate and support effective conservation activities to their benefit.

Projected impact for the 2017-2020 quadrennium

Completion and planned implementation of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Vulture Multi-species Action Plan (MsAP) aims to halt the decline in Old World vulture populations in Africa-Eurasia over the next 12 years, commencing in 2018.

Targets for the 2017-2020 quadrennium

Assess
Research activities: publish four editions of the VSG journal Vulture News.

Plan
Planning: (1) engage members and others to implement the Vulture Multi-species Action Plan (MsAP) for all Old World vultures; (2) support implementation of the MsAP at a regional and sub-regional level.

Network
Membership: build and develop VSG membership.
Synergy: (1) develop links with other relevant SSC groups, e.g. Conservation Planning Specialist Group (CPSG), African Elephant Specialist Group, Canid Specialist Group; (2) participate in and support the work of the SSC CPSG.

Communicate
Communication: (1) outputs from Abu Dhabi Meeting produced that assist with the implementation of the Multi-species Action Plan; (2) promote International Vulture Awareness Day each September; (3) produce two Newsletters annually; (4) develop VSG website presence; (5) act as a key partner in promoting the CMS Multi-species Action Plan for African-Eurasian Vultures.

Activities and results 2018

Assess
Research activities
i. Two issues of Vulture News published during the review period. (KSR #28)

Plan
Planning
i. Continuous effort by a range of members who are involved in drafting national action plans in three African countries. (KSR #15)

Network
Membership
i. A total of eight new members recruited during the review period.

Synergy
i. Constructive working relationships established with the Elephant, Canine and Lion groups primarily focused on addressing the mutual threat of wildlife poisoning. (KSR #29)
ii. Continued participating in and supporting the work of the SSC CPSG. (KSR #29)
Communicate

i. Provided support letters to more than 15 proposals submitted by VSG members and affiliate organisations aimed at implementing components of the Vulture MsAP. (KSR #28)

ii. A total of 102 organisations from 26 countries participated in International Vulture Awareness Day, which was observed on 1 September 2018. (KSR #28)

iii. Newsletters 9 and 10 produced and distributed with positive feedback from a range of recipients. The circulation list already reaches over 400 recipients. (KSR #28)

iv. Developing a VSG website presence is in process, to be completed in 2019. (KSR #28)

v. Various efforts to promote the CMS Multi-species Action Plan for African-Eurasian Vultures are in place across the range through the work of partners in the Saving Asia’s Vultures from Extinction consortium, Vulture Conservation Foundation (Europe) and through a range of partner organisations in Africa. (KSR #21)

Acknowledgements

We particularly thank the Endangered Wildlife Trust and Royal Society for the Protection of Birds for hosting the co-Chairs and agreeing work time to carry out key activities. Thanks also to the Hawk Conservancy Trust for support, and to Rachel Hoffmann from SSC for her continued support. Vulture Conservation Foundation, BirdLife Africa and Cambridge Secretariat have given additional support, as has the wider network of organisations including the Peregrine Fund, Saving Asia’s Vultures from Extinction consortium, the LIFE Egyptian Vulture project in Bulgaria and elsewhere in the species’ range. The Hawk Conservancy Trust also provided some administrative support in the form of Lesley Jerome.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

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Main KSRs addressed: 15, 21, 28, 29

KSR: Key Species Result
Mission statement

The first aim of the Woodcock and Snipe Specialist Group (WSSG) is to provide an up-to-date knowledge on eight woodcock and 18 snipe species in the world. It is also expected to encourage new research and to facilitate contacts between researchers. WSSG plays the role of expertise platform for biologists, conservationists and wildlife managers interested in woodcocks and snipes for share and exchange of information. As these are game species, the final objective is to ensure the sustainable use of the populations.

Projected impact for the 2017-2020 quadrennium

The group’s workshop, held in Pico in 2017, the publication of the respective minutes and the annual newsletter, all contribute to increased knowledge about our target species and their conservation and sustainable management. In this sense, we also perceive an increasingly important role for our members alongside the entities responsible for assuring effective conservation and management. By 2020, we also envisage having new data on the populations of some poorly known woodcock and snipe species from Africa, South America and Asia.

Targets for the 2017-2020 quadrennium

Assess
Research activity: improve knowledge on the conservation status of African, South American and Asian woodcock and snipe species.

Plan
Policy advice: continue working closely with entities involved in hunting management.

Network
Membership: visit the US to meet American colleagues, strengthen collaboration within the group and recruit new members.

Communicate
Communication: (1) publish the WSSG Annual Newsletter (numbers 43, 44, 45 and 46); (2) publish the Proceedings of the 8th Woodcock and Snipe Workshop.

Scientific meetings: (1) organise the 8th Woodcock and Snipe Workshop; (2) participate in the 11th American Woodcock Symposium, 24–27 October 2017, Roscommon, Michigan, US.

Activities and results 2018
Assess
Research activity
i. We started discussing and we have defined the members that will coordinate the component concerning conservation status of Asian woodcock species. (KSR #23)

ii. Publication of the annual newsletter of the group (number 44); uploaded in the web site of Wetlands International. (KSR #28)


**Summary of activities 2018**

Species Conservation Cycle ratio: 1/5

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Main KSRs addressed: 23, 28

KSR: Key Species Result

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Common Snipe chick (*Gallinago gallinago*), Least Concern

Photo: Tiago M. Rodrigues

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Eurasian Woodcock (*Scolopax rusticola*), Least Concern

Photo: Tiago M. Rodrigues
Mission statement
To coordinate effective conservation and management activities for the benefit of eel species, as well as acting as advocates and increasing awareness of the threats to them.

Projected impact for the 2017-2020 quadrennium
Despite the fact that three anguillids are listed as Endangered or Critically Endangered – the European Eel (*Anguilla anguilla*), Japanese Eel (*Anguilla japonica*) and American Eel (*Anguilla rostrata*) – these are relatively well studied, and it is arguable that the other 13 species are in greater need of conservation attention, as little is understood of their status. The Anguillid Eel Specialist Group’s (AESG) aim is to increase our understanding of all anguillids, the tropical species in particular, in order that conservation actions, policy interventions and use are guided by up to date science. Further, it is becoming clear that there are lessons to be learnt from interventions relating to the better studied species that can be applied when working directly with and/or advising managers and policymakers, and catalysing communication between range states of all species. Over the past five years, trade and use of anguillids has altered dramatically – both in relation to species traded and countries trading – to meet the ongoing demand in East Asia; therefore, increasing our understanding of the global dynamics of import and export will be essential to ensure sustainable use.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) Red List assessment workshop of all 16 anguillid eel species (13 updates and three new) in 2018; (2) ongoing engagement with academic institutions, government agencies and NGOs who can provide and/or initiate the collection of robust monitoring data for inclusion in Red List assessments, including from CITES processes if CoP17 draft decisions are adopted.

Research activity: (1) increased engagement in relation to the practice of re-stocking of anguillids and determining how effective this measure is locally, regionally and globally; (2) monitor use and trade in anguillid species; (3) initiation of PhD on the socio-economics of eel fisheries and trade; (4) monitoring initiated in key sites for species where no data is being collected or gaps exist in species ranges; (5) development of a ‘threat index’ for anguillid eels using the European Eel as a case study.

Plan
Planning: (1) Species Action Plan developed for the Japanese Eel in Japan; (2) Species Action Plan developed for the American Eel in Costa Rica.

Policy: (1) engage Japanese stakeholders and the Ministry of the Environment with regards to updating the national assessment of *Anguilla japonica*; (2) ensure all relevant information on anguillids is shared in relation to the needs of conventions such as CITES and the Convention on the Conservation of Migratory Species of Wild Animals (CMS); (3) continued engagement with the Sargasso Sea Commission regarding the importance of this region for American and European Eels.

Act
Conservation actions: produce a national management plan for eel fisheries in the Philippines.

Network
Synergy: engage with range states encompassing transboundary watercourses in Europe as part of CMS cooperative actions.
Communicate
Communication: (1) expand ongoing engagement with policy makers and industry stakeholders in range states to improve the understanding of Red List assessments, the data used in them and the benefits of incorporating information in them in conservation and management activities. Information from Red List assessments used as species/trade reviews are carried out on behalf of CITES parties; (2) develop the strategy of using eels as a flagship species for aquatic conservation.

Activities and results 2018

Assess Red List
i. The Red List assessment workshop was held, all 16 species were reviewed and assessments have begun to be drafted. We are prioritising the three Australasian species that have yet to be published for submission in March 2019. We expect publication of all assessments to be complete by the end of 2019. (KSR #1)
ii. There was significant engagement by AESG members with anguillid eel range states and other stakeholders as part of the process of delivering two major reports on these species to the CITES Secretariat. (KSR #32)

Research activity
i. Individuals in the AESG have engaged on the practice of re-stocking of anguillids and determining how effective this measure is locally, regionally and globally, through: discussing with the Philippine government the development of monitoring of the impact of their stocking of eels; ongoing research in Japan; an assessment of the benefit of stocking in the UK, included in a document developed to determine whether trade in European Eel could be carried out post-Brexit. (KSR #33)
ii. The Zoological Society of London (ZSL) led the delivery, in collaboration with TRAFFIC and independent consultants, of two major reports on the trade in the CITES Appendix II-listed European Eel (https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-18-01-A1.pdf), and non-listed species (https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-18-01-A2.pdf). Range states and stakeholders were involved in the development of the agenda for the AESG’s existence, are infinite.

Plan
Planning
i. Engagement of Japanese Eel stakeholders in Japan continues; AESG members visited Japan in 2018 to engage on several matters. However, the development of a species action plan has presently been put on hold. (KSR #15)
ii. The scope of engagement in the southern portion of the American Eel range has broadened due to a workshop that was held in 2018 in response to the CITES decisions from CoP17 (2016). Three members of the AESG were present at the workshop as well as a range of stakeholders from American Eel range states. This was extremely useful in building relationships and progress has been made in developing a more joined-up approach to management of this species across the range, particularly between US and Canada. (KSR #15)

Policy
i. As with the Species Action Plan for the Japanese Eel in Japan, AESG members are engaging with the Japanese Ministry of the Environment and other government departments to update the national assessment of Anguilla japonica; however, there doesn’t appear to be any plans to update this assessment at the present time. (KSR #27)
ii. For CITES, sharing of all relevant information on anguillids has been carried out to some extent via monitoring in key sites for species where no data is being collected or for filling gaps in species ranges; the chair of the AESG has also attended the CITES Animal Committee and Standing Committee to engage with relevant stakeholders. For CMS, this is captured in the target addressing engagement with range states encompassing transboundary watercourses in Europe. (KSR #26)
iii. The Sargasso Sea Commission were embedded both in the CMS meeting in Malmo and the American Eel Range State meeting, and as such, the AESG continues to work closely with them. (KSR #26)

Act
Conservation actions
i. A draft management plan for eel fisheries in the Philippines was developed; however, in 2018, the eel was determined not to be a priority by the National Government, and as such, this is now on hold. (KSR #36)

Network
Synergy
i. The second European Eel Range State meeting of CMS signatories took place in Malmo (14-17/5). This progressed the discussions around an instrument relating to conservation of the European Eel under CMS. AESG members were involved in the development of the agenda and the meeting itself. (KSR #26)

Communicate
Communication
i. ZSL led the delivery, in collaboration with TRAFFIC and independent consultants, of two major reports on the trade in the CITES Appendix II-listed European Eel (https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-18-01-A1.pdf), and non-listed species (https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-18-01-A2.pdf). Range states and stakeholders were engaged via a questionnaire circulated by the CITES secretariat, which yielded a great deal of useful information that was in turn used to inform the Red List assessments that were carried out. Conversely, the Red List assessments provided a great deal of information on describing the present status of these species. (KSR #3)
ii. A paper is being produced on using eels as a flagship species. (KSR #28)

Acknowledgements
We would like to thank those that provided funding for our activities: the Sargasso Sea Commission, Synchronicity Earth and the UK Government – Defra. We would also like to thank both Charlotte Pike and Emma Levy for their tireless efforts before, during and after the AESG Red List assessment workshop. Emma provided invaluable logistic and administrative support that made sure all attendees were in the room, housed and fed. Charlotte has collated the data and literature and begun drafting assessments for both internal and external review; this has been a titanic job, even with 13 existing assessments, and our thanks for her work, fundamental to the AESG’s existence, are infinite.

Summary of activities 2018

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Main KSRs addressed: 1, 3, 12, 15, 26, 27, 28, 32, 33, 36

Resolutions addressed: WCC-2016-Res-099

KSR: Key Species Result
Mission statement
To achieve conservation and sustainable use of freshwater fishes and their habitats through: (1) generating and disseminating sound scientific knowledge, (2) creating widespread awareness of their values, and (3) influencing decision-making processes at all levels.

Projected impact for the 2017-2020 quadrennium
By 2020, we envision we can provide stronger recommendations for freshwater conservation priorities, in terms of which species and regions require most urgent action, and how to link conservation action between regions through habitat connectivity. We can achieve this through mobilising the newly assimilated Red List assessment data for application to management and policy. Conservation action will be directed at selected, leading threats to freshwater ecosystems, in particular, invasive species and fragmentation of habitats by dams. By working with partners such as the IUCN World Commission on Protected Areas (WCPA) Freshwater Specialist Group, we can provide guidance for better conservation of freshwater ecosystems in protected areas. By facilitating communication and collaboration between SSC Specialist Groups with a freshwater interest, and by linking this to the work of other IUCN Commissions and the Secretariat, as well as contributing to other major freshwater initiatives beyond IUCN, we will ensure that future freshwater conservation planning is more fully integrated across IUCN’s programmes. Conservation of freshwater species and habitats will be given a higher profile as a core component in wider landscape management, conservation and policy making. Freshwater conservation initiatives will be better coordinated to complement each other, rather than operating in parallel.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete Red List assessments of all freshwater fishes (ca. 15,000 species).
Research activities: (1) expand taxonomic, geographic and ecosystem coverage of freshwater fishes included in World Wildlife Fund’s Freshwater Living Planet Index (FLPI); (2) review the conservation status of migratory fishes relative to dam development.

Plan
Planning: (1) develop programmes on the sustainable, wild-caught fishery for aquarium fishes, with initial focus in the Amazon and Congo; (2) develop projects and collaborations focused on freshwater invasive species; (3) promote the objectives of the IUCN Recommendation WCC-2016-Rec-099-EN: ‘Promotion of Anguillid eels as flagship species for aquatic conservation’; (4) survey and conservation of the Rio Marañón and its fishes.
Policy: (1) review of relationships between freshwater biodiversity conservation and inland fisheries; (2) application of the IUCN Guidelines document on recreational fisheries.

Network
Synergy: (1) be a key partner in a new initiative/NGO – Shoal – focused on fundraising for freshwater biodiversity conservation; (2) be a key partner in developing the new initiative, the Alliance for Freshwater Life (AFL); (3) be a key partner in developing the IUCN One Programme for Freshwater Biodiversity.
Communicate
Communication: (1) implement World Fish Migration Day (WFMD) for 2018 and 2020; (2) contribute to the Stockholm World Water Week (SWWW) 2018.

Activities and results 2018
Assess

Red List

i. In 2018, the IUCN Freshwater Biodiversity Unit coordinated the following Red List assessment programmes on freshwater fishes: (1) Lake Malawi/Nyasa/Niassa Catchment – published reassessments of all freshwater decapods, fishes and molluscs, and of selected freshwater plants, plus delineated Key Biodiversity Areas (KBAs) for freshwater species; (2) Lake Tangan-yika – delineated KBAs for freshwater species (TNC project); (3) Malili Lakes – completed assessments of all freshwater decapods, fishes and molluscs, to be published in 2019; (4) West Africa – started assessments of all freshwater decapods, fishes, molluscs and freshwater plants; (5) Japan – completed assessments of all endemic freshwater fishes (ca. 60), to be published in 2019; (6) Mexico – completed assessments of all native freshwater fishes (ca. 520), to be published in 2019; (7) Sunda – started assessments of all native freshwater fishes (ca. 1,000), to be published in 2019; (8) Australia – started assessments of all native freshwater fishes (ca. 250), to be published in 2019; (9) Pakistan – started assessments of all native freshwater fishes (ca. 170), to be published in 2019. Freshwater Fish Specialist Group (FFSG) members have contributed to several of these assessment programmes. (KSR #1)

Research activities

i. Some FFSG members have suggested additional species to expand taxonomic, geographic, and ecosystem coverage of freshwater fishes included in WWF’s Freshwater Living Planet Index (FLPI). However, no data assimilation has been made to date.

ii. Proposals to review the conservation status of migratory fishes relative to dam development have been prepared. A regionally focused proposal was submitted by FFSG member Kerry Brink to the IRS Foundation but was unsuccessful. Kerry Brink has also compiled a review of the status of migratory fishes in southern Africa. (KSR #43)

Plan

Planning

i. Project Piaba leader and Chair of the FFSG Home Aquarium Fishes subgroup, Scott Dowd, leads an expedition to the Project Piaba sites each year in January/February. The February 2018 Issue of the OFI Journal – the official publication of Ornamental Fish International – includes an article by Scott Dowd on Project Piaba. The issue also includes three important letters in support of a sustainable ornamental fish trade that would support conservation and livelihoods, written by Rosie Cooney (Chair, IUCN SSC/CEESP Sustainable Use and Livelihoods Specialist Group), Devin Bartley (Retired Senior Fishery Resources Officer, Food and Agriculture Organization of the United Nations) and Valerie Hickey (Practice Manager, Environment and Natural Resources Global Practice World Bank Group). FFSG Chair Richard Sneider co-funded the production of a documentary on the wild-caught ornamental fishery, which will be released in 2019. (KSR #18)

ii. FFSG Steering Committee members Nathan Lujan and Ian Harrison have been collaborating with Marañón Waterkeeper to develop proposals for funding to support biodiversity surveys of the Rio Marañon, and to provide general support to Marañón WaterKeeper’s programme for initiating conservation of the river. A short expedition to parts of the Marañon in August 2018, by Nathan Lujan, confirmed the presence of several new species of fishes. Nathan Lujan assisted in the development of a short video about the river: https://www.youtube.com/watch?v=eHrd1sEZwfs&feature=youtu.be. (KSR #27, 32)

Policy

i. Several members of FFSG are part of the global InFish network (www.infish.org); opportunities for collaboration on projects of mutual interest are being explored. (KSR #26)

ii. FFSG Steering Committee member Rajeev Raghavan is an Officer of the Mahseer Trust; an important focus of the Trust’s work is on sustainable recreational fisheries for mahseers, and the role that these fisheries can have in supporting conservation of the fishes. (KSR #26)

Network

Synergy

i. FFSG has a key partnership in a new initiative/NGO focused on fundraising for freshwater biodiversity conservation. This initiative is not yet an official NGO, but it is officially formed, under the name Shool (https://shoalconser-vation.org), and has a small Secretariat run by Mike Baltzer. The mission of Shool is to engage a wide range of organisations to accelerate and

The goonch, Bagarius yarrelli, with FFSG member Zeb Hogan underwater Courtesy Zeb Hogan
escalate action to save the most threatened fish and other freshwater species. FFSG members Ian Harrison and Harmony Patricio attended the initial planning meeting of Shoal in January 2018, hosted by the Fishmongers Company. Subsequently, Ian Harrison, Will Darwall, Scott Dowd and some other FFSG members have liaised with Mike Baltzer as he has further developed the concept for Shoal. (KSR #29)

Several members of the FFSG have been closely involved with the development of the Alliance for Freshwater Life (AFL), following an initial planning meeting held at Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Berlin, in October 2017. Subsequently, some FFSG members helped plan the official launch of the AFL at Stockholm World Water Week in August 2018 (https://programme.worldwaterweek.org/event/8124-a-new-global-initiative-the-alliance-for-freshwater-life). We have also co-authored a manuscript describing the AFL: Darwall, W., et al. (2018). The Alliance for Freshwater Life: A global call to unite efforts for freshwater biodiversity science and conservation. *Aquatic Conservation: Marine and Freshwater Ecosystems* 28(4):1015–1022. Some FFSG members submitted a proposal (accepted) for a session on “The Alliance for Freshwater Life – fostering multidisciplinary freshwater research on local to global scales” for the 2019 Annual Meeting of the Society for Freshwater Science. (KSR #29)

In September 2017, FFSG member Ian Harrison helped organise a workshop to create a plan for developing the IUCN One Programme Strategy for Freshwater Biodiversity Conservation. The meeting was hosted by the IUCN
Water Programme at IUCN Headquarters in Switzerland and was attended by 19 people from 15 different organisations (or different units within their organisations). The subsequent plan was to assimilate the information from the workshop and turn this into a Framework Strategy for the IUCN One Programme for Freshwater Biodiversity, which would: (1) be presented as a summary document to IUCN’s Council meeting in November 2017, to alert the council to the overall plan for the IUCN One Programme for Freshwater Biodiversity; (2) subsequently be developed into a more detailed document to be presented at the World Water Forum in March 2018; and (3) then be proposed for adoption at the IUCN World Conservation Congress in 2020. The logistics of this process are being managed by the IUCN Water Programme; however, administrative changes within the Water Programme in 2018 have slowed the process down, and the Strategy document has not been prepared thus far. Nonetheless, the Water Programme have stated their continued interest in advancing this agenda prior to 2020. (KSR #29)

Communicate

Communication

i. World Fish Migration Day 2018 (WFMD 2018) was held on 21 April. There were 570 events worldwide, in 63 different countries. Over 3,000 organisations joined forces to create the biggest global event that brings attention to migratory fishes, and 200,000 people joined the events. Several FFSG members were involved in planning and attending events. Aquariums, zoos, museums, universities, research institutes, schools, angling associations, non-profit organisations, kayak clubs, water and river basin authorities, restoration projects (river restoration projects, dam removal projects, fishway inauguration projects, etc.), fishway visitor centres, private companies, national parks, nature reserves, town associations, working groups, and even individuals who wanted to organise something, all participated in making WFMD 2018 the success that it was. A film, Love Flows, was produced following WFMD 2018, featuring interviews with FFSG members, and will go on public release on 16 May. Planning is currently underway for World Fish Migration Day 2020, through FFSG members Zeb Hogan and Ian Harrison. (KSR #28)

ii. Contributions were made to Stockholm World Water Week by several FFSG members; however, these were focused more broadly on freshwater biodiversity conservation than specifically on fish conservation. (KSR #28)

Acknowledgements

Project Piaba provides IT support for FFSG’s website. Support for FFSG members to attend meetings has been provided by FFSG Chair Richard Sneider, IUCN Commission on Ecosystem Management, IUCN Water Programme, the Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany/Alliance for Freshwater Life, North East Council of Aquarium Societies (US), Wetlands International, World Fish Migration Foundation, and FFSG Steering Committee member Zeb Hogan.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

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Main KSRs addressed: 1, 18, 26, 27, 28, 29, 32, 43

KSR: Key Species Result
Co-Chairs
Yvonne Sadovy (1)
Matthew Craig (2)

Red List Authority Coordinator
Matthew Craig (2)

Location/Affiliation
(1) The University of Hong Kong, Hong Kong
(2) National Oceanographic and Atmospheric Administration, National Marine Fisheries Service, California, US

Number of members
40

Social networks
Website: https://www.iucn.org/ssc-groups/fishes/grouper-and-wrasse

Mission statement
The Mission of the Grouper and Wrasse Specialist Group (GWSG) is to promote the conservation, management and wise use of groupers and wrasses, and to enhance awareness of the vulnerability of this group of fishes, which includes the groupers (family Epinephelidae) and wrasses (family Labridae), and of the habitats upon which they depend.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we would like to see conservation and management attention paid to groupers that are threatened and near-threatened and international trade reduced to sustainable levels in the case of threatened groupers and the CITES-listed Humphead (Napoleon) Wrasse (Cheilinus undulatus). We hope to increase our representation in Asia, which will support the development of national planning in the region to encourage conservation of threatened species, and to stimulate research into species that are listed as Data Deficient. More educational materials, especially for government officials, will be developed on species that are important for fisheries.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete Red List assessments for all groupers. Since these will be reassessments of all the species in the taxon (all 160-plus species are published on the Red List), we can also do an Indicator Analysis of changes, if any, over time.

Research activities: publish one high impact paper on the outcomes of the grouper Red List reassessments.

Plan
Policy advice: (1) publish report on live reef fish trade, which is a major threatening factor for groupers and Humphead Wrasse; (2) publish outcomes of 6 years of surveys of Humphead Wrasse in Indonesia following its CITES Appendix II listing.

Network
Membership: enhance GWSG membership in Asia (increase number to at least eight members in Asia).

Activities and results 2018
Assess
Red List
i. We have completed re-assessments for all grouper species. (KSR #2)

Research activities
i. A draft of the paper is currently in review for publication, co-authored by most of the assessors. Three publications for the Humphead Wrasse are now in press or recently published (in Aquatic Conservation and Frontiers of Biogeography) on field surveys, follow up to the CITES listing and on global population structuring, with another in review on follow up work to the 2004 CITES listing in Indonesia, issues around illegal, unreported, and unregulated (IUU) fishing and methods to detect legally traded fishes in Hong Kong. One report on the live reef fish trade, which covers Humphead Wrasse and also groupers in Southeast Asia, has also been published. (KSR #43)

Plan
Policy
i. Information was provided on Humphead Wrasse regional trade to Indonesia, Hong Kong and mainland China management authorities. Summaries of activities relevant to this CITES-listed species were also provided to IUCN, WWF
Information and advice is regularly provided to the governments of Indonesia and Hong Kong regarding trade in Humphead Wrasse. A facial recognition method is being developed for use online and with laptop and iPhone for detection of legally imported fish or fish laundering. There is collaboration with the Hong Kong government. The report on the live reef fish trade has been released, and a publication is now out for multi-year surveys. (KSR #27)

Network

Membership

i. Asian groupers: a proposal was approved by Ocean Park Conservation Foundation in Hong Kong to fund a regional workshop for national grouper assessments as well as to train and recruit more members from Asia. The workshop will take place in May 2020 in Hong Kong.

Acknowledgements

We are most grateful for the ongoing and excellent support from the IUCN Global Marine Species Assessment Unit. CITES Secretariat funding has variously assisted field work in Indonesia. For work on Humphead Wrasse we acknowledge the excellent support of LIPI (Indonesian Institute of Sciences) and the support in Hong Kong of the Agriculture Fisheries and Conservation Department.

Summary of activities 2018

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Main KSRs addressed: 2, 26, 27, 43

KSR: Key Species Result
Mission statement
To promote the long-term conservation of the world’s Syngnathiform (seahorses, pipefishes, seadragons and their relatives) fishes through the illumination and alleviation of threats to wild populations and their ocean habitat.

Projected impact for the 2017-2020 quadrennium
The Seahorse, Pipefish and Seadragon Specialist Group (SPS SG) will seize these four years to understand and help reduce pressures on syngnathids in at least three geographic areas – Southeast Asia, South Africa and Atlantic South America – that are home to species of particular conservation concern. We will do this through integrated research, management support and policy development. We plan a special effort to urge reduction in perverse incentives (such as fuel subsidies) and to foster enhanced enforcement of existing laws. We hope other Specialist Groups will join us in promoting such changes, which would be of broad benefit. At the same time, we will be making a real effort to reduce the number of our species that are assessed as Data Deficient on the IUCN Red List by expanding our knowledge base. These four years will further see us grow our membership, with respect for diversity of sex, ethnic background, taxonomic focus and technical experience. We are particularly keen to engage youth and non-scientists to add to our effectiveness. Using all members, we plan to raise the profile of our species to help grow the constituency of their supporters.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) monitor and evaluate priority species (redo Red List assessments); (2) redo Red List assessments for priority Data Deficient species.
Research activities: (1) marshal obscure/grey information on Data Deficient species; (2) promote research agenda for all species; (3) collate new data and knowledge.

Plan
Planning: (1) priority action statement for Hippocampus capensis (Endangered – South Africa); (2) priority action statement for Hippocampus whitei (Endangered – Australia); (3) priority action statement for Syngnathus watermeyeri (Critically Endangered – South Africa); (4) priority action statement for Microphis pleurostictus (Endangered – Philippines); (5) priority action statements for Vulnerable species; (6) monitoring and evaluation for Southeast Asian marine environments; (7) determine priority Data Deficient species.
Policy: (1) select priority regions in which to promote greater implementation of rules and laws that affect syngnathids; (2) create scoping document on implementation for most relevant rules and laws that affect syngnathids in the following regions: Southeast Asian marine, South African estuarine, India and Southeast Asian freshwater, and Brazil and Argentina marine; (3) disseminate scoping document to resource managers and policy makers; (4) complete matrix on perverse incentives that affect syngnathids in Southeast Asian marine environments; (5) complete scoping document on perverse incentives for Southeast Asian marine environments.
Network
Capacity building: mentor next generation leaders/succession planning.
Membership: grow the SPS SG membership in strategic ways by taxon, region, discipline, etc.
Proposal development and funding: source funding for SPS SG programme officer and meetings.
Synergy: (1) collaborate with aquariums; (2) collaborate with multiplier organizations; (3) tighten links with other IUCN units; (4) develop strategic partnerships/synergies with multiplier organizations.
Technical advice: develop urgent action response capacity.

Communicate
Communication: (1) catalyse campaign to effect change in Southeast Asian marine environments; (2) develop outreach capacity for syngnathid conservation issues; (3) create synopsis of issues for donors, policy makers and the public; (4) deploy social media campaign; (5) create a taking action toolkit; (6) create a set of communication tools for the SPS SG.
Scientific meetings: (1) catalyse joint meeting with Specialist Groups for other marine taxa; (2) hold annual meetings of the SPS SG.

Activities and results 2018

Assess

Red List
i. A list of priority species in urgent need of re-assessment has been created. (KSR #1, 32)
ii. Re-assessments of two priority Data Deficient species, *Hippocampus hippocampus* and *H. guttulatus*, has begun in collaboration with the IUCN Marine Red List Officer at Oceanário de Lisboa in Portugal. (KSR #1, 32)

Plan

Planning
i. Priority action statements have been created and work has begun on priority research to address some of the threats and determine possible solutions: (1) we investigated the home-range, population size and growth rate of *H. capensis* within artificial reno mattress habitats; (2) mapped the Knysna estuary sub-tidal habitat to determine the amount of suitable habitat available; (3) initiated monthly monitoring of *H. capensis* populations within the Keurbooms estuary; (4) successfully used eDNA to determine the extent and current range of *H. capensis* within the Knysna, Keurbooms and Swartvlei estuaries; (5) work has also begun to investigate the population genomics of *H. capensis*. (KSR #15)
ii. Priority action statements have been created and work has begun on priority research to address some of the threats and determine possible solutions. To assist with recovery of declining populations of the Endangered seahorse *Hippocampus whitei*, a study was implemented to assess the viability of using purposely designed artificial habitats (known as seahorse hotels) to help recolonise areas where the species previously occurred. The results from this study are encouraging and a manuscript is currently being prepared. (KSR #15)
iii. Priority action statements have been created and work has begun on priority research to address some of the threats and determine possible solutions. Monitoring has begun for *Syngnathus watermeyeri*, including the use of eDNA to determine the presence within the Bushman’s and Kariega estuaries. (KSR #15)
iv. Consulted potential expert in the region to lead on priority research; dependent upon funding. (KSR #15)
Policy

i. Priority regions have been selected: (1) Southeast Asian marine; (2) South African estuarine; (3) India and Southeast Asian freshwater; and (4) Brazil and Argentina marine. (KSR #26)

ii. Developed document detailing rules and laws related to habitat alteration and loss in South Africa and Brazil and Argentina. Initiated discussions with government and agencies in South Africa about implementing rules and laws that are already in place. (KSR #26)

iii. Secured a summer undergraduate research student through the University of British Columbia to complete matrix on perverse incentives that affect syngnathids in Southeast Asian marine environments. (KSR #26)

Network

Capacity building

i. Almost one-third of the IUCN SPS SG’s members are early career scientists who are within 10 years of completing their PhDs. (KSR #17)

Membership

i. Since the new quadrennium, we have grown our SPS SG membership by recruiting 10 members, increasing discipline and regional representation including many from developing countries.

Proposal development and funding

i. A draft grant template has been created to use once funding opportunities arise. (KSR #19)

Synergy

i. The IUCN SPS SG is working together with the IUCN Marine Red List Officer at Oceanário de Lisboa in Portugal to complete re-assessments of the two European seahorse species. We have also begun talks with Birch Aquarium at Scripps Institution of Oceanography on the possibility of collaborating on husbandry projects. (KSR #29)

ii. The IUCN SPS SG partnered with Oceanário de Lisboa and the Oceano Azul Foundation with support from Guylian Chocolates Belgium to host the first European syngnathid meeting at the Oceanário de Lisboa in Portugal in October 2018. (KSR #29)

Communicate

Communication

i. Embarked on a plan to enhance our social media presence on Facebook, Instagram and Twitter, involving SPS SG members. (KSR #28)

ii. A draft taking action toolkit has been developed. (KSR #28)

iii. Created conservation outreach toolkits for: (1) Sweetings Pond, Eleuthera Island, Bahamas; (2) the Endangered Knysna seahorse, Hippocampus capensis, in South Africa; (3) Ria Formosa in Portugal; and (4) CITES for seahorses. (KSR #28)

iv. SPS SG members have contributed five blogs documenting their work with syngnathids and have initiated a plan to increase our social media presence on Facebook, Instagram and Twitter, involving SPS SG members. (KSR #28)

Scientific meetings

i. Facilitated two joint meetings on funding opportunities and conservation planning with IUCN Marine Specialist Group Chairs through Amanda’s Vincent’s role as the Chair of the IUCN Marine Conservation Committee. (KSR #28)

ii. Held a well-attended virtual SPS SG meeting on 23 January 2019. Plans are already underway for the next in-person meeting on 22 May 2020 in Guangzhou China. (KSR #28)

Technical advice

i. Developed a country-specific briefing document for Malaysia as a model template to expand to other priority countries. These briefing documents will aid researchers in countries in need of urgent action and will become a useful resource summarizing issues, threats, species, laws and lead advocates for each priority country. (KSR #18)
Acknowledgements

The SPS SG benefits from support to Project Seahorse, acting as the SPS SG. Project Seahorse is hugely grateful to our long-time major partner in marine conservation, Guylian Belgium Chocolates, and to our faithful supporters at the Langar Foundation. We would like to thank IUCN and Synchronicity Earth for providing funds to complete the IUCN Red List assessments. Sincere thanks to Oceanário de Lisboa and the Oceano Azul Foundation for their support in holding the first European Syngnathid meeting and for syngnathid conservation (and marine conservation in general). Heartfelt thanks to Guylian Chocolates Belgium for its generous help with this event and its long-lasting and very valuable determination to secure a future for seahorses in a healthy ocean. Project Seahorse also thanks our host institutions, the University of British Columbia in Canada and Zoological Society of London in the UK, who provide support for the Chair and Project Seahorse activities.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

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Main KSRs addressed: 1, 15, 17, 18, 19, 26, 28, 29, 32

Resolutions 2016 WCC: 016, 021

KSR: Key Species Result
Co-Chairs
Nicholas Dulvy (1)
Colin Simpfendorfer (2)

Red List Authority Coordinator
Peter Kyne (3)

Location/Affiliation
(1) Earth to Oceans Research Group, Department of Biology, Simon Fraser University, Vancouver, British Columbia, Canada
(2) College of Science and Engineering, James Cook University, Townsville, Australia
(3) Research Institute for the Environment and Livelihoods, Charles Darwin University, Australia

Number of members
176

Social networks
Facebook: IUCN Shark Specialist Group
Instagram: shark_specialist_group
Twitter: @IUCNshark
Website: https://www.iucnssg.org/
YouTube: IUCN Shark Specialist Group

Mission statement
To secure the conservation, management and, where necessary, the recovery of the world’s sharks, rays and chimaeras by mobilising global technical and scientific expertise to provide the knowledge that enables action.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision a substantial advance in reducing the extinction risk of the top three most threatened groups of chondrichthyans, namely the Sawfishes, Angel Sharks, and Guitarfishes. Eight regional and two thematic workshops will be undertaken to inform updated Red List assessments for all remaining chondrichthyans (942 species), thereby informing conservation prioritisation beyond these most threatened groups moving forward.

Targets for the 2017-2020 quadrennium

Assess
Policy: Living Planet Index for Chondrichthyans.
Red List: (1) nine hundred and forty-five assessments/reassessments through eight regional and two thematic workshops (all chondrichthyans not recently assessed); (2) Global Red List Index for chondrichthyans; (3) predicted statuses for all species assessed as Data Deficient.
Research activity: begin funding and development of a sawfish sightings database.
Technical advice: advance national shark report card work.

Plan
Planning: (1) conservation strategy for Wedgefishes and Guitarfishes; (2) Mediterranean Angel Sharks: Regional Action Plan workshop for Angel Sharks.
Research activities: advance the shark and ray Marine Protected Area (MPA) project.

Act
Policy: (1) provide policy advice on the use of Red List categories and criteria in fisheries management to the International Council for the Exploration of the Sea (ICES); (2) provide policy advice on chondrichthyans to the Convention on Migratory Species.
Research activities: creation of EDGE Sharks (Evolutionarily Distinct and Globally Endangered Sharks) with Zoological Society of London (ZSL).
Technical advice: (1) provide advice on shark and ray conservation priorities to donors, including the Shark Conservation Fund; (2) provide advice on reintroduction to zoos and aquaria; (3) provide advice as part of progress reporting on implementation of the Protocol for Specially Protected Areas and Biodiversity Information on the reporting party.

Network
Synergy: create a collaborative network focused on wedgefish and guitarfish conservation.

Communicate
Communication: (1) launch the Sawfish Progress and Priorities report; (2) raise awareness about extinction risk in sawfishes; (3) maintain an active and engaged Shark Specialist Group membership; (4) make contributions to the SSC E-bulletin.
Technical advice: provide advice to Humane Society International.
Activities and results 2018

Assess

Policy

i. Draft Living Planet Index (LPI) developed for Oceanic Pelagic Sharks and Rays; progress toward a global Shark and Ray LPI is anticipated by end of year. (KSR #11, 12)

Red List

i. Seventy-six assessments published. (KSR #1)

ii. Produced taxonomic group Red List Index for all 16 Wedgefishes and Giant Guitarfishes, and sub-equatorial African endemic species (99 species). (KSR #1)

iii. Categorical predictions made for North-East Atlantic and Mediterranean Sea Chondrichthysans (Walls, R.H.L. and Dulvy, N.K. (2019). Predicting the conservation status of Europe’s Data Deficient sharks and rays. bioRxiv. [DOI: 10.1101/614776]). (KSR #1)

Technical advice

i. National shark report card work is online at: www.sharkreportcard.org. (KSR #27)

Plan

Research activities


Act

Research activities

i. The EDGE Sharks funding and capacity building programme was launched in December 2018. Ninety people watched the launch webinar, and 14 respondents commented from seven countries: United Kingdom, United States of America, Venezuela, Trinidad and Tobago, Sri Lanka, Canada, and Cameroon. (KSR #17)

Network

Synergy

i. A collaborative network focused on wedgefish and guitarfish conservation was created with the participation of thirty-seven network members from 22 countries. (KSR #29)

Communicate

Communication


ii. More than 11.5 million social media impressions about extinction risk in sawfishes were generated; more than 8,700 people engaged. (KSR #15)

iii. Four newsletters were published. (KSR #28, 29)

iv. Six contributions were made to the SSC E-bulletin. (KSR #28, 29)

Acknowledgements

We thank the Shark Conservation Fund for funding for the Global Shark Trends Project and the associated international Red List assessment workshops. The South African Institute for Aquatic Biodiversity (SAIAB) and the Squalus Foundation generously hosted workshops. This important conservation work would not have been possible without the help of all of the Shark Specialist Group members and external experts who attended workshops, contributed data, or helped in the review process.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

Assess 5

Plan 1

Act 1

Network 1

Communicate 4

Main KSRs addressed: 1, 11, 12, 15, 16, 17, 26, 27, 28, 29, 32

Resolutions addressed: WCC-2016-Res-016

KSR: Key Species Result
Mission statement
To achieve conservation and sustainable use of snappers, seabreams, grunts and associated coastal fish species through the application of improved scientific knowledge and community engagement in management decision-making.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, the Snapper, Seabream and Grunt Specialist Group (SSG) aims to complete over 90% of the Red Listing of all snapper, seabream and grunt (SSG) families (more than 400 species), with conservation planning and actions underway for at least two species in two regions (with implementation beginning by 2021). There is a focus on the conservation of threatened spawning aggregations of major SSG species. We also plan to develop Red List training workshops and assessments in understudied regions with diverse SSG species, some of which are highly vulnerable and need species conservation planning linked to applied fishery management. We also envision climate change research on key species in the SSG as well as continued efforts to bring fishers and other sources of traditional ecological knowledge (TEK) into fishery management and conservation.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete global assessment of Family Nemipteridae (target completion of total 73 species); (2) complete global assessment of Family Lutjanidae (target completion of total 113 species); (3) complete global assessment of Family Haemulidae (target completion of total 136 species); (4) complete global assessment of Family Lethrinidae (target completion of total 44 species); (5) complete global assessment of Family Caesionidae (target completion of total 23 species); (6) update global assessment of Family Sparidae (target completion of total 166 species).

Research activities: (1) assessment of climate change impacts on 20 haemulid and lutjanid species; (2) develop collaborative guidelines on TEK in SSG Science and Management.

Plan

Act
Conservation activities: assist Regional Fisheries Management Organisation (RFMO) implementation of five new spawning reserves.
Network
Capacity building: foster training of at least two members per region using species conservation planning tools, with preliminary development of new conservation planning efforts in two regions.

Communicate
Communication: (1) complete and maintain a website for the Specialist Group; (2) produce guides in three languages for common, difficult to identify early life history stages of nearshore snappers, grunts, and seabreams.

Activities and results 2018

Assess
Red List
i. Family Nemipteridae: in conjunction with the Global Marine Species Assessment Project (GMSA), completed assessment of 20 species; 42% of species remain to be assessed. (KSR #1)
ii. Family Lutjanidae: in conjunction with GMSA, completed assessment of 16 species; 8% of species remain to be assessed. (KSR #1)
iii. Family Haemulidae: in conjunction with GMSA, completed assessment of 26 species; 27% of species remain to be assessed. (KSR #1)
iv. Family Lethrinidae: in conjunction with GMSA, completed assessment of 4 species; 16% of species remain to be assessed. (KSR #1)
v. Family Caesionidae: in conjunction with GMSA, completed assessment of 5 species; 13% of species remain to be assessed. (KSR #1)

Research activities
i. Assessment of climate change impacts on 20 haemulid and lutjanid species is underway, with green listing work on both families. (KSR #12)
ii. Development of collaborative report on TEK in SSG Science and Management is near completion with partners of report on TEK in coastal fishery management and in Red Listing. Separate document in prep with partners. (KSR #32)

Plan
Planning
i. Publication of marine components of the Species Conservation Planning Guidelines completed. (KSR #18)

Act
Conservation activities
i. Assisted production of reporting on the monitoring and early performance results of the five South Atlantic Fishery Management Council (SAFMC) Amendment 36 spawning reserves. (KSR #22)

Network
Capacity building
i. Identification of priority regions and species aided by advances in species Red Listing; we are now scoping potential projects. (KSR #17)

Communicate
Communication
i. Website developed and updated to reflect current activities of the SSG SG. (KSR #28)

Acknowledgements
We thank the many members of the Snapper, Seabream and Grunt Specialist Group for their input, particularly for efforts on the first Red List assessments of hundreds of species among diverse global regions. We appreciate the assistance of the Marine Biodiversity Unit at Old Dominion University, as well as offices of the IUCN Global Species Programme. We also greatly appreciate the assistance of Rob Bullock and the coordination efforts of Amanda Vincent and the Marine Conservation Subcommittee.

Summary of activities 2018
Species Conservation Cycle ratio: 5/5

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Main KSRs addressed: 1, 12, 17, 18, 22, 28, 32
KSR: Key Species Result
Mission statement

The mission of the IUCN Sturgeon Specialist Group (SSG) is to provide accurate information on the status of sturgeons and paddlefishes and promote their conservation and recovery.

Projected impact for the 2017-2020 quadrennium

By 2020, we envision an SSG with enhanced capacity to contribute to the conservation of sturgeons and paddlefishes on global, regional and local scales. The SSG will have greater impact on decision-making at global meetings (CITES, Convention on the Conservation of Migratory Species of Wild Animals (CMS)), and will provide expertise in the areas of conservation of wild stocks and impact of aquaculture. With an up-to-date Red List for all species, accurate information on the status of wild species and necessary conservation actions will be available. For the most threatened species, action plans will be under development to guide restoration and recovery efforts.

Targets for the 2017-2020 quadrennium

Assess


Plan

Planning: action plans under development for at least four of the most imperilled species. Policy: (1) increased presence at CMS; (2) prepare position papers/information documents for CITES meetings where sturgeon is discussed, particularly in areas of aquaculture, labelling and stock identification.

Network

Membership: enhanced regional representation (e.g. Hungary, Bulgaria, Georgia, Azerbaijan and Uzbekistan).
Proposal development and funding: at least two grants submitted by SSG members as a result of SSG activities.
Scientific meetings: annual meetings held for regional representatives.
Synergy: strong working groups created on topics of importance (e.g. identification of management units, stock assessments, trade control and link to aquaculture).

Communicate

Communication: (1) mission statement, website and portal membership list revised; (2) better communication internally and with outside groups (e.g. World Sturgeon Conservation Society, North American Sturgeon and Paddlefish Society); (3) at least two position papers published.

Activities and results 2018

Assess

Red List: (1) Data acquisition for Red List assessment update of North American species completed, review process started. (KSR #2)

Plan


Policy

i. Involvement of the Convention on Migratory Species (CMS) in the Pan European Action Plan. (KSR #26)

ii. Development of identification guideline. (KSR #26)
Network

Membership
i. Relevant experts contacted, membership revised.

Scientific meetings
i. European Sturgeon Conference, 9–10 July 2018, Vienna, Austria; Corruption and caviar trade, 18 April 2018, Bergen, Norway; Envi Crime Net, 8–9 November 2018, Vienna, Austria. (KSR #28)

Communicate

Communication
i. Better internal and external communication in progress. (KSR #28)
ii. Two position papers in preparation. (KSR #28)

Acknowledgements
Thanks to the North American Sturgeon and Paddlefish Society for assistance on the Red List assessment. We thank the US Fish and Wildlife Service, National Oceanic and Atmospheric Administration (NOAA), World Sturgeon Conservation Society (WSCS), North American Sturgeon and Paddlefish Society (NASPS), Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Leibniz Institute for Zoo and Wildlife Research (IZW) and the Yangtze Fisheries Research Institute for support of activities.

Summary of activities 2018
Species Conservation Cycle ratio: 4/5

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Main KSRs addressed: 2, 26, 28, 31

KSR: Key Species Result
Mission statement
To bring together a variety of stakeholders to increase knowledge on the global status and conservation of the world’s tuna and billfish species.

Projected impact for the 2017-2020 quadrennium
Reassessments of the world’s tunas and billfishes will greatly improve and consolidate the current state of knowledge of these species around the globe. Many regional and national fisheries management organisations, in addition to other sustainable seafood and research organisations, are relying on these data to inform and update current policies and management recommendations.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete reassessments for 51 scombroids and 10 billfishes. Research activities: complete the book *Tunas and Billfishes of the World*.

Activities and results 2018
Assess
Research activities
1. Book *Tunas and Billfishes of the World* by Bruce Collette and John Graves, John Hopkins University Press, was completed and is in press. (KSR #43)
Summary of activities 2018

Species Conservation Cycle ratio: 1/5

Assess 1

Main KSRs addressed: 43

KSR: Key Species Result

Sailfish (Istiophorus platypterus) off Cancun
Photo: Daniel Botelho
Mission statement
The mission of the IUCN SSC Butterfly Specialist Group is to increase knowledge on the taxonomy, ecology and conservation status of butterflies and moths around the world and promote their long-term conservation.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, the group will be re-established with an active membership driving forward the assessment of species’ conservation status. By the end of 2020, the group will have completed its first major assessment project by publishing the findings of a status assessment of the world’s swallowtails. The group will have also re-established its presence on social communication platforms, built a membership throughout the world’s regions and pinpointed additional projects for the next quadrennium.

Targets for the 2017-2020 quadrennium
Assess
Green List: complete assessment of 1-2 species of butterfly for the IUCN Green List testing process.
Proposal development and funding: establish a collaboration with Butterfly Conservation to inventory butterfly monitoring schemes and available data worldwide (time series of abundance data and presence/absence data, to help us assess data gaps, capacity needs and build a Living Planet Index for butterflies). The first target is to secure funding for this.

Red List: (1) complete assessment of ~550 species of swallowtail butterfly (comprehensive assessment); (2) assessment of 29 species of North American prairie butterfly, led by Minnesota Zoo; (3) implement assessment of 400 South Asian endemic butterflies, in conjunction with the South Asian Invertebrate Specialist Group.

Network
Capacity building: carry out capacity building for Red Listing within the group via targeted Skype or online sessions/have members sign up for the online Red List training course.
Membership: build a global network of members, covering at least 20% of Lepidoptera range countries.

Activities and results 2018
Assess
Red List
i. We have already completed 80 assessments for Australasia and the Neotropics, with a further 100 assessments submitted or in review. (KSR #1)
ii. Two Minnesota Zoo focus species assessed for the Red List (and published on IUCN Red List 2019.2). (KSR #1, 2)

Network
Membership
i. We interacted and built relationships with around 50 species experts, primarily from Australasia, Indomalaya and the Neotropics. We started formalising membership within the IUCN Commission system as soon the Chair got access to all the available information needed in early 2019.
Acknowledgements

We want to thank The IUCN-Toyota Red List Partnership for supporting the assessment of swallowtails.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 2

KSR: Key Species Result

Atrophaneura aristolochiae, Common Rose (Papilionidae), Least Concern
Photo: Shawan Chowdhury

Papilio homeroides (Papilionidae), one of the most threatened swallowtails in the world
Photo: Peter Hall

Atrophaneura aristolochiae, Common Rose (Papilionidae), Least Concern
Photo: Shawan Chowdhury

Eurytides bellerophon (Papilionidae), Least Concern
Photo: Augusto Rosa
Mission statement
The Cave Invertebrate Specialist Group (CISG) is a global network of experts working on invertebrates associated with karst and caves habitats. Our goal is to contribute to increase the knowledge of these animals and plants extremely rich in narrow endemics, and to promote conservation action through Red Listing, mostly focused on species under threats like limestone quar- rying or water pollution.

Projected impact for the 2017-2020 quadrennium
Most cave-restricted and many deep soil species are narrow endemics and vulnerable to disturbance, but very few have been evaluated so far. During the 2017-2020 quadrennium, Red List assessment by CISG will increase significantly, with focus on the most critical sites on earth. This will allow us to provide validated information to the media, to stakeholders and to companies at the origin of the most important threats to this fauna. They will have full knowledge of the impact of their local activities on these biotas. A complementary objective will be to integrate, when possible, basic guidelines about the preservation of highly endemic cave-related fauna in the environmental policy of public and private companies, in first line quarrying companies.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete assessments of 132 cave Trechinae from China; (2) increase the number of cave invertebrate species assessed for the Red List, focusing on the most threatened; (3) upgrade the Brazilian cave species from national lists to the IUCN Red List; (4) complete assessments of 20 cave species from Maros karst, South Sulawesi; (5) complete assessment of six cave flatworm species from Italy; (7) complete assessments of several cave species from Georgia.

Network
Membership: diversify membership for coverage of all subterranean invertebrate groups and all subterranean habitats.
Proposal development and funding: Tony Whitten fund for grants on cave biodiversity of Southeast Asia.

Communicate
Communication: (1) develop own website; (2) develop virtual library in own website.
Research activities: prepare a special issue of a taxonomic journal in honour of Tony Whitten.
Scientific meetings: (1) participation at the 21st International Conference on Subterranean Biology; (2) participation at the International Union of Speleology in Lyon (France).
Synergy: establish a network of regional contact persons for identifying and dealing with regional issues.
Activities and results 2018

Assess
Red List
i. Eighty-seven species of cave Trechinae from China have been assessed and are under review; the remaining are under assessment. (KSR #2)

Scientific meetings
i. Planned communications for the 21st International Conference on Subterranean Biology have been done and are available online at ARPHA (Authoring, Reviewing, Publishing, Hosting, Archiving). (KSR #28)

Research activities
i. All 20 potential contributions to the special issue of Raffles Bulletin of Zoology (RBZ) have been received and reviewed; most have been accepted; we are waiting for revised manuscripts. (KSR #43)

Network
Membership
i. Recruitment is in fact increasing naturally by requests of different specialists to join CISG, with no special campaign necessary.

Proposal development and funding
i. The first call for candidates of the Tony Whitten Fund for Grants on Cave Biodiversity of Southeast Asia for 2020 was launched in May 2018 to CISG members and labs working in the region.

Communicate
Communication
i. Human and financial resources to create and maintain a website are lacking; an offer to help by a US member is under discussion. (KSR #28)

Acknowledgements
We thank The IUCN-Toyota Red List Partnership for the Red Listing workshop organised in Cambridge in January 2018 and associated assessment completion. Red-listing and other CISG tasks were done in close collaboration with Ana Komericki and Jut Wynne, appointed by IUCN as Programme Officers to the CISG. We thank Global Wildlife Conservation and Flora Fauna International for the one year grant awarded to Ana Komericki for her part-time work in CISG.

Summary of activities 2018
Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 1, 2, 28, 29, 43

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC Dragonfly Specialist Group (DSG) is to increase the knowledge on taxonomy, ecology and biogeography of all Odonata (damselflies and dragonflies). Based on this information, we are currently working on the final steps towards assessing all species globally against the criteria of The IUCN Red List of Threatened Species, while outdated assessments are updated. In parallel, we help conservationists and countries to protect threatened species.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we want to see all Odonata assessed on the IUCN Red List of Threatened Species. We hope to be able to help more countries with their National Red Lists and their endeavours with Biodiversity Action Plans. Hopefully, more conservation projects and capacity building, not only for threatened species, can be established. Another goal is to establish dragonflies as “guardians of the watershed”, enabling a better understanding of biodiversity, a healthy environment and human well-being.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) global dragonfly assessment (6,300 species); (2) assessments focusing on African and South American dragonflies added to National Red Lists; (3) contribute to the Barometer of Life by completing the assessments of ca. 500 dragonflies in Southeast Asia; (4) contribute to the Barometer of Life by completing the remaining assessments of ca. 1,000 dragonflies globally; (5) gather data in North America through OdonataCentral to feed into global Red List assessments.

Research activities: (1) gain more information on *Lestes umbrinus* to assist conservation planning; (2) research and scientific publication on dragonflies in Tatamá National Park and its buffer area in Colombian western Andes; (3) contribute to the process of delineating Key Biodiversity Areas (KBAs) for freshwater conservation; (4) delineate KBAs for freshwater conservation in Lake Tanganyika Catchment, Africa; (5) develop an Atlas of the dragonflies of Bhutan/the Eastern Himalaya; (6) use the atlas to develop a Dragonfly Biotic Index for the Eastern Himalaya; (7) develop a field guide for the odonates in Tatamá region; (8) conduct research on impacts of climate change on mountainous dragonflies in the Andes, Colombia; (9) delineate KBAs for freshwater conservation in Lake Malawi Catchment, Africa; (10) create an open online database for Odonata; (11) contribute to producing a KBA monitoring plan; (12) contribute to KBA assessment for Greece.

Plan
Planning: (1) produce a Species Conservation Action Plan for *Ceriagrion citrinum*; (2) produce a Species Conservation Action Plan for *Notogomphus maathaiae*; (3) produce a Species Conservation Action Plan for *Platycypha amboniensis*.

Policy: (1) develop a Dragonfly Biotic Index for Monitoring and Prioritising Restoration Sites within the Congo-Nile Crest Watershed, Rwanda; (2) develop a Dragonfly Biotic Index for Monitoring and Prioritising Restoration Sites within Europe.
**Act**

Conservation actions: (1) implement conservation action for *Lestes umbrinus*; (2) implement conservation actions for endemic dragonflies in the Cape Region.


**Network**

Agreements: develop a scientific research collaboration to generate conservation information for the Sarawak Forestry Corporation.

Capacity building: (1) capacity building and training of Red List assessors worldwide (several people trained in workshops on various continents); (2) continued focus on capacity building and training in Africa and South America for Red Listing and on-the-ground conservation work; (3) increase the number of Red List trainers in the DSG.

Proposal development and funding: increase funding for scientific and research projects for dragonflies globally.


Synergy: expand the network of odonatologists and freshwater conservationists in Africa as members of the DSG.

**Activities and results 2018**

**Assess**

**Red List**

**i.** Assessments and necessary re-assessments of the Odonata from Europe, northern Asia, Australia, Hawaii, North America, and Africa are completed. Nearly 1,000 assessments (968) have been submitted in 2018. Assessments of Odonata from South America and Southeast Asia are ongoing. (KSR #1)

**ii.** South Africa National Red List completed in 2018, but ongoing assessments for South America. (KSR #2)

**Research activities**

**i.** Report on *Lestes umbrinus* to assist its conservation planning completed and sent to the International Dragonfly Foundation (the donor). (KSR #12)

**ii.** Published report on dragonflies in Tatamá National Park and its buffer area in Colombian western Andes at https://www.researchgate.net/profile/Cornelio_Bota-Sierra. (KSR #11, 12)


**iv.** Publication on delineation of KBAs for freshwater conservation in Lake Tanganyika Catchment, Africa drafted and ready for publication. (KSR #22)

**v.** Field guide for the odonates in Tatamá region submitted for publication. (KSR #28, 43)

**vi.** Report on delineation of KBAs for freshwater conservation in Lake Malawi Catchment, Africa about to be published. (KSR #22)

**vii.** Open online databases created for Africa at http://addo.adu.org.za/ and for the entire Western hemisphere at https://www.odonata-central.org/. (KSR #1, 2, 12, 32, 43)

**viii.** We participated in an IUCN workshop on KBA monitoring in Malaga, Spain. We are working on the protocol and conducted a practical application in the field in June, with all the participants. (KSR #22)

**ix.** We are delivering data on Odonata for the delineation of KBAs in Greece. (KSR #22)
Capacity building workshop at Rwanda in 2018
Photo: Viola Clausnitzer

Male Evening Hawker Anaciaeschna triangulifera,
Least Concern
Photo: Jens Kipping
Plan

Planning

i. Proposal of Species Conservation Action Plan for *Ceriagrion citrinum* drafted. (KSR #12, 15, 20)

ii. Proposal of Species Conservation Action Plan for *Notogomphus maathaiae* submitted. (KSR #12, 15, 20)

iii. National Geographic Society proposal submitted by Scion Trust, Kenya. (KSR #12, 15, 20, 34, 39)

Act

Conservation actions

i. Workshop on conservation action for *Lestes umbrinus* was held (including local teachers to help raise awareness through education) and there are ongoing conservation activities at the community level. (KSR #33, 34, 35, 43)

ii. Ongoing conservation work on endemic dragonflies in the Cape Region and publications about the impact of conservation actions. (KSR #22)

Technical advice

i. Priority issues and conservation actions to address them published in a book on the dragonflies of New Zealand. (KSR #28)

Network

Agreements

i. MOU on scientific research collaboration in the Sarawak Forestry Corporation drafted and signed. (KSR #18, 21, 26)

Capacity building

i. Twenty-five people trained at a workshop in Rwanda, held March-April 2018, most were students and some will end up assisting with national Red Listing. (KSR #5, 28)

ii. Two training workshops planned for 2019 in South America. (KSR #28)

iii. Training workshop planned in Rwanda. (KSR #28)

Synergy

i. Ongoing network communication. (KSR #28)

Summary of activities 2018

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Main Key Species Results (KSR) addressed: 1, 2, 5, 11, 12, 15, 18, 20, 21, 22, 26, 28, 32, 33, 34, 35, 39, 43

Resolutions addressed: WCC 2016 Res 016, WCC-2016-Res-041

Acknowledgements

We thank the National Geographic Society, Rufford Small Grants, Chicago Zoological Society (CBOT grants), Eppley Foundation, Dian Fossey Fund International, and NABU for supporting conservation and assessment work on dragonflies worldwide. Our gratitude also to Marcelo Tognelli for his constant advice on mapping and Red Listing issues to the SOL (Sociedad Odonatológica Latinoamericana) and to IUCN’s Freshwater and Red List Units for their tireless help in Red List assessments.
Mission statement

Our mission is to compile existing knowledge for ~2000 lampyrid species worldwide on their geographic range, population size, and population trends, to identify major extinction threats and risk factors, to increase public knowledge concerning firefly diversity, ecology and behaviour, and to promote long-term conservation efforts.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, the Firefly Specialist Group (FSG) envisions: (1) compilation and publication of a global review of firefly extinction threats; (2) complete data compilation (extent of occurrence (EOO), area of occupancy (AOO), population size, risk factors) in preparation for Red List assessment for fireflies in certain regions (North America, others); (3) increased communication and educational initiatives through the newly announced World Firefly Day, the Selangor Declaration on firefly conservation, and awareness campaigns conducted in individual member countries.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) complete Red List assessments for a selection of 1-10 flagship species in one year; (2) complete global Red List assessments of 100-200 species for 2020; (3) develop and disseminate standardised methodologies for monitoring firefly species abundances.

Research activities: (1) develop a global distribution database for fireflies that includes relevant behavioural and life-history data, then use this information to inform Red List assessments; (2) determine whether the congregating mangrove fireflies in Malaysia and other South-east Asian countries could be used to establish Key Biodiversity Areas (KBAs); (3) develop a prioritised list of threats to firefly population persistence within different regions.

Network

Membership: recruit members, appoint regional coordinators.
Synergy: provide guidance and work with local communities to protect threatened species and prevent their extinction.

Communicate

Communication: (1) articulate and share guidelines to promote sustainable firefly ecotourism; (2) ignite public interest and garner local and regional support for firefly conservation and management; (3) develop a media to track FSG activities and keep members updated; (4) information on the FSG posted on the Fireflyers International Network (FIN) website: fireflyersinternational.net

Technical advice: disseminate technical information and advice about firefly conservation issues to interested parties.
Activities and results 2018

Assess

Red List
i. Standardised methodologies for monitoring firefly species abundances are being compiled. (KSR #12)

Research activities
i. Global distribution database for fireflies now completed for the ~170 North American firefly species; data compilation currently in progress for other regions. (KSR #1)
ii. Contacted Penny Langhammer and reviewed Ver 1.0 of the Guidelines for the Identification of Key Biodiversity Areas. (KSR #14, 22)
iii. Survey of global threats to firefly population persistence within different regions conducted, literature reviewed, manuscript submitted for publication. (KSR #26)

Network

Membership
i. We have recruited 22 members and have appointed regional coordinators for all regions where expertise exists.

Synergy
i. Formation in Malaysia of Firefly Komuniti network consisting of six communities and enterprises; more groups will be recognised to join this network. This will be a model for regional coordinators in other countries to set up their own networks. (KSR #15)

Communicate

Communication
i. Information-gathering from relevant regions to promote sustainable firefly ecotourism is in progress. (KSR #15)
ii. Group is actively posting on social media (Facebook: Fireflyers International, Silent Sparks; Twitter: @silent_sparks); Co-Chair Wong provided training for 18 firefly ambassadors to lead community walks at Earth Hour 2019; training underway for World Firefly Day celebrations in Thailand, Malaysia, and the UK; radio interviews and public lectures given on firefly ecology and conservation in New York City and Boston, US; working with the US citizen science initiative, Firefly Watch. (KSR #28)
iii. Communication through email to date to track FSG activities and keep members updated. (KSR #28)
iv. Currently using the FIN website and Facebook group to post Specialist Group activities. (KSR #28)

Technical advice
i. In cooperation with The Xerces Society, Conservation Guidelines for Fireflies in the US and Canada is now in preparation. (KSR #26)

Acknowledgements
We thank The Xerces Society and Tufts Summer Scholars Program for supporting work on the North American firefly database, and Ben Pfeiffer, Lynn Faust, and Larry Buschmann for sharing their expertise. We are also grateful to the Malaysian Nature Society and Tufts University for administrative support.

Summary of activities 2018

<table>
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<td>Network</td>
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</tr>
<tr>
<td>Communicate</td>
<td>5</td>
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Main KSRs addressed: 1, 12, 14, 15, 22, 26, 28

KSR: Key Species Result
Mission statement

The mission of the IUCN SSC Freshwater Crustacean Specialist Group (FCSG) is to work towards all aspects of the long-term conservation of freshwater decapods (freshwater crabs, crayfish, freshwater shrimps, and aeglids) worldwide. Specific goals are: (1) to act as the Red List Authority and to update IUCN Red List species assessments; (2) to promote their long-term conservation worldwide by management of habitats and by the development of conservation strategies and, where necessary, the recovery of populations; (3) to promote integrated research on biodiversity and conservation; (4) to educate non-specialists about all aspects of the group; and (5) to create and maintain the FCSG website of the IUCN SSC that will provide up-to-date world species lists, keep track of the discovery of new species, and list the Red List status for each species.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envisage that we will have made progress towards a second global reassessment of the freshwater crabs, including up to 300 newly described species assessed for the first time. This will guide the prioritisation of species for future conservation actions for Critically Endangered species of freshwater crabs. We will also have added the entire global fauna of the Aeglidae (South American anomuran freshwater crabs) to the IUCN Red List. Again, this will guide the prioritisation of species for future conservation actions, especially for Critically Endangered species. We are on track for the stabilisation of the populations of the Critically Endangered species Johora singaporensis in Singapore and the reduction of threats and specific management of habitat for this species, at least in part of its range. We will have implemented additional conservation strategies for Critically Endangered species of highest priority, and our focus will be on developing conservation action plans for the two rediscovered threatened species of freshwater crabs in Cameroon. We will also have expanded our scope to include all of the world’s land crabs and mangrove crabs.

Targets for the 2017-2020 quadrennium

Assess
Red List: begin the assessment of 1,500 species of primary freshwater crabs, plus about 90 species of newly described crayfish, and 86 species of aeglids. Also targeted are 27 species of land crabs, and more than 100 species of mangrove crabs.

Act
Conservation actions: (1) follow up on the progress of the project initiated in 2015 to save a Critically Endangered species of freshwater crab from Singapore (Johora singaporensis) from extinction; (2) begin implementation of conservation action plans for two threatened species recently re-discovered in Cameroon.

Network
Capacity building: (1) organise two Red List training workshops; (2) organise one conservation planning training workshop.

Membership: increase membership from China, Taiwan, Singapore, Costa Rica, US, Colombia and Australia.
Communicate
Communication: develop a website for the FCSG.

Activities and results 2018

Assess
Red List
i. We have completed assessments for 278 species of pseudothelphusid freshwater crabs (every species in the Neotropical region), more than 200 species of freshwater crabs from China, 42 species of freshwater decapods from Madagascar, 12 species from Lake Victoria, and 10 species from Lake Malawi. We have also completed draft assessments of 86 species of aeglids from South America. All of these assessments are awaiting submission to the Red List Unit; however, we have abandoned ideas to assess the more than 100 species of mangrove crabs because this is not realistic. (KSR #1)

Plan
Planning
i. We are continuing field work to study two threatened species recently re-discovered in Cameroon, and are ready to implement conservation actions, but this will need support for a meeting of all of the stakeholders. (KSR #15)

Act
Conservation actions
i. We established a captive breeding programme for a Critically Endangered species of freshwater crab from Singapore at the Singapore Zoo, and worked with the National Park Service to preserve the habitat at the type locality. Genetic studies of this species began at the National University of Singapore. (KSR #27)

Network
Capacity building
i. No Red List training workshops were held during 2018; however, two Malagasy scientists who had not previously had any Red List training were involved in the Red List workshop in Madagascar, where we evaluated the extinction risk of all of the freshwater decapods on that island. (KSR #5)

Membership
i. Three new members were recruited from Costa Rica, the US, and Cameroon. Two more are planned (from Colombia and Australia).

Acknowledgements
We thank the following donors that helped us to cover the costs of the workshops for developing the conservation action plan for the Critically Endangered Singapore Freshwater Crab (*Johora singaporensis*): National Parks Board, Singapore, Wildlife Reserves Singapore, and the National University of Singapore. Moreover, we want to thank the following IUCN Red List experts that assisted with the development of the conservation action plan: Sonja Luz, Roopali Raghavan, Geoffrey Davison, Cai Yixiong, Daniel J.J. Ng, and Philip J.K. McGowan.

Summary of activities 2018

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<td>Plan</td>
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<td>Act</td>
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Main KSRs addressed: 1, 5, 15, 27

KSR: Key Species Result
Mission statement
The mission of our group is to foster the conservation of orthopteroid insects (grasshoppers, katydids, crickets, mantids, stick insects) and their habitats around the world. We assess their conservation status, raise awareness and engage in practical conservation of this amazing and highly diverse group of insects.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we want to increase the number of Orthoptera, Phasmida and Mantodea species on the IUCN Red List by ca. 1,000 species. This will help to raise awareness for this species group and foster research and conservation activities. We are particularly interested in engaging local park managers to consider grasshoppers, bush-crickets, crickets, stick insects and mantids in conservation planning, monitoring and management. We want to increase the number of conservation strategies for threatened Orthoptera species and help to implement these plans. This will help to avoid future extinctions and set best practice examples for other projects.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete Red List assessments of 400 Tanzanian Orthoptera species, 17 Bladder Grasshoppers (Family Pneumoridae), 84 Agile Grasshoppers (Subfamily Euryphyminae), 36 European mantises, 80 Mediterranean mantises, 4 Razor-backed bush-hoppers (Xyronotidae), 3 Tanaoceridae grasshoppers, 270 Malagasy grasshoppers, 29 Socotran endemic Orthoptera, 68 Dichoroplini grasshoppers from South America, and 30 grasshoppers from Western Ghats (India); (2) complete Sampled Red List Index for Orthoptera (1,500 species by the end of 2024).

Research activities: (1) develop and implement a population monitoring programme for the Critically Endangered Pronotropis rhodanica; (2) develop monitoring standards for Orthoptera in Europe.

Plan
Planning: (1) develop a conservation strategy for the Endangered Zeuneriana marmorata in Slovenia and Italy; (2) develop a conservation strategy for the Critically Endangered Peripodisma ceraunii in Albania.

Activities and results 2018
Assess
Red List
i. Assessments of 139 Tanzanian Orthoptera species completed. (KSR #1)
ii. Assessments of 17 Bladder Grasshoppers (Family Pneumoridae) completed. (KSR #1)
iii. Assessments of 84 Agile Grasshoppers (Subfamily Euryphyminae) completed. (KSR #1)
iv. Assessments of 36 European mantises completed and currently under review. (KSR #2)
v. Assessment of 80 Mediterranean mantises started. (KSR #2)
vi. Assessment of 81 Malagasy grasshoppers completed. (KSR #2)

vii. Assessments of 200 Orthoptera completed for the Sampled Red List Index. (KSR #1)

viii. Some assessments of Dichoroplini grasshoppers from South America completed. (KSR #1)
Research activities

i. A monitoring protocol for the Critically Endangered *Prionotropis rhodanica* has been optimised to minimise field effort. This has been applied for the first time in 2018 with success. Currently, detection dogs are trained to further optimise the method. (KSR #12)

ii. A monitoring protocol for Orthoptera in Europe is currently being developed by Tim Gardiner. (KSR #32)

Plan

Planning

i. Conservation plans for the Endangered *Zeuneriana marmorata* in Slovenia and Italy are currently being implemented. (KSR #21)

ii. A proposal has been sent to National Geographic to support a conservation planning workshop and related work for the Critically Endangered *Peripodisma ceraunii* in Albania. (KSR #21)

Acknowledgements

We are particularly grateful for the constant support by the Mohamed bin Zayed Species Conservation Fund as well as to National Geographic for funding the implementation of the Crau Plain Grasshopper Strategy in France. Furthermore, we would like to thank The IUCN-Toyota Red List Partnership for providing funding to continue with the Red List assessments for the Sampled Red List Index. We are also grateful to all Orthopterists who have helped us with the assessments.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

| Assess | 10 |
| Plan   | 2  |

Main KSRs addressed: 1, 2, 12, 21, 32

KSR: Key Species Result
Mission statement

The four extant species of horseshoe crabs are imperilled, because of overfishing for use as food, bait, production of biomedical products derived from their blood, and because of habitat loss or alteration due to shoreline development and armouring against coastal erosion. The group aims to protect horseshoe crabs in the world through collaborative effort in conservation of their populations and habitats, and in raising public awareness of their importance in evolutionary history, marine coastal ecology and biomedical uses.

Projected impact for the 2017-2020 quadrennium

The three species of horseshoe crabs in Asia, Tachypleus tridentatus, T. gigas and Carcinoscorpius rotundicauda, are currently listed as Data Deficient, and we expect that our current activities will lead to a change in this status in the current quadrennium. While it is premature to assign a status without a formal review of the data, most studies indicate a moderate to severe threat to local populations and a lack of genetic connectivity among populations. We expect to submit a Red List assessment for each of the three Asian horseshoe crabs as an important first step in leading to greater conservation measures for these animals, including greater protection for essential spawning and juvenile nursery habitats. Our group will continue being an active advocate for these unique animals through the support of various outreach and educational programmes that our members have developed.

Targets for the 2017-2020 quadrennium

Assess

Green List: complete Green List assessment of American Horseshoe Crab (Limulus polyphemus) and Tri-spine Horseshoe Crab (Tachypleus tridentatus) through assessing the recovery of species’ populations and measuring their conservation success.

Red List: update Red List assessments of all three Asian species of horseshoe crab.

Network

Capacity building: develop best practices for adult and juvenile horseshoe crab population assessments.

Communicate


Scientific meetings: (1) coordinate the 4th International Workshop on the Science and Conservation of Horseshoe Crabs in summer 2019; (2) organise a Special Session at the 148th Annual Meeting of the American Fisheries Society, Atlantic City, NJ, August 2018.
Activities and results 2018

Assess

Green List
i. A working group has been assembled to develop the American Horseshoe Crab and Tri-spine Horseshoe Crab Green List assessments. The group will lead a workshop at the 2019 meeting in China. (KSR #11)

Red List
i. We have completed Red List assessment on Tachypleus tridentatus, which has been updated from Data Deficient to Endangered in August 2018. This update was officially announced by IUCN in March 2019. (KSR #2)

Communicate

Research activities
i. Publication of book based on papers presented the 3rd and 4th International Workshops on the Science and Conservation of Horseshoe Crabs in 2015 and 2019. (KSR #28)

Scientific meetings
i. The 4th International Workshop on the Science and Conservation of Horseshoe Crabs will be held from 15-20 June 2019 in Qinzhou, Guangxi, China. There will be around 130 participants attending. We have successfully secured travel funding for some participants, especially those from emerging economies, to attend the workshop. Such funds include an IUCN SSC Internal Grant and Ocean Park Conservation Foundation Hong Kong grant. (KSR #28)

ii. ‘Spirit in the night: throwing light on our many connections to the American horseshoe crab’, Special Session at 148th Annual Meeting of the American Fisheries Society, Atlantic City, NJ, August 2018. 18 papers presented. (KSR #28)

Acknowledgements

We thank the Species Survival Commission and Ocean Park Conservation Foundation Hong Kong for providing travel funding support for participants from emerging economies to attend the June 2019 International Workshop, and Beibu Gulf University, Guangxi Biodiversity Research and Conservation Association, Guangxi Key Laboratory of Beibu Gulf Marine Biodiversity Conservation, and Guangxi First-Class Aquaculture Platform (Incubation) at Beibu Gulf University for organising the event.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

<table>
<thead>
<tr>
<th>Assessed Activities</th>
<th>Level</th>
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<tbody>
<tr>
<td>Assess</td>
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<tr>
<td>Communicate</td>
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Main KSRs addressed: 2, 11, 28

KSR: Key Species Result
**Mission statement**

The mission of the IUCN SSC Hoverfly Specialist Group (HSG) is to accomplish the Red Listing of European hoverflies, and in so doing to increase current knowledge of the taxonomy, ecology and distribution of European hoverflies, promoting their long-term conservation.

**Projected impact for the 2017-2020 quadrennium**

By the end of 2020, we expect to have completed the Red Listing of a substantial proportion of European hoverflies, drawing together for the first time the European-wide distribution and status of the species. This will identify critical sets of species on which Europe-wide conservation efforts can be targeted, and promote the inclusion of hoverflies in conservation planning and education.

**Targets for the 2017-2020 quadrennium**

- **Assess**
  - Red List: (1) assess a selection of 650 European hoverfly species; (2) assess globally all species currently listed on existing national or regional Red Lists.
  - Research activities: (1) identify new Key Biodiversity Areas (KBA) according to IUCN standards; (2) stimulate research on the distribution of particular species and threats affecting them; (3) produce publications about the conservation of hoverflies.

- **Plan**
  - Planning: develop conservation strategies for threatened Syrphidae.

**Network**

- Agreements: develop a network of institutions and individuals dealing with hoverflies.
- Capacity-building: hold a training workshop for 17 European Hoverfly experts to do Red List assessments.
- Membership: increase and balance membership in terms of gender, age and geographic location.

**Communicate**

- Communication: (1) develop guidelines for the conservation management of Syrphidae habitats; (2) establish a HSG communication platform among members; (3) establish HSG social media accounts; (4) create a HSG logo; (5) promote awareness about hoverflies through specialised and general social media; (6) accomplish a photographic competition and exhibition on syrphids.

**Activities and results 2018**

**Assess**

- Red List: (1) assessment of European hoverfly species is in planning stage. (KSR #1)

**Research activities**

- (1) Databases on the distribution of particular species and threats affecting them have been identified and are being put together for the assessment workshops. (KSR #4, 7, 15, 21, 22, 26, 27)

**Network**

- Agreements: (1) International cooperation is already in place for hoverfly research, and is being used to set up cooperation for Red Listing. (KSR #28, 43)
Communicate

Communication

i. HSG email list established and Google drive established for shared outputs. (KSR #28, 43)

ii. HSG social media person being identified. (KSR #28, 43)

iii. Creation of a HSG logo accomplished. (KSR #28, 43)

Acknowledgements

We thank the Faculty of Sciences, University of Novi Sad for hosting the training workshop in April 2019.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

<table>
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<tbody>
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Main KSRs addressed: 1, 4, 7, 15, 21, 22, 26, 27, 28, 43

KSR: Key Species Result
Mission statement
Our mission is to collaborate across regions and disciplines to: (1) identify (through the application of IUCN Red List categories and criteria) ladybird species with high extinction risk, (2) determine the factors leading to high extinction risk, (3) develop strategies to manage risk and enhance the status of these species and, (4) implement conservation management for threatened ladybird species.

Projected impact for the 2017-2020 quadrennium
We project that our impact for the 2017-2020 quadrennium will be to establish a key baseline of evaluated ladybird species across the world including a flagship species in each region. In addition, we will establish the primary factors leading to extinction allowing development and initial implementation of conservation management strategies.

Targets for the 2017-2020 quadrennium

Assess
Red List: (1) globally assess one flagship species for each region; (2) globally assess 100-200 species per region; (3) compile a list of countries for which national Red Lists for ladybirds exist; (4) identify candidate countries for future national ladybirds Red Lists; (5) develop and publish ladybird status reports for each region.

Research activities: (1) identify areas where lack of data impedes understanding of trends or implementation of effective conservation strategies; (2) start integration of multiple sources of ladybird data (e.g. surveys, collections) into single accessible database; (3) integrate global ladybird databases; (4) compare at regional and global scale current and past status of native and adventive ladybird species complexes; (5) develop and publish a complete revision of the family and of research accomplishments relating results to ladybirds to a wider range of taxa; (6) review and publish reports on factors leading to or preventing recovery of native ladybird species and/or spread of dominant cosmopolitan species.

Plan
Planning: develop and publish conservation plans of species at highest risk.

Act
Conservation actions: implement a global conservation plan through, at least, one site managed as a ladybird preserve and/or multiple redistribution releases in each region.

Network
Synergy: (1) inform researchers and conservation specialists within and beyond the Specialist Group on utilisation of the completed phylogeny as a guide for developing ladybird conservation strategies; (2) establish links with other groups and individuals working towards similar objectives and where there may be cross-overs in areas such as Red Listing, conservation planning, and reintroductions.

Communicate
Communication: (1) develop and publish management guidelines of the globally dominant invasive species Harmonia axyridis; (2) develop and publish guidelines of best practices for conservation of all ladybird beetles as a component of land management; (3) initiate a ladybird education/outreach programme potentially including a web page and presence on social media. (4) ensure engagement of the Specialist Group members with the activities of the work of the Specialist Group, through an annual newsletter, website, communication platforms, or similar.
Activities and results 2018

Assess
Red List
i. After our training workshop in September 2018, we initiated assessments of flagship species in all regions, except the Australian Region. (KSR #1)
ii. 2018 was largely a Red Listing capacity building year for our group. We have made good progress in establishing the infrastructure to globally assess 100-200 species per region. (KSR #1)
iii. We have taken the first step in the process of identifying countries with Red Lists for coccinelids at the national level, by assembling teams at the regional level. (KSR #2)
iv. We initiated the process for identification of candidate countries for future national ladybirds Red Lists by compiling target lists for evaluation at the national level; once these evaluations are complete, the potential for “listing” with inherent protection and conservation will initiate. (KSR #2)

Research activities
i. Regions have been identified where both data (e.g. Africa) and collaborating specialists (e.g. Australia/New Zealand) are lacking for understanding of trends or implementation of effective conservation strategies. (KSR #12, 28)

Plan
Planning
i. Members of the group have collaborated with the Canadian federal and Ontario provincial governments in the development of conservation plans for ladybird species that have been listed as Endangered. (KSR #27)

Act
Conservation actions
i. Sites with extant populations of rare ladybirds have been identified in several countries, but we are still finalising protocols for best practices to manage “ladybird preserves”. (KSR #15)

Network
Synergy
i. As a newly established group we have not yet had the chance to fully collaborate with other groups, but we have greatly benefitted from the wisdom and experience of these established groups.

Communicate
Communication
i. Work has commenced on a full assessment of Harmonia axyridis, which will form the basis for future management guidelines. (KSR #15)
ii. In 2018, a grant was received by John Losey through the US Smith-Lever programme to develop materials for and engage in education for gardeners and farmers on the facilitation of ladybirds on the land they manage. (KSR #15)

Acknowledgements
We thank The IUCN-Toyota Red List Partnership that helped us to cover the costs of our training workshop. In addition, we want to thank IUCN specialists, Axel Hochkirch, for providing excellent training on Red List assessment in our workshop and Rachel Hoffmann, for all her patience and wisdom as we formed our group. Finally, we want to acknowledge the passing of our valued colleague and group member, Dr Juan Bernal from the Universidad Autónoma de Chiriqui.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

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Main KSRs addressed: 1, 2, 12, 15, 27, 28, 32, 43

KSR: Key Species Result
Mission statement
No mission stated.

Projected impact for the 2017-2020 quadrennium
The focus of the Mayfly, Stonefly and Caddisfly Specialist Group (MSCSG) for the remaining years of the quadrennium is on fully establishing the group and undertaking assessments of a small number of Ephemeroptera, Plecoptera and Trichoptera species.

Targets for the 2017-2020 quadrennium
Assess
Red List; (1) organise a meeting to progress Red Listing of a selection of 20 African Ephemeroptera species thought to be endangered; (2) assess 25 micro-endemic and a further 25 randomly selected European Trichoptera species; (3) organise a meeting to progress Red Listing of 25 Plecoptera species at a global level.

Network
Membership: continue to invite members (taking into account a balanced representation across geography, gender and age) to join the newly established group.
Proposal development and funding: prepare a funding application to undertake Red List assessment of all European Trichoptera.
Synergy: (1) organise a meeting of the Co-Chairs and Red List Authority Coordinator; (2) organise a meeting for all members of the MSCSG.

Communicate
Communication: (1) development of logo and a website for the group; (2) create Twitter and Instagram accounts to establish a social media presence for the MSCSG; (3) organise an awareness-raising campaign in connection to the World Fish Migration Day (16 May 2020).

Acknowledgements
Thanks to Rachel Hoffmann and Axel Hochkirch for assistance with establishing the group. Thanks also to Buglife and BOKU for supporting the MSCSG Chairs.

Summary of activities 2018
This Specialist Group was created in 2018 and has no activities or results to report.
Brachyptera putata male
Photo: Stewart Taylor

Ameletus inopinatus
Photo: Stuart Crofts

Chaetopteryx rugulosa
Photo: Graf/Schmidt-Kloiber

Invertebrates
Mission statement
To increase the evidence and action for invertebrate conservation on the islands of: Gough, Tristan, St Helena, Ascension, Cape Verdes, Canaries, Madeira, Azores, and São Tomé and Príncipe.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision: (1) significant progress in raising awareness of invertebrates and their conservation issues across the Mid-Atlantic Islands; (2) at least one additional island that previously had no direct invertebrate conservation to have established programmes; (3) a total of 500 invertebrate Red List assessments to be achieved; and (4) another new conservation action plan to be operating. We expect also to contribute to conservation policy in Azores by informing the Azorean Conservation Agency about the arthropod species in urgent need of conservation. These combined efforts will create more secure invertebrate populations on these islands.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete assessments of 100 St Helena endemic invertebrates; (2) complete assessments of 30 Ascension Island endemic invertebrates; (3) complete assessments of 211 Azorean endemic arthropods; (4) complete assessments of 25 Azorean endemic spiders; (5) complete assessments of 120 Madeira endemic Carabidae and Staphylinidae; (6) the BIOS2020 project (2019-2022) was submitted by IFCN IP-RAM (Madeira Government) to the second call of the European Union Madeira-Açores-Canarias (EU MAC) Programme; if approved, it will contribute to the update of the conservation status of the endemic Madeiran land snail species, namely those from the Madeiran Natural Forest Laurissilva.

Plan
Planning: (1) assess invertebrate conservation needs on Tristan and Gough islands; (2) initiate conservation planning for threatened Azorean invertebrates; (3) implement the European Commission LIFE Programme project ‘LIFE BEETLES – Bringing Environmental and Ecological Threats Lower to Endangered Species’.

Act
Conservation actions: (1) project initiated on the conservation of Ascension Island endemic invertebrates; (2) project completed on increasing data on St Helena endemic invertebrates; (3) species recovery project for the Spiky Yellow Woodlouse (Pseudolaureola atlantica) on St Helena.

Network
Documents review: (1) review of the St Helena Invertebrate Strategy; (2) review of the Spiky Yellow Woodlouse Conservation Plan.

Communicate
Communication: (1) paper published on establishing conservation on St Helena; (2) invertebrate identification book finished for St Helena; (3) group newsletter circulated at least three times per year; (4) paper published on
the species conservation profile of Azorean endemic forest beetles; (5) paper submitted on the species conservation profile of Azorean endemic moths; (6) paper in preparation on the species conservation profile of Azorean endemic cave arthropods; (7) webpage established; (8) paper submitted on a Global Island Monitoring Scheme (GIMS) for the long-term coordinated survey and monitoring of forest biota across islands; (9) Forest Giants project targets for awareness and conservation of Archachatina bicarinata and review Red List assessment for the species.

Activities and results 2018

Assess

Red List

i. Red List assessments completed for 84 St Helena endemic invertebrates, with another 30 species in progress. (KSR #2)

ii. Difficulties exist with data and capacity to complete assessments of Ascension Island endemic invertebrates; we are still exploring whether this will be possible. In addition, the number of assessments (30) was an estimate; it appears there are fewer than 30 endemic invertebrates. (KSR #2)

iii. One hundred eighteen (118) Azorean endemic arthropod assessments published on the IUCN Red List. (KSR #2)

iv. Twenty-five Azorean endemic spider assessments on track to be published. (KSR #2)


vii. Website established: www.maiisg.com. (KSR #28)


Conservation status of the forest beetles (Insecta, Coleoptera) from Azores, Portugal.

*Biodiversity Data Journal* 5: e14557. [DOI: 10.3897/BDJ.5.e14557] (KSR #28)

Plan

Planning

i. The project ‘LIFE BEETLES – Bringing Environmental and Ecological Threats Lower To Endangered Species’ was approved and will start on January 2020. (KSR #15)

Act

Conservation actions

i. The project to increase data on St Helena endemic invertebrates has been completed, supported by MAIISG; a total of 26 sites were surveyed. (KSR #27)

Network

Documents review

i. We are still deciding the best approach to review the St Helena Invertebrate Strategy and finding capacity. Most likely, progress will be assessed and comments made in 2019.

ii. Partial review of the Spiky Yellow Woodlouse Conservation Plan complete; to be finalised in 2019. (KSR #15)

Communicate

Communication

i. Paper on establishing conservation on St Helena was published in *Biodiversity and Conservation*: https://rdcu.be/9WUr. (KSR #28)

ii. Finalising text of book on identification of St Helena invertebrates and still hoping to publish it in 2019. (KSR #28)

iii. Three group newsletters were sent out in 2018, and are available on the Mid-Atlantic Island Invertebrate Specialist Group (MAIISG) website. (KSR #28)


Acknowledgements

We would like to thank all the MAIISG members and all their hard work during 2018.

Summary of activities 2018

<table>
<thead>
<tr>
<th>Component</th>
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<tr>
<td>Assess</td>
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<td>Network</td>
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<td>Communicate</td>
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Species Conservation Cycle ratio: 5/5

Main KSRs addressed: 2, 14, 15, 27, 28

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC South Asian Invertebrate Specialist Group is to encourage and assist invertebrate specialist institutions and agencies in South Asia to conserve invertebrate taxa at species, genetic and habitat level and to make it into a region that appreciates and conserves invertebrates.

Projected impact for the 2017-2020 quadrennium
The priority, at this point in time, is to document information for species that require attention and to prioritise some important invertebrate groups that require conservation action. By the end of 2020, we aim to assess some of the families of arachnids (Theraphosids) to determine the status of the species. Another important component of our activities is conservation education. We are committed to education and promoting conservation of freshwater biodiversity of the Western Ghats, targeting a wider audience of people who live at the grassroots level, student communities and the public.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) assess 53 theraphosid spiders of South Asia (Bangladesh, Bhutan, India, Nepal and Sri Lanka); (2) assess 60 mantids of India. Research activities: conduct a surveillance study on the mosquitoes of Southern India and identify species shifts, if any, due to climate change (MOSI Project).

Act
Conservation activities: create a protected area for the Critically Endangered theraphosid spider Poecilotheria hanumavilasumica in Rameshwaram.

Activities and results 2018
Assess
Red List
i. Fifty-three species of theraphosid spiders have been assessed. (KSR #2)
ii. The assessment of mantid species of India is in progress; most of them are Data Deficient species. (KSR #2)

Research activities
i. The MOSI Project is in progress and will continue during 2019. (KSR #38)

Act
Conservation activities
i. A feasibility study to create a protected area for the Critically Endangered theraphosid spider Poecilotheria hanumavilasumica in Rameshwaram has been completed. We are trying to raise more funds.
Acknowledgements

We would like to thank the Zoological Society of London and Paul Pearce-Kelly for their assistance in running the Specialist Group and also the invertebrate conservation activities in South Asia. Our thanks to Axel Hochkirch for his constant encouragement to carry out species assessment projects. Thanks to Rainforest Trust for their support to carry out the feasibility study.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 2, 38

KSR: Key Species Result

Rhyothemis variegata Male Dragonfly
Photo: Ashish Tiple

Invertebrates

Mating of Pea Blue (Lampides boeticus)
Photo: Neha Mujumdar
Mission statement
The main objectives of the Spider and Scorpion Specialist Group (SSSG) are to assess the extinction risk of a representative sample of arachnid species globally; assist on international law and agreements (e.g. Habitats Directive, Convention on International Trade in Endangered Species – CITES); contribute towards national and regional legislation protecting threatened species; develop scientifically sound species conservation strategies in cooperation with relevant authorities; and promote the public knowledge of arachnids.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we expect to: (1) develop tools that facilitate Red List assessments, (2) significantly increase the number of assessed species, (3) reduce the extinction risk of a number of species and (4) provide advice on CITES species.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) Red List assessments for Sampled Red List Index (SRLI): 200 species; (2) Red List Nephilidae: 35 species; (3) Red List Archaeidae: 80 species; (4) Red List Macaronesian endemics: 170 species; (5) develop R package to assist Red Listing; (6) conduct two assessment workshops (for SRLI and CITES); (7) conduct one Red List assessment workshop.

Research activities: develop an IUCN Data Paper in Biodiversity Data Journal.

Plan
Planning: develop a Species Conservation Plan for Hogna ingens (Desertas Wolf Spider).


Act
Conservation activities: ex situ breeding of Hogna ingens.

Network
Capacity building: conduct four Red List teaching workshops.

Membership: increase the number and range of group membership.

Communicate
Communication: (1) conduct interviews with media outlets; (2) produce a group website.
Activities and results 2018

Assess
Red List
i. Two assessment workshops were conducted (for SRLI and CITES species). (KSR #1)
ii. In 2018 we obtained financial support for another Red List assessment workshop, set to take place in early 2019. (KSR #1)

Network
Membership
i. Several new members were accepted.

Communicate
Communication
i. Several interviews with media outlets were conducted and are now online, many of which were shared via Twitter. (KSR #4, 28)
ii. The website is now online, and we aim to improve it in the upcoming year. (KSR #28)

Acknowledgements
We are grateful for the financial support from IUCN internal grants and the Natural Environment Research Council for supporting the group’s Chair. We would also like to acknowledge the support from Bristol Zoo and London Zoo (ZSL).

Summary of activities 2018
Species Conservation Cycle ratio: 3/5

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<td>Communicate</td>
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Main KSRs addressed: 1, 4, 28

KSR: Key Species Result

Brachypelma emilia from Mexico, a species that is illegally traded, one of the issues I often get asked about on interview.
Photo: Sergio Henriques

Invertebrates
Mission statement
The mission of the African Elephant Specialist Group (AfESG) is: to promote the long-term conservation of Africa’s elephant throughout their range.

Projected impact for the 2017-2020 quadrennium
An average population decline of approximately 21%, mainly due to illegal killing, was reported between 2007 and 2016, a period that partly overlapped with the previous quadrennium. We expect that illegal killing of elephants will decline and population numbers will increase in the available and potential range during this quadrennium. A confirmation of the forest and savannah elephants as separate species is likely to lead to more conservation focus on each species separately, thus improving their conservation status. Similarly, the results of the Red Listing process, which is due for completion in 2019, will reshape the conservation focus for African Elephants. The July 2019 AfESG members meeting will generate emerging issues and urgent areas of focus to improve on the science and conservation of the elephants. The publication of the 2016 African Elephant Status Report on a website platform, now provides a wider audience with the latest population status of the species and is eliciting questions that would prompt the AfESG to update the status report through a functional African Elephant Database.

Targets for the 2017-2020 quadrennium
Assess
Agreements: finalise African Elephant Database (AED) data acquisition and use license.

Research activities: (1) enhance functionality and performance of the African Elephant Database; (2) contract University of Washington to carry out the African Elephant Taxonomy project; (3) scope the African Elephant Database’s integration into the IUCN database systems and capacity to host multiple elephant species.

Plan
Policy: (1) confirm that forest and savannah elephants are two species and revise policy accordingly; (2) review proposals for the 18th meeting of the Conference of the Parties to CITES (CITES CoP18) and attend the CoP.

Network
Membership: strengthen AfESG membership.
Proposal development and funding: (1) secure funding for AfESG members meeting; (2) fundraise for AfESG activities and support for its Secretariat.
Scientific meetings: hold AfESG meeting.
Synergy: (1) handover of the AfESG leadership to the new Co-Chairs; (2) reach out to elephant technical experts within the government conservation agencies; (3) strengthen AfESG Secretariat.

Communicate
Technical advice: respond to technical requests by the Global Species Programme.
Activities and results 2018

Assess
Agreements
i. IUCN legal office contacted to finalise African Elephant Database data acquisition and use license. (KSR #14)

Red List
i. Assessment of the African Elephant done, peer review done, submitted to IUCN Red List team. (KSR #1)

Research activities
i. Independent consultants were contracted by Save the Elephants (STE). Documentation on how to enhance the functionality of AED produced and due for circulation to the membership for their understanding. The AED officer is currently working on the recommendations. (KSR #14)
ii. Contracts signed with University of Washington to carry out the African Elephant Taxonomy project. Taxonomy report produced. (KSR #12)
iii. An internal agreement made with the IUCN Global Species Programme for African Elephant Database integration into the IUCN database systems and capacity to host multiple elephant species. (KSR #14)

Plan
Policy
i. Reviews of CITES CoP18 proposals submitted to CITES secretariat. (KSR #27)

Network
Membership
i. Membership data compiled for gap analyses, Postdoc identified to perform the analyses, membership policy yet to be drafted.

Proposal development and funding
i. Funding secured for both the AFESG meeting and a one-day African Elephant Action Plan (AEAP) planning meeting. (KSR #30)


Scientific meetings
i. AFESG meeting to be held in Pretoria, South Africa, from 14–19 July 2019. About 50 members have confirmed attendance. An additional ca. 40 relevant specialists have been invited and confirmed attendance. Four themes for the meeting have been identified and assigned to members to take the lead.

Synergy
i. Minutes of the handover meeting are available.

ii. We have reached out to elephant technical experts within government conservation agencies for Angola, Botswana, China, Mozambique, Namibia, South Sudan, Tanzania, Zambia, and Zimbabwe.

iii. AED officer and Senior Programme Officer recruited. Additional funding will be required to keep them from December 2019.

Communicate
Scientific meetings
i. Minutes of the MIKES-ETIS TAG meeting are available.

Technical advice
i. Technical reports provided to the Global Species Programme. (KSR #29)

Acknowledgements
We thank the following donors who helped us cover the costs of running the AFESG in 2018: CITES MIKES covered the cost of a Red List Assessment meeting in July 2018, the cost of the handover meeting and other running costs. The UK Department for Environment, Food and Rural Affairs (DEFRA), Save The Elephants (STE), African Wildlife Fund (AWF) and Safariclub International for the core support to the activities of the AFESG. USFWS for the support to the African Elephant Taxonomy project which was carried out in collaboration with Prof. Sam Wasser of University of Washington. To Kathleen Gobush, Dave Balfour, Fiona Maisels, George Witteymer, Russell Taylor, Peran Ross and Charles Edwards who participated in the Red List Assessment workshop in July 2018. We thank the SSC Chair’s Office and IUCN Global Species Programme office for their support during the period of the AFESG transition.

Summary of activities 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>Activity</th>
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IUCN SSC
African Rhino
Specialist Group
2018 Report

Chair
Michael Knight (1)

Deputy Chair
Benson Okita (2)

Red List Authority Coordinator
Richard Emslie (3)

Location/Affiliation
(1) KAZA TFCA Leader, WWF in Namibia, Windhoek, Namibia
(2) Save the Elephants Organisation, Kenya
(3) IUCN, Gland, Switzerland

Number of members
51

Social networks
Website: https://rhinos.org/research-publications/iucn-african-rhino-specialist-group/

Mission statement
To promote the development and long-term maintenance of viable populations of the various sub-species of African rhinos in the wild.

Projected impact for the 2017-2020 quadrennium
The African Rhino Specialist Group (AFRSG) wants: (1) secure, viable and valued rhino populations in their natural habitat; (2) rapidly growing and genetically diverse rhino populations facilitated through adaptive biological management; (3) a reduction in the threat to rhinos from poaching, driven primarily by the high illegal demand for rhino horn; and (4) an incentivised communal and private sector investing in rhino conservation through continued range expansion and numbers.

Targets for the 2017-2020 quadrennium

Assess
Red List: Red List assessments for Black Rhinos (Diceros bicornis) and White Rhinos (Ceratotherium simum).

Plan
Planning: (1) review of the South Africa Biodiversity Management Plan for Black Rhinos; (2) contribute to delivery of national plans; (3) assist with implementation of the Rhino Range State Plan; (4) provide official support for the Rhino Management Plan for Chad.

Policy: (1) compile joint IUCN/TRAFFIC report for the 18th CITES Conference of the Parties (CoP18); (2) review Range State proposals for IUCN/TRAFFIC analyses; (3) attendance and technical role at CITES Conference of the Parties (CoP); (4) attendance and technical role at CITES Standing Committee (SC) and Working Group (WG) meetings.

Act
Conservation actions: engage in the Rhino Impact Investment Project (RIIP).
Technical advice: (1) participate in the Black Rhino Range Expansion Project (BRREP); (2) participate on the Rhino DNA Indexing System (RhODIS) Advisory Board; (3) review hunting applications; (4) engage with ex situ conservation (European Association of Zoos and Aquaria (EAZA) Taxon Advisory Groups (TAG), etc.); (5) provide expert advice to range states and conservation authorities; (6) provide expert advice to MyPlanet Rhino Fund.

Network
Capacity building: (1) East African Rhino Management Group capacity building; (2) Biological Management Workshop.
Documents review: scientific peer review of rhino papers.
Membership: diversify the AFRSG.
Proposal development and funding: (1) submit donor applications; (2) complete funding reports.
Synergy: (1) participate in Rhino and Elephant Security Group/INTERPOL Environmental Crime Working Group (ECWG) meetings; (2) establish a new management partner for AFRSG.
Technical advice: attendance at workshops/government meetings as invited or presentations given.
Communicate
Communication: (1) Southern African Development Community Rhino Management Group and Chairing; (2) publish the Pachyderm Chair Report; (3) respond to media requests; (4) improved communication of rhino issues to members, state and private sectors.
Scientific meetings: hold biennial AFRSG meetings.

Activities and results 2018
Assess
Red List
i. We are reviewing Red List assessments for Black and White Rhinos, using new methodology and incorporating ideas from the East African Community Rhino Management Group (EAC RMG) genetics workshop. (KSR #1)

Plan
Planning
i. Review of South Africa Biodiversity Management Plan for Black Rhinos started. (KSR #16)

ii. Chair commented on the proposed Black Rhino re-introduction to Gonarezhou National Park. AFRSG contributed to and/or developed a number of national plans, including the Zimbabwe Rhino Plan (awaiting signature), Uganda Plan, Chad Rhino Plan (awaited final signed off version), and 6th Kenya Rhino Action Plan. In addition, the Scientific Officer presented AFRSG’s approach to strategic planning of national plans for rhinos. (KSR #27)

iii. The Rhino Range State Plan was signed by most of the rhino range states. A method by which to investigate the degree of delivery of rhino range states on the current plan is in development, with feedback expected in 2019. (KSR #27)

iv. Ongoing support provided for the Rhino Management Plan for Chad through numerous committee meetings. Animals were delivered in May 2018. (KSR #21)

Policy
i. We are drafting the report to the CITES Secretariat for COP18. Our Scientific Officer worked with IUCN on contract covering the Scientific Officer’s contribution to reporting as well as TRAFFIC’s costs and the cost of obtaining additional updated information on South Africa rhino numbers required for the report. (KSR #26)

ii. Attendance and technical role at CITES COPs planned. (KSR #26)

iii. Our Scientific Officer was the lead on rhinos for the IUCN delegation at CITES SC69. (KSR #26)
Conservation actions

i. Attended the Third meeting on the Rhino Impact Investment Project (RIIP) Board, providing comments on several documents. (KSR #11)

Technical advice

i. Attended the Management Committee Meeting of the Black Rhino Range Expansion Project (BRREP) in November 2018. (KSR #18)

ii. We are in constant engagement with Dr Harper from RhODIS. No Advisory Committee meeting was held. (KSR #27)

iii. Two hunting applications reviewed. (KSR # 27)

iv. Correspondence is ongoing to engage with ex situ (EAZA, TAG, etc.) conservation. (KSR #27)

v. Provided expert advice to Chad authorities, BRREP, MyPlanet, RIIP. (KSR #27)

vi. Provided comments on proposals submitted to MyPlanet Rhino Fund, as required. (KSR #27)

vii. Steering Committee on the Northern White Rhino. (KSR #27)

Network

Capacity building

i. Third meeting in Akagera National Park, Rwanda, from 27 February to 2 March 2018. (KSR #18)

ii. Attended and participated in the International Rhino Science Meeting at Dinokeng, South Africa, in February 2018. (KSR #18)

Documents review

i. Five scientific papers reviewed. The Chair and Scientific Officer provided detailed and extremely critical comment for an IUCN Commission on Environmental, Economic and Social Policy/SSC Sustainable Use and Livelihoods (IUCN CEESP/SSC SULi) response to a submission on animal welfare issues to IUCN Council by academic lawyers representing IUCN’s World Commission on Environmental Law Ethics Specialist Group.

Membership

i. Membership increased to 51 with 36 males (32 African resident) and 12 females (6 African resident). A skill audit is being undertaken.

Proposal development and funding

i. Applications were submitted to the U.S. Fish and Wildlife Service (USFWS), Safari Club International (SCI), African Wildlife Foundation (AWF), World Wildlife Fund South Africa (WWF SA), International Rhino Foundation (IRF), Oak Foundation and Save the Rhino International (SRI) for funds for the AFRSG biennial meeting. (KSR #9)

Synergy


ii. Establishment of a new management partner for AFRSG is no longer required, because the Endangered Wildlife Trust has reduced the administration fee to 0%.

Technical advice

i. Technical advice provided to: IUCN Conservation Planning Specialist Group, IUCN delegation at CITES SC69, EAC RMG meeting, RIIP Board meetings, BRREP Management Committee meeting, Biological Management Science meeting, Committee member of Woolworths MyPlanet, steering committee for the Northern White Rhino project, South Africa’s Scientific Authority, South African Rhino Research Priorities Workshop (part of Rhino Lab), extensive engagement in South Africa/Chad/African Parks committee for the delivery of rhinos to Chad, WWF Namibia INL project. (KSR #27)
Communicate

Communication

i. Michael Knight resigned as the Chair of the Southern African Development Community Rhino Management Group in May 2018. (KSR #28)

ii. Pachyderm Chair report was published in Pachyderm No. 59 July 2017–June 2018. The Chair, Vice-Chair and Scientific Officer continue to sit on the Pachyderm Editorial Board and Pachyderm report. (KSR #28)

iii. Provided data and/or gave interviews for numerous researchers and media outlets (Smithsonian, Namibia’s Radio Kosmos, BBC Inside Science, BBC World Service, The Art Newspaper, CBS News, IUCN communications, Tony Carnie, Edinburgh Napier University, Project Earth Films, Bonne de Bod), AFP and Tony Grogan’s docu-series on subjects including poaching levels, general rhino conservation, synthetic horn, Northern White Rhino (*Ceratotherium simum cottoni*) and domestic horn sales in South Africa. (KSR #28)

iv. Established WhatsApp group for regular communication. Regular sharing of news items/publications. (KSR #28)

Scientific meetings

i. Planning is ongoing for the 13th AFRSG meeting, scheduled for 2019. (KSR #28)

Acknowledgements

We would like to thank the following donors that have allowed the AFRSG to deliver on its mandates: the continued support and cooperation of range states is appreciated; the AFRSG is also grateful to Save the Rhino International (SRI), International Rhino Foundation (IRF), the U.S. Fish and Wildlife Service’s Rhino and Tiger Conservation Fund (USFWS RTC) and the Endangered Wildlife Trust (EWT) for support provided to the AFRSG Secretariat. We also thank SANParks and WWF in Namibia for their support of the Chair, as well as WWF Netherlands via WWF ARP and WWF South Africa for funding the EAC RMG meeting.

Summary of activities 2018

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<td>Assess</td>
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Main KSRs addressed: 1, 9, 11, 16, 18, 21, 26, 27, 28

KSR: Key Species Result
Co-Chairs
Galen Rathbun (1)  
Andrew Taylor (2)

Red List Authority Coordinator
Matthew Child (3)

Location/Affiliation
(1) California Academy of Sciences, California, US  
(2) The Endangered Wildlife Trust, Modderfontein, Johannesburg, South Africa  
(3) South African National Biodiversity Institute (SANBI), Kirstenbosch National Botanical Garden, Newlands Cape Town, South Africa

Number of members
34

Social networks
Twitter: @Tweeting_Tenrec  
Website: https://afrotheria.net/

Mission statement
The IUCN SSC Afrotheria Specialist Group (ASG) facilitates the conservation of hyraxes, aardvarks, elephant-shrews or sengis, golden moles, tenrecs and their habitats by: (1) providing sound scientific advice and guidance to conservationists, governments, and other interested groups; (2) raising public awareness; and (3) developing research and conservation programmes.

Projected impact for the 2017-2020 quadrennium
If the ASG achieved all of its targets, it would be able to deliver more accurate, data-driven Red List assessments for more Afrotherian species and, therefore, be in a better position to move to conservation planning, especially for priority species.

Targets for the 2017-2020 quadrennium
Assess
Red List: reassess Red List categories in species for which new information arises (e.g. Nimba Otter Shrew, Microtus monticola), for which we have new extent of occurrence (EOO) data or for newly described species that may be described during the quadrennium (such as golden moles or sengis). Research activities: (1) develop five standardised monitoring protocols for each group of Afrotherians to track trends over time and produce more data for Red List assessments; (2) complete 2-4 reassessments of taxonomy of golden moles in species where it is necessary (e.g. Amblysomus and Neamblysomus species); (3) collect basic data for 3-4 golden mole species, including geographic distributions and natural history data; (4) conduct surveys to determine distribution and abundance of five hyrax species; (5) revise taxonomy of five hyrax species; (6) develop and assess field trials for standardised camera trapping methods to determine population estimates for giant sengis; (7) conduct surveys to assess distribution, abundance, threats and taxonomic status of the Data Deficient sengi species; (8) build on current research to determine the systematics of giant sengis, especially Rhynchocyon species; (9) survey Aardvark (Orycteropus afer) populations to determine abundance, distribution and trends; (10) conduct taxonomic studies to determine the systematics of aardvarks, with a focus on contrasting aardvarks from central African forests with southern African savanna aardvarks; (11) integrate the monitoring of tenrecs in the management of key protected areas with threatened species in order to track their status and threats and identify key conservation concerns; (12) conduct genetic studies to clarify the taxonomy and species diversity within the genus Microgale.

Communicate
Communication: (1) update and maintain the Afrotheria.net website; (2) produce one Afrotheria Specialist Group newsletter every year.
Activities and results 2018

Assess

Red List

i. We reassessed the status of one species during 2018, the Nimba Otter Shrew. (KSR #1)

Research activities

i. To complete reassessments of taxonomy of golden moles, we need more detailed information on species’ distributions and phylogenetic status, and we have not yet secured funding for the associated fieldwork. However, Dr. Samantha Mynhardt (via her post-doctoral host, Professor Paulette Bloomer) has applied for the necessary funding to the Mohammed Bin Zayed Foundation and the Foundational Information Biodiversity Programme (managed by the NRF and SANBI). The outcome of such applications is pending; if successful, fieldwork to collect additional necessary data will take place later this year. (KSR #43)

ii. The Foundational Biodiversity Information Programme (FBIP) project submitted for funding aims to also collect new data on the Giant Golden Mole (*Chrysospalax trevelyani*) and cryptic Amblysomus lineages (possibly distinct species) in the Eastern Cape. Furthermore, we are working with the Endangered Wildlife Trust (Cobus Theron) to try to secure funding for trialing the use of sniffer dogs and drones to collect more specimens and natural history information for the two threatened *Cryptochloris* species in Namaqualand. However, funding has proven to be elusive. (KSR #12)

iii. The project to conduct surveys to determine distribution and abundance of five hyrax species is awaiting funding. The hyrax section coordinator is preparing a proposal submission to the National Geographic Society. (KSR #12)

iv. Revision of taxonomy of five hyrax species is under way, with two Specialist Group members (Hendrik Hoeck and Lukas Keller) taking the lead. (KSR #43)

v. Determination of the systematics of aardvarks is ongoing, but the project has been delayed due to an unexpected change in personnel. So far, genetic material has been collected from aardvarks in European Collections (old material, no FRESH material as it is very difficult with the new Nagoya protocol) and its quality has been checked. The material will then be used to gain the genome of “forest” and “savanna” aardvarks and compare their genetic distance, and hence their degree of relationships. Some funding is available for preliminary analysis, but if differences are detected between forest and savanna aardvarks, much more detailed and expensive sequencing will be required, and this will require a new source of funding. (KSR #43)

vi. Genetic studies to clarify the taxonomy and species diversity within the genus *Microgale* are ongoing, with a manuscript in review and several more in various stages of preparation. Many newly circumscribed species will be published over the next few years. (KSR #43)

Communicate

Communication

i. Updating and maintenance of the Afrothelia.net website is ongoing. Galen Rathbun, our Co-Chair, always paid for the maintenance of the website. Galen died in April 2019, so we will have to make arrangements to maintain the website. (KSR #28)

ii. Our annual newsletter was successfully completed in September 2018, and we are currently looking for submissions for the 2019 edition. (KSR #28)

Acknowledgements

We thank our Afrotheria Specialist Group members, all of whom are volunteers, who contributed towards the successful updating of the Red Lists and the annual newsletter. In particular, we are grateful to our section coordinators, Gary Bronner, Lee Koren, Thomas Lehmann, Voahangy Soarimalala, Link Olson and PJ Stephenson, as well as our newsletter editors Chris and Mathilde Stuart. We also thank Avian Designs for supporting our website at discounted rates. Finally, we remember our group founder and long-time co-chair Galen Rathbun, who died in April 2019.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

Assess 7

Communicate 2

Main KSRs addressed: 1, 12, 28, 43

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC Anteater, Sloth and Armadillo Specialist Group is to promote the long-term conservation of the extant species of xenarthrans (anteaters, sloths and armadillos) and their habitats.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision the Anteater, Sloth and Armadillo Specialist Group (ASASG) will have achieved increased protection for our priority species, the Critically Endangered Pygmy Three-toed Sloth (Bradypus pygmaeus) and the Vulnerable Brazilian Three-banded Armadillo (Tolypeutes tricinctus). We aim to reach this goal by increasing scientific knowledge, raising awareness, developing and implementing comprehensive action plans and securing protection of their habitat. Capacity building through training courses will allow us to increase the number of researchers dedicated to conservation-relevant research on armadillos, sloths and anteaters. We predict that our awareness campaigns will increase knowledge about our species and their conservation problems among the general public.

Targets for the 2017-2020 quadrennium

Assess
Red List: (1) complete assessment of seven silky anteater species; (2) complete re-assessment of all Xenarthra species; (3) facilitate assessments of other taxa for the IUCN Red List; (4) support assessment of mammals of Argentina. Research activities: collection of scientific data for the Brazilian Three-banded Armadillo and the Pygmy Three-toed Sloth.

Plan
Planning: effective protection for the Brazilian Three-banded Armadillo and the Pygmy Three-toed Sloth.

Act
Conservation actions: effective protection for the Brazilian Three-banded Armadillo and the Pygmy Three-toed Sloth.

Network
Capacity building: (1) five training courses taught; (2) train Argentinean mammalogists in Red List assessments. Proposal development and funding: secure funding to replenish the Xenarthra Conservation Fund. Synergy: enter into partnership with zoological institutions.

Communicate
Communication: (1) four issues of the ASASG Newsletter published; (2) increase awareness.

Activities and results 2018
Assess
Red List
I. We have started compiling the information and will conclude the assessment in 2019. (KSR #1)
II. Specialist Group members (especially the Chair and RLA) have trained researchers in the use of IUCN methodology for Red List assessments and participated in several assessment workshops for other taxa: (1) We provided Red List training to Argentinean botanists for the Argentinean Red List of native plants (2 workshops); to Peruvian researchers for the national Red List of the vertebrate and invertebrate fauna of Peru (2 workshops); and to Honduran botanists for the global assessment of wild crop relatives. (2) We facilitated the assessment workshop on the extinction risk of plants of the tropical Andes. We will continue providing training and facilitating assessments in 2019 and 2020. (KSR #1)
Research activities

i. The conservation programme for Brazilian Three-banded Armadillo (Tolypeutes tricinctus), which is supported by our Specialist Group and whose scientific coordinator is our member Flávia Miranda, has identified the area of distribution and the main threats to the species. (KSR #12)

ii. Our member Diorene Smith, in collaboration with the Zoological Society of London, has equipped 10 Pygmy Three-toed Sloths (Bradypus pygmaeus) with radio transmitters to collect information about their home range, habitat preference, activity, and behaviour in different habitat types. (KSR #12)

Plan

Planning

i. A workshop was held with 40 members of the Kusapin community in Panama, to promote the development of sustainable activities. Field studies have revealed that human impacts on Pygmy Three-toed Sloth habitat, such as deforestation, still persist in spite of education and awareness activities. A new and significant cause of concern is the promotion of Escudo de Veraguas, the only island inhabited by the species, as a new tourist destination. In combination with the scarce presence of the environmental authorities, the massive tourism activities on this tiny island severely threaten the Pygmy Three-toed Sloth’s habitat. The local authorities have been informed about this problem, and solutions are being sought. (KSR #18)

Act

Conservation actions

i. The Action Plan for T. tricinctus has been implemented very successfully. The conservation programme for T. tricinctus initiated an ex situ conservation project in collaboration with Brasilia Zoo. In addition, an expedition allowed definition of the area of a future national park that will provide effective protection to the species. (KSR #27)

Network

Capacity building

i. We participated in a special course on medicine and conservation of Xenarthra, organised in Brazil by Grupo de Estudos em Animais Selvagens do Brasil and the Tamanduá Institute. This event had over 100 registered participants and 20 collaborators.

ii. In 2018, we held two workshops to train Argentinean mammalogists in Red List assessments and to clarify doubts as well as discuss problems that arose during the assessment process. Overall, 50 mammalogists participated in these workshops. (KSR #5)

Synergy

i. We have contacted several institutions, but haven’t been able to find any that would be interested in a partnership with our Specialist Group. (KSR #29)

Communicate

Communication

i. In December 2018, we published volume 19 of Edentata, which included nine articles related to the conservation of Xenarthra. (KSR #28)

ii. The “Year of the Anteater” campaign, initiated in April 2018 by the Association of Zoos and Aquaria of Brazil and the Instituto Tamanduá and supported by the ASASG, aims to raise awareness for anteater conservation. To date, more than 40 institutions (zoos, aquaria, and educational institutions) from Brazil and other parts of the world have carried out environmental education activities to disseminate knowledge about anteaters, raise awareness, and promote their conservation. More than 50,000 people from all age groups and a variety of social, cultural, and economic levels have been reached. The initiative ends in May 2019, after which a final report will be issued that will include a description of activities and the number of individuals reached. (KSR #28)

iii. We are increasing awareness through different strategies: (1) by providing information on Xenarthra through our website, www.xenarthrans.org, and our Facebook page www.facebook.com/xenarthrans; (2) by providing advice to researchers, students, and schoolchildren; (3) by giving talks and interviews to different media, and participating in documentaries; (4) by contributing chapters on Xenarthra to the Handbook of the Mammals of the World. (KSR #28)

Acknowledgements

We would like to thank Animal Educators Inc. and Nurtured by Nature for supporting the Brazilian Three-banded Armadillo conservation programme both financially and by contributing their vast knowledge. We also thank Ryan Felton for his financial support, which allowed us to publish this year’s issue of Edentata.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

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<td>Communicate</td>
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Main KSRs addressed: 1, 2, 5, 12, 18, 27, 28, 29

KSR: Key Species Result
Co-Chairs
Phillipe Chardonnet (1)
David Mallon (2)

Red List Authority Coordinator
David Mallon (2)

Location/Affiliation
(1) Tandala, Paris, France
(2) Division of Biology and Conservation Ecology, Manchester Metropolitan University, UK

Number of members
95

Social networks
Facebook: IUCN SSC Antelope Specialist Group
Twitter: @AntelopeSG, #AntelopeSG

Mission statement
The mission of ASG is to promote the conservation of the world’s antelope diversity and to contribute to the mission of SSC.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we expect that: the Antelope Specialist Group’s (ASG) global framework for antelope conservation; road maps for all threatened taxa; action plans for key species; updated Red List assessments; advice to IUCN, CITES, CMS, governments and INGOs; support for project proposals; and dissemination of information will collectively have made a significant contribution to stabilising and/or improving the status of antelopes and also to specific targets on the SSC Strategic Plan.

Targets for the 2017-2020 quadrennium

Assess
Green List: complete Green List assessments for 93 species.
Red List: (1) maintain regular updates of 93 species’ Red List datasheets; (2) complete all (144) Red List reassessments.
Research activities: (1) enter baseline data for all species and subspecies (144) into the Antelope e-database; (2) expand fields of the Antelope e-database.

Plan
Conservation actions: (1) publish the ASG planning guidelines; (2) develop the Global Antelope Strategy; (3) publish action plans for eight key antelope taxa; (4) enhance the link between Red List assessments and species planning.
Policy: (1) revise the Intensive Genetic Manipulation Policy; (2) liaise annually with the Convention on the Conservation of Migratory Species of Wild Animals (CMS); (3) provide advice to the SSC Chair and IUCN; (4) liaise annually with the CITES Animals Committee, Standing Committee and Conference of the Parties, and attend two standing meetings per year for two species, as well as additional events ad hoc.

Act
Conservation actions: review Key Biodiversity Area (KBA) sites for antelopes.

Network
Agreements: sign MoU with Royal Zoological Society of Scotland (RZSS) on genetics and planning.
Membership: increase regional and gender diversity of members of the ASG.
Proposal development and funding: support preparation of grant proposals as requested.
Synergy: Liaise with the UN Food and Agriculture Organization (FAO) and World Organisation for Animal Health (OIE) for the Global Eradication Campaign of “Peste des Petits Ruminants” (PPR GEP).

Communicate
Communication: (1) produce policy statements as appropriate; (2) publish six Gnusletter regular issues (2 per year) and special issues; (3) re-launch website; (4) maintain Facebook page with one post per month; (5) create a Twitter account and a blog.
Scientific meetings: co-organise the 3rd and 4th African Buffalo (Syncerus caffer) workshops.

Activities and results 2018
Assess
Green List
i. A start has been made to complete Green List assessments for 93 species. Progress is awaiting finalisation of the Green List guidelines. (KSR #22)
Red List

i. An assessment update file for each species (total number of species 93) has been created. New data are added to the appropriate sections using track changes when they become available. (KSR #11)

Research activities

i. Information on species and subspecies from the African Antelope Database (East 1999) and Mammals of Africa Vol 6 (Kingdon & Hoffman 2013) entered into Antelope e-database.

Plan

Conservation actions

i. Development of the Global Antelope Strategy started. (KSR #15)

ii. Conservation action plans: (1) Dama Gazelle (Nanger dama): a Regional Action Plan for Chad and Niger was published in 2018 and a global strategy workshop was held in December 2018 at Al Ain, UAE (action plan currently being finalised); (2) strategic planning events were initiated for three other taxa: Gazella leptoceros and Antilocapra americana (workshops planned for 2019); Saiga tatarica – collaborated with CMS secretariat on updating the CITES-CMS Saiga MoU action plan (workshop scheduled in April 2019); (3) ASG accepted an invitation from the Ethiopian government agency to collaborate on development of a national antelope strategy. (KSR #15)

iii. Guidance document on integrating Red Listing and planning initiated. (KSR #18)

Policy

i. Revision of the Intensive Genetic Manipulation Policy has begun. (KSR #26)

ii. Comments on Saiga tatarica and Pantholops hodgsonii were provided to the CITES Secretariat, as requested. (KSR #26)

iii. Advice to CITES: (1) we liaised regularly with the CMS Secretariat on issues concerning the CMS Saiga Antelope MoU, including revision of the work programme (action plan); (2) the two Co-Chairs attended the Sahelo-Saharan Interest Group meeting in May 2018 in Paris, where many issues relevant to the CMS Concerted Action were discussed; (3) we are currently working with the CMS Secretariat on production of a revised status review and action plan for Sahelo-Saharan antelopes; (4) we liaised regularly with the CMS Secretariat on the Central Asian Mammals Initiative, including planning a transboundary landscape planning project (workshop in August 2019), David Mallon facilitated the Central Asian Mammals Initiative (CAMI) mid-project review workshop in April 2018. (KSR #26)

iv. We responded to all requests made by the SSC Chair and IUCN. (KSR #26)

Act

Conservation actions

i. An ASG volunteer has started work on review of KBA sites for antelopes. (KSR #22)

ii. Field survey of Ammodorcas clarkei in Ogaden Region, Ethiopia. (KSR #12)

iii. Field survey on antelope health in Chad. (KSR #12)

Network

Agreements

i. The MoU with Royal Zoological Society of Scotland (RZSS) on genetics and planning was signed. (KSR #29)

Membership

i. Several new members (both Range State and gender) have been identified.

Proposal development and funding

i. Five grant proposals were supported.

Synergy

i. ASG collaboration with FAO and OIE on the “Peste des Petits Ruminants” Global Eradication Programme (PPR GEP) and with Sahara Conservation Fund on antelope health.

Communicate

Communication

i. Gnusletter: Issue 35#1 was published in May 2018 and 35#2 in December 2018. (KSR #28)

ii. Planning for two special issues of Gnusletter was initiated. (KSR #28)

iii. A new domain name was registered and work began on constructing the new website for the ASG. (KSR #28)

iv. The ASG Facebook site was re-launched and has made regular posts. (KSR #28)

v. A Twitter account was launched. (KSR #28)

vi. Planning for the 3rd African Buffalo workshop was initiated. (KSR #28)

Scientific meetings

i. Progress for 4th African Buffalo workshop depends on the 3rd African Buffalo workshop. (KSR #28)

Acknowledgements

We are grateful to the following: Marwell Wildlife for supporting the ASG Programme Office; Rob Cooke, Project Officer; White Oak Conservation, Steve Shurter (Editor of Gnusletter) and Stephannie Rutan (Editorial Assistant); Joanna Clark and Emma Holroyd (volunteer project officers); Mike Hoffmann for reviewing Red List assessments; Helen Senn (RZSS) for advice on genetics issues; and all those who responded to requests for information or contributed to Gnusletter.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

Assess 3

Plan 7

Act 3

Network 4

Communicate 7

Main KSRs addressed: 11, 12, 15, 18, 22, 26, 28, 29

Resolutions addressed: WCC-2016-Res-041, WCC-2016-Res-100
Mission statement

The Asian Elephant Specialist Group (AsESG) does not have a mission statement, but has developed a mandate for the group: (1) AsESG shall provide best available scientifically-grounded evidence as to the abundance, distributions and demographic status of Asian Elephant populations in all 13 range states. It shall also set forth advisory guidelines for range states and assist in capacity building in performing their own assessments; (2) the AsESG shall analyse threats to wild populations and raise awareness by communicating both within and outside the scientific community and also set forth standards/guidelines for management and welfare of wild and captive elephants, including but not limited to the surveillance of disease interfaces and economic activities that impact elephants; (3) the AsESG shall use its advisory mandate to guide conservation and welfare issues of Asian Elephants by governments, civil society or any other relevant stakeholder. Members will also work within and in collaboration with external experts to outline conservation strategies for Asian Elephants; and (4) the AsESG may choose to meet regularly to share information and conduct its own activities as well as convene gatherings in the form of conferences/workshops on specific themes open to external participants for furthering the protection of Asian Elephants.

Projected impact for the 2017-2020 quadrennium

Conservation prospect of Asian Elephant across 13 range states improved through collaborative efforts of range countries and AsESG members.

Targets for the 2017-2020 quadrennium

Assess

Research activities: (1) map the distribution of elephants in all the 13 range states in Asia; (2) develop Asian Elephant database.

Plan

Conservation actions: produce National Action Plans (NAPs) on elephant conservation for 13 range countries in Asia.
Policy: (1) assist the Viet Nam Government in arresting the decline of the elephant population in Viet Nam; (2) identify select elephant conservation emergencies and plan mitigation measures with technical support from AsESG.
Technical advice: (1) effective data collection and reporting for the Monitoring the Illegal Killing of Elephants (MIKE) programme facilitated by the AsESG; (2) guidelines/protocols for the conservation of Asian Elephants developed by Working Groups.

Act

Proposal development and funding: generate financial resources to support AsESG conservation activities.

Network

Capacity building: (1) at least 13 young emerging professionals working on Asian Elephants supported in 2019 and 2020; (2) capacity building training for range country officials.
Membership: develop AsESG membership for the quadrennium.
Communicate
Communication: (1) communicate elephant conservation and research on Asian Elephants through Gajah journal; (2) communicate information on Asian Elephants and the activities of the group through an updated website. Scientific meetings: two meetings of the Asian Elephant Specialist Group members organised in 2018 and 2020.

Activities and results 2018

Assess
Research activities
i. The Working Group on mapping has prepared the methodology to be followed to map the distribution of elephants in all the 13 range states, and had a meeting in Myanmar to finalise the plan and work towards implementing it. AsESG plans to produce the first draft of the map by end-2019.

Conservation actions
i. The Working Groups for the preparation of Sabah, Indonesia and Bhutan National Action Plans are working on the documents and have prepared the draft which is being reviewed. The final document is expected to be ready by 2019.

The Secretariat is also in contact with Government of India and Lao PDR for the preparation of their National Elephant Conservation Action Plan. Both these governments have agreed to prepare the plan and AsESG is facilitating it. (KSR #18)

Policy
i. The Working Group has prepared the draft conservation plan to arrest the decline of elephant populations in Viet Nam and presented it at the AsESG members meeting in Bangkok in April 2018. Based on feedback from members, the plan is being revised. (KSR #27)

ii. One of the major issues impacting elephant habitat in Bangladesh was the influx of Rohingya refugees in Cox’s Bazar in August 2017. As of September 2018, about 921,000 Rohingya refugees reside in 27 camps covering 6,000 acres of forest area cleared for the camps. The camp area is located in the middle of an elephant corridor and has totally impaired elephant movement between Myanmar and Bangladesh, thereby increasing human-elephant conflict in the region. About 13 cases of human death in and around the camp area as a result of elephants were reported between September 2017 and October 2018. AsESG has formed a working group which, along with Bangladesh Forest Department and IUCN Bangladesh, is working on a mitigation plan to minimise the impact on elephants and their habitat. The AsESG Programme Manager visited the camp site in January 2018, followed by a Working Group members’ visit in October 2018. The mitigation plan is being prepared. (KSR #26)

Technical advice
i. The Chair has formed a Monitoring the Illegal Killing of Elephants (MIKE) Working Group to strengthen and improve MIKE data collection protocol and to build better synergies between MIKE and SSC activities in the region. A MIKE regional meeting was held on 28 April 2018 in Bangkok, with support from the AsESG, that brought together members of the MIKE Technical Advisory Group, Range State officials and experts from the AsESG, as well as the staff of IUCN and CITES involved in the MIKE programme. (KSR #16)

ii. All 10 Working Groups presented the draft guidelines/manuals/plans for the conservation of Asian Elephants for discussion during the AsESG members meeting in Bangkok in April 2018. Based on feedback, the guidelines on use of captive elephants for tourism and manuals on management of musth in captive elephants have been finalised and submitted. The other plans are also being finalised and we expect to have them next year. Following the
AsESG members meeting, the Chair constituted three more Working Groups to help prepare the Bhutan National Environmental Action Plan, minimising the impact of Rohingya camps on elephants and emerging diseases; the groups are working towards the mandate. (KSR #26)

Proposal development and funding

The AsESG Secretariat is funded by Elephant Family and International Fund for Animal Welfare (IFAW). It also raised money from Wildlife Reserves Singapore, WWF International (The Wildlife Practice), MIKE Asia and Golden Triangle Asian Elephant Foundation for partially supporting the AsESG members meeting. It received support from the Department of National Parks, Wildlife and Plant Conservation, Thailand to host dinner for the members meeting in Bangkok. It is also coordinating with other donor agencies to support AsESG activities. (KSR #19)

Capacity building

As part of AsESG’s mandate to help in capacity building of range country members for the conservation of the species, AsESG facilitated a training programme on radio collaring of elephants and strategies for mitigating human-elephant conflict for six delegates from Cambodia (including two vets) and three delegates from Viet Nam (including two vets), led by Wildlife Trust of India (WTI) at its Centre for Wildlife Rehabilitation and Conservation (CWRC), Kaziranga National Park, Assam from 26 November to 2 December 2018. WWF Cambodia and WWF Viet Nam supported the exposure visit-cum-training programme. (KSR #17)
**Membership**

i. AsESG membership comprises about 110 experts as voluntary members from 19 countries. We previously had no members from Viet Nam. In 2018, about 20 experts from diverse skill sets joined the group, including three from Viet Nam. The group also has 14 ex-officio government members nominated by range countries and four other ex-officio members.

**Communicate**

Communication

i. Two volumes of the Gajah journal (Vol 48 and 49) were published with articles on Asian Elephant research, conservation and developments along with news updates. The Secretariat has also submitted an article on the population status of Asian Elephant and key threats to the International Zoo Yearbook. (KSR #28)

ii. The new AsESG website was re-developed and launched. The website was reviewed by the AsESG Communications Working Group, AsESG members and then hosted. This needs to be further improved with more content to make it informative to viewers. (KSR #28)

**Scientific meetings**

i. An AsESG members meeting was organised in Bangkok, Thailand from 25–27 April 2018. In total, 130 people participated in the meeting, including AsESG members, Range Country Government officials from all 13 range countries and other experts. The chief guest of the meeting was General Surasak Karnjanarat, Hon’ble Minister of Natural Resources and Environment, Kingdom of Thailand. The minutes of the meeting were prepared and circulated to AsESG members and range state representatives. All the Working Group conveners presented their outcome documents for review and discussion. Apart from this, other elephant conservation issues were also discussed. The next meeting of the group is in Sabah, Malaysia, in December 2019, and the preparations are in progress. (KSR #28)

**Acknowledgements**

The AsESG Secretariat would like to thank Elephant Family and the International Fund for Animal Welfare (IFAW) for supporting the activities of AsESG. We are also grateful to Wildlife Reserves Singapore, WWF International (The Wildlife Practice), MIKE Asia and Golden Triangle Asian Elephant Foundation for partially supporting the AsESG meeting cost in Bangkok. The Chair would also like to extend his thanks to the Government of Thailand, the Hon’ble Minister of Natural Resources and Environment, Kingdom of Thailand General Surasak Karnjanarat, the Officials of the Department of National Parks, Wildlife and Plant Conservation, Thailand for extending all support for hosting the AsESG meeting in Bangkok. The Chair expresses his thanks to the Range Country Government representatives for coming to the AsESG meeting in Bangkok as well as actively contributing to the conservation of elephants in Asia. We would also like to thank all our members of the AsESG for extending their support. We are grateful to the Working Group conveners and members for working on the issues assigned to them and for developing the guidelines/manuals/plans. The AsESG Secretariat would also like to thank Prof. Jon Paul Rodríguez, SSC Chair and his team for extending all help and assistance to AsESG.

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**Summary of activities 2018**

Species Conservation Cycle ratio: 5/5

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Main KSRs addressed: 16, 17, 18, 19, 26, 27, 28

Resolutions addressed: WCC-2016-Res-041, WCC-2016-Res-100

KSR: Key Species Result
Mission statement
Foster conservation and management of three species of Asian rhinos and their habitats.

Projected impact for the 2017-2020 quadrennium
By 2020, AsRSG intends to produce the Conservation Action Plans for Critically Endangered Javan Rhino (*Rhinoceros sondaicus*), Critically Endangered Sumatran Rhino (*Dicerorhinus sumatrensis*) and Vulnerable Greater One-horned Rhino (*Rhinoceros unicornis*) through consultation process, following latest guidelines framed by IUCN and by forming three working groups for the three species of Asian rhinos. Further for the upcoming CITES CoP, AsRSG shall generate the latest information from Asian rhinos to prepare the combined report of IUCN/SSC; Asian Rhino Specialist Group, IUCN/SSC; African Rhino Specialist Group and TRAFFIC International. In October or November 2018, AsRSG is planning to organise the 2nd Asian Rhino Range Country meeting in Guwahati, India, in collaboration with the Assam Government, in which ministers from Asian Rhino Range Countries - Indonesia, Nepal and India shall be invited to strengthen regional cooperation to address diverse challenges that Asian rhinos are facing. Experiences from rhino range countries shall be shared and available expertise within Asian rhino range countries shall be documented to promote conservation of Asian rhinos.

Targets for the 2017-2020 quadrennium

**Plan**

**Planning**: (1) initiate preparation of Javan Rhino (*Rhinoceros sondaicus*) Conservation Plan; (2) initiate preparation of Sumatran Rhino (*Dicerorhinus sumatrensis*) Conservation Plan; (3) initiate preparation of Greater One-horned Rhino (*Rhinoceros unicornis*) Conservation Plan.

**Activities and results 2018**

**Plan**

i. A committee composed of Dr. Widodo Ramono, Mr. Sectionov and Dr. Hayonon from Indonesia and the Chair of the Asian Rhino Specialist Group (AsRSG) is being formed to draft the Javan Rhino Conservation Plan. The report outline is being agreed, though we are waiting for Indonesia’s Emergency Action plan for Javan Rhino so that key components can also be incorporated in AsRSG’s Conservation Plan. (KSR #15)

ii. For Sumatran Rhino, a committee composed of Dr. Sunarto from Indonesia, Chair of AsRSG, Dr. Susie Ellis (AsRSG Red List Authority) and Mr. Anwar Purwato from Indonesia is being constituted to draft the Conservation Plan. The outline of the report is being agreed, though we are waiting for Indonesia’s Emergency Action plan for Sumatran Rhino so that key components can also be incorporated in AsRSG’s Conservation Plan. (KSR #15)

iii. For Greater One-horned Rhino, a small team composed of the AsRSG Chair, Dr. Ram Chandra Kandel and Dr. Shant Raj Inawali from Nepal, and Mr. B.S. Bonal from India is being formed to draft the Conservation Plan. The outline is being circulated internally for comments. (KSR #15)
Acknowledgements

AsRSG is grateful to the International Rhino Foundation and WWF-India for their commitment to partially cover the cost of the 2nd Asian Rhino Range States Meeting in New Delhi, India, which was originally scheduled in November 2018, but has been re-scheduled for the end of February 2019. AsRSG is also grateful to Aaranyak for providing secretarial support to AsRSG.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

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Main KSRs addressed: 15

KSR: Key Species Result
Mission statement
The mission of the Asian Wild Cattle Specialist Group (AWCSG) is to promote the long-term conservation of the Asian wild cattle species and their habitats by means of information-sharing, identification of conservation priorities and facilitation/delivery of these priority actions through collaborative conservation work.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we will have enhanced the partner network, planning and coordinated action for four wild cattle species. For the Tamaraw (*Bubalus mindorensis*), range-wide conservation actions will be defined, agreed amongst stakeholders, and being implemented, following a PHVA workshop in 2018. The One Plan approach for conserving Anoa (*Bubalus depressicornis* and *B. quarlesi*) and Banteng (*Bos javanicus*) in Indonesia will be implementing two site-based projects, while the ex situ status will have been improved with cooperative breeding efforts in Indonesian zoos. This programme (Action Indonesia Global Species Management Plans) will have built capacity of the national zoo association and set up cooperative breeding programmes for the first time that can be used as a model for other species. The most likely remaining locations of Saola (*Pseudoryx nghetinhensis*) will have been searched, and efforts conducted to capture individuals for a captive breeding programme.

Targets for the 2017-2020 quadrennium
Assess
Red List: Red List assessments completed for eight of nine species.
Research activities: (1) production of publications on Anoa and Babirusa (*Babyrussa babyrussa, B. celebensis, B. togeanensis*) genetics, Tamaraw, Kouperey (*Bos sauveli*), and hunting in Sulawesi; (2) Tamaraw population monitoring and improved assessment; (3) Banteng monitoring in east Javan park; (4) Anoa and Babirusa monitoring in Sulawesi park; (5) Saola camera trapping study.

Plan
Planning: (1) First planning workshop for Banteng, Anoa and Babirusa Global Species Management Plans (GSMPs); (2) host Saola working group biennial meeting; (3) participate in the Conservation Planning Specialist Group (CPSG) visioning workshop; (4) organize Sabah Banteng conservation planning workshop; (5) complete GSMP masterplan for Anoa, Banteng and Babirusa; (6) contribute to the European Association of Zoos and Aquaria (EAZA) Regional Collection Planning for wild cattle; (7) set up a programme to increase support for Tamaraw conservation.

Act
Conservation actions: (1) construction of Saola breeding centre in Viet Nam; (2) improve protection of Tamaraw population.

Network
Capacity building: (1) hold one training workshop for Indonesian zoo educators to set up network and test out materials; (2) host a PHVA Tamaraw workshop and produce a report; (3) hold two animal husbandry training work-
shops for zoo keepers on Banteng, Anoa and Babirusa; (4) hold one animal husbandry training workshop for forest ranger staff on Anoa and Babirusa; (5) assess Indonesian zoo experts to plan future training.

**Communicate**

Communication: launch AWCSG newsletter.

### Activities and results 2018

#### Assess

**Red List**

i. Red List assessments are completed and online, with one assessment remaining to be completed. (KSR #4)

**Research activities**


ii. A publication on Tamaraw is available at: https://www.asianwildcattle.org/newsletter.html (KSR #32)

**Plan**

**Planning**

i. The Global Species Management Plan for Banteng, Anoa and Babirusa was completed and approved by the World Association of Zoos and Aquariums (WAZA). (KSR #15)


iii. The Regional Collection Plan for wild cattle and camelids was completed and approved by EAZA. (KSR #15)

#### Network

**Capacity building**

i. The PHVA Tamaraw Workshop was held and the report is being written. (KSR #15)

**Communicate**

**Communication**

i. The AWCSG newsletter was launched in December: https://www.asianwildcattle.org/newsletter.html (KSR #32)

### Acknowledgements

We would like to acknowledge the IUCN SSC office: Jon Paul Rodriguez, Rachel Hoffmann, Kira Mileham and Orlando Salamanca, for all their support to help set up this collaboration and continued support to grow and strengthen our network. We are very grateful to the supporters of the AWCSG, in particular Mark Pilgrim, Simon Dowell, Scott Wilson, Tim Rowlands, Charlotte Smith at Chester Zoo; Wes Sechrest and Barney Long of Global Wildlife Conservation; and Jeff Holland and John Wortman of Center for Conservation of Tropical Ungulates. Also, thanks to all the active members of the AWCSG for their continuing hard work to conserve these species, and in particular, the species coordinators, Bill Robichaud, Paul Buzzard, Penny Gardner, Simon Hedges, Rahul Kaul, Tom Gray and Emmanuel Schultz. We acknowledge the hard work of the Saola Working Group members in their many areas of work. We also appreciate the dedication that all members of the GSMP Committees have contributed throughout the last year, especially the conveners/co-conveners and new Working Group Leaders and all the institutions supporting the GSMPs. We are grateful to those from the Philippine Government, NGOs and other partners that have made huge progress to conserve Tamaraw in the last year.

**Summary of activities 2018**

<table>
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<td>Main KSRs addressed: 4, 15, 32</td>
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KSR: Key Species Result
Mission statement
To enhance the long-term conservation outlook for the marsupials and monotremes of Australia, Papua New Guinea and Indonesia.

Projected impact for the 2017-2020 quadrennium
Major focal areas in the 2017-20 period will be on increasing conservation efforts for marsupials and monotremes in Papua New Guinea and Indonesia; increasing the representation of stakeholders in those countries; completing conservation status assessments for the minority of species not covered by recent assessments; and seeking to catalyse research on Data Deficient species.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete conservation status assessment for all taxa not assessed within last 10 years.

Network
Membership: (1) rebuild membership, especially to include more experts and other stakeholders for species from Papua New Guinea and Indonesia; (2) hold first face-to-face meeting with members and other interested individuals.
Synergy: review and re-establish internal structure.

Communicate
Communication: enhance communication within and beyond SSC.

Acknowledgements
We thank the previous Chair (Chris Johnson) and Deputy Chair (Chris Dickman) for their leadership of this group, and for managing conservation assessment efforts for most species in the 2015–18 period.

Summary of activities 2018
No activities reported for year 2018.
Western pygmy-possum
cercartetus concinnus (Least Concern, stable),
Kangaroo Island
Photo: Rosemary Hohnen

Juvenile southern brown bandicoot
Isoodon obesulus (Least Concern, declining),
Kangaroo Island
Photo: Rosemary Hohnen

Northern quoll dasyurus hallucatus (Endangered,
diminishing). Current research is addressing ways to diminish the threats posed by feral cats and poisoning by the introduced cane toad.
Photo: Nicolas Rakotopare / Threatened Species Recovery Hub
Mission statement

(1) To contribute to the mission and goals of IUCN/SSC.
(2) To ensure the maintenance or recovery of populations of threatened bat populations.
(3) To ensure that other bat species remain at a favourable conservation status.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision that having effective Red List assessments in place, informed by current taxonomy, will underpin effective conservation planning for bat species globally. The Bat Specialist Group (BSG) anticipates a sustainable resolution to the human-bat conflict in Mauritius, and an end to Government culls of Pteropus niger. A conservation networking initiative in Oceania is intended to promote regional capacity and conservation of threatened island bat species. The North American Bat Conservation Alliance will be solidly in place and recognised by the three federal governments of Canada, the US and Mexico, as the entity to promote bat conservation in the continent. RELCOM, the Latin American Alliance, will have the network of Important Areas for Bat Conservation (AICOMs) and Important Sites for Bat Conservation (SICOMs) articulated and integrated into a GIS platform upon which each country will enable investment in bat conservation priorities. Following the Convention on the Conservation of Migratory Species of Wild Animals (CMS) listing of four species of Lasiurus, the implementation of the associated requirements is a priority for the quadrennium; additional species are likely to be listed.

A survey to monitor the presence of Pseudogymnoascus destructans will have, by the end of 2020, expanded to Mexico and research for treatment and recovery of bats affected by White Nose Syndrome will continue.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) complete assessment of Old and New World bats; (2) establish a global bat taxonomy database and review process.
Research activities: compile all Important Areas for Bat Conservation (AICOMs) and Important Sites for Bat Conservation (SICOMs) in one GIS platform.

Plan

Capacity building: capacity building for disease, surveys, important areas and sites for bat conservation, etc.
Research activities: secure standardised protocols to monitor Pseudogymnoascus destructans in North America.

Network

Synergy: (1) resolve human-bat conflict and secure stable populations of Pteropus niger; (2) strengthen interaction with wind energy companies for bat conservation; (3) develop network of bat conservation researchers in Oceania; (4) create a network of networks around the world for bat conservation.

Communicate

Communication: improve BSG communication with all of its members.
Activities and results 2018

Assess

Red List

i. Two hundred and two (202) assessments were submitted in 2018. A Red List assessment workshop was completed at the 4th International Southeast Asian Bat Conference. Work is underway to add the information to the IUCN SIS database. The balance of assessments is underway with regional assessors, including a combination of an online and workshop meeting for the balance of the Australasian species. Additional online assessment work sessions are planned. (KSR #2)

ii. Using internet communications and lots of work by many members of the BSG, we assessed the vast majority of the bat species of the New World and continue to do so. The assessment, as it is, is in good shape but there are still Data Deficient and Not Evaluated species. (KSR #2)

iii. We held the 2nd Global Bat Taxonomy Working Group meeting in October 2018; reviewed the status of the online database of bat taxonomy, standards, and potential processes of reviewing future changes in taxonomy; and discussed the sorts of maps that might develop from Global Biodiversity Information Facility (GBIF) and IUCN data. “Bats of the World: A Taxonomic and Geographic Database” went live in 2018 at batnames.org (KSR #4)

Research activities

i. Over 100 AICOMs and SICOMs have been identified in a database and the network is expanding.

Plan

Capacity building

i. The new disease research network WABNet (Western Asia Bat Research Network) includes several IUCN members. A workshop in Tbilisi, Georgia, in September 2018 included a capacity-building component. (KSR #18)

ii. IUCN members also are part of the Bat One Health Research Network (BOHRN), and participated in a workshop in Vienna, Austria, in October 2018. (KSR #18)

iii. Two workshops conducted to continue strengthening the AICOMs and SICOMs (Areas and Sites of Importance for the Conservation of Bats in Latin America and the Caribbean). (KSR #18)

Research activities

i. In North America, the North American Bat Conservation Alliance (NABCA) was recognised by the Trilateral Committee on International Wildlife and Ecosystem Conservation (the three federal governments of Canada, Mexico and the United States). NABCA has developed an assessment of bat threats, and has designed and is implementing the action plan focusing on diseases such as White Nose Syndrome (WNS), with a coordinated and expanded monitoring programme to the three countries. (KSR #12)

ii. In the context of the Trilateral Committee (see above), assessments of the status of all bat species have been designed and planned, to be conducted in September and October 2019. Surveillance of the presence of WNS and its pathogenic agent, Pseudogymnoascus destructans, was conducted across the three countries for the last two winters. All results so far for Mexico are negative but P. destructans has been found in Texas. (KSR #12)

Network

Synergy

i. A series of actions have been taken to contribute toward resolving human-bat conflict and secure stable populations of Pteropus niger: (1) A workshop to develop a national strategy for P. niger conservation management led by the SSC Human-Wildlife Conflict Task Force in collaboration with BSG, Chester Zoo, Mauritian Wildlife Foundation and Mauritian Vampyrum spectrum

Photo: Anand Varma, National Geographic
Rwandan bat conservation and research team  
Photo: Bat SG archives

The leaders of the Rwandan bat conservation team  
Photo: Bat SG archives
Government, held in May 2018; well-attended by diverse research sectors, including Co-Chair Kingston; Human-Wildlife Conflict report produced. (2) Reassessment of the species completed and published in July 2018; it is now listed as Endangered (uplisted from Vulnerable). (3) Third cull implemented by the Mauritius government in November/December 2018; projected 6,000 bats killed, though numbers not yet confirmed. (4) Letters sent to the Mauritian government, and IUCN position statement released following initiation of cull. (KSR #29)

ii. NABCA (North American Bat Conservation Alliance) was strengthened with three country coordinators, Jeremy Coleman, Charles Francis, and Rodrigo Medellín. NABCA is recognised by the three governments as the entity to coordinate bat conservation initiatives in the region. (KSR #29)

iii. In 2018, discussions with conservation researchers in Fiji, Papua New Guinea, Australia, and other areas have started to formulate the vision for the new Oceania network. (KSR #29)

iv. To create a network of networks around the world for bat conservation, a Letter of Intent was submitted to the National Science Foundation’s call for proposals under the “ACCELNET” programme that aims to network networks at a global scale. Full proposal to be submitted in February 2019. (KSR #29)

Communicate

i. Newsletter for 2019 prepared, and membership updated. One-way interactions took place through the distribution of National Geographic Society funding opportunities and similar, but bi-directional communication not achieved globally. (KSR #28)

ii. RELCOM (the Latin American and Caribbean arm of the BSG) has published on its website several white papers stating the position of RELCOM about emerging infectious diseases. (KSR #28)

Acknowledgements

Funding for the Mauritius Fruit Bat Research Strategy Workshop generously received from Chester Zoo, Mauritian Wildlife Foundation, Government of Mauritius, Lubee Bat Conservation, and Bat Conservation International. WABNet is supported by a grant to EcoHealth Alliance (PI Kevin Olival) from the US Defense Threat Reduction Agency (DTRA). The Southeast Asian Bat Conservation Research Unit, supported by the US National Science Foundation, supported the Red Listing workshop at the 4th International Southeast Asian Bat Conference. Bats of the World: A Taxonomic and Geographic Database is supported by the American Museum of Natural History Taxonomic Mammalogy Fund. RELCOM and the AICOMs and SICOMs Thematic Network is supported by the Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo (CYTED).

Summary of activities 2018

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KSR: Key Species Result
Mission statement
The Bear Specialist Group (BSG) strives to promote the conservation of bears living in their natural habitats across their worldwide distribution. We do this by gaining, synthesising and disseminating information; aiding, promoting and supporting conservation initiatives; providing technical assistance and building capacity of those involved or interested in bear conservation; and becoming directly involved in issues that reduce threats and foster the conservation of any of the seven species of terrestrial bears.

Projected impact for the 2017-2020 quadrennium
We will enhance the conservation status of bears in this quadrennium by (1) improving global outreach via completion of our website; (2) implementing several portions of the Sun Bear (Helarctos malayanus) conservation action plan; (3) providing guidelines for more rigorous monitoring of Asian bears; and (4) conducting or facilitating several on-the-ground conservation projects.

Targets for the 2017-2020 quadrennium
Assess
Red List: Red List bear species at the population level.
Research activities: (1) finish bear farming situation analysis; (2) publish peer-reviewed paper on Asiatic Black Bear (Ursus thibetanus) range map.

Plan
Communication: issue position statement on bear collaring.
Planning: (1) set conservation priorities and develop a method for prioritisation of species planning; (2) Sun Bear (Helarctos malayanus) action plan finished and published; (3) Sloth Bear (Melursus ursinus) action plan finished and published.

Act
Conservation actions: (1) start implementing Sun Bear action plan; (2) mitigate bear-human conflicts on the Tibetan Plateau.
Technical advice: (1) human-bear conflicts manual completed and published; (2) monitoring protocols for Asian bears completed and published.

Network
Proposal development and funding: secure a longer-term and viable funding base.
Synergy: Seek a Programme Officer.

Communicate
Communication: (1) new independent website built; (2) ongoing regular communication internally and externally.

Activities and results 2018
Assess
Research activities
i. All phases of the bear farming situation analysis are in process, with some preliminary analyses conducted. There is much good collaboration between IUCN and the Chinese State Forestry and Grassland Administration (SFGA). (KSR #43)

ii. Some data has been collected on the Asiatic Black Bear (Ursus thibetanus) range map. (KSR #43)
Plan

Communication
i. The position statement on bear collaring is finished. (KSR #28)

Planning
i. We are formulating a proposal on methods for prioritisation of species planning for Sun Bears. (KSR #15)

ii. The Sun Bear action plan is finalised, now being proof-read and nearly completed. (KSR #15)

iii. We need to collect more data in advance to make the Sloth Bear action plan meaningful; we developed a survey mechanism to collect those data (but not distributed yet). (KSR #15)

Act

Conservation actions
i. One project on Sun Bear was started with National Geographic Society funding, and another proposal submitted. (KSR #27)

ii. Mitigation of bear-human conflicts on Tibetan Plateau: started fieldwork, wrote report, obtained funding, working with a PhD student, draft manuscript in preparation. (KSR #37)

iii. We finished preliminary work on the human-bear conflicts manual, including two SSC-approved documents, and have a framework for larger manual. (KSR #37)


Network

Proposal development and funding
i. A new partner organisation is in place, though the level of funding is uncertain. (KSR #19)

Synergy
i. Some early discussions on the Programme Officer search have taken place, and will be followed up. (KSR #17)

Communicate

Communication
i. Progress toward a new independent website: working with a web designer, incomplete website launched, content being provided and loaded, some technical problems encountered that need to be solved by the web designer. (KSR #28)

ii. Articles are being submitted to International Bear News (joint newsletter with the International Association for Bear Research and Management – IBA). We are hoping to move to an online newsletter run by BSG and have started that process. (KSR #28)

Acknowledgements

We thank Free the Bears for taking the lead on organising the 1st International Symposium on Sun Bear Conservation and Management, and Conservation Planning Workshop, and the following for financial support of the symposium and workshop: Wildlife Reserves Singapore; Perth Zoo Wildlife Conservation Action; Taronga Conservation Society Australia; Bornean Sun Bear Conservation Centre; Hauser Bears; and the International Association for Bear Research and Management Research and Conservation Grant. Special thanks to Caroline Lees of the Conservation Planning Specialist Group for great assistance on producing the Sun Bear conservation action plan. Many thanks also to Rachel Hoffmann, SSC Director of Conservation Outcomes, for delivering the keynote presentation of the Bear Specialist Group session on the topic “What would have been without us?”, at the International Bear Conference in Ljubljana, Slovenia.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

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Main KSRs addressed: 15, 17, 19, 27, 28, 37, 43

Resolutions addressed: WCC-2012-Rec-139

KSR: Key Species Result
Mission statement
The Bison Specialist Group (BSG) is committed to the development of comprehensive and viable strategies and management actions to enhance conservation and ecological restoration of European Bison (Bison bonasus) and American Bison (Bison bison), including Plains Bison (Bison bison bison) and Wood Bison (Bison bison athabascae), as wildlife where feasible across their original range. The BSG operates under the authority of the Species Survival Commission of the International Union for Conservation of Nature to conduct comprehensive assessments, provide evidence-based advice and support, and communication and outreach activities in support of this mission.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, the American Bison Section of the BSG anticipates a substantial advance in the knowledge of the location and size of bison herds through a global bison census. The census will be critical to the understanding of the bison metapopulation across North America, as it will include all jurisdictions in all nations and management designs. This will be a crucial tool for recovering bison at local, national, and international levels.

The world population of European Bison is steadily growing with one-third of the species kept in captivity, and the rest in reintroduced populations. This captive population, very large in comparison to other species, is very important for conservation, especially for proper management of genetic diversity. In many European countries, animals in captivity do not have the status of protected species. Building upon decades of hard-won growth in the abundance of captive and reintroduced bison, there is now enhanced need for critical assessment of legal and management improvements that could serve as the foundation for long-term conservation strategies and implementation throughout the full historic range across Europe. The European Bison Section is undertaking an updated Conservation Action Plan to articulate such a unified approach across Europe. The other problem European Bison face are health threats to the species. In Russia, foot-and-mouth disease outbreaks have been reported after not existing for years in central Europe, while in Western Europe cases of bluetongue disease have been detected. European Bison are very sensitive to both with mortality close to 50%. The future for the species likely lies in an extensive metapopulation; with close involvement of multiple jurisdictions and land owners.

Targets for the 2017-2020 quadrennium
Assess
- Green List: produce a new Green List assessment.
- Red List: produce an updated Red List assessment report.
Research activities: (1) produce a new global census of the Bison genus; (2) prepare guidelines for veterinarians about bison health protection.

Plan
- Planning: produce new long-term conservation action plans for the American Bison and the European Bison.
- Policy: advise decision makers regionally.

Communicate
- Communication: (1) hold a BSG meeting; (2) create a library.
- Scientific meetings: hold a yearly conference.
Activities and results 2018

Assess

Green List
i. Designed initial test of draft Green List assessment protocol for the North American Northern Great Plains ecoregion. (KSR #11)

Red List
i. The last Red List assessment was published in 2017, and an updated assessment is on track to be published in 2022, utilising updated information from the Global Bison Census and Green List assessment. (KSR #2)

Research activities
i. Initial draft project description and fundraising for the new global census of the Bison genus completed. (KSR #32)
ii. Preparation of first workshop about bison health protection for veterinarians. (KSR #23)

Plan

Planning
i. Developed partnerships with new collaborators to produce a new long-term conservation action plan for the American Bison. (KSR #15)
ii. The conservation action plan for the European Bison has been outlined, authors have been selected for all sections, and the first chapters are completed. (KSR #15)

Policy
i. Some changes have been made to the position of the species in Spanish law; in Poland the national programme for the species is being updated; in Romania the BSG provided help in the reintroduction process. (KSR #27)

Communicate

Communication
i. Started planning for a joint meeting with the American Bison Society in Santa Fe, New Mexico, in October 2019. (KSR #28)
ii. Papers collected in pdf version for a virtual library. (KSR #43)

Scientific meetings

Acknowledgements


Summary of activities 2018

Species Conservation Cycle ratio: 3/5

Assess 4
Plan 3
Communicate 3

Main KSRs addressed: 2, 11, 15, 23, 27, 28, 32, 43

KSR: Key Species Result
Mission statement
Our mission is to promote the long-term conservation of all wild Canidae species throughout their ranges.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we aim to make advances in reducing the extinction risk of key threatened canid species. Our focus will be on species currently classified as Critically Endangered, Endangered, Vulnerable and Near Threatened. This aim will be achieved through the implementation of the following objectives: (1) to compile, synthesise and disseminate information on the conservation and status of all canid species across their range, with particular emphasis on species which are threatened or rare; (2) to provide and improve technical information and advice on all matters concerning wild canids, including their status in the wild, the threats they face and their conservation requirements, biology and natural history to all relevant bodies (range state government agencies; non-governmental organisations, including national and international organisations and potential funding bodies; inter-governmental organisations e.g. IUCN, CITES; field projects concerned with canid conservation); (3) to promote and catalyse conservation activities benefitting wild canids, to be carried out by the above, prioritising and coordinating efforts of researchers and conservationists worldwide; (4) to help raise funding for canid research and conservation and undertake research directly when necessary or appropriate; (5) to improve management of the common and sometimes troublesome species; (6) to build capacity through the exchange of ideas, information, and technical expertise among the members of the Group.

Targets for the 2017-2020 quadrennium
Assess
Green List: (1) complete Green List assessment for two canid species.
Red List: (1) complete Red List reassessment of all canid species.
Research activities: (1) complete update of status of Grey Wolves (Canis lupus) in Europe; (2) conduct survey of Kit Fox (Vulpes macrotis) and Swift Fox (Vulpes velox) research and conservation efforts; (3) resolve systematic ambiguity surrounding old ‘Canis lupus’ taxa.

Plan
Planning: (1) organise Dhole (Cuon alpinus) population and habitat viability assessment; (2) more effective engagement within the Maned Wolf Working Group through developing collaborative actions; (3) implementation of regional strategies and support new national action plans under the Range Wide Conservation Program for Cheetah and African Wild Dogs; (4) develop national conservation action plan for Darwin’s Fox (Lycalopex fulvipes).

Act
Conservation actions: (1) advance recovery of Red Wolf (Canis rufus) under the Endangered Species Act; (2) protect Ethiopian Wolves (Canis simensis) from disease through an integrated disease management strategy, with One Health benefits; (3) rescue Ethiopian Wolves through conservation translocations.
**Network**
Membership: (1) develop Canid Specialist Group (CSG) membership, invigorate Working Groups; (2) address succession plan for the CSG.

**Communicate**
Scientific meetings: (1) co-host the 2nd International Jackal Symposium, Marathon Bay, Greece; (2) endorse and contribute to the 6th Arctic Fox Conference in Svalbard.

**Activities and results 2018**

**Assess**

**Green List**
- Some progress made drafting a Green List assessment for Ethiopian Wolf. (KSR #11)

**Red List**
- Reassessment of five Canis spp. completed; work on remaining two species is on track. (KSR #1)

**Research activities**
- Early discussions were had in Greece, leading to a planned workshop at CIBIO, Porto, in May 2019. (KSR #32)

**Plan**

**Planning**
- Preparations were made toward the February 2019 Meeting on Dhole Population and Habitat Viability Assessment. (KSR #15, 18, 20)
- Ongoing work on drafting the national conservation plan for Darwin’s Fox. (KSR #15, 18, 20)

**Act**

**Conservation actions**
- Early planning and fundraising to rescue Ethiopian Wolves through conservation translocations. (KSR #24)

**Network**

**Synergy**
- Publication of the ICAP Workshop for Canids and Hyaenids Report (available on the IUCN Conservation Planning Specialist Group website). (KSR #14, 18, 32)

**Communicate**

**Scientific meetings**
- Co-hosted the 2nd International Jackal Symposium, in Marathon Bay, Greece. (KSR #28)

**Summary of activities 2018**

Species Conservation Cycle ratio: 5/5

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Main KSRs addressed: 1, 11, 14, 15, 18, 20, 24, 28, 32

**Acknowledgements**

The CSG is hosted by the WildCRU at the University of Oxford. The Chair is kindly sponsored by the Born Free Foundation, who funds his Bill Travers Chair for Conservation Biology at Lady Margaret Hall, University of Oxford. The Association of Zoos and Aquariums (AZA) and the European Association of Zoos and Aquaria (EAZA) sponsored the Dhole PHVA workshop. Born Free Foundation, the Wildlife Conservation Network and Foundation Segre have supported key field activities to protect Ethiopian wolves. We are grateful for many colleagues that assisted us in Red List reassessment.
Mission statement

To promote conservation of wild Caprinae and their environments, in collaboration with IUCN itself, international and local agencies, NGOs and anybody who struggles for the same objective of participating, endorsing and helping in any initiative that helps to promote the status and habitat of these species.

Projected impact for the 2017-2020 quadrennium

We plan to increase connections between stakeholders and specialists on Caprinae conservation. We plan to inform both Caprinae Specialist Group members and other interested people about the results of relevant research, management and conservation initiatives through our revived newsletter *Caprinae News*. One topic several of us have been working on is the consequences of current climatic changes on the distribution and numbers of mountain-dwelling herbivores, especially wild sheep, goats and goat-antelopes. Furthermore, several of us have been working on the evolutionary effects of trophy hunting on the hunted populations and several papers on this very important, controversial issue will be published. New and ongoing conservation initiatives will be furthered. The 7th World Mountain Ungulate Conference will be organised in Bozeman (Montana, US) in September 2019 and the Caprinae Specialist Group will cooperate in its organisation.

Targets for the 2017-2020 quadrennium

**Assess**

Red List: advise and support administrations, NGOs and other bodies on Caprinae conservation initiatives.

**Network**

Documents review: advise and support administrations, NGOs and other bodies on Caprinae conservation initiatives.

Synergy: advise and support administrations, NGOs and other bodies on Caprinae conservation initiatives.

Technical advice: advise and support administrations, NGOs and other bodies on Caprinae conservation initiatives.

**Communicate**

Communication: edition of *Caprinae News*, one issue per year.

Scientific meetings: organise the 7th World Mountain Ungulate Conference, Bozeman, Montana, US.

**Activities and results 2018**

**Assess**

Red List

i. Arabian Tahr *Arabritragus jayakari* reassessment undertaken by Steve Ross. (KSR #1)

**Network**

Documents review

i. Advising Philip McGowan on a scientific paper regarding Caprinae. (KSR #27)

Synergy

i. Letters of support provided for: Blue Sheep *Pseudois nayaur*, Urial *Ovis vignei*, Caprinae. (KSR #27)

ii. Consultation of CITES scientific and management authorities with regard to the importation of Caprinae hunting trophies. Jointly with SULI, organization of workshop on sustainable management of wildlife in Central Asia with contributions by SG members on the conservation and hunting management of Caprinae species. (KSR #27)
Technical advice
i. Inform CITES captive breeding working group. (KSR #25)
ii. Inform the Convention on the Conservation of Migratory Species of Wild Animals. (KSR #27)
iii. Inform the IUCN World Commission on Environmental Law Ethics Specialist Group. (KSR #27)

Communicate
1. Publish Caprinae News bulletin 2018. (KSR #28)

Scientific meetings
i. Support organisation of the 7th World Mountain Ungulate Conference, to be held in Bozeman, Montana, US. (KSR #28)

Summary of activities 2018
Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 1, 25, 27, 28

A saddleback individual of Nilgiri-Tahr Nilgiritragus hylocrius.
As the males grow old they develop silvery saddle like patch on the rump
Photo: Shri T. Anil Kumar

Two magnificent male Kashmir Markhors Capra falconeri, Near Threatened
Photo: Imran Shah

Eastern Tur Capra cylindricornis, Near Threatened
Photo: Zurab Guriedze
Mission statement

Projected impact for the 2017-2020 quadrennium
By 2020, we will have implemented the Assess-Plan-Act (APA) approach for additional cat species. We envision to improve the status assessments and launch new conservation planning processes. These conservation initiatives will be combined with communicational and educational programmes for people and institutions living with these species.

Targets for the 2017-2020 quadrennium
Assess
Red List: update key Red List assessments: Fishing Cat (Prionailurus viverrinus), Chinese Mountain Cat (Felis bieti), Leopard (Panthera pardus) subspecies.

Research activities: develop camera trapping database which feeds into the Global Mammal Assessment and the IUCN SIS database.

Technical advice: (1) develop Cat Monitoring Guidelines; (2) conservation of the Wild Cat (Felis silvestris) in Scotland: review of the conservation status and assessment of conservation activities.

Plan
Planning: (1) revise the National Action Plan for Asiatic Cheetah (Acinonyx jubatus venaticus) in Iran; (2) participate in Javan Leopard (Panthera pardus melas) workshop; (3) facilitate lynx workshop; (4) develop conservation strategy for the Pallas’s Cat (Otocolobus manul); (5) planning for the Leopard in Africa and Southeast Asia; (6) updating and coordination for the Lion (Panthera leo) Conservation Strategy; (7) facilitate a workshop to develop a conservation strategy for the Jaguar (Panthera onca) in a number of neglected countries in collaboration with San Diego Zoo Global.

Scientific meetings: attend workshop on non-detriment findings in regard to trophy hunting in Sevilla, Spain.

Synergy: attend European Association of Zoos and Aquaria (EAZA) and Association of Zoos & Aquariums (AZA) Felid Taxon Advisory Group (TAG) meetings.

Technical advice: (1) attend Convention on Migratory Species (CMS) Central Asian Mammals Initiative (CAMI) midterm workshop; (2) attend CITES Animal Committee, Steering Committee meetings and Conference of the Parties (CoP); (3) attend first range state meeting of the joint CMS-CITES African Carnivores Initiative (ACI).

Act
Conservation actions: (1) support implementation of revised strategy for Leopard in the Caucasus eco-region; (2) support implementation of revised National Action Plan for Asiatic Cheetah in Iran.

Network
Technical advice: organise a meeting with Lion specialists and the appointed Lion database manager to discuss the Lion database and the content of the Guidelines for the Conservation of Lions in Africa.
Communicate

Communication: (1) World Wildlife Day celebration: Cat theme; (2) develop Cat News issue on the Status and Conservation Needs for Pallas’s Cat; (3) develop Cat News issue on the Status and Conservation Needs for Eurasian Lynx (Lynx lynx) in Continental Europe; (4) scale up communication and fundraising; (5) produce two regular Cat News issues per year.

Scientific meetings: (1) participate in the Suicide or Survival (SOS) Conference in The Hague representing the IUCN SSC APA approach; (2) attend the 2nd International Small Wild Cat Conservation Summit; (3) attend meeting of the African Lion Working Group.

Activities and results 2018

Assess

Red List

i. Key re-assessments of Fishing Cat, Chinese Mountain Cat and Leopard subspecies have been initiated and are underway. (KSR #1)

Technical advice

i. The conservation status of the Wild Cat in Scotland and the implementation of conservation activities have been reviewed for the Scottish Wildcat Conservation Action Plan Steering Group. Report delivered. (KSR #26)

Plan

Planning

i. Attended the Javan Leopard workshop in January 2018. (KSR #15)

ii. Facilitated a workshop on the conservation of the Bohemian-Bavarian-Austrian (BBA) Eurasian Lynx population. (KSR #18)

iii. Facilitated a workshop to develop a conservation strategy for the Pallas’s Cat. (KSR #15)

iv. Developed the Guidelines for the Conservation of the Lion in Africa, delivered in English and French together with more than 50 authors from the wider Cat Specialist Group network. (KSR #15)

v. Reviewed the status of the Jaguar in a number of neglected countries in the region and developed a conservation strategy and action plan. (KSR #15)

Scientific meetings

i. Attended a workshop on non-detriment findings in regard to trophy hunting in Sevilla, Spain. (KSR #28)

Synergy

i. Attended the EAZA Felid TAG meeting in Ireland in spring 2018. (KSR #29)

Technical advice

i. Attended the CMS CAMI midterm workshop. (KSR #29)

ii. Attended the 30th CITES Animal Committee meeting in Geneva in July 2018; gave a talk in a WAZA, AZA and EAZA side event about our cooperation with zoos. (KSR #26)

iii. Attended the first range state meeting of the joint CMS-CITES African Carnivores Initiative (ACI) and presented the Guidelines for the Conservation of the Lion in Africa and a draft of a Leopard roadmap, as well as the Regional Conservation Strategies for the Cheetah and African Wild Dog. (KSR #26)

Act

i. Participated in meetings of the Advisory team (including the EAZA Felid TAG chair, EAZA European Endangered Species Programme (EEP) coordinator, Cat Specialist Group) for the Sochi breeding programme. (KSR #27)

Network

Technical advice

i. Organised and held a workshop with key Lion people on the Lion database and content of the Guidelines for the Conservation of Lions in Africa. (KSR #26)
Pallas’s Cat (Otocolobus manul), Near Threatened
Photo: P. Meier

Pallas’s Cat Workshop Group
Photo: Nordens Ark
### Communicate

#### Communication

1. Celebration with a symposium on cat conservation in Bern with participation of CITES and CMS Secretariats. The proceedings of the symposium just got published as a special issue of *Cat News*. (KSR #28)

2. All chapters of the *Cat News* issue on the Status and Conservation Needs for Pallas's Cat have been drafted and are either in the review process or already in the layout. The Special issue will be out in spring 2019. (KSR #28)

3. Invitations for a symposium to produce a *Cat News* issue on the Status and Conservation Needs for Eurasian Lynx in Continental Europe are out, and guidelines for the chapters are developed. (KSR #28)

4. Produced two regular *Cat News* issues (CN67 and CN68) with 34 peer reviewed papers. (KSR #28)

#### Scientific meetings

1. Participated in the Suicide or Survival (SOS) Conference, The Hague, with a presentation on the SSC Species Conservation Cycle. (KSR #28)

### Acknowledgements

Working very closely with the Cat Specialist Group Co-Chairs were Manuela von Arx (Digital Cat Library, Balkan Lynx Recovery Programme), Tabea Lanz (Assistant to the Chair, website, Red List Assessments), Roland Bürki (support to the Chair), Anna Huber (book keeping): a great thank you to all of them. We would like to thank the many dedicated people who helped develop and run the various projects: Alex Sliwa (Sochi leopard reintroduction), Marianne Hartmann (Sochi leopard reintroduction), Keith Richmond, Brian Bertram, Juan Repucci and Maximilian Allen (associate editors *Cat News*). Alex Sliwa, Patrick Meier and Sebastian Kennerknecht have generously made available their superb cat pictures for Cat Specialist Group purposes.

Our projects would not be possible without financial support from many committed institutions and private persons: Friends of the Cat Group, MAVA Foundation, Zoo Leipzig, Forestry Bureau of the Taiwan Council of Agriculture, the Governments of Switzerland, Germany and Belgium, Fondation Segré, AZA Felid TAG, Copenhagen Zoo, IUCN Netherlands, Nordens Ark, Council of Europe, Convention on Migratory Species, Foundation Temperatio, Innflow AG, Stämpfli Publikationen AG, and especially Patrick Meier and Peter Stämpfli.

### Summary of activities 2018

<table>
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Main KSRs addressed: 1, 15, 18, 26, 27, 28, 29

KSR: Key Species Result
Mission statement

The Cetacean Specialist Group (CSG) promotes and facilitates the conservation of cetaceans worldwide. It functions as a catalyst, clearing house, and facilitator for cetacean-related research and conservation action. Our guiding premise is that conservation ultimately depends upon good science, and the group’s credibility and value are based on maintaining high standards of scientific rigour. The advice we provide relates mainly to the status of populations, abundance, trends, the effects of current or potential threats, and the efficacy of mitigation. Our emphasis is on the recovery of endangered species and populations, but we also recognise the importance of maintaining the full diversity of the Cetartiodactyla (cetaceans), which includes about 90 species and many populations.

Projected impact for the 2017-2020 quadrennium

Cetaceans are nominally protected under several international conventions and by national legislation in most countries, but they are incidentally affected by many human activities in marine and freshwater environments. Most of the conservation work by CSG members is linked, directly or indirectly, to that of other bodies or groups with shared objectives, and this makes it impossible in most instances to tease apart the influence or ‘impact’ made ‘by the CSG’ per se (other than in the case of Red Listing). It also means that the targets, activities and results reported here are only a sample of the many areas of cetacean conservation work in which members are engaged, and are often leading or sharing the lead with others. The CSG regularly ‘partners’ with bodies like the International Whaling Commission (IWC), Convention on the Conservation of Migratory Species of Wild Animals (CMS), US Marine Mammal Commission, national government agencies, and NGOs. Our group’s traditional focus on Endangered and Critically Endangered small cetaceans, particularly those outside North America, Western Europe, Australia and New Zealand, continues.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) complete assessments and reassessments of all baleen whale species and selected subspecies and subpopulations; (2) complete assessments and reassessments of all toothed cetacean species and selected subspecies and subpopulations.

Plan

Planning: co-organise and co-convene a workshop (Ex situ Options for Cetacean Conservation) for marine mammal experts regarding a One Plan approach for the conservation of small cetaceans. Policy: (1) establish link with Indian Ocean Tuna Commission (Ninth Session, co-led by WWF-UAE); (2) ongoing links with Indian Ocean Tuna Commission; (3) help to prevent extinction of the Vaquita (Phocoena sinus); (4) ongoing involvement in the work of the International Whaling Commission’s Scientific and Conservation Committees; (5) serve on an independent expert panel to review New Zealand’s Threat Management Plan for the two endemic subspecies of Hector’s Dolphin – Cephalorhynchus hectori hectori (Endangered) and C. h. maui (Critically Endangered).
Act
Conservation actions: provide technical support for the IUCN Marine Mammal Protected Areas Task Force (https://www.marinemammalhabitat.org/)
Technical advice: (1) continue involvement in IUCN Western Gray Whale Advisory Panel (see https://www.iucn.org western-gray-whale-advisory-panel); (2) assist efforts to prevent extirpation of Taiwanese Humpback Dolphins (Sousa chinensis taiwanensis; see https://iucn-csg.org/csg-special-projects/eastern-taiwan-strait-humpback-dolphins/); (3) assist efforts (mainly by WWF-Cambodia) to prevent extinction of Mekong River dolphins (Orcaella brevirostris; see https://iucn-csg.org/mekong-dolphins/)

Network
Capacity building: increase engagement with Conservation Planning Specialist Group to ramp up conservation planning for cetacean species. Membership: increase CSG membership in South Asia and Africa.
Synergy: (1) help to expand and consolidate Arabian Sea Whale Network; see https://iucn-csg.org/csg-special-projects/arabian-sea-humpback-whales/; (2) respond to requests for advice and feedback (e.g. CITES) to other IUCN bodies and Specialist Groups as requested.

Communicate
Communication: ongoing communication and outreach on all aspects of Vaquita conservation efforts.

Activities and results 2018
Assess
Red List
i. All 14 baleen whale species as well as at least four subpopulation updates have been published. (KSR #1, 2)

ii. Dozens of toothed cetacean species and selected subspecies and subpopulations were published in 2018, but still shy of reaching target of 74 species. Efforts are constantly ongoing. (KSR #1, 2)

Plan
Planning
i. The workshop for marine mammal experts regarding a One Plan approach for the conservation of small cetaceans took place in December 2018, and resulted in planning of four tasks for conservation action, as follows: (1) workshop to review Yangtze Finless Porpoise (Neophocaena asiaeorientalis asiae-orientalis; Critically Endangered) conservation and write-up of a plan as the first cetacean subject to conservation planning under the One Plan approach; (2) workshop to develop conservation actions for Franciscana dolphins (Pontoporia blainvillei; Vulnerable), including field health assessments and capacity to rehabilitate stranded animals; (3) workshop to develop conservation actions for the Atlantic Humpback Dolphin (Sousa teuszii; Critically Endangered), including methods to assess distribution of animals and threats through community surveys; (4) development of protocols to increase health data gathered from stranded Indus Dolphins (Platanista gangetica minor; Endangered) in Pakistan. This ongoing follow-up work is a high priority for our group in 2019. (KSR #15)

Policy
i. Publication of cetacean identification guide for fisheries in the Indian Ocean. (KSR #26, 27, 43)

ii. Submission on cetacean bycatch in Pakistani fisheries prepared and presented at 14th Working Party on Ecosystems and Bycatch of the Indian Ocean Tuna Commission in Cape Town in September (Jeremy Kiszka). (KSR #26)

iii. Numerous meetings attended, field efforts, coordination work by the core CSG Vaquita team led by Lorenzo Rojas-Bracho and including Jorge Urbán-Ramírez, Taylor, Bob Brownell, Jeff Moore, Andy Read, Peter Thomas and Reeves, throughout the year. (KSR #26, 27, 43)

iv. Reeves and Justin Cooke attended May 2018 annual meetings of IWC Scientific Committee and Conservation Committee, and Cooke attended September 2018 meeting of the Commission. Both were extensively involved in intersessional activities, including a workshop on Gray Whales (Eschrichtius robustus) in April 2018 in California. (KSR #26, 27)

v. Reeves and Taylor served as independent international experts on a panel convened by the New Zealand government, and co-produced a final report with recommendations (in collaboration with a third expert not affiliated with the Cetacean Specialist Group). The report was submitted to the New Zealand government in August (the New Zealand government’s draft Threat Management Plan, along with the panel’s report, will not be made public until the second quarter of 2019). (KSR #27)
Act
Conservation actions

i. Technical support provided to the IUCN Marine Mammal Protected Areas Task Force for five regions of the world, but at least five more to reach full completion (please refer to Marine Mammal Protected Areas Task Force for results). (KSR #26, 27, 43)


iii. Workshop in Vancouver in September attended by Reeves to work on several papers for journal submission focusing on main threats to Taiwanese white dolphins, and planning for a 2019 workshop to produce recovery and action plans for the Taiwan government. (KSR #26, 27, 43)

Training mission to Sarasota, Florida, for Cambodia dolphin team organised, hosted, sponsored and led by CSG members (Randy Wells, Lindsay Porter, Thomas) in November. Webinar on Sambor Dam led by Greg Thomas, National Heritage Institute, Sausalito, California, in December (co-organised by Thomas and Frances Gulland). Efforts led by Porter and Gulland throughout year to assist in necropsies of dolphins in Cambodia.

Network

Capacity building

i. Taylor completed the Conservation Planning Specialist Group Facilitation Course. (KSR #17)

Synergy

i. Northern Indian Ocean Humpback Whale (*Megaptera novaeangliae*) data platform workshop held in Oman (Gianna Minton lead) in January, report finalised in March. Informal meeting of network members in May during IWC Scientific Committee annual meeting (Minton, Tim Collins, Sal Cerchio and others). Newsletter for the Arabian Sea Whale Network published in October. (KSR #29)

ii. Provided advice to the IUCN Global Species Programme on CITES COP Decision 17.149 (current status, etc. of Vaquita and Totoaba (*Totoaba macdonaldi*)) in February, on Animals Committee issue with Black Sea Bottlenose Dolphins (*Tursiops truncatus ponticus*) in June, and on Standing Committee issues concerning introduction from the sea specimens of North Pacific Sei Whales (*Balaenoptera borealis borealis*) by Japan in September. (KSR #29)

Communicate

Communication

i. The Vaquita reports were in addition to regular updates on all aspects of Vaquita conservation efforts. This service has made our website the go-to place for up-to-date documentation of Vaquita matters, used by individuals and groups in Mexico, elsewhere in North America and other parts of the world. (KSR #28)

Acknowledgements

We thank WWF-International and the TOTAL Foundation for providing funds to support our Red List work during the period 2016–2018. Other major contributors to CSG-related work by members include the US Marine Mammal Commission, the National Marine Mammal Foundation (US), Ocean Park Conservation Foundation (Hong Kong), International Whaling Commission, and IUCN Programmes (specifically the Global Species and the Business and Biodiversity Programmes) for supporting some of the chair’s travel and activities; the various organisations that have supported the Marine Mammal Protected Areas Task Force co-chaired by CSG Deputy Chair Notarbartolo di Sciara and CSG member Erich Hoyt (https://www.marine-mammalhabitat.org/about/supporting/); and the many donors and supporters mentioned in project-related information on the CSG website (www.iucn-csg.org). Very importantly, The Marine Mammal Center in Sausalito, California, has, since early 2018, provided financial support for the CSG website.

Summary of activities 2018

| Species Conservation Cycle ratio: 5/5 |
|---|---|
| Assess | 2 |
| Plan | 6 |
| Act | 4 |
| Network | 3 |
| Communicate | 1 |

Main KSRs addressed: 1, 2, 15, 17, 26, 27, 28, 29, 43

Resolutions addressed: WCC-2016-Res-017
The mission of the Deer Specialist Group (DSG) is to contribute to biodiversity conservation through improvement of the welfare and sustainability of deer populations around the world. Our challenge is to find conservation alternatives to mitigate conflict to enable rare and threatened species to survive.

Projected impact for the 2017-2020 quadrennium

We aim to explore new collaborations to evaluate possible monitoring methodologies to survey the deer species of the world. We will be seeking to share experiences and survey methodologies and how to create a database. We will be focused on promoting capacity building of new field deer biologists to obtain biological data to update the species information and advise policy makers on critical species and ecosystems, as well as problematic overabundant populations, and generate appropriate management guidelines.

Targets for the 2017-2020 quadrennium

Assess

Red List: complete assessment of 71 deer species (20% increase in knowledge of species).
Research activities: conduct genetic analysis of widespread species (20% of deer species analysed).

Network

Capacity building: hold three workshops to train field biologists to collect data on deer species and to provide capacity building to the Estación Fauna Cría Autóctona (EFCA) personnel. We plan to offer two in 2018 and one in 2019.

Activities and results 2018

Network

Capacity building

i. We performed two Conservation Biology of Neotropical Deer training workshops, covering expenses for 15 Latin American biologists, veterinarians, park rangers and zoo keepers. Training workshop topics included: (1) specialization and evolution of Neotropical deer species, (2) deer natural history, (3) research methodologies, and (4) proposal preparation. (KSR #25)

Synergy

i. We signed three cooperation agreements: (1) Estación Fauna Cría Autóctona (EFCA) Maldonado-Uruguay, for captive breeding and genetic assessment; (2) Ministerio de Educación y Cultura (MEC) de Uruguay, for cooperation in training and capacity building activities; and (3) Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente (MVOTMA), to support research activities on Pampas Deer (Ozotoceros bezoarticus) in the wild and in captivity in Uruguay. (KSR #17)
Acknowledgements

We thank our supporting agencies: Conservation Force (www.conservationforce.org) for providing funding to Bill for Eld’s Deer (Rucervus eldii) ecology and conservation projects in Southeast Asia, and to Susana González, Comisión Sectorial de Investigación Científica (CSIC-UdelaR), and the Women in Science Award of the L’Oréal Foundation-UNESCO-MEC in Uruguay, for supporting her research and contributing to the advancement of scientific knowledge on Neotropical deer species.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

<table>
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<th>Network</th>
<th>2</th>
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Main KSRs addressed: 1, 17, 25

Resolutions addressed: WCC-2016-Res-085

KSR: Key Species Result
Mission statement

The mission of the IUCN SSC Equid Specialist Group (ESG) is to conserve biological diversity by developing and executing programmes to study, save, restore, and manage wisely wild equids and their habitats. Our greatest challenge is to improve wild equid conservation status, to sustain their ecosystems and to enhance the livelihoods of local communities.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we hope that the conservation status of the African Wild Ass (Equus africanus, Critically Endangered) is improved by capacity building in the two main range states, Ethiopia and Eritrea, and the establishment of a protected area in Eritrea. The Convention on the Conservation of Migratory Species of Wild Animals (CMS) road map for the Conservation of the African Wild Ass has been completed and the species is listed on Appendix I of CMS. Przewalski’s Horse (Equus ferus przewalskii, Endangered) populations are expected to increase in Mongolia, and further reintroduction sites may become necessary; a national Action Plan for the species will be developed. Equid species in Africa – Grevy’s Zebra (Equus grevyi, Endangered), Mountain Zebra (Equus zebra, Vulnerable), and Plains Zebra (Equus quagga, Near Threatened) – are at threat from catastrophic droughts; conservation efforts in range states will aim to ameliorate these effects. In Asia, conservation efforts of Asiatic Wild Ass (Equus hemionus, Near Threatened) and Kiang (Equus kiang, Least Concern) will continue, so we do not expect to see a decline in population numbers.

Targets for the 2017-2020 quadrennium

Assess

Red List: complete Red List assessments of all seven wild equid species.

Plan

Planning: complete Ethiopian national action plan for three wild equids. Policy advice: (1) produce a CMS road map for African Wild Ass conservation; (2) African Wild Ass listed on CMS Appendix 1; (2) Przewalski’s Horse listed on CMS Appendix 1.

Act

Conservation activities: (1) demarcate an African Wild Ass protected area in Eritrea; (2) continue working with all ESG members towards conservation of wild equids.

Network

Capacity building: (1) Eritrean national to obtain PhD on African Wild Ass; (2) Ethiopian national to obtain PhD on African Wild Ass; (3) conduct scout training courses in Ethiopia and Eritrea.

Membership: increase membership diversity.

Communicate


Activities and results 2018

Assess

Red List

i. Assessments for all seven wild equids completed. All Red List assessments are up to date. (KSR #1)
Plan
Planning
i. The Ethiopian National Action Plan for Wild Equids (African Wild Ass, Grevy’s Zebra, Plains Zebra) was completed, approved by the Ethiopian Wildlife Conservation Authority (EWCA), and implementation has started. Dr Fanuel Kebede, who was supported by the ESG, is now Director of Research for the Ethiopian Wildlife Conservation Authority. (KSR #15, 26, 28)

Policy advice
i. We assisted with production of the Road Map for the Conservation of the African Wild Ass Equus africanus 2017-2027, CMS Technical Series Publication No. 34, which was approved by CMS COP 12. (KSR #15, 26, 28, 29)
ii. Proposals were developed for listing the African Wild Ass (Equus africanus) on CMS Appendix I at CMS COP 12; they were submitted and approved at CMS COP 12. (KSR #18, 26)
iii. Listing of Przewalski’s Horse (Equus ferus przewalskii) on CMS Appendix I was approved at CMS COP 12. (KSR #18, 26)

Act
Conservation actions
i. Research on the population biology and the distribution of the African Wild Ass has established that the most important area for this species’ reproduction and population viability in Eritrea is the Messir Plateau, Northern Red Sea Zoba. Demarcation of the protected area has been funded. (KSR #22, 30)
ii. Action plan for the conservation of wild equids approved. The Ethiopian National Action Plan for Wild Equids (African Wild Ass, Grevy’s Zebra, Plains Zebra) was completed, approved by the Ethiopian Wildlife Conservation Authority, and implementation has started. (KSR #15, 31)

Network
Capacity building
i. An Eritrean national is enrolled and conducting doctoral research on African Wild Ass distribution, population viability and habitat utilisation. Research and analyses on the population viability of African Wild Ass in Eritrea completed and published. Publication of ‘Viability of the critically endangered African wild ass (Equus africanus) population on Messir Plateau (Eritrea)’ in Journal of Mammalogy. (KSR #32, 38)
ii. An Ethiopian national is enrolled and conducting doctoral research on African Wild Ass distribution, population viability and habitat utilisation. Research on population viability ongoing. (KSR #32, 38)
iii. Funding secured, training programmes scheduled. (KSR #12)

Membership
i. We have sixty-five members from 25 countries, composed of 25 women and 40 men.

Communicate
Scientific meetings
i. International Conference on Wild Equids will be convened in Prague in September 2019. Organizing committee was established, conference scheduled and conference locale secured. (KSR #28, 32, 33, 34, 38)

Acknowledgements
We thank the following donors that have provided funding for operations, research, training, and conservation action: EcoHealth Alliance, Basel Zoo, IUCN SSC Species Conservation Planning Sub-Committee, Knowsley Zoo, Plock Zoo, Seaworld Busch Gardens Conservation Fund, Little Rock Zoo. We thank Dr David Mallon for facilitating the Ethiopia National Wild Equid Action Plan workshop. We thank the Ethiopian Wildlife Conservation Authority for hosting and organising the Ethiopia National Wild Equid Action Plan workshop. We are very grateful to the Convention on Migratory Species (CMS) for hosting the African Wild Ass Range State meeting in Bonn, Germany. The Government of the Federal Republic of Germany Ministry for the Environment, Nature Conservation, Building and Nuclear Safety provided funding for the range state meeting and the development of the African Wild Ass road map and participation of range state nationals at CMS COP 12. Subsequently the Germany Ministry for the Environment, Nature Conservation, Building and Nuclear Safety and CMS provided funding for implementing road map actions. We would particularly like to thank Dr Elsa Nickel, Christiane Paulus, Oliver Schall, Bert Lenten and Yelizaveta Protas for their contributions and support.

Summary of activities 2018
Species Conservation Cycle ratio: 5/5
Assess 1
Plan 4
Act 2
Network 4
Communicate 1
Main KSRs addressed: 1, 12, 15, 18, 22, 26, 28, 29, 30, 31, 32, 33, 34, 38

KSR: Key Species Result

Kiang (Equus kiang), Least Concern
Photo: Patricia D. Moehlman

Two plains zebras greeting
Photo: Patricia D. Moehlman

Mammals
Co-Chairs
Julian Fennessy (1)
Noelle Kumpel (2)

Red List Authority Coordinator
David Mallon (3)

Location/Affiliation
(1) Giraffe Conservation Foundation, Windhoek, Namibia
(2) Independent (BirdLife International), Cambridge, UK
(3) Division of Biology and Conservation Ecology, Manchester Metropolitan University, Derbyshire, UK

Number of members
58

Social networks
Website: http://www.giraffidsg.org

Mission statement
The vision of the Giraffe and Okapi Specialist Group (GOSG) is: viable populations of Giraffe and Okapi, iconic African species, and their habitats, are conserved sustainably and for their evolutionary potential across, and role in, naturally functioning ecosystems; are valued and protected, locally and globally, recognising their independent right to existence and our duty to current and future generations. We will achieve our vision by: (1) providing coordination, support and technical advice; (2) monitoring and reporting of population status and trends; and (3) raising awareness and providing information.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we expect to have a clearer, coordinated, joint framework for conserving both Giraffe (Giraffa camelopardalis) and Okapi (Okapia johnstoni) in the form of two species-wide conservation strategies, guiding conservation action and resources. This will guide and support newly-developed national-level conservation strategies and engagement to support priority populations and increase multi-stakeholder buy-in and cooperation. We will also have further raised awareness of the plight of both Giraffe and Okapi at the international level and within range states, by improving and scaling up the GOSG communications and working to support things like World Okapi Day and World Giraffe Day and increase range state involvement. We hope to have increased funding targeted towards conservation of both species, and raised the need for safeguarding of their habitats and management actions up the political agenda. Given the pressures on both species, we do not anticipate improving the Red List status at species-level within this quadrennium, but hope to begin to stem the species-wide declines and increase some populations, such as the Niger giraffe. However, we do need to increase survey effort and accuracy in order to gauge any sort of conservation success, so this is a priority for Okapi, though heavily dependent on funding and the security situation which is a considerable and difficult to counter threat to this species in particular.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) update Giraffe and Okapi species Red List assessments; (2) complete nine Giraffe subspecies Red List assessments.
Research activities: (1) establish a giraffid publications/metadata repository; (2) Giraffe and Okapi taxonomy review; (3) develop standardised methods or protocols for Giraffe and Okapi surveys.

Plan

Act
Conservation activities: (1) develop an Africa-wide Giraffe conservation strategy; (2) develop four national Giraffe conservation strategies.
Policy: (1) submit an IUCN resolution to highlight the decline of and threats to giraffids and conservation needs; (2) proposal submitted and accepted to list Giraffe on the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Appendix II.

Network
Proposal development and funding: support fundraising for Giraffe and Okapi research and conservation.
Synergy: establish an Advisory Committee to improve governance of GOSG and support Co-Chairs.
Communicate

Communication: (1) develop and implement GOSG communications strategy; (2) develop and publish improved GOSG website and social media outreach; (3) support communications around World Okapi Day and World Giraffe Day; (4) produce and disseminate biannual *Giraffid* newsletter.

Technical advice: provide technical advice to relevant parties on Giraffe and Okapi research and conservation issues.

Activities and results 2018

Assess

Red List
1. Seven Giraffe subspecies assessed by beginning of 2018 and planned for nine Giraffe subspecies to be assessed by end of 2019. (KSR #1)

Research activities
i. Giraffe Resource Centre (www.girafferesourcecentre.org) established online in 2017 by Giraffe Conservation Foundation with support from partners. Ongoing Okapi resources being collated although limited updates. (KSR #1)

ii. Ongoing taxonomic research being undertaken, which will feed into review. Discussions with potential assessors undertaken and development of draft Terms of Reference. (KSR #43)

Plan

Planning

Policy

i. GOSG with support of Giraffe Conservation Foundation drafted the proposal for inclusion of the Giraffe on CMS Appendix II on behalf of Government of Angola, which was subsequently approved. (KSR #26)

Act

Conservation activities
i. Various aspects of the Okapi strategy have been undertaken by GOSG members, in particular Okapi Conservation Project, Chester Zoo and Lukuru Foundation. (KSR #31)

Network

Synergy
i. Advisory committee established and discussions shared for comment amongst members. One of the committee members resigned and a new member will be sought in the next quadrennium.

Communicate

Communication
i. Draft Communications Strategy developed; however, it remains unfinished as the Focal person was unable to commit further, and as such implementation is limited. (KSR #28)

ii. Website was adapted with support of the Zoological Society of London (ZSL) and is available online. There are limited updates due to limited availability of the Co-Chair and Focal person. (KSR #28)

iii. Ongoing increase in World Giraffe Day and World Okapi Day communications, predominantly through Giraffe Conservation Foundation and ZSL, and individual members. (KSR #28)

iv. New partner identified to develop *Giraffid* newsletter. (KSR #28)

Technical advice

i. GOSG members have provided considerable support to Giraffe and Okapi range States throughout Africa on a range of policy, legislation, conservation and management actions. (KSR #27)

Acknowledgements

We thank all Giraffe range States and partners who have assisted in the development of the updated Red List assessment. Additionally, we would like to thank the Giraffe Conservation Foundation and Zoological Society of London for co-hosting the Specialist Group.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

<table>
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Main KSRs addressed: 1, 26, 27, 31, 43

Resolutions addressed: WCC-2016-Res-012

KSR: Key Species Result
**Mission statement**

We are committed to working with the global conservation network, governmental and other entities to ensure the long-term survival of the two hippo species (Common and Pygmy) and to support sustainable conservation and management of hippos across their range.

**Projected impact for the 2017-2020 quadrennium**

The Hippo Specialist Group (HSG) has identified three key priorities for the current (2017-2020) quadrennial to ensure that we can achieve the desired direct impact on hippo species conservation:

1. **Communication and outreach:** to strengthen and improve awareness of hippo conservation within the general public and conservation community. Key impact activities for this priority are website re-development and launch, social media engagement, and stronger intra-group communication.

2. **Partnerships:** it is clear that to catalyse conservation and research action the HSG needs partners. We are looking for partner institutions willing to host the HSG website, help fund management, and work collaboratively with the HSG to support shared vision and activities.

3. **Conservation projects:** Common Hippos (*Hippopotamus amphibius*) need regional action plans including coordination across West, Central, and East Africa; Pygmy Hippos (*Choeropsis liberiensis*) already have action plans in place, but require a conservation network that has the ability to support key initiatives in implementing this action plan. These are eight key projects that HSG will initiate as soon as funding becomes available. We plan to work with our partners to secure resources that can support these and other conservation and research projects.

**Targets for the 2017-2020 quadrennium**

**Assess**

- **Red List:** Red List assessment for the Common Hippo.

**Network**

Proposal development and funding: support hippo conservation projects through fundraising and capacity building.

Synergy: (1) strengthen HSG intra-group communication by initiating quarterly emails/informal newsletters to members; (2) strengthen HSG intra-group communication by creating an online resource site for HSG members.

**Communicate**

Communication: (1) update the HSG website; (2) launch Facebook account.

**Activities and results 2018**

**Assess**

- **Red List**: The Red List assessment for the species was completed and published. (KSR #1)

**Network**

Proposal development and funding

- In total, eight hippo conservation projects were identified (the eighth one in 2018) and are announced on webpages; the Co-Chairs are actively looking for support for the projects, though still without results. (KSR #18)

**Synergy**

- HSG members are regularly informed about current issues (e.g. Hippo culling in Zambia) and asked for their expertise; members are regularly requested to submit reports to the newsletter (*Suiform Soundings*) and about publishing the newsletter.

- The online resource site for HSG members is in preparation.
i. The HSG website was updated including species accounts, list of members of the HSG and the list of projects supported by the HSG. (KSR #28)

ii. The HSG regularly reports updates to the European Association of Zoos and Aquaria (EAZA). (KSR #28)

Acknowledgements

We thank Thiemo Braasch for his help in updating the webpages and perfect cooperation on the newsletter Suiform Soundings. We are also grateful to the members of HSG for their important contribution in hippo conservation and active work on projects in the field.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

Assess 1

Network 3

Communicate 2

Main KSRs addressed: 1, 18, 28

KSR: Key Species Result
Mission statement

The mission of the IUCN SSC Hyaena Specialist Group (HSG) is to contribute to and promote the understanding and conservation of the species in the family Hyaenidae: Spotted Hyaenas, Striped Hyaenas, Brown Hyaenas and Aardwolves.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we will have completed a new range-wide occurrence study for the four species of hyaenas. This will hopefully pave the way towards a new Action Plan, which is sorely needed; the current plan was published in 1998 and much has changed since then! Only after this study is completed will we determine whether we have achieved any targets of the original plan. There has been little conservation planning for the hyaenids, especially when compared to the felids and canids with overlapping ranges, and despite their ecological importance and the potentially high rate of conflict between humans and the Spotted Hyaena. In addition, our communication strategy will first focus on the production of high-quality content and its amplification online, followed by printed material for local communities once funding is secured. Only through improved education and transfer of knowledge (at local, national, and international levels) will hyenas be conserved.

Targets for the 2017-2020 quadrennium

Assess

Research activities: (1) develop an online threats assessment survey; (2) publish a range-wide occurrence study for the four species of hyaena.

Plan

Planning: strategic planning for the next quadrennium.

Synergy: develop methods to integrate results of the Global Integrated Collection Assessment and Planning (ICAP) Workshop for Canids and Hyaenids into HSG conservation planning.

Act

Conservation actions: (1) have a rabies vaccination day in two hyaena areas to treat 500 domestic dogs in 2018, in two hyaena areas to treat 500 domestic dogs in 2019, and in three hyaena areas to treat 750 domestic dogs in 2020.

Network

Proposal development and funding: fundraise to support new research for hyaena conservation.

Synergy: create three working groups within the HSG.

Communicate

Communication: (1) establish a new website; (2) establish additional social media.

Activities and results 2018

Assess

Research activities

1. More than 100,000 occurrence data points for the four species of hyaena were collected in 2018 and several additional collaborators joined. (KSR #4, 12, 32)
Plan

Synergy


Act

Conservation actions

1. Rabies and distemper vaccinations delivered to more than 1,000 domestic dogs and cats in two parts of Kenya: outside Amboseli National Park and the Masai Mara National Reserve. (KSR #37)

Network

Proposal development and funding

1. HSG Chair wrote 10 letters of support for new research by HSG members; however, none of the proposals were successful. (KSR #19)

Communicate

Communication

1. Website up but not completed. (KSR #28)
2. HSG now established on Facebook, Instagram, and Twitter. (KSR #28)

Acknowledgements

We thank Andrew Jacobson and Florien Weise for their invaluable collaboration and persistent research work for the Hyaena Distribution Mapping Project.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

| Assess | 1 |
| Plan   | 1 |
| Act    | 1 |
| Network| 1 |
| Communicate | 2 |

Main KSRs addressed: 4, 12, 19, 28, 29, 32, 37

KSR: Key Species Result
Mission statement
To promote the conservation and effective sustainable management of all species of lagomorph through science, education and advocacy.

Projected impact for the 2017-2020 quadrennium

The Lagomorph Specialist Group (LSG) is “middle-sized” – not a single species, nor composed of hundreds of species. We have slightly less than 100 species in our brief. However, these are distributed around the globe, and there are few similarities among any of our many forms that are Red List classified as Threatened. Thus, we do not have a single programme or a single thrust; there is no one-size-fits-all to our approach. LSG members largely work independently in their region, and the Co-Chairs serve more as a nerve centre. This has always had to be our approach; the broad geographic reach of our members and the cost that would be involved in attempting to meet as a body of the whole essentially prohibit planning such a meeting. We judge our success based on the terrific work done by our members in their respective regions, and as this summary of our activities shows, this body of work is encouraging. What we are all doing collectively is to make Lagomorph a known entity, and to ensure that lagomorph diversity worldwide is maintained by minimising extinction risk, addressing climate change, working with local communities, stopping horrific poisoning campaigns, etc.

Targets for the 2017-2020 quadrennium

Assess
Red List: (1) improve knowledge and assessment of lagomorph systematics, (2) complete all Red List reassessments of all lagomorph species.
Research activities: (1) improve knowledge of Brachylagus idahoensis; (2) examine population trends of all lagomorphs in the western United States; (3) improve knowledge of Lepus callotis; (4) improve knowledge of Lepus fagani, L. habessinicus, and L. starcki in Ethiopia; (5) improve knowledge of Lepus flavigularis; (6) improve knowledge of all Chinese Lepus; (7) improve knowledge of Nesolagus netscheri; (8) improve knowledge of Nesolagus timminsi; (9) improve knowledge of Ochotona iiliensis; (10) improve surveys of poorly-studied Ochotona in China; (11) understand the role of climate change in the determination of Ochotona princeps populations; (12) understand how climate change and reduced snow cover may affect populations of Lepus americanus; (13) identify individuals to study the Pronolagus species in Africa; (14) improve understanding of Romerolagus diazi; (15) improve understanding of lesser-known species of Sylvilagus in North America and South America; (16) increase knowledge of lagomorphs via publication of peer-reviewed publications (as indicated via The Web of Science).

Plan
Act
Conservation actions: (1) reintroduction of *Brachylagus idahoensis* into the Columbia Basin, Washington; (2) improve knowledge and conservation of *Bunolagus monticularis*; (3) improve knowledge and conservation of *Caprolagus hispidus*; (4) stop poisoning of *Ochotona curzoniae*; (5) control of feral cats and their negative impact on *Pentalagus furnessi*; (6) improve the status of *Oryctolagus cuniculus* in its native range, as a prey item of the endangered Iberian Lynx; (7) improve conservation to recover *Sylvilagus transitionalis*; (8) protect *Ochotona hyperborea* in Hokkaido; (9) protection and monitoring of the endangered subspecies *Sylvilagus bachmani riparius*; (10) monitor the endangered subspecies *Sylvilagus palustris hefneri*.

Network
Membership: review and expand LSG membership.

Communicate
Communication: (1) develop new improved LSG webpage; (2) publish overarching book on the biology and conservation of all lagomorphs.

Scientific meetings: plan for 6th World Lagomorph Conference.

Activities and results 2018
Assess
Red List
I. Discussions underway for the formation of an expert committee to review lagomorph systematics. (KSR #6)

II. We completed all of the assessments of lagomorphs by December 2018, including assessments of newly described species. (KSR #1)
**Research activities**

**i.** Four critical peer-reviewed publications on *Brachylagus idahoensis* were published by LSG members in 2018 (and 11 publications in the years 2016 and 2017). Continued successful reintroduction of an extinct population. (KSR #12, 16)


**iv.** Improved LSG capacity to understand *Lepus fagani*, *L. habessinicus*, and *L. starcki* in Ethiopia through bringing in new LSG members. (KSR #12, 16)

**v.** Red Listing process brought together updated information on *Lepus flavigularis*. Censuses are continuing and a solid team is assembled to monitor the status of the species. (KSR #12, 16)

**vi.** We have an active LSG member at the Chinese Academy of Sciences, Institute of Zoology, Ge Deyan, who is looking for people with appropriate focal expertise to study all Chinese *Lepus*. We are optimistic that our new point person for Chinese lagomorphs will help with this moving forward. (KSR #12, 16)

**vii.** We sadly learned that *Nesolagus netscheri* has become a target for international trafficking, and working through our network, TRAFFIC, and WWF, we are hoping to bring more attention to this issue. We are in the process of forming a *Nesolagus* action conservation group. (KSR #12, 16)

**viii.** We have been doing ongoing surveys and documenting the wire traps that are being set for wildlife throughout Viet Nam that are really devastating *Nesolagus timminsi*. Several pieces have been published in the lay literature to bring the threat of the species to the general public. Our point person (Andrew Tilkir) is working with locals to try to eliminate the use of wire nooses in protected areas. We are in the process of forming a *Nesolagus* conservation action group. Tilkir, A. (2018). Fading Stripes in Southeast Asia: Saving the Elusive Annamite Striped Rabbit. Capeia: 2018/12/18.016. (KSR #12, 16)

**ix.** We have not been able to get people to study the populations or natural history of *Ochotona* species in Asia. Very little is known and the systematics of these species are quite poorly understood. (KSR #12, 16)

**x.** Continuing to survey the populations of *Ochotona ilenisa*. Our point person, Li Weidong, is having success with camera traps for improving knowledge. There still appear to be widespread extinctions. (KSR #12, 16)

**xi.** In the last three years, there have been 18 peer-reviewed publications by LSG members on the role of climate change in the determination of American Pika (*Ochotona princeps*) populations. It has become apparent that American Pikas can still be regarded as a sentinel species for climate change, but they are not being driven to extinction and they are resilient in the face of climate change. Millar, C.I., Delany, D.L., Hersey, K.A., Jeffress, M.R., Smith, A.T., Van Gunst, K.J. and Westfall, R.D. (2018). Distribution, climatic relationships, and status of American pikas (*Ochotona princeps*) in the Great Basin, USA. Arctic, Antarctic, and Alpine Research 50:1, e1436296. [DOI: 10.1080/15230430.2018.1436296] (KSR #12, 16, 38)


**xiii.** We have not found anyone with relevant expertise to study *Pronolagus* species in Africa. LSG Co-Chair Andrew Smith has been searching for someone interested in this group since 1991. (KSR #12, 16)

**xiv.** Documented an extension of the range of *Romerolagus diazi* into an internal portion of its range. It remains an important species for conservation. We have a really great team of people working on this species. (KSR #12, 16)

**xv.** Several papers have either been published or are being published on species of *Sylvilagus* in North America and South America, refining and improving the taxonomic limits, ranges, and conservation status of the species formerly under the umbrella of *Sylvilagus brasiliensis*. Population surveys conducted on Mexican lagomorphs, such as: Lorenzo-Monterrubio, C., Ríoj-Paradela, T.M., Carrillo-Reyes, A. and de la Paz-Cuevas, M. (2018). Conejos y liebres insulares de México (Insular rabbits and hares of Mexico). Ciudad de México, México: CONABIO. (in Spanish and English). (KSR #12, 16)

**xvi.** In the last three years, 165 peer-reviewed publications have been published on lagomorphs by LSG authors. (KSR #28)
Plan

Planning


ii. The Riverine Rabbit Programme was established in 2003 under the auspices of the Endangered Wildlife Trust of South Africa to confront the situation facing the Critically Endangered Riverine Rabbit (Bunolagus monticularis). This highly successful effort has now been broadened into the Drylands Conservation Programme, a regional effort to protect not only the rabbit, but the entire Karoo ecosystem in which it lives. The Drylands Conservation Programme is managed by LSG member Cobus Theron. It is a prime example of how comprehensive and broad-based conservation initiatives should work. Significant efforts have been put into determining the numbers and range extent of the Riverine Rabbit, as the species is very difficult to census due to its low density and the thick scrub habitat that it occupies. These efforts include a sniffer dog – Jesse the border collie – who can discriminate between Riverine Rabbits and two other sympatric rabbits (Cape Scrub Hares Lepus saxatilis and Cape Hares Lepus capensis). The field work includes arrays of camera traps that record the presence of Riverine Rabbits (and help flesh out which other species occupy their habitat). Knowledge of the specific habitat the rabbit occupies feeds into an ambitious nursery project growing native species which then can be planted to restore degraded areas throughout its range. Because the Riverine Rabbit primarily occupies private land, the programme works closely with ranchers and farmers, forming conservancies and engaging in sustainable land management – activities which benefit local stakeholders as well as the rabbit. Finally, the Drylands Conservation Programme has developed several overarching educational programmes (the Clever Rabbit Project and Eco-Rangers) to ensure that the next generation will embrace conservation. (KSR #11, 12)

Ochotona gloveri (Glover’s Pika) is a rock-dwelling species found across much of the southern Qinghai-Tibetan Plateau. While common, this species has never been studied.

Photo: Andrew Smith
iii. A new publication documenting and extending the modern range for *Caprolagus hispidus* into Bhutan was published this year. This has improved our knowledge of their distribution and status of this species. Nidup, T. (2018). Endangered Hispid Hare (*Caprolagus hispidus*-Pearson 1839) in the Royal Manas National Park, Bhutan. *Journal of the Bhutan Ecological Society* 2018 (3):56–64. (KSR #12, 16)

iv. The poisoning of *Ochotona curzoniae* has largely stopped in many areas. This is a major success story, and a review of the status of poisoning and the ecological role of the pika published online by Smith et al. in 2018 covers this story. Numerous scientists are agreeing that poisoning is bad, so we may be turning the corner on this practice. Smith, A.T., Badin-qiuying, Wilson, M.C. and Hogan, B.W. (2019). Functional-trait ecology of the plateau pika *Ochotona curzoniae* in the Qinghai-Tibetan Plateau ecosystem. *Integrative Zoology* 14:87–103. [DOI: 10.1111/1749-4877.12300] (KSR #27)

v. The Amami Rabbit *Pentalagus furnessi* occurs only on Amami-ohshima Island (712 km²) and on Tokuno-shima Island (248 km²) in the Ryukyu archipelago in southwestern Japan. The recent status of the rabbit on both islands is recovering, both in population and distribution overall, due mainly to near-eradication of invasive mongoose *Herpestes auropunctatus* on Amami-ohshima Island and feral cat control on Tokuno-shima Island. As a next step in invasive species measures on Amami-ohshima Island, feral cat control was re-started in 2018, after stopping in 2013 for consensus building. In addition, more effective measures against traffic accidents are required. The rabbit is an important conservation species as a component of a candidate natural World Heritage site;
in January 2019, the Japanese Government re-nominated the site to UNESCO for review, aiming for 2020 designation. (KSR #27)

**vi. Oryctolagus populations** have taken a massive downturn since 2017. They have been attacked by a new strain of a rabbit virus that has wiped out 60–70% of the species. We are hoping that they will develop immunity. LSG members are assessing the situation and working on the disease issue (our knowledge is high but the status of the species is worse). (KSR #27)

**vii. Good conservation work continues to be done on Sylvilagus transitionalis.** Our LSG point person, John Litvaitis, is very involved with state agency and recovery efforts. (KSR #15, 27)

**viii. Attempts to stabilise the Hokkaido populations of Ochotona hyperborea** have been carried out by the Pika Fan Club, which is the largest green/conservation group in Japan. They have been working through the publications of books, seminars, and meetings throughout the country of Japan, and have had success with fighting off development that would threaten the species. Pika Fan Club (Japan). (2017). *Pikas in the Rocks*. Sapporo, Japan: The Pika Fan Club. *Ochotona hyperborea yessoensis* (KSR #21, 27)

**ix. The Riparian Brush Rabbit** (*Sylvilagus bachmani riparius*) is listed as Endangered by the state of California and the US federal government. A number of significant conservation and recovery actions have been implemented since 2001 in its remaining habitat in the central valley of California. These include establishment of new populations, restoration and creation of new habitat, and the provision of high ground with suitable cover for shelter and protection when rivers within their range flood. A camera survey of the refuge was conducted following major flooding in spring/summer of 2017, and the overall results were reassuring. Cameras were deployed along 18 transects (3/transect) in three habitat types (riparian, transitional, grassland; 6 transects in each) in fall/winter 2017. Although Riparian Brush Rabbit mortality was high during the flood, following the flood and recovery of the habitat, rabbits were documented on all of the riparian transects. Once the flood waters receded, rose and other brushy species recovered and the surviving Riparian Brush Rabbits moved from refugia areas (vegetated levees, etc.) back into suitable habitat in areas that had been flooded for months. We are now concerned that there will be major flooding in 2019 due to the above average precipitation and snowpack in the Sierra Nevada during the winter of 2019, and the rabbits will be continuously monitored. (KSR #12, 16, 24)

**x. The Lower Keys Marsh Rabbit** (*Sylvilagus palustris hefneri*) is vulnerable due to its occupancy on the low-lying and exposed lower Florida Keys. The subspecies is listed as Endangered by the US Government. In addition to other stressors leading to its vulnerability, Hurricane Irma in September 2017 severely impacted the population, such that standardised pellet counts, an indication of the population, declined by 96–98%. LSG plans to follow up these surveys conducted by the US Fish and Wildlife Service and engage in conservation action to restore the Lower Keys Marsh Rabbit to sustainable levels. Parker, I.D., Montalvo, A.E., Lund, A.A., et al. (2017). *Lower Keys Marsh Rabbits Post-Hurricane Irma*. College Station, Texas: Texas A&M Natural Resources Institute. (KSR #12, 16)

**Network**

**Membership**

i. Expanded membership primarily with new members in Africa and Asia.

**Communicate**

**Communication**

i. New improved LSG Web Page completed and online. (KSR #28)


**Scientific meetings**

i. First announcements for the 6th World Lagomorph Conference have been circulated to the LSG membership. (KSR #28)

**Acknowledgements**


**Summary of activities 2018**

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Main KSRs addressed: 1, 6, 11, 12, 15, 16, 21, 24, 27, 28, 38

KSR: Key Species Result
Mission statement
Maintain and restore, in coexistence with people, viable populations of large carnivores as an integral part of ecosystems and landscapes across Europe.

Projected impact for the 2017-2020 quadrennium
The Large Carnivore Initiative for Europe (LCIE) report on the status of large carnivores in Europe is largely regarded as the most reliable information source on the status of these species. Our previous report was a highly-cited paper published in Science (Chapron et al. 2014) and we intend to do similar scientific publications in 2019. Our report is also instrumental to inform the policy of the European Commission and several European countries on managing large carnivores and their conflicts with human activities. The LCIE regularly supports the European Commission’s work on large carnivores through scientific and technical advice. LCIE, through the Institute of Applied Ecology in Rome, has just been awarded (December 2017) a contract to develop four regional and national platforms of stakeholders on large carnivore management.

Targets for the 2017-2020 quadrennium
Assess
Research activities: (1) complete update of the status of large carnivores in Europe (numbers and distribution); (2) produce a technical document on defining and managing bold wolves; (3) produce a technical document on the impact of artificial feeding of carnivores and their prey; (4) produce a technical document of recommendations on how to survey and monitor carnivore populations; (5) produce a technical document on the legal and technical opportunities to establish management zones for large carnivores in Europe.

Network
Membership: focus on recruiting more young members to the LCIE Specialist Group.

Activities and results 2018
Assess
Research activities
i. The Red List assessments for large carnivores in Europe are completed and published. (KSR #1)
ii. Report on defining and managing bold wolves published and available on our website at www.lcie.org (KSR #27)
iii. Report on the impact of artificial feeding of carnivores and their prey published and available on our website at www.lcie.org (KSR #27)
iv. We have completed a first draft of recommendations on how to survey and monitor carnivore populations. (KSR #27)

Network
Membership
i. No new members recruited in 2018.

Acknowledgements
We thank the European Commission for the partnership on organising and managing the eight stakeholder platforms in several European countries. We also thank the Science Museum of Trento for hosting our meeting in 2018.
Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 27

KSR: Key Species Result

Large carnivores, such as brown bears and wolves, are increasing in number and distribution areas across most of Europe. Their return to ranges where they were eradicated centuries or decades ago poses difficult challenges toward coexistence.

2018 meeting of the LCIE at Trento, Italy
Mission statement
The Otter Specialist Group (OSG), founded in 1974: (1) provides leadership for the conservation of all 13 otter species; (2) determines and reviews on a continuing basis the status and needs of otters, and promotes the implementation of necessary research, conservation and management programmes by appropriate organisations and governments; (3) communicates the status and conservation needs of otters and promotes the wise management of otter species.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we hope to reduce the extinction risk of four Asian otter species, our current high priority. We published the Asian Otter Conservation Manifesto in 2016 and our Global Otter Conservation Strategy in late 2018. The Strategy lists regional conservation priorities for each of the 13 otter species and the budgets required, which will help accelerate project funding and implementation. We published our second and third TRAFFIC reports on the Illegal Otter Trade in Asia in 2018, which will expand targeted conservation actions and community programmes. In South America, we bolstered national initiatives and programmes for three endangered otter species in Brazil, Peru, Chile and Argentina with targeted field research, local assistance from NGOs, and national parks. In April 2019, we held our 14th International Otter Congress in the Tangjiahe Nature Reserve, Sichuan, China, with 140 participants from 39 countries in attendance. Representatives from Chinese Nature Resources and National Park ministries participated and pledged to finance a China-wide survey with the OSG’s assistance.
Activities and results 2018

Assess

Green List
i. Agreed in 2018 to participate in the Green List process planned for the OSG Congress in 2019, including a training workshop. (KSR #11)

Red List
i. Red List revisions of 13 species announced, but will be submitted between 2019 and 2020. (KSR #1)

Plan

Planning
i. Global Otter Conservation Strategy draft reviewed. Discussed new conservation initiatives and applications in Southeast Asia. (KSR #15, 20, 21)
ii. Meeting scheduled in South Africa, January 2020, to expand projects of the African Otter Network. (KSR #15)

Policy

i. Contacted Asian CITES authorities and NGOs to assist in gaining support for uplisting proposal. (KSR #21, 26)

Network

Synergy
i. Change of Otters in Zoos coordinator to promote expansion of network. (KSR #29)

Communicate

Communication
i. Publication of Global Otter Conservation Strategy accomplished. The Strategy details goals and objectives of the OSG, and an in-depth review of the 13 otter species, including conservation status, threats, funding opportunities. It is our Species Conservation Focal Point for years to come. (KSR #15, 21, 26, 28)

ii. Two newsletters published in 2018. The IUCN OSG Bulletin is the scientific journal of the IUCN/SSC Otter Specialist Group. We publish peer-reviewed manuscripts containing information from original research that contributes to understanding of any aspect of the biology of the 13 otter species. Topics include investigations into physiology, ecology, conservation, status, diet, behaviour and can cover observations from the wild or animals in captivity. (KSR #28)

Scientific meetings
i. The lengthy preparations and fund-raising for the 14th International Otter Congress took place in 2018.
ii. Participation in 2nd Nepal Otter Network meeting accomplished. Third meeting planned and funded for 2020. The Himalayan Otter Network that the OSG set up in 2017 has become the otter conservation leader in Nepal. (KSR #28)

Acknowledgements

We wish to thank our following supporters and foundations: (1) Altman foundation; (2) Foundation Segre, Kaddorie Farms and Botanic Garden, Wildlife Reserves Singapore Conservation Fund, National University Singapore and National Parks Singapore for international congress support; (3) Columbus Zoo, Species 360 and World Animal Protection for project support. We wish to thank our close collaborators: TRAFFIC SE Asia and Japan, Monitor, Chris Shepherd and Lalita Gomez, and all the members of the Otter Specialist Group dotted around the world, who focus on otter conservation and research.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

|   | Assess | 2 || |
|---|--------|---|---|
|   | Plan | 4 |||| |
|   | Network | 1 |||| |
|   | Communicate | 4 |||| |

Main KSRs addressed: 1, 11, 15, 20, 21, 26, 28, 29

KSR: Key Species Result
Mission statement
To work within the framework of the IUCN SSC to secure a future for wild pangolins through advancing knowledge on pangolin status, threats and conservation priorities, and by catalysing action to conserve them.

Projected impact for the 2017-2020 quadrennium
By 2020, subject to secured resources, we envision publication of updated assessments for each species of pangolin on The IUCN Red List and a greater number of conservation strategies for pangolins developed at the national and regional level, to complement global conservation planning and guide investment in reducing the extinction risk to pangolins. The Pangolin Specialist Group will be a global hub of knowledge and best practice on pangolins and their conservation, including the rehabilitation of trade-confiscated pangolins and applicable ecological monitoring methods. It will continue to provide technical and scientific expertise to CITES, having developed a pangolin trade resource kit to assist countries in combating illegal trade in pangolins and their parts. We envision a larger, more diverse, proactive membership that readily collaborates with other stakeholders and communicates effectively internally and externally with diverse audiences.

Targets for the 2017-2020 quadrennium
Assess
Red List: re-assess all species of pangolin for the IUCN Red List.
Research activities: (1) research papers published on most suitable methods for monitoring wild pangolin populations; (2) research to investigate the impact of pangolin farming on demand and wild populations.

Plan
Planning: (1) hold workshop to develop a regional conservation strategy for the Sunda Pangolin (Manis javanica); (2) hold workshop to develop a national conservation strategy for the Philippine Pangolin (Manis culionensis) in the Philippines; (3) hold workshop to develop a national conservation strategy for the Chinese Pangolin (Manis pentadactyla) in Taiwan; (4) hold workshop to develop a national conservation strategy for the Sunda Pangolin in Singapore; (5) hold workshops to develop regional conservation strategies for pangolins; (6) hold workshops to develop national conservation strategies for pangolins.

Policy: (1) completion of authoritative report on the status, trade, conservation and legislation affording protection to pangolins for the 69th meeting of the CITES Standing Committee (CITES SC69); (2) contribute scientific and technical expertise to CITES meetings.

Act
Scientific meetings: hold workshop to determine most appropriate methods for detecting and monitoring pangolin populations.
Technical advice: (1) provide technical support to implementation of existing national/regional strategies; (2) develop a pangolin trade resource kit for CITES parties; (3) provide technical advice on rehabilitation and husbandry of pangolins; (4) provide technical advice on methods for detecting and monitoring pangolin populations to key stakeholders; (5) provide technical guidance on collecting, storing and transporting samples for genetic analyses; (6) serve as a hub of knowledge and best practice on pangolin conservation.
Network
Membership: increase membership of the group to include at least one individual from each range state.
Proposal development and funding: secure finances to support Pangolin Specialist Group priorities and conservation work.
Synergy: build relationships with range state governments.
Communicate
Communication: (1) develop position statements on key issues facing pangolins; (2) communicate the Pangolin Specialist Group’s conservation work through strategic and targeted communication; (3) document and communicate successful local community engagement case studies to catalyse such engagement in other places; (4) document and communicate successful law enforcement effort through case studies; (5) document and communicate successful law enforcement effort through case studies; (6) maintain and enhance where possible communications with members, donors and other key stakeholders.
Scientific meetings: convene Pangolin Specialist Group members to strengthen the network.

Activities and results 2018
Assess
Red List
i. We have held meetings to re-assess all eight species for the Red List. We will be submitting the assessments to the IUCN Red List Unit for inclusion in a 2019 update of the Red List. (KSR #2)

Research activities
i. Two out of three peer-reviewed papers on pangolin monitoring have been published, with a third due for submission to the Special Issue of Global Ecology and Conservation on pangolins in spring 2019. (KSR #27)
ii. A peer-reviewed paper on pangolin farming has been accepted for publication in Global Ecology and Conservation subject to minor revisions. It will be published in summer 2019. Other research is planned as well. (KSR #32)

Plan
Planning
i. Workshop to develop a regional conservation strategy for the Sunda Pangolin completed. Strategy to be published in summer 2019. (KSR #15)
ii. Workshop to develop a national conservation strategy for the Philippine Pangolin in the Philippines completed. Strategy to be published in summer 2019. (KSR #15)
iii. Workshop to develop a national conservation strategy for the Chinese Pangolin in Taiwan completed. Strategy to be published in summer 2019. (KSR #15)
iv. Workshop to develop a national conservation strategy for the Sunda Pangolin in Singapore completed. Strategy now published. (KSR #15)
v. We have secured funds for Specialist Group member Keri Parker to develop an internal strategy for the Specialist Group for future conservation strategy development. This will be complete by September 2019. (KSR #15)

Policy
i. Report on the status, trade, conservation and legislation affording protection to pangolins for CITES SC69 is being prepared, and will be completed in time for the 18th meeting of the Conference of the Parties to CITES (CITES COP18). (KSR #26)
ii. The Specialist Group continues to provide technical advice to CITES on pangolin trade and conservation. (KSR #26)

Act
Scientific meetings
i. Workshop to determine most appropriate methods for detecting and monitoring pangolin populations held and guidance prepared for publication. Guidance will be launched in summer 2019. (KSR #27)

Technical advice
i. The Specialist Group and its members provide advice to implementation of existing national/regional strategies as needed (ongoing). (KSR #18)
ii. The pangolin trade resource kit for CITES parties is in development. The intention is to complete it by September 2019. (KSR #27)
iii. The Chair, Programme Officer and members respond to queries on rehabilitation and husbandry of pangolins when they come in (ongoing). (KSR #27)
iv. The Chair, Programme Officer and members respond to queries on methods for detecting and monitoring pangolin populations when they come in (ongoing). (KSR #27)
Al Davies presenting feedback on monitoring options for the Vulnerable Black-bellied Pangolin (Phataginus tetradactyla)
Photo: Dan Challender

Participants of the ecological monitoring workshop held in summer 2018
Photo: Dan Challender
A document has been drafted on collecting, storing and transporting samples for genetic analyses by Specialist Group member Antoinette Kotze, but is in need of review ahead of finalisation. (KSR #27)

The Specialist Group continues to serve as a hub of knowledge on pangolin science and conservation. (KSR #27)

Network
Membership
- The Specialist Group continues to receive membership requests and targets suitable individuals for membership, and our membership is growing.

Proposal development and funding
- Some funds have been raised to support the Specialist Group Chair and Programme Officer and for key activities, e.g. the ecological monitoring workshop, but additional funds are needed. (KSR #19)

Synergy
- Relationships with range state governments are being built. The Chair is liaising with CITES authorities, for example, through the CITES stream of work to analyse legislation affording protection to pangolins in range states, though more concerted effort is needed. (KSR #29)

Communicate
Communication
- An ex situ working group has been established – chaired by Keri Parker – who is convening key selected members and developing a process to arrive at position statements on ex situ conservation and farming. Keri is liaising closely with the Chair in doing so. (KSR #28)

The conservation work with the Pangolin Specialist Group is being communicated. The group will shortly be publishing a range of products including two conservation strategies, guidance on ecological monitoring and peer-reviewed papers which will be communicated widely. (KSR #28)

Work is underway to analyse national legislation affording protection to pangolins in range states. (KSR #28)

Internally, the group communicates by email and generally does so well. We are in the process of creating a better system to ensure effective and timely communication with external stakeholders, especially where the group is approached cold by potential funders/collaborators. (KSR #28)

Acknowledgements
We thank all government, foundation and individual donors that supported the Pangolin Specialist Group in 2018. In particular, we thank Fondation Segré for generous ongoing support to the group and the U.S. Fish and Wildlife Service for their support of our ecological monitoring work. We are grateful to Zoological Society of London (ZSL) for their continued hosting and support to the group. We thank all our members for their continued commitment to the group and Rachel Hoffmann from the SSC Chair’s office for always being a source of guidance if needed.

Summary of activities 2018
Species Conservation Cycle ratio: 5/5

<table>
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<tr>
<th>Task</th>
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<td>Plan</td>
<td>7</td>
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<tr>
<td>Act</td>
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<tr>
<td>Network</td>
<td>3</td>
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<tr>
<td>Communicate</td>
<td>4</td>
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</tbody>
</table>

Main KSRs addressed: 2, 15, 18, 19, 26, 27, 28, 29, 32

Resolutions addressed: WCC-2016-Res-015

KSR: Key Species Result
Co-Chairs
Harald Beck (1)
Mariana Altrichter (2)

Red List Authority Coordinator
Richard Bodmer (3)

Location/Affiliation
(1) Department of Biological Sciences, Towson University, US
(2) Prescott College, Prescott, Arizona, US
(3) Durrell Institute of Conservation and Ecology, University of Kent, Canterbury, UK

Number of members
41

Social networks
Facebook: IUCN Peccary Specialist Group
Website: https://sites.google.com/site/wildpigspecialistgroup/iucnssc-wild-pig-specialist-group/
suiform-soundings-2;
https://sites.google.com/site/wildpigspecialistgroup/
iucnssc-wild-pig-specialist-group

Mission statement
The overall aim of the Peccary Specialist Group is to promote the long-term conservation of peccaries and their natural habitats, and the recovery or restoration of peccary species, populations and communities. The specific objectives are: (1) contribute to peccary conservation through management and research, (2) consolidate the group of researchers and other people interested in the biology, conservation and management of peccaries, and (3) foster communication, coordination, collaboration and exchange of information.

Projected impact for the 2017-2020 quadrennium
We are focusing on the most endangered, endemic species in the Chaco region. We are uniting efforts with organisations that are addressing large scale deforestation and land title issues. We aim at promoting more awareness about the importance of this and the other species as ecosystem engineers.

Act
Conservation actions: (1) continue the implementation in the field of the Chacoan Peccary (Catagonus wagneri) Conservation Plan, which was published in 2016; (2) conduct a research project on the reintroduction of Collared Peccaries (Pecari tajacu) in South America.

Network
Synergy: have a new Red List Coordinator as soon as possible.

Communicate
Communication: reach a wider audience by further developing a shared homepage with the Hippo Specialist Group.

Activities and results 2018
Assess
Red List
i. We are starting to discuss a reassessment workshop for White-lipped Peccary. (KSR #2)

Research activities
i. Research is being conducted on population density estimates of White-lipped Peccary across their geographical range, but results have not yet been published. (KSR #12)

ii. A major achievement was research on the mating system of White-lipped Peccaries utilising genetic samples from a large geographical region. These findings not only provide new insights into our understanding of the evolution of the mating system in this unusual species but may also be critical for conservation. Publications from this research include: (1) Leite, D.A., et al. (2018). Genetic evidence of promiscuity in a mammal without apparent sexual dimorphism, the white-lipped peccary (Tayassu pecari). Mammalian Biology 92:111–114; and

Research activities
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**Act**

**Conservation actions**

i. Progress is being made in implementing the actions of the Chacoan Peccary Conservation Plan. (KSR #27)

ii. Cindy Hurtado and colleagues were involved in the first-ever successful reintroduction of Collared Peccaries in South America. This research provides valuable guidelines for future reintroductions and critical contributions to species conservation. Publications from this research include: (1) Hurtado, C.M., Beck, H., Thebpanya, P. and Altrichter, M. (in review). Spatial patterns of the first groups of collared peccaries (*Pecari tajacu*) reintroduced in South America. (KSR #24)

**Communicate**

**Communication**

i. A shared homepage with the Hippo Specialist Group is still in development. (KSR #28)

**Acknowledgements**

We acknowledge Proyecto Quimilero in the Argentine Chaco, for significant progress leading a large movement of organisations to address issues of land use planning and deforestation.

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**Summary of activities 2018**

Species Conservation Cycle ratio: 3/5

<table>
<thead>
<tr>
<th>Assess</th>
<th>Act</th>
<th>Communicate</th>
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<td>3</td>
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Main KSRs addressed: 2, 12, 24, 27, 28

KSR: Key Species Result
Mission statement
The mission of the Pinniped Specialist Group is to promote awareness regarding conservation threats to pinnipeds worldwide and to actively take a role in ensuring good management practices that ensure healthy, robust pinniped populations.

Projected impact for the 2017-2020 quadrennium
By the end of 2021, we envision assessments at the population level for the most threatened species and subspecies of pinnipeds and accompanying action plans for these populations that will serve to improve their status.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete assessment at the population level of all threatened subspecies; (2) complete population level assessments for the Mediterranean Monk Seal (*Monachus monachus*).
Research activities: (1) serve as reviewers for IUCN assessments of Important Marine Mammal Areas; (2) engage with pinniped research and conservation-oriented programmes.

Plan
Policy: (1) advise the IUCN Climate Change Specialist Group and other IUCN instances; (2) advise governments around the world.

Activities and results 2018
Assess
Red List
i. We have commenced our work with Red Listing at the population level, starting with the monk seals. (KSR #1, 2)

ii. We have completed the first population level assessments for the Mediterranean Monk Seal. (KSR #1, 2, 3)

Research activities
i. We have served as reviewers for IUCN assessments of Important Marine Mammal Areas. (KSR #32)

ii. All members are actively engaged with pinniped research and with numerous conservation-oriented programmes. (KSR #12, 14, 23, 32, 38, 39)

Plan
Policy
i. We have serviced the IUCN Climate Change Specialist Group and done many species at risk features for them and other IUCN efforts. (KSR #7, 26, 40)

ii. Many members serve important advisory capacities for governments around the world. (KSR #7, 26, 40, 43)

Acknowledgements
We thank the employers of all of the Pinniped Specialist Group members that facilitated the many efforts that the group makes on behalf of IUCN.

Summary of activities 2018
Species Conservation Cycle ratio: 2/5

<table>
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<th>Phase</th>
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<td>Plan</td>
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Main KSRs addressed: 1, 2, 3, 7, 12, 14, 23, 26, 32, 38, 39, 40, 43

KSR: Key Species Result
Mammals

Fritz Trillmich about to capture a Galapagos sea lion pup
Photo: Fritz Trillmich

Greg Hofmeyr (PSG elephant seal expert) working with both pinnipeds and cetaceans a stranding network on the east coast of South Africa
Photo: Javier Lobon

Simon Goldsworthy removing a satellite tag from a female Australian sea lion
Photo: Roy Hunt
Mission statement

The mission of the IUCN SSC Polar Bear Specialist Group (PBSG) is to coordinate, synthesise and distribute scientific information necessary to guide the long-term viability of Polar Bears and their habitats.

Projected impact for the 2017-2020 quadrennium

The Polar Bear (Ursus maritimus) is currently classified as Vulnerable (VU) on the basis of a projected reduction in global population size due to loss of sea ice habitat. Loss of Arctic sea ice due to climate change is the most serious threat to Polar Bears throughout their circumpolar range, but action to mitigate this threat is beyond the ability of either the PBSG or the five governments that comprise the Polar Bear Range States. Our assessment of global threats to Polar Bears and research priorities were critical pieces that were incorporated by the Polar Bear Range States into its 2015 Circumpolar Action Plan: Conservation Strategy for Polar Bears. We consider the commitment to the implementation of this plan critical to help secure the long-term persistence of Polar Bears in the wild that represent the genetic, behavioural, and ecological diversity of the species. During the current quadrennium, we would expect continued actions identified under this plan to be taken by the responsible authorities and that the PBSG would continue to provide technical advice and scientific oversight where appropriate.

Targets for the 2017-2020 quadrennium

Assess
Research activities: development of new criteria for describing the status/trend of Polar Bears and subsequent application to all 19 currently recognised subpopulations.

Plan
Policy: (1) provide to the five governments comprising the Polar Bear Range States, advice with respect to priorities for multi-lateral actions that the Range States could take over the next 2-10 years to best address conservation and research needs for Polar Bears; (2) participate in the 2018 Biennial Meeting of the Parties to the 1973 Agreement on the Conservation of Polar Bears, 2-4 February 2018, Fairbanks, Alaska; (3) participate in a planned 2020 Biennial Meeting of the Parties to the 1973 Agreement on the Conservation of Polar Bears to be held in Norway.

Network
Agreements: in collaboration with the five governments comprising the Polar Bear Range States, develop Terms of Reference for the PBSG that will enable and facilitate its role as the independent scientific advisor to the Range States.

Communicate
Scientific meetings: hold 19th Working Meeting of the PBSG.
Activities and results 2018

Assess
Research activities
i. New criteria for describing status and trend of Polar Bears have been developed and are currently under review by PBSG membership. These will be applied to all 19 currently recognised subpopulations once approved. (KSR #12)

Plan
Policy
i. Document provided to the five Polar Bear Range States identifying four primary and four secondary multi-lateral actions that they could take over the next 2-10 years to best address conservation and research needs for Polar Bears. (KSR #26)

ii. PBSG gave three presentations to the five Polar Bear Range States and Delegations: ‘Polar Bear Conservation Status and Research Efforts’; ‘Arctic Climate: Where We Are Going and What it Means for Polar Bears’; and ‘Conservation Status of Polar Bears in Relation to Projected Sea Ice Decline’. (KSR #26)

iii. Norway announced intentions to host the meeting sometime in 2020. (KSR #26)

Network
Agreements
i. Terms of reference for the PBSG to enable and facilitate its role as the independent scientific advisor to the Range States currently under review and not yet finalised. (KSR #29)

Communicate
Scientific meetings
i. Date, location, and host organisation of the 19th Working Meeting of the PBSG not yet determined. (KSR #28)

Acknowledgements

We thank the following for financial/logistical support of the work of the IUCN SSC Polar Bear Specialist Group: Government of Canada, Norwegian Ministry of Climate and the Environment, Norwegian Polar Institute, Polar Bears International. We thank the Heads of Delegations of the five Polar Bear Range States for inviting the PBSG to attend and present at the 2018 Biennial Meeting. Finally, we would also like to thank the various government agencies and organisations for supporting their staff in participating as members of the Polar Bear Specialist Group.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

<table>
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<td>Network</td>
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<td>Communicate</td>
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Main KSRs addressed: 12, 26, 28, 29

KSR: Key Species Result
Mission statement

The mission of the Primate Specialist Group (PSG) is to maintain the current diversity of the order Primates by ensuring the survival of threatened species wherever they occur and providing effective protection for large numbers of primates in areas of high primate diversity and abundance. In essence, the PSG has a Zero Extinction policy for all primate species.

Projected impact for the 2017-2020 quadrennium

During this quadrennium, we will continue to support primate conservation activities worldwide through the maintenance of networks, especially our newsletters and journals, finalise Red Listing for all primate species, and continue to fund primate conservation projects through existing sources and new ones to be identified. There will also be a strong emphasis on stimulating appropriate primate ecotourism as a tool for primate conservation through the production of new field guides, pocket guides, apps, and other tools to facilitate primate-watching and primate life-listing. The ultimate goal of all our activities is zero extinctions for primates, i.e. not allowing any named taxon to go extinct.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) reassessment of all the species of primates; (2) complete assessment of 112 lemur species and subspecies. Research activities: (1) maintain a taxonomic, geographic and conservation status (Red List) database for primates; (2) publish articles on the taxonomy, geographic distributions, surveys and conservation status of primates.

Plan

Planning: elaboration of action plans for the conservation of primate species and species groups.

Act

Conservation actions: (1) stimulate primate ecotourism, i.e. primate-watching and primate life-listing, as a major conservation tool for primates; (2) fundraising: dramatically increase funding for primates by 2020.

Network

Capacity building: promote, organise, and participate in field courses for primate field research and conservation.

Proposal development and funding: (1) manage the Primate Action Fund, a small grants scheme for primate conservation, monitoring, surveys, research, and education; (2) manage the Lemur Conservation Action Fund, a small grants scheme for lemur conservation, monitoring, surveys, research, and education.

Communicate

Communication: (1) compile and edit regional newsletters/journals for the Neotropics, Africa, Asia, and Madagascar: Neotropical Primates, African Primates, Asian Primates Journal, Lemur News; (2) edit and publish the journal Primate Conservation; (3) maintain a list of the 25 Most Endangered Primates; (4) produce field guides and pocket field guides for primates; (5) launch of the first Lemur-Watching App.

Research activities: publish articles on the taxonomy, geographic distributions, surveys and conservation status of primates.
Activities and results 2018

Assess

Red List
i. Red List assessments completed for 111 lemur taxa (one species synonymised); national (regional) assessments completed for 22 taxa of Ecuador. (KSR #1)

Research activities
i. Maintenance of taxonomic, geographic and conservation status (Red List) database for primates accomplished. (KSR #14)

ii. Seventy-one scientific articles published on the taxonomy, geographic distributions, surveys and conservation status of primates. (KSR #43)

Plan

Planning

ii. Several action plans are ongoing: (1) Red Colobus Action Plan, (2) Mangabeys and Mandrillus Action Plan, (3) Primates of Argentina Action Plan, and (4) Western Chimpanzee, Pan troglodytes verus, Action Plan. (KSR #15)

Act

Conservation actions
i. Applications for primate-watching and primate life-listing are ongoing for lemurs and in preparation for Asian primates. (KSR #36)

Proposal development and funding


ii. Small grants scheme for lemur conservation, monitoring, surveys, research, and education (Lemur Conservation Action Fund): 21 grants awarded. (KSR #30)

iii. Fundraising summary: $25,000 to support the 25 Most Endangered Primates workshop at the 2018 International Primatological Society Congress: Margot Marsh Biodiversity Foundation; $25,000 to support production of scientific illustrations and images to promote the conservation of primates: Margot Marsh Biodiversity Foundation; $150,000 Primate Action Fund: Margot Marsh Biodiversity Foundation; $150,000 Primate Action Fund: Margot Marsh Biodiversity Foundation and Primate Partnership Fund; $10,000 layout, printing and distribution of Primate Conservation: Margot Marsh Biodiversity Foundation; $98,954 Lemur Conservation Action Fund: SOS – IUCN; $49,000 Primates of Fouta Djalon, Guinea: Margot Marsh Biodiversity Foundation and Mohamed bin Zayed Species Conservation Fund; $150,000 Primate Action Fund: Margot Marsh Biodiversity Foundation and Mohamed bin Zayed Species Conservation Fund; $25,000 Support for Lemur Conservation Network: Margot Marsh Biodiversity Foundation; $5,000 Mangabeys and Mandrillus Action Plan: Nacey Maggioncalda Foundation; $25,000 Red Colobus Action Plan: Mohamed bin Zayed Species Conservation Fund; $24,000 Primate Survey in the Udzungwa Mountains, Tanzania: Margot Marsh Biodiversity Foundation.

Network

Capacity building
i. Field courses held for primate field research and conservation: two in Madagascar, one in Brazil and one in Mexico. (KSR #18)

Communicate

Communication
i. Compilation and edition of newsletters and regional journals in 2018: Lemur News Volume 21; Neotropical Primates Volume 24(1) and 24(2); and Asian Primates Journal Volume 7(1). (KSR #28)


Acknowledgements

We thank the following organisations for their support: Global Wildlife Conservation, International Primatological Society (IPS), Conservation International (CI), Bristol Zoological Society, and the Houston Zoo. The following organisations were generous in their funding: Margot Marsh Biodiversity Foundation, Mohamed bin Zayed Species Conservation Fund, Arcus Foundation, IUCN SOS Fund, Andrew Sabin Foundation, Primate Partnership Fund, and Virgin Unite.

Summary of activities 2018

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<thead>
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<th>Species Conservation Cycle ratio: 5/5</th>
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<td>Assess</td>
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<td>Act</td>
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<td>Network</td>
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<td>Communicate</td>
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Main KSRs addressed: 1, 14, 18, 28, 30, 36, 43

KSR: Key Species Result
Mission statement

The mission of the Sirenia Specialist Group (SSG) is to contribute to increase current knowledge on status and distribution of Order Sirenia across the entire geographic range of its distribution, to identify issues of concern, and to provide recommendations in research and conservation actions to ensure their long-term conservation.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we aim to have achieved a substantial advance in reducing the risk of extinction of:

1. West Indian Manatee (*Trichechus manatus*) and Amazonian Manatee (*Trichechus inunguis*), through information sharing and training of African researchers throughout the species’ range via a collaborative network for manatee field work and conservation in 18 African countries, providing basic field research equipment and assisting with the development of plans tailored to specific countries or regions.

2. African Manatees (*Trichechus senegalensis*), through the Global Environment Facility Dugong and Seagrass Conservation Project, which focuses on conservation through sustainable community-led stewardship and socio-economic development in Indonesia, Madagascar, Malaysia, Mozambique, Sri Lanka, Timor-Leste, and Vanuatu, and in-country actions in the remaining range states.

Assess

Red List: (1) West Indian Manatee assessment revised; (2) Dugong regional assessment completed.

Communicate

Communication: (1) *Sirenews* published regularly; (2) sirenian bibliography readily accessible.

Targets for the 2017-2020 quadrennium

Assess

Red List

i. The United States Geological Survey (USGS) has already completed a draft of the West Indian Manatee assessment and is assisting with the IUCN draft. (KSR #2)

ii. Informal regional status assessments for Dugong are complete. Full drafts are already available for the Ryukyus and east Africa. (KSR #2)

Communicate

Communication

i. New editorial team of *Sirenews* assembled and functional. (KSR #28)

ii. Host universities to host sirenian bibliography identified and approached.
West Indian Manatee (*Trichechus manatus*), Vulnerable, Xcalak, Costa Sur de Quintana Roo
Photo: Alfredo Barroso

**Summary of activities 2018**

Species Conservation Cycle ratio: 2/5

<table>
<thead>
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<th>Assess</th>
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<td>Communicate</td>
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Main KSRs addressed: 2, 28


KSR: Key Species Result

15 years old orphan manatee rescued and monitored at Chetumal Bay, Mexico
Photo: Benjamin Morales
Mission statement
The mission of SCSG is to build capacity among small carnivore researchers and conservationists, provide a venue to publish new knowledge, maintain the most up-to-date status assessment for the species and to engage in active research and conservation related to small carnivores.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, the Small Carnivore Specialist Group (SCSG) aims to: (1) host a workshop to develop an action plan for all threatened species in the group; (2) acquire resources and develop a research programme for Data Deficient species (who are threatened but lack critical information to understand the extent of threats); (3) find an organisational host for the Small Carnivore Conservation Journal, including resources for a part-time Editor in Chief (currently managed by volunteers); (4) work with other specialists and Specialist Groups to capture and publicise ‘by-catch’ data on small carnivores from other programmes; and (5) partner with other Specialist Groups to address the ground threats for small carnivores and other species who share habitats and landscapes with them.

Targets for the 2017-2020 quadrennium
Assess
Documents review: (1) explore the magnitude and implications of human–wildlife conflict for small carnivores globally; (2) prepare an update on the knowledge and conservation status of Data Deficient species of the Americas.
Research activities: develop a research strategy for Data Deficient species.

Plan
Planning: (1) complete Action Planning for threatened taxa; (2) publish a conservation strategy and action plan for Owston’s Civet (Chrotogale owstoni).

Act
Conservation actions: engage a programme officer for coordinating the Owston’s Civet conservation strategy.
Planning: assist implementation of three priority actions from Owston’s Civet conservation strategy.
Synergy: engage with wider issues re: snaring, wild meat trade, and impacts on biodiversity loss in Southeast Asia.

Network
Membership: increase membership from priority countries/regions as they relate to distribution of globally threatened and Data Deficient small carnivores.

Communicate
Communication: (1) update SCSG’s website and other communication platforms; (2) reduce journal to one high quality issue per year.
Activities and results 2018

Plan

Planning

i. The fundraising process and all the work needed to get support to conduct the Owston’s Civet workshop in 2019 was achieved. (KSR #15)

Acknowledgements

Thanks to the Phoenix Zoo/Arizona Center for Nature Conservation for serving as our sponsor during recent years and ProCAT Colombia for providing support and time to develop the group’s tasks.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

Plan  1  |

Main KSRs addressed: 15

KSR: Key Species Result
The mission of the IUCN SSC Small Mammal Specialist Group (SMSG) is to serve as the global authority on the world’s small mammals through developing a greater scientific understanding of their diversity, status and threats, and by promoting effective conservation action to secure their future.

Projected impact for the 2017-2020 quadrennium

Within this quadrennium, we will have expanded our global-level research for small mammals and we will have made considerable progress in each of our three programmes of activities within our strategy: Key Regions, Key Species, and increasing our influence within the global zoo network. From our list of priority key regions, where there are high densities of globally threatened and data deficient species, we will specifically concentrate on Mexico, Borneo and Ethiopia. We will prioritise species and areas in most urgent need of conservation efforts and help to build capacity in countries to begin research and conservation work. Additionally, we will catalyse conservation actions on the ground for at least 10 key species. This will involve recruiting species champions and assisting our champions with fundraising, training, research activities, networking opportunities and/or facilitating conservation planning. We will build on our work to promote small mammal conservation within the world’s leading zoos, in particular focusing on both the Association of Zoos & Aquariums (AZA) and the European Association of Zoos and Aquaria (EAZA). We will bring experts together for a series of regional planning workshops to secure support for small mammal conservation, both for financing conservation within wild habitats and to increase representation in zoo collections of small mammal species facing extinction. Finally, we will have grown the membership of the SMSG so that it is taxonomically and geographically balanced and covers all priority skills and knowledge areas.

Targets for the 2017-2020 quadrennium

Assess

Red List: Red List assessments published for 100% of small mammal species.
Research activities: (1) one high impact publication, 2-3 lower impact publications; (2) two expeditions to areas with high densities of data deficient species; (3) appoint new taxonomic specialist, Dr. Nate Upham.

Plan

Planning: hold eight action planning workshops (for zoos and regions).

Act

Conservation activities: active conservation efforts in place for 10 key species.

Network

Membership: taxonomic and geographic coverage for the majority of species results from a geographically diverse membership.

Communicate

Communication: keep membership updated.

Activities and results 2018

Assess

Red List

i. One hundred and thirty-four species assessments were published in 2018. Progress was made with many more, which should be ready for publication in 2019. (KSR #1)
Research activities

i. The global analysis for Rodentia and Eulipotyphla is in the final stages before being submitted for publication. (KSR #32)

ii. We appointed Dr. Nate Upham as our new taxonomic advisor and he has joined us on monthly SMSG calls when needed. (KSR #43)

Plan

Planning

i. We held an action planning regional workshop for Mexico in April 2018. (KSR #17)

Act

Conservation activities

i. Six species have research or conservation activities started or funding in place to begin activities. (KSR #27)

Network

Membership

i. We added many new members in 2018, particularly for Central America, after our workshop in Mexico.

Communicate

Communication

i. We now provide quarterly email updates to our members on the various activities that we are undertaking, plus provide a list of opportunities that may be of interest to our members.

Acknowledgements

We would like to thank Global Wildlife Conservation for their continued support for the SMSG. We have also received funding support from Ernest Kleinwort Charitable Trust. For some of our zoo-based activities and regional work in Mexico we have received financial support from Jacksonville Zoo and Gardens, Houston Zoo, Nashville Zoo and Brevard Zoo. Texas A&M University has provided financial support for our Mexico workshop in 2018.

Summary of activities 2018

Species Conservation Cycle ratio: 5/5

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<th>Category</th>
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<tr>
<td>Communicate</td>
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Main KSRs addressed: 1, 17, 27, 32, 43

KSR: Key Species Result
Mission statement
To promote the conservation and sustainable use of (wild) South American Camelids in their area of geographic distribution.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision a substantial advance in reducing the extinction risk of some reduced and isolated populations of camelids, and reducing/managing the conflict between the species and human activities in recovered and abundant populations. Through scientific information, accurate assessment of the populations at regional scale for local classification in conservation categories, and the implementation of national conservation plans for Guanaco (*Lama guanicoe*) and Vicuña (*Vicugna vicugna*), we will build a governmental scenario for working with the species with local communities. We will continue to support sustainable use of species to benefit local people, and to fight against poaching and illegal trade in order to reduce their impact on natural populations. These conservation initiatives will be combined with communication and educational programmes, that we predict will impact positively on the attitude of human communities across the camelids’ distribution.

Targets for the 2017-2020 quadrennium
Assess
Green List: (1) complete Guanaco assessment for the Green List; (2) complete Vicuña assessment for the Green List.
Policy: include assessment of the Vicuña in the USA Endangered Species Act.
Red List: (1) complete one Vicuña reassessment for the Red List; (2) complete Guanaco subspecies assessment for the Red List; (3) complete Vicuña subspecies assessment for the Red List; (4) carry out classification of the Vicuña in a conservation category in Chile.
Research activities: write scientific articles affiliated as a Specialist Group.

Plan
Agreements: analyse the idea to include the wild Bactrian Camel (*Camelus ferus*) within the remit of our Specialist Group.
Planning: (1) complete a conservation plan for Vicuña in Peru; (2) complete a conservation plan for Vicuña in Bolivia; (3) complete a conservation plan for Vicuña in Argentina; (4) complete a conservation plan for Vicuña in Chile; (5) complete a conservation plan for Guanaco in Peru; (6) complete a conservation plan for Guanaco in Bolivia; (7) complete a conservation plan for Guanaco in Paraguay; (8) complete a conservation plan for Guanaco in Argentina; (9) complete a conservation plan for Guanaco in Chile; (10) planning and assessment of a meeting for a new Conservation and Management plan for South American Camelids.

Network
Membership: (1) update the membership protocol; (2) develop membership cancellation protocol.
Proposal development and funding: sign three funding agreements.
Synergy: formalise the group’s host organisation.

Communications
Communication: (1) publish four issues of the newsletter; (2) obtain a newsletter ISSN; (3) publish the Vicuña book (The southern subspe-
Activities and results 2018

Assess
Green List
i. A focal point was identified and invited to complete the Guanaco assessment for the Green List. (KSR #11)
ii. A focal point was identified and invited to complete the Vicuña assessment for the Green List. (KSR #11)

Policy
i. Members of our Specialist Group supplied information to the Fish and Wildlife Service for the reassessment of the Vicuña in the US Endangered Species Act. (KSR #27)

Red List
i. The Vicuña reassessment was uploaded in June 2018. (KSR #1)
ii. An initial proposal was written by our Red List Authority on the Vicuña subspecies assessment for the Red List in our newsletter and the Southern Vicuña Book. (KSR #2)
iii. An agreement with the government agency was achieved in order for our Specialist Group to head the assessment of the species in Chile. (KSR #2)

Research activities
i. One scientific article affiliated as the South American Camelid Specialist Group (SAC-SG) and written by Jane C. Wheeler was published in Conservation Letters. (KSR #43)

Plan
Planning
i. The Open Standards for the Practice of Conservation were applied to Vicuña in Chile. (KSR #18)
ii. A brief meeting was held by our Chair in Asunción, Paraguay, to motivate public agencies and NGOs to start the process of preparing a conservation plan for the Guanaco in Paraguay. (KSR #18)
iii. An update of the National Plan for the management of the Guanaco in Argentina was conducted by governmental institutions, but lack of effective participation mechanisms of members of our Specialist Group was detected. (KSR #18)

Policy
i. A Protocol of Good Management Practices for Wild Guanacos was delineated by members in Argentina and was made available to provincial and national implementing authorities. (KSR #26, 35, 36)
ii. A draft of the animal welfare protocol applied to commercial hunting was delineated by members in Chile. (KSR #27)

Network
Membership
i. The membership protocol must be reviewed in order to include more professionals from governmental agencies and researchers from countries and regions with low representation in our Specialist Group. Similarly, we are looking for equal (50/50) representation by women and men.

Summary of activities 2018

| Species Conservation Cycle ratio: 4/5 | Assess | 7
|--------------------------------------|--------|---
| Plan                                 | 6      |
| Network                              | 3      |
| Communicate                          | 8      |

Main KSRs addressed: 1, 2, 3, 4, 11, 18, 19, 26, 27, 28, 35, 36, 43

Resolutions addressed: WCC-2016 Res-093

KSR: Key Species Result

Proposal development and funding

i. Some private organisations were identified in order to organise meetings between them and our Chair, to explain our mission and the necessity of funds. (KSR #19)

Synergy
i. An agreement between SSC and Facultad de Ciencias Forestales y de la Conservación de la Naturaleza, Universidad de Chile, is under review.

Communications
Communication
i. The 2018 issue of our newsletter was written and will be uploaded to our webpage in January 2019. (KSR #28)
ii. Some attempts were made during 2018 by our Editorial Committee to get the ISSN of our newsletter, but the delay of the current newsletter issue put our initiative in stand-by. (KSR #28)

iii. All chapters of the Vicuña book (The southern subspecies) were written and sent by different authors during the end of 2018. (KSR #28)

iv. Our website was updated several times during the year in order to include news and documents. (KSR #28)

v. A draft of the position statement on commercial hunting was delineated by members in Chile. (KSR #27, 28)

vi. A report on Mange disease in Vicuña was solicited in the last meeting of the Vicuña Convention held in Jujuy, Argentina, in 2018.

vii. A report on methods of abundance estimates in large mammals will be offered by our Specialist Group in the next meeting of the Vicuña Convention, to be held in Chimborazo, Ecuador, in 2020.

viii. The proposal on a resolution about poaching and trafficking of Vicuña products was discussed and approved in the Vicuña Convention in Jujuy, Argentina, 2018. (KSR #3, 4)
Mission statement
The IUCN SSC Tapir Specialist Group (TSG) is a global group of biologists, zoo professionals, researchers and advocates dedicated to conserving tapirs and their habitat through strategic action-planning in countries where tapirs live, information sharing and through educational outreach that shows the importance of the tapir to local ecosystems and to the world at large.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we want to have a strong representation in all tapir range countries in Latin America and Southeast Asia and stable, long-term research and conservation programmes in several of these countries. In addition, we want to see our Action Plans implemented.

Targets for the 2017-2020 quadrennium
Assess
Research activities: (1) working inventory of the tapirs under human care in tapir range countries; (2) work on and update a list/map for existing biosamples and biobanks; (3) augment the number of people/projects collecting biosamples for each tapir species; (4) raise, at least by one, the number of tapir-related citizen science projects.

Network
Capacity building: integrate our education curriculum ‘Tapir Tracks’ with education programmes.
Documents review: enhance the ex situ Tapir Husbandry Manual.

Synergy: (1) have one governmental representative from each tapir range country present at the next Tapir Symposium; (2) establish three additional long-term partnerships between tapir projects with zoos; (3) ensure that ex situ tapir populations are utilised in basic and applied research contributing to conservation; (4) create a TSG full-time representative position to attend (participate and report) international meetings; (5) involve TSG members in at least three TSG Strategic Plan actions; (6) share information available through existing databases (Species 360) with in situ and ex situ partners; (7) obtain a minimum of 10 new alliances between ex situ and in situ conservation efforts; (8) prepare an evaluation survey for self-assessment in place for TSG Country and Species Coordinators; (9) implement an internal online communication channel; (10) establish a Global Species Management Plan in range countries of Malayan Tapir (Tapirus indicus); (11) liaise with other ecosystem/ restoration stakeholders.

Communicate
Communication: (1) publish a scientific article (newsletter) annually for a scientific audience to cover tapir conservation topics; (2) prepare an awareness campaign about tapir conservation that includes TSG talking points for every country with a TSG representative; (3) publish a visual, popular version of at least two TSG Action Plans (Baird’s Tapir Tapirus bairdii and Mountain Tapir Tapirus pinchaque), condensed, accessible and mobile for use; (4) effectively communicate one success story from each species every year; (5) upload at least 100 papers to the TSG Virtual Library; (6) increase the search visibility of the TSG website.

Chair
Patrícia Medici (1)  
Red List Authority Coordinator  
Cody Schank (2)  
Location/Affiliation  
(1) IPÊ - Instituto de Pesquisas Ecológicas, Brazil  
(2) Department of Geography and The Environment, University of Texas, Austin, Texas, US  
Number of members
130  
Social networks  
Facebook: Tapir Specialist Group  
Twitter: @IUCN_Tapirs
Activities and results 2018

Network
Capacity building
i. We now have Tapir Tracks in Portuguese and Spanish. (KSR #17)

ii. The TSG Fellowship is a major success. We have trained dozens of tapir conservationists from all over Latin America.

Synergy
i. Our tapir conservation alliances have been successful in raising funds from several zoos in the United States, Europe, and Latin America. (KSR #29)

ii. We have concluded the first grant from our TSG & Segre World Tapir Conservation Programme. We have approved a continuation grant for three more years.

iii. We have established a project where several zoos in the United States and Brazil are photographing tapir calves over time as they lose their skin pattern (spots and stripes). This will be useful so that tapir researchers working in the wild will be able to estimate tapir age. (KSR #29)

iv. TSG members have been requested to list at least three TSG Strategic Plan actions with which they would like to get involved.

v. New alliances: (1) we have linked a number of tapir researchers and conservationists with zoo conservation funds; (2) we have facilitated the link between staff from field projects and zoo personnel, creating opportunities for professional exchanges; (3) zoos and breeding centres in Brazil are supporting a Lowland Tapir (Tapirus terrestris) re-introduction programme in Rio de Janeiro State. (KSR #29)

Communicate

Communication
i. TSG members in different countries have been running a multitude of awareness campaigns. (KSR #28)

ii. TSG Country Coordinators are working on reviewing Species and National Action Plans. (KSR #28)

iii. One-hundred and fifty papers uploaded to the TSG Virtual Library.

Acknowledgements
Association of Zoos and Aquariums (AZA) and Tapir Taxon Advisory Group (TAG) (Michele Stancer); Copenhagen Zoo, Denmark; European Association of Zoos and Aquaria (EAZA); Tapir TAG (Bengt Holst); Foundation Segre, Switzerland; Houston Zoo, US; IPE - Institute for Ecological Research, Brazil; IUCN SSC Conservation Planning Specialist Group (CPSG); ProCAT, Colombia.

Summary of activities 2018
Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 17, 28, 29

KSR: Key Species Result
Mission statement

The SSC Wild Pig Specialist Group (WPSG) has not yet defined a mission statement. Key components of such a statement would be: (1) viable wild pig populations, (2) all wild pig taxa, (3) threat management, (4) conservation breeding, (5) reintroduction, (6) habitat restoration and management, and (7) resolution of conflicts with people. Most wild pig species are in decline, especially the various species and subspecies in Indonesia and the Philippines. The WPSG uses a combination of strategies to try to reduce these population declines. This primarily includes (1) research on taxonomy and distribution (the cornerstone of any conservation management), and (2) management of captive and wild populations to prevent the extinction of the most threatened species.

Projected impact for the 2017-2020 quadrennium

We aim to safeguard the small populations of the two Critically Endangered suid species, Pygmy Hog (Porcula salvania) and Visayan Warty Pig (Sus cebifrons) and continue the captive breeding and release programmes. The target for Pygmy Hogs is to ensure a population in the wild of at least 250 individuals. For Visayan Warty Pig, we still need to confirm that the species survives in the wild, as no such information has been forthcoming. For all other species, we are still in the stage of assessing population status and trends, and we do not have conservation programmes that can realistically aim to stabilise populations in the wild. For Wild Boar (Sus scrofa), we aim to revise the taxonomy of the current 18 subspecies.

Assess

Red List: Red List assessment of all pig species completed. Research activities: (1) status update of the Hairy Babirusa (Babyrousa babyrussa); (2) Javan Warty Pig (Sus verrucosus) status surveys; (3) genetics of Javan Warty Pig and Bawean Warty Pig (Sus verrucosus blouchi); (4) taxonomic research on Giant Forest Hog (Hylochoerus meinertzhageni) and Wild Boar; (5) Giant Forest Hog status in Uganda; (6) Warthogs research in Kenya; (7) Red River Hog (Potamochoerus porcus) ecological research in Sierra Leone; (8) Sulawesi ungulate project (phylogenetic/taxonomic research); (9) Philippines pigs programme: Mindoro Warty Pig (Sus oliveri) survey 1 and 2; (10) comprehensive surveys for all species of pigs in the Philippines and Indonesia; (11) phylogeny of Philippine wild pigs; (12) first worldwide scale book on wild pigs and peccaries.

Plan

Planning: (1) Conservation Needs Assessment and Planning Strategy with the Conservation Planning Specialist Group (CPSG); (2) collaborative captive breeding of Javan Warty Pigs; (3) Pygmy Hog Species Action Plan workshop to be held in Guwahati, Assam, November 2018; (4) complete the update of the Pygmy Hog Species Action Plan (in progression of the Pygmy Hog Conservation Programme). Policy: recommendation to the UK Department for Environment, Food and Rural Affairs (DEFRA) for the status of Wild Boar in the UK.
Conservation actions: (1) Babirusa Global Species Management Plan; (2) release programme for Javan Warty Pig; (3) European Association of Zoos and Aquaria (EAZA) Tapir and Suiform Regional Collection Plan; (4) Philippine pigs programmes 1, 2 and 3 of captive breeding of Visayan Warty Pigs; (5) collaborative captive breeding of Javan Warty Pigs.

Network
Agreements: a new MoU (International Conservation, Management and Research MoU) between the partners (Durrell Wildlife Conservation Trust; WPSG; Forest Department Government of Assam; Ministry of Environment and Forest, Government of India and local partners Aaranyak and EcoSystems-India) for five years for continuation of Pygmy Hog Conservation Programme.

Membership: update membership and recruit new members for neglected species and other disciplines.

Proposal development and funding: develop fundraising plan, making contacts to the pig production industry for fundraising.

Synergy: formalise advisory committee and regional advisors.

Communicate
Communication: (1) publish Suiform Soundings; (2) update website, include restricted member area for communication.

Scientific meetings: organise African Pigs Conference.

Assess
Research activities
i. Survey of Hairy Babirusa has been conducted on Buru and published in Suiform Soundings; Red List update not yet done. (KSR #12)
ii. Survey of Javan Warty Pig is ongoing, and will be finalised in 2019. (KSR #12)
iii. Genetic studies of Javan and Bawean Warty Pigs are ongoing. Preliminary results have been published, but final results depend on more samples (currently being collected). (KSR #32, 42)
iv. Erik Meijaard and Colin Groves submitted a manuscript on Giant Forest Hog and Wild boar to Zootaxa, but it was rejected. Colin sadly passed away and the manuscript requires further work. We proposed recognising two or three distinct species, because the morphological differences are not clinal and change abruptly in eastern Africa. Reviewers requested further morphological work and supporting genetic data. As the latter is not forthcoming, it is unclear whether the current taxonomic proposal should be pursued. This requires discussion among specialist on this species. (KSR #43)
v. Two reports on Giant Forest Hog status in Uganda delivered, one book chapter update. Funds obtained for additional research. Data will be discussed during African wild pig meeting in 2019. (KSR #12)

vii. Book published by end of 2017. (KSR #43)

Plan
Planning

i. Pygmy Hog Species Action Plan workshop was held in Assam in the last week of November 2018. The Species Action Plan was facilitated by a CPSG facilitator and organised by Durrell Wildlife Conservation Trust on behalf of WPSG. (KSR #15)

Act

Conservation actions

i. Global Species Management Plans are running very well, with improvements in relationships and cooperation every year. In 2018 a second planning workshop was conducted and new master plan drafted. (KSR #25)

ii. A temporary holding and release enclosure for the Javan Warty Pig release programme has been built at Baluran National Park, with currently one rescued piglet held. The Javan Warty Pig consortium has been built to monitor progress and is meeting every 6 months. Currently, source of release population is being discussed. (KSR #24)
Network
Agreements
i. International Conservation, Management and Research MoU between the partners (Durrell Wildlife Conservation Trust; WPSG; Forest Department Government of Assam; Ministry of Environment and Forest, Government of India and local partners Aaranyak and EcoSystems-India) drafted, currently at last stages of being checked and signed. (KSR #29)

Membership
i. Updated membership and new members for neglected species and other disciplines recruited.

Communicate
Communication
i. Publication of Suiform Soundings has been continued every 6 months. (KSR #28)

Scientific meetings
i. Internal SSC grant received, meeting planned for October 2019. (KSR #28)

Acknowledgements

Thank you to all the WPSG members who actively contribute to the work of the WPSG, especially to the Regional Advisors, to the Suiform Soundings Editor and Social Media Officer, Thiemo Braasch. I would also like to offer sincere thanks, on behalf of all WPSG members past and present, to the former Chair, Erik Meijaard, for his commitment to leading the group over the past years, and to Chester Zoo for generously providing the new Chair with the time to work on WPSG activities. A thank you also to Durrell Wildlife Conservation Trust for fundraising for the species action plan for Pygmy Hog and also helping to initiate the process and organise the workshop on behalf of WPSG.

Summary of activities 2018
Species Conservation Cycle ratio: 5/5

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Main KSRs addressed: 12, 15, 24, 25, 28, 29, 32, 42, 43

KSR: Key Species Result
Mission statement

The mission of our IUCN Specialist Group is to promote the conservation of chytrids, downy mildews, myxomycetes and zygomycetes.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision a substantial advance in understanding extinction risks for certain ecological groups of myxomycetes (slime moulds), chytrid, zygomycete, downy mildew and particular species. One of the most important aspects of evaluating possible impacts of climate change and anthropogenic influence is to demonstrate that changes are occurring in the distribution of particular species. In future research, at least two possible effects of climate change and other negative impacts should be clearly distinguished. First, the negative impacts on composition of species assemblages, which does not necessarily threaten particular species, must be assessed. Second, the negative impacts on a single species, which may well be threatened and thus would warrant inclusion on Red Lists, needs to be evaluated. In addition, promotion of conservation activities for neglected groups of living organisms will provide the general vision of nature processes functioning; in particular, attention needs to be focused on discovering the role of chytrids, zygomycetes, downy mildews, and myxomycetes in people’s lives and their relationships with other species. Furthermore, the conservation action network of experts and amateurs will expand.

Plan

Policy: promote the conservation of different groups of living organisms that were not considered to be in danger before, but are in need of protection today.

Network

Capacity building: train professionals on how to carry out Red List assessments.

Synergy: organise a network of specialists and stakeholders for discussing conservation problems for “lower fungi” and for exchange of successful protection measures.

Communicate

Communication: advance conservation activity for chytrids, zygomycetes, downy mildews and slime moulds.

Activities and results 2018

Assess

Red List

1. We carried out preliminary Red List assessment of 10 tropical myxomycete species from genus Physarum based on field expedition material from Seychelles and Martinique. Ten species were assessed and four species were re-assessed (previous assessment in 2007), as follows: 11 Critically Endangered, 2 Endangered and 1 Near Threatened species. The new version of the Red List of Cuba was prepared, including 21 species of myxomycetes from Cuba; the list includes 11 Critically Endangered, 4 Endangered, 2 Near Threatened and 4 Data Deficient species. We have already completed workshops in Cuba, France and Ukraine. (KSR #1)
Research activities

i. Five publications were produced, including scientific publications which analysed conservation problems, climate change, environmental safety, species identification, human impact, heavy metals accumulation, mountain and tropical ecosystems in the context of "lower fungi"; a guidebook for field work; and an identification book. For the characterisation of the ecological niche, 19 bioclimatic variables were used and obtained from the Worldclim database (www.worldclim.org/). For each model, the extreme values of radiative forcing (FR) were used (as proposed by the IPCC: 2.6 W/m² for a mitigation scenario, and 8.5 W/m² for a pessimistic scenario). Predictive models of the potential distribution of 11 species of myxomycetes were obtained in different climatic scenarios and the contribution of the bioclimatic variables to the potential distribution of the species was determined. (KSR #43)

ii. We made three field studies and scientific analyses of myxomycete assemblages in tropics, mountain and mangrove ecosystems. The project "Inventories of fungal and functional taxonomic groups" was carried out in three Cuban wetlands: (1) Managed Resources Protected Area Ciénaga de Zapata (Matanzas province), declared a Biosphere Reserve "Zapata Peninsula" in 2000, as well as a Ramsar Site in 2001 and an Area of Importance for Birds in 2009 (it is distinguished as the largest wetland in the insular Caribbean). Two field collections took place during the project. Twenty species of myxomycetes were identified; 18 of these species are registered as new for this study area. (2) Wildlife Refuge "Las Picúas-Cayo Cristo" (Villa Clara province, northwest keys cayeria). Four field collections took place during the project; 18 species of myxomycetes in 10 genera were identified. (3) Wildlife Refuge "Golfo de Batabanó" (Mayabeque province, western coastal area of Batabanó municipality). One field collection took place during the project; eight species of myxomycetes in eight genera were identified. (KSR #12)

Plan

Policy

i. Promotion of the conservation of different groups of living organisms that were not considered to be in danger before, but are in need of protection today. This concept was promoted to different audiences, including students in different levels of education (primary, secondary and special education) through the creation of various teaching materials: (1) students of Community of Las Terrazas School (Pinar del Rio province): 5th, 6th and 7th grade; (2) Coastal Marine Festival in the community of Carahatas, protected area RA Las Picúas-Cayo Cristo: exhibition of crochet allegorical to fungi and myxomycetes, trunks with different species to appreciate the diversity in types, shapes and colours of these organisms, as well as children's drawing competitions with coloured chalk; (3) design of allegorical stickers of fungi and myxomycetes with educational messaging; (4) design of sheet of paper on myxomycetes for the plastic field guide (four sheets of paper); (5) programme design for circle of interest for 5th and 6th grade children in primary education, in coordination between mycologists and Environmental Educators of the National Botanical Garden Training; to specialists of the RA Golfo of Batabanó Protected Area; (6) Project Workshop: Diversity and conservation of fungi in Cuban wetlands. Criteria of the IUCN Red List: Treatment for fungi and myxomycetes. College extension: linking students of the Faculty of Biology of the University of Havana (3rd and 4th year) to the project that was executed (2016-2018) and to the research topics. The students participated in all results and are co-authors of the presented papers. (KSR #2)

Network

Capacity building

i. We have secured Red List assessment training for around 50 people from European and Latin American countries. (KSR #5)

Synergy

i. Two working groups were established to discuss conservation problems for "lower fungi" and for exchange of successful protection measures, one in Europe and one in Latin America. IV Encuentro Científico sobre Diversidad Biológica. BiodiverSOS 2018. (Sancti Spiritus, Cuba, 2018).

Communicate

Communication

i. Five public outreach efforts were achieved, including: scientific-popular articles; courses for students and schoolchildren, press notes about our events; TV report on local French television; Facebook network (Slime Mold Identification & Appreciation https://www.facebook.com/groups/SlimeMold/permalink/1968371953422653/). (KSR #28)

Acknowledgements

We thank the Cuban National Program "Sustainable use of the components of biological diversity in Cuba".

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

Assess 3

Plan 1

Network 2

Communicate 1

Main KSRs addressed: 1, 2, 5, 12, 28, 43

KSR: Key Species Result
**Mission statement**

To promote conservation of ascomycete fungi by raising awareness that they have vital roles as nutrient recyclers, mutualistic symbionts of animals and plants, and as checks and balances in freshwater, marine and terrestrial ecosystems, and that like animals, plants and other fungi, they are endangered by climate change, habitat destruction, persecution and pollution.

**Projected impact for the 2017-2020 quadrennium**

By the end of 2020, we plan to have the basic infrastructure within IUCN to enable conservation of ascomycete fungi to be promoted, with global Red List evaluations for at least 150 species. This will in turn mean more Specialist Group members, their training in communication skills and in Red Listing procedures, and greater activity by those members, so that the group is nowhere dependent on a single person. We intend to achieve an increase in awareness of the vital role of fungi first among IUCN personnel, and thereafter in an expanding range of other conservation NGOs, in the public, and among national focus points for the Convention on Biological Diversity.

**Targets for the 2017-2020 quadrennium**

**Assess**

Red List: evaluation of 150 non-lichen-forming ascomycetes for the IUCN Red List, particularly those with human food value (The IUCN-Toyota Red List Partnership, first tranche).

**Network**

Capacity building: development of a list of essential sources to consult for evaluating species. Scientific meetings: collaboration with European Mycological Association and International Society for Fungal Conservation in organising a European-level meeting on fungal conservation in Macedonia in October 2017. Synergy: appointments of Specialist Group Co-Chair, Red List Authority Coordinator and Programme Officer.

**Communicate**

Communication: (1) registration of Internet domain name for Specialist Group; (2) establishment of Specialist Group website; (3) establishment of email dedicated addresses for Specialist Group Chair, Specialist Group Co-Chair, Red List Authority Coordinator and Programme Officer; (4) establishment of Facebook account; (5) establishment of Twitter account.
Activities and results 2018

Assess
Red List
i. Work on assessments of 150 non-lichen-forming ascomycetes for IUCN Red List started. (KSR #1)

Network
Capacity building
i. Draft list of sources for observations of ascomycetes prepared and circulated to group; other draft lists (of resources for defining individuals and population numbers, and for identifying threats) started. (KSR #5)

Synergy
i. Programme Officer appointed. (KSR #5)

Communicate
Communication
i. Domain name www.asco-conservation.org registered. (KSR #28)
ii. Very basic draft home page established. (KSR #28)
iii. Dedicated email addresses set up for Chair, Co-Chair, Red List Authority Coordinator and Programme Officer. (KSR #28)

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

Assess 1
Network 2
Communicate 3

Main KSRs addressed: 1, 5, 28

KSR: Key Species Result

Field image of Hypocreopsis rhododendri (preliminary assessment, Vulnerable), on bark of Corylus avellana. (Bar = approx. 10 mm) Photo: P.F. Cannon

Detail of stromatal lobes of Hypocreopsis rhododendri (preliminary assessment, Vulnerable), on bark of Corylus avellana, with ostioles visible as dark dots. (Bar = approx. 5 mm) Photo: P.F. Cannon
**Co-Chairs**
Christoph Scheidegger (1)
Jessica L. Allen (2)

**Red List Authority Coordinator**
Christoph Scheidegger (1)

**Location/Affiliation**
(1) Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland
(2) Department of Biology, Eastern Washington University, Cheney, WA, US

**Number of members**
24

**Mission statement**
Promote studies assessing lichen diversity, population dynamics and conservation genetics in order to evaluate the conservation status of lichen species according to IUCN criteria.

**Projected impact for the 2017-2020 quadrennium**
By 2020, we will strengthen the visibility of lichens in biodiversity conservation strategies by (1) publishing Red List assessments of lichens from all continents, and (2) further developing research and outreach in lichen conservation in Asia.

**Targets for the 2017-2020 quadrennium**

**Assess**

- **Red List**
  - We have assessed approximately 50 species and uploaded the assessments to the IUCN SIS database. Some assessments have been published; others are under revision and pending publication. (KSR #1)

**Research activities**

- A detailed study on the effects of climate change on *Lobaria pindarensis* in the Himalayas was completed; a manuscript reporting the study was prepared, submitted and reviewed. (KSR #32)

**Act**

- A manuscript on conservation actions for *Erioderma pedicellatum* in Kamchatka has been submitted and is currently under review. (KSR #27)

**Activities & Results 2018**

**Assess**

- **Red List**

**Research activities**

**Act**

- Conservation actions: development of conservation actions in the respective regions for *Erioderma pedicellatum*.

**Acknowledgements**
We thank the following institutions for their support: Swiss Federal Institute for Forest, Snow, and Landscape Research WSL and Eastern Washington University.
Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 27, 32

KSR: Key Species Result

Lungwort lichen (Lobaria pulmonaria)
Photo: Christoph Scheidegger

Critically Endangered Erioderma pedicellatum, Alaska
Photo: Christoph Scheidegger
Mission statement
The mission of the Mushroom, Bracket, and Puffball Specialist Group is to advance fungal conservation by raising awareness of the importance of fungi and the need to conserve them, building capacity among the mycological community, and greatly increasing the number of fungi on national and the global Red Lists.

Projected impact for the 2017-2020 quadrennium
By the end of this quadrennium, fungal conservation efforts will have developed substantially. There will be a broader interest in and understanding of the need for including fungi in conservation discussions and actions. The number and diversity of mycologists trained and engaged in generating conservation assessments will be greatly increased and processes for generating Red Lists will be enhanced. The number of mushrooms and relatives on national and global Red Lists will be significantly higher than in 2015, providing insight into the conservation status of mushrooms and related fungi. The Mushroom, Bracket, and Puffball Specialist Group will have begun to add conservation planning into their activities.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete commitment of 1,000 Red List assessments for The IUCN-Toyota Red List Partnership; (2) increase quantity and quality of fungal national Red Lists by providing advice and encouragement for national Red List committees that are either creating fungal Red Lists for the first time or in the process of revising their fungal Red List.

Network
Capacity building: build capacity among the mycological community (2-3 courses/workshops per year).
Synergy: Establish Fungal Conservation Committee to better coordinate efforts among the fungal Specialist Groups and other parts of IUCN, create a higher profile for fungal conservation, and diversify participants in fungal conservation.

Activities and results 2018
Assess
Red List
i. We held a Red List workshop in Virginia, US, with participants from North America, Europe, and Asia; initiated plans and successfully obtained funding for several workshops taking place in 2019. (KSR #1)
ii. Provided training and assisted with finding funds for several national and regional Red List initiatives. (KSR #2)

Network
Capacity building
i. Taught two Red List workshops plus gave several additional presentations at national and international conferences. (KSR #5)

Synergy
i. Work with the SSC Chair’s office to establish the Committee. (KSR #2, 5, 28)

Acknowledgements
The financial support of The Mohamed bin Zayed Species Conservation Fund, Oak Springs Foundation, and The IUCN-Toyota Red List Partnership is greatly acknowledged. Without their support, little of the work accomplished in 2018 could have been undertaken. We also thank the IUCN Red List Unit for their assistance and support.
Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 2, 5, 28

Resolutions addressed: WCC-2012-Res-033

KSR: Key Species Result

Ramaria purpurissima from California

Photo: US Forest Service Noah Siegel

Amanita caesarea, Central Serbia, 2016

Photo: Nikola Lačković

Craterellus cornucopioides in deciduous oakwoods in Tocchi Natural Reserve, Siena, Italy

Photo: Diego Cantini

Fungi and Lichens
Mission statement

The mission of the Rust and Smut Specialist Group (RSSG) is to promote the study and conservation of the rust and smut fungi by:

1. increasing current knowledge on the taxonomy of the species,
2. identifying and documenting threats to the survival of the species, and
3. assessing and monitoring their conservation status.

Projected impact for the 2017-2020 quadrennium

The conservation status of 50 species of rust and smut fungi will be assessed.

Targets for the 2017-2020 quadrennium

Assess

Red List

**Summary of activities 2018**

Species Conservation Cycle ratio: 1/5

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KSR: Key Species Result

Microbotryum piperi, from Bulgaria
Photo: T.T. Denchev

Microbotryum piperi, from Bulgaria
Photo: T.T. Denchev

Sporisorium elionur-tristis, from Madagascar
Photo: T.T. Denchev

Fungi and Lichens
IUCN SSC
Bryophyte
Specialist Group

2018 Report

Co-Chairs
Irene Bisang (1)
Jacques van Rooy (2)

Red List Authority Coordinator
Ariel Bergamini (3)

Location/Affiliation
(1) Swedish Museum of Natural History, Stockholm, Sweden
(2) South African National Biodiversity Institute, Pretoria, South Africa
(3) Swiss Federal Research Institute WSL, Birmensdorf, Switzerland

Number of members
28

Social networks
Website: https://eccbbryo.nhmus.hu/BSG_initial

Mission statement
The mission of the IUCN SSC Bryophyte Specialist Group is to promote the exploration of bryological diversity across all geographic scales and its long-term conservation.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we expect that substantially more bryophyte species are properly assessed or reassessed at the global scale, following the latest IUCN guidelines. We expect the European Red List of Threatened Bryophyte Species, to be published in autumn of 2019, will support priority making for conservation actions and inform policy decisions on biodiversity conservation in Europe. It will serve as a critical instrument to measure some aspects of the progress towards achieving the EU 2020 Biodiversity strategy.

Many members of the Bryophyte Specialist Group (BSG) and other bryologists will, after having attended the IUCN Red List training workshop (https://www.bryology2019.com/iucn-red-listing-workshop/), be familiar with the IUCN methodology for Red List assessment and its application. This will have catalysing effects at national and regional levels.

Targets for the 2017-2020 quadrennium
Assess
- Red List: (1) complete assessment of 1,800 European bryophytes and publication of a European bryophyte Red List; (2) Top10-Initiative; (3) Red List assessment of all Swiss Pottiaceae; (4) Red List assessment of South African Pottiaceae.

Research activities: (1) analysis of the endemic bryophyte elements of southern Africa (South Africa, Botswana, Namibia, Swaziland, Lesotho); (2) publish paper on the most strongly threatened African bryophytes.

Network
Capacity building: capacity building among BSG members through a training workshop on IUCN Red List methodology.

Activities and results 2018
Assess
- Red List
  ① The EU Life Red List project was extended to September 2019. The taxonomic backbone and species to be included were finalised by December 2018, and the majority of species assessments submitted to IUCN Red List Unit. (KSR #1, 2)
  ② Species for the Top10-Initiative were selected for Africa and are ready to be assessed. (KSR #1, 2)
  ③ Two-thirds of the field work was completed for Red List assessment of all Swiss Bryophytes. Two internal workshops on evaluating the Red List status of the species were held. (KSR #1, 2)
iv. Mr. Tsepo Hlasoa registered the project of Red List assessment of South African Pottiaceae for a Master of Technology degree at the Tshwane University of Technology. He compiled a list of Pottiaceae species present in southern Africa and started gathering distribution and other data for the species. (KSR #1, 2)

Research activities
i. Ms. Nonkululo Phephu re-registered for her PhD at Wits for 2018. She worked on moss and liverwort checklists for the region and started to gather data on the distribution and ecology of the endemic species. (KSR #43)

ii. Scientific article on the most strongly threatened African bryophytes in press. (KSR #43)

Network
Capacity building
i. Successfully fundraised to conduct a training workshop on IUCN Red List methodology; funding secured from Mohamed bin Zayed Species Conservation Fund, International Association for Bryologists, and Royal Botanic Garden Madrid. The workshop is supported by certified Red List facilitators from the IUCN Global Species Programme Red List Unit Cambridge, the Royal Botanic Garden (CSIC), Madrid and the International Association of Bryologists for supporting the IUCN Red List workshop. Jacques van Rooy, Ariel Bergamini and Irene Bisang acknowledge the support of their employers (South African National Biodiversity Institute; Swiss Federal Research Institute, Swedish Museum of Natural History).

Acknowledgements
The European Red List of bryophytes is funded by the European Commission (LIFE grant agreement no. IFE14PREBEG01) and co-funded by the Ministry of the Environment of the Czech Republic and ArtDatabanken from the Swedish University of Agricultural Sciences. We are thankful to Mohamed bin Zayed Species Conservation Fund, the IUCN Centre for Mediterranean Cooperation Malaga, the IUCN Global Species Programme Red List Unit Cambridge, the Royal Botanic Garden (CSIC), Madrid and the International Association of Bryologists for supporting the IUCN Red List workshop. Jacques van Rooy, Ariel Bergamini and Irene Bisang acknowledge the support of their employers (South African National Biodiversity Institute; Swiss Federal Research Institute, Swedish Museum of Natural History).

Summary of activities 2018
Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 2, 5, 43

KSR: Key Species Result
Mission statement
The mission of the CSSG is to contribute to the conservation of cactus and succulent plants through better understanding of their taxonomy, ecology and threats.

Projected impact for the 2017-2020 quadrennium
By the end of the quadrennium, we envisage a priority conservation plan to conduct activities on the ground to improve the conservation status of highly threatened cactus species. We will have generated the Red List assessments for other complete groups of succulent plants that will enable us to start setting and planning conservation. We will have a more diverse Cactus and Succulent Plant Specialist Group (CSSG) that includes members from a wider geography.

Targets for the 2017-2020 quadrennium
Assess
Red List: three hundred succulent plant species assessed.
Research activities: (1) two scientific papers published; (2) Alliance for Zero Extinction sites (AZEs) and Key Biodiversity Areas (KBAs) identified for all cacti.

Plan
Planning: (1) one national or regional conservation action plan for cacti; (2) participate in one policy related forum.

Co-Chairs
Barbara Goettsch (1)
Kimberlie McCue (2)

Red List Authority Coordinator
Raúl Puente (2)

Location/Affiliation
(1) Global Species Programme, IUCN, Cambridge, UK
(2) Desert Botanical Garden, Phoenix, Arizona, US

Number of members
21

Social networks
Facebook: IUCN SSC Cactus and Succulent Plants Specialist Group
Instagram: cactusandsucculents_sg
Twitter: @CssgSsc

Network
Capacity building: four CSSG members trained as Red List Assessors.
Membership: increase in number of CSSG members, with 40 as goal.
Research activities: strategic planning of activities to conduct with host institution Desert Botanical Garden.
Synergy: hire a Programme Officer.

Communicate
Communication: (1) publish a CSSG Newsletter; (2) build a presence on social media platforms.

Activities and results 2018
Assess
Red List
i. The extinction risk of 185 species of agaves and yuccas was assessed by 31 experts from the United States of America, Mexico, Guatemala, Honduras and Colombia with the help of five IUCN facilitators, during a five-day workshop in the city of Querétaro, Querétaro, Mexico. The genera Agave and Yucca are distributed from southern US to northern South America and the Caribbean. Since pre-Hispanic times, these plants have been widely utilised and today are of great importance for human livelihoods, such as the production of the alcoholic beverages known as mescales, including the world famous tequila. They are also widely utilised for their fibres, as food and as ornamental plants. This will be the second comprehensive assessment of a succulent plant group conducted by the CSSG, after cacti, and will bring a better understanding of the threats affecting these plants and the baseline data to better plan conservation actions. The workshop was also a great opportunity to expand the CSSG membership. A total of 126 aloes from Madagascar were assessed with the collabora-
tion of expert Solofo Rakotoarisoa. This is part of a wider collaboration involving several plant Specialist Groups, including the Madagascar Plants SG, South African Plants SG, the CSSG, and the IUCN Secretariat to complete the global assessment of aloes. (KSR #1)

Research activities

i. The members of the CSSG supported the IUCN Secretariat and Birdlife International in the identification of Key Biodiversity Areas (KBA) and Alliance for Zero Extinction (AZE) areas for cactus species. A total of 115 such areas were identified across the Americas and are now published at zeroextinction.org. Each of these locations is the last remaining refuge of one or more Endangered or Critically Endangered cactus species. (KSR #22)

ii. The Co-Chair of the CSSG, Bárbara Goettsch, was invited to participate in the workshop ‘Raising the profile of plants in IWT policy: an evidence-based agenda-setting workshop’, which took place during the event Evidence to Action – Research to Address Illegal Wildlife Trade held prior to the 2018 London Illegal Wildlife Trade. The goal of the workshop was to discuss and debate practical opportunities for raising the profile of wild plant species that are actively traded across international markets. The results of the workshop have been included in a scientific manuscript which is under submission titled “Combating ‘plant blindness’ in illegal wildlife trade” led by Jared Margulies. (KSR #32)

iii. A scientific publication with significant impact on the conservation of cactus species, led by Co-Chair Barbara Goetttsch, was published on the journal Conservation Biology: The first global gap analysis for a whole plant group (Cactaceae) showed that more threatened cactus species lack protection by the current network of protected areas than amphibians, birds or mammals. The publication assessed the level of protection of all cactus species based on their range size and level of threat, and showed that 18% of cactus species are not considered to be adequately protected in designated areas of protection and 32% of threatened cacti are unprotected. Protected areas containing a relatively high representation of species were also identified as well as priority areas, that if protected, could harbour as many as a 100 threatened cactus species. This is a significant contribution to the knowledge on the performance of protected areas in protecting biodiversity and a milestone towards the conservation of this highly threatened iconic plant group. (KSR #32)

Plan

Policy

i. Co-Chair, Kim McCue participated in the Global Strategy for Plant Conservation (GSPC) Conference, held in August 28-30, 2018, at Cape Town, South Africa. During the meeting, she presented the partnership between IUCN SSC Cactus and Succulent Plants SG and the Desert Botanical Garden (DBG) as host institution. Kim emphasized how collaboration can support achievement of the GSPC proposed targets. As an example, she presented how in February 2018, a collaborative effort allowed the SG and the DBG to contribute to Target 2 by assessing the extinction risk of Agaves and Yuccas for the IUCN Red List of Threatened Species. (KSR #7, 8)

Network

Capacity building

i. Five members of the Specialist Group were officially trained as assessors during an Assessors Red List training workshop in Phoenix, Arizona, USA. (KSR #5)

Membership

i. The CSSG has eight new members, including experts from four countries (Chile, Venezuela, El Salvador and Madagascar) which were not previously represented in the CSSG.

Acknowledgements

We thank our host institution, Desert Botanical Garden, for their generous support to the CSSG. We are grateful to DBG and The IUCN-Toyota Red List Partnership for co-funding the Agave and Yucca Red List workshop. We are thankful to CONABIO for supporting the assessment process with members of their staff and to the Jardín Botánico Regional de Cadereyta for their support with local logistics for the workshop. We thank the Royal Botanical Gardens, Kew and The IUCN-Toyota Red List Partnership for their support on the Aloes of Madagascar Red List workshop. We are in debt to DBG for kindly sponsoring the part-time position of our Programme Officer.

Summary of activities 2018

| Species Conservation Cycle ratio: 3/5 |
|---|---|
| Assess | 4 |
| Plan | 1 |
| Network | 2 |

Main KSRs addressed: 1, 5, 7, 8, 22, 32

KSR: Key Species Result
Mission statement
The mission of the China Plant Specialist Group (CPSG) is to contribute to the increase of current knowledge on the identification and conservation of threatened species of China’s flora.

Projected impact for the 2017-2020 quadrennium
The CPSG and individual members are committed to threatened species assessment, biodiversity conservation and related activities such as science popularisation. In the past year, members of our group have completed a number of field resource investigations, carried out a number of conservation actions focusing on ex situ conservation, provided technical support for local institutions and other organisations in China, and published articles related to biodiversity conservation.

Targets for the 2017-2020 quadrennium
Assess
Red List
i. The assessment of 2,000 endemic trees is ongoing and we expect to be able to complete it on time. (KSR #2)
ii. Our group participated in the completion of the manuscript of important medicinal plants Red Book in China (nearly 200 species in this manuscript). (KSR #2)
iii. We have launched internal workshops on Red List species assessment and expect to conduct more external technical training courses in mid-2019. (KSR #2)

Research activities
Consulting plant specimens at the herbarium
Photo: Hao Zhang

Activity to popularize scientific knowledge
Photo: Liqiang Xu

**ii.** We have finished more than 10 targeted field investigations: (1) Liaoning grassland resources inventory (CAO Wei); (2) investigation on plant diversity and vegetation in Luojing Mountain Region (Chen Gongxi); (3) investigation in Wuling Mountain Area (Chen Gongxi); (4) the second national key species survey project, responsible for plant survey work in Zhangzhou City, Fujian Province (Hou Xueliang); (5) we participated in the second national key protected wild plant resource survey in Jiangxi Province from 2015 to 2017, and were responsible for the investigation of key protected wild plant resources in four prefecture-level cities (Tan Ceming); (6) we participated in the investigation and preservation of wild plant germplasm resources in the Southwest China Wildlife Germplasm Resource Bank (Tan Ceming); (7) China Botanical Garden Alliance: Central China Plant Survey (Li Xiaodong); (8) we participated in the work of some native plant resources coverage projects (LIU Xingjian); (9) East China Xianxia Ridge – Wuyi Mountain Range and Huangshan Mountain – Tianmu Mountain Biodiversity Survey (Shao Jianwen); (10) biodiversity surveys and scientific research in multiple protected areas or wetland parks (Shao Jianwen); (11) investigation and analysis of rare tree species in Jiangsu Province and field monitoring (Zhang Guangfu). (KSR #12)

**Act**

**Conservation actions**

**i.** The members of our group have carried out the *ex situ* conservation of many wild plants step by step in 2018, including artificial breeding and rejuvenation of three species in genus *Isoetes* (Liu Baodong). (KSR #27)

**ii.** Observed and cultured 15 kinds of national secondary protected plants such as *Asplenium komarovii*, *Brainea insignis*, *Sphaeropteris lepifera*, and others. (Liu Baodong). (KSR #27)

**iii.** Introduced more than 10 kinds of protected plants into Nanjing Botanical Garden (Liu Xingjian). (KSR #27)

**iv.** Successfully introduced some threatened and rare species into Jiujiang Forest Herbarium, such as *Taxus mairei*, *Sinojackia rehderiana*, *Emmenopterys henryi*, *Lindiodendron chinense*, *Ormosia henryi*, *Eucommia ulmoides*, and some rare species in genus *Peucedanum* (Tan Ceming). (KSR #27)

**v.** Habitat protection, breeding and returning to the wild rare tree species of *Emmenopterys henryi* (Zhang Guangfu). (KSR #27)

**Network**

**Capacity building**

**i.** In recent years, more than 20 experts of our Specialist Group are professors in their respective schools. They teach courses related to plant diversity conservation. For example, the CPSG Chair, Dr Qin, is a lecturer in conservation biology at the university of Chinese Academy of Sciences. He is mainly responsible for teaching the conservation of plant diversity. (KSR #5)

**Acknowledgements**

We are very grateful to all the 85 members of the China Plant Specialist Group. Their passion for biodiversity conservation gave us enough motivation to organise this volunteer team. In addition, we thank the research team that collected, cleaned and analysed the data for assessment of 2,000 species.

**Summary of activities 2018**

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Main KSRs addressed: 2, 5, 12, 27, 32

KSR: Key Species Result
Mission statement
To generate baseline information to support decision-making for plant conservation by different stakeholders in Colombia.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we will have advanced in Red List evaluation for ca. 50% of our endemic plant species (3,000 species evaluated) and other strategic groups of conservation concern. This information on threat evaluation will be used to inform conservation planning, in terms of feedback for conservation action plans for species groups and for supporting the implementation of KBAs (Key Biodiversity Areas) in Colombia.

Targets for the 2017-2020 quadrennium
Assess
Red List: advance in the National Red List of plants (3,000 assessments), particularly for endemics, other species of conservation interest and potential Least Concern species within taxonomic groups or ecosystems.

Plan
Planning: implementation and evaluation of short-term targets of existing conservation action plans for plants (some timber trees, palms, cycads, orchids) and development of new plans for other strategic groups (such as cacti, medicinal plants, crop wild relatives, and other species of socio-economic importance).
Policy advice: incorporate plant Red List information into conservation planning, including national landscape management tools.

Act
Conservation actions: incorporate plant Red List information into conservation planning, including identification of Important Plant Areas (IPAs).

Activities and results 2018
Assess
Red List
1. The Specialist Group met in Bogota in February 2018, with the participation of 14 members. In this meeting, the Specialist Group established rules of operation and discussed lessons learnt from previous Red List projects and potential new avenues of work. In 2018, we completed Red List assessments for 465 species, within the framework of two projects: (1) assessing the risk of extinction of plants and updating Key Biodiversity Areas in the Tropical Andes (funded by CEPF), where 150 species of Bromeliaceae and Ericaceae were assessed (116 of these endemics); (2) tree assessments for the Global Tree Assessment initiative (lead by Botanic Gardens Conservation International and the IUCN/SSC Global Tree Specialist Group), for which we assessed 315 species of trees endemic to Colombia. These 465 assessments were uploaded to the IUCN SIS database (315 species in Spanish), together with previous global assessments of 250 species of high Andean ecosystems (mostly endemics). These Red List projects have helped increase expertise within the group in the application of the...
Red List criteria and the use of tools available to conduct the assessments and upload them in SIS (e.g. SIS-Connect and R packages). These capacities have been transferred to young researchers participating in the projects, and to some of the group members during events, such as an assessment workshop that took place in November 2018 for the CEPF project. As a result, we are expanding our network of experts trained for assessments, including several students at universities where members of the group implement Red List projects. Based on the previous experiences, the group is preparing to address larger Red List projects for the next two years. We have secured funds to continue with Red List assessments for endemic trees and other groups, and we are negotiating funds to have a full-time staff member to carry out assessments and interact with botanical experts. (KSR #2)

**Plan**

**Planning**

i. We are following the implementation of published conservation action plans and discussing with their leaders and the Ministry of Environment about opportunities for funding projects that can contribute to their targets. For example, the Ministry of Environment and some stakeholders are interested in promoting sustainable use targets, and there is a pilot project to promote cycads (genus Zamia) as ornamental plants in the country. We are also participating in the formulation of conservation action plans for tropical dry forests and high Andean ecosystems, where we expect to include specific targets related to the conservation of plant species. (KSR #16)

**Act**

**Conservation actions**

i. We are participating in a project to identify KBAs for the conservation of plants and reptiles in the Tropical Andes (in collaboration with the IUCN-CI Biodiversity Assessment Unit). (KSR #22)

**Acknowledgements**

We thank the Alexander von Humboldt Institute for providing logistical support for meetings and all our activities during 2018, and Conservation Ecosystem Partnership Fund (CEPF), Botanic Gardens Conservation International (BGCI) and the Global Tree Assessment (GTA) for collaborating with us and providing funding for Red List assessment projects.

**Summary of activities 2018**

| Species Conservation Cycle ratio: 3/5 |
|---|---|---|
| **Assess** | 1 |   |
| **Plan** | 1 |   |
| **Act** | 1 |   |

Main KSRs addressed: 2, 16, 22

KSR: Key Species Result

Libidibia ebano, Colombia
Photo: Carolina Castellanos

Zamia obliqua, Near Threatened, Choco Colombia
Photo: Cristina López-Gallego
Mission statement
The Conifer Specialist Group helps promote the long-term survival of the world’s conifers through rigorous conservation assessments, which help to guide conservation planning and conservation action.

Targets for the 2017-2020 quadrennium

Assess
Red List: complete Red List assessments of 50 conifer species.

Act
Conservation actions:
1. Continue the ex situ conifer conservation programme in the UK;
2. Restore the forests of the threatened conifer Glyptostrobus pinsilis in Laos.

Activities and results 2018

Assess
Red List
1. Forty reassessments of conifers are in draft form ready for review. (KSR #1)

Acknowledgements
We would like to thank the following people who have helped with the restoration work of the degraded Glyptostrobus stands in Lao PDR: Professor Vichith Lamxay (National University of Lao PDR); Daophone Suddychanh (Nam Theun Power Company); Dr Gretchen Coffman (University of San Francisco); Dr Brendan Buckley (Columbia University, New York) and De Liang Ming Gao (Kunming Institute of Botany).
## Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 12, 25

KSR: Key Species Result

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**Taiwan Catkin Yew (Amentotaxus formosana), Vulnerable**

Photo: Martin Gardner

**Plantae**

---

**Atlas Cedar (Cedrus atlantica), Endangered**

Photo: Martin Gardner
Mission statement
The vision of the Crop Wild Relative Specialist Group (CWRSG) is the effective conservation and use of crop wild relatives (CWR) and their increased availability for crop improvement, for the benefit of the environment and human society worldwide.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we hope to have established a global network of in situ conservation sites to complement current ex situ conservation activities. Our vision is a developing world in which the full potential of CWR diversity is used to maximise the development of healthy, resilient food systems, where rural communities/family farmers are recognised for their sustaining of vital conservation action, and where nutritional security is not limited by climate change or breeders’ access to CWR diversity.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete threat assessment of 1,400 global priority CWR taxa (500 new Red List assessments).

Policy advice: improving CWR conservation policy context (all 16,000 global CWR).

Act
Conservation actions: ex situ conservation of CWR diversity in genebanks (1,392 priority CWR species conserved).

Activities and results 2018
Assess
Red List
i. 186 CWR assessments undertaken and 182 drafted in 2018. (KSR #1)

Plan
Planning
i. A network of genetic reserves for globally important CWR has been designed as well as a Nordic European network of genetic reserves for regionally important CWR. Both works are important steps towards the implementation of a global network of genetic reserves for in situ conservation of CWR. In addition, a global network targeting wild relatives of temperate cereals has also been designed. (KSR #42)

ii. One of the tasks of the 'Farmer’s Pride – Conserving plant diversity for future generations’ project (http://www.farmerspride.eu/), an EU funded project that initiated in November 2017, is to design a European network of regionally important CWR for active in situ conservation. The foundations of this regional analysis were undertaken by Kell in 2018 with the following resultant work published: Kell, S.P. (2018). 'Cataloguing and prioritising crop wild relatives as a baseline for their conservation and utilisation’. PhD Dissertation. Birmingham: School of Biosciences, University of Birmingham. (KSR #42)
iii. National networks of genetic reserves for in situ conservation of CWR were designed and recommended. In most cases, the design of the genetic reserves resulted from the efforts of relevant national stakeholders and governments to initiate the establishment and implementation of national networks for active conservation of CWR. (KSR #42)

iv. CWR conservation planning in development for more than 30 years, and we hope coming to fruition in 2019 underpinning systematic CWR complementary conservation. (KSR #15)

Policy

i. Improvement of CWR conservation policy context, and we hope coming to fruition in 2019 underpinning systematic CWR complementary conservation. (KSR #26)

Act

Conservation actions


Acknowledgements

We would like to give special thanks to the CWRSG Programme Officer Joana Magos Brehm. We also thank the following donors for providing resources to support conservation planning, conservation implementation, policy enhancement and threat assessment: United Nations Food and Agriculture Organization, International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), World Bank, Consultative Group on International Agricultural Research (particularly Biodiversity International), Global Environment Facility, IUCN SSC, European Commission (including ACP-EU Co-operation Programme in Science and Technology and Horizon 2020 Framework Programme), European Parliament, European Cooperative Programme for Genetic Resources, national governments of Albania, Armenia, Azerbaijan, Belarus, Bolivia, Bulgaria, Cyprus, Czech Republic, Denmark, Finland, Greece, Iceland, India, Ireland, Italy, Madagascar, Mauritius, Mexico, Norway, Peru, Poland, Portugal, South Africa, Spain, Sri Lanka, Sweden, United Kingdom, Uzbekistan, Zambia, and the Royal Botanic Gardens, Kew, MAVA and The IUCN-Toyota Red List Partnership.

Summary of activities 2018

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Main KSRs addressed: 1, 15, 26, 42

KSR: Key Species Result
Mission statement
The mission of the Cuban Plant Specialist Group (CPSG) is to contribute to increase current knowledge on the taxonomy and ecology of the species across the geographic range of distribution and promote their long-term conservation.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision a significant advance in plant conservation in the country. The conservation status of at least 80% of the Cuban flora will be known and appropriately documented, and the assessments will be available to the public, researchers, decision makers and policy makers. A network of plant conservationists with the support of the local communities will be conducting actions to reduce the extinction risk of native plant species and recover their populations across the country, with an emphasis in areas of high plant diversity. Species recovery plans for at least 27 species will be produced and partially or fully implemented. An updated list of Cuban native plants will be available, and the Cuban relatives of globally important plants for food, agriculture and forestry will be identified.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete assessment of all species of palms; (2) complete assessment of all species of cacti; (3) complete assessment of all species of orchids; (4) complete assessment of endemic plant species; (5) complete assessment of bryophytes; (6) develop a conservation network aiming at conducting Red List assessments and promoting and supporting conservation initiatives in the Caribbean region, with emphasis in plant species that are shared among islands.

Research activity: (1) identify and document natural areas with conservation needs; (2) identify Cuban wild relatives of cultivated plants important for food, agriculture and forestry.

Plan
Planning: produce and partially or fully implement recovery plans for 27 species of Cuban plants.

Network
Capacity building: build capacities on Red Listing.

Activities and results 2018
Assess
Red List
i. We have finished the compilation of complementary information for all Cuban palms, and we expect to enter the assessment data in the IUCN SIS database during the summer of 2019. (KSR #1)
ii. We have updated the national data sheets for all Cuban cacti, and we expect to update the information in the IUCN SIS database during the summer of 2019. (KSR #1)
iii. We have completed the Red List assessments for 80 species of orchids out of the 311 species reported for Cuba. The taxon data-sheets of these species will be published by the Cuban Plant Specialist Group in the datasheet compilation of 2019. (KSR #1)
iv. We have completed the Red List assessments for 58 endemic tree species and gathered information to assess the conservation situation of an additional 117 endemic trees. (KSR #1)
v. We completed a Red List workshop with experts of the floras of the Bahamas, Cuba, Dominican Republic, Puerto Rico, southern US (Florida) and Yucatan (Mexico). We expect to have a workshop for species shared between the Bahamas and Cuba in Nassau in September, and one for species of the Dominican Republic in March 2020. During the workshop, we assessed 45 Caribbean species. We expect to publish the species datasheets by the end of 2020. (KSR #1)

Research activity

i. We conducted a rapid biodiversity inventory in 3.1 ha of Charrascal La Cueva (less than 10% of the total area). We recorded 366 plant species, 52% of them endemic to Cuba. Vertebrates are represented by 64 species, half of them endemics: 11 species of frogs and toads, 9 of them endemics; 16 reptiles including 11 Cuban exclusive species; 32 bird species, 18 of them endemic; and 5 mammals, 3 of them endemics. We recorded 228 invertebrate species including 50 endemics, most of them butterflies and moths: 191 species with 38 endemics and two species new to science. Other endemics among invertebrate groups include one freshwater crab, four snails, two scorpions and two grasshoppers, one of them probably new to science. Important conservation values include, among plants, the monotypic genus Harnackia and 87 species known only from Sierra de Nipe. Other local endemics include a new species of grasshopper of the Greater Antillean endemic genus Dellia and two new butterflies of the genus Calisto, restricted to the Greater Antilles and with more than 50 known species. The Oriente Warbler, Terestris fornis, is one of the two species in the only bird family endemic to Cuba, Teretristidae. Holguinia is the only butterfly genus endemic to Cuba, is monotypic and ours is the third record and the second known locality since 1955. Three endemic snail genera are represented at La Cueva: Coryda, Polymita and Zachry sia. We recorded for the first time Dianesia from Sierra de Nipe at La Cueva. This relict genus is the only West Indian representative of the Riodinidae (Metalmarks butterflies) with ca. 130 genera and 1,400 species in the continent. (KSR #22)

ii. We identified 859 taxa of the Cuban flora that are congeneric with plants of global economic importance for food, agriculture and forestry. (KSR #43)

Plan

Planning

i. We have documented the conservation situation of 12 target species (Coccothrinax borhidiana, Dendrocer eus nudiflorus, Emanianthe longiflora, Harpalyce macrocarpa, Juniperus saxicola, Leuenbergeria zinniiflora, Magnolia cristalesis, Magnolia minor, Magnolia orbiculata, Podocarpus angustifolius, Tabe buia sauvalei and Tetralix nipensis) and produced a detailed recovery plan for each of them. The recovery plans have been submitted for consultation to stakeholders. (KSR #15)

Network

Capacity building

i. We have secured training for 23 conservation biologists distributed across the country.

Acknowledgements

We thank the following donors that support our mission: Whitley-Sagre Conservation Fund, Foundation Franklinia, Mohamed Bin Zayed Species Conservation Fund, Planta! - Plantlife Conservation Society, the National Environmental Agency (Cuba) and the PNUD Project Conectando Paisajes. Moreover, we want to thank the National Botanical Garden, University of Havana for hosting our group and the Cuban Botanical Society for its organisational support. Our very special thanks and appreciation to the local conservationists and volunteers who work with us for the conservation of Cuban plants and their habitats.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 1, 15, 22, 43

KSR: Key Species Result
Mission statement
The FPSG exists to promote and further the conservation of plant species which are dependent upon wetlands and the habitats upon which they depend.

Projected impact for the 2017-2020 quadrennium
Unless the funding situation changes, we do not envisage any significant change in the conservation condition of freshwater plants as a result of action by the Freshwater Plant Specialist Group (FPSG).

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) conservation assessment of wetland-dependent plants in the Indo-Burma region; (2) development of a baseline for a Red List index of wetland-dependent plants in the Mediterranean; (3) complete Red List assessment of nationally endemic freshwater plants in Canada.

Research activities: (1) research into reproductive strategies along water depth gradient of Vallisneria natans and V. spinulosa in shallow lakes of the Yangtze River, China; (2) research into plant community patterns in Moroccan temporary ponds along latitudinal and anthropogenic disturbance gradients.

Act
Conservation activities: (1) assessment of conservation requirements of Crinum malabaricum; (2) global conservation action for the genus Isoetes; (3) conservation of “ferricretes” in Satara District, Western Ghats, India as Conservation Zones.

Network
Capacity building: development of a decision support tool to improve restoration projects with emphasis on freshwater wetland vegetation.

Communicate
Communication: (1) raise awareness of global conservation of freshwater wetland plants; (2) use of charophytes for description and monitoring of inland waters in Sicily; (3) global conservation assessment of the genus Callitriche; (4) global conservation assessment of the genus Cryptocoryne.

Activities and results 2018
Assess
Red List
i. Project initiated on conservation assessment of wetland-dependent plants in the Indo-Burma region. (KSR #1, 2, 3, 4, 7)

ii. Three hundred and eighty-four new assessments of wetland-dependent plants in the Mediterranean completed; 116 recent assessments identified. (KSR #1, 2, 3, 4, 7)

iii. Initiation of Red List assessment of nationally endemic freshwater plants in Canada. (KSR #1, 2, 3, 4, 7).
Research activities

i. Completion of research on reproductive strategies along water depth gradient of *Vallisneria natans* and *V. spinulosa* in shallow lakes of the Yangtze River, China. (KSR #43).

ii. Article published on plant community patterns in Moroccan temporary ponds along latitudinal and anthropogenic disturbance gradients. (KSR #43).

Act

Conservation activities

i. Report completed on conservation requirements of *Crinum malabaricum*, article not yet published. (KSR #27).

ii. Article published on global conservation action for the genus *Isoetes*. (KSR #27).

iii. Fifteen ferricretes of Satara district designated as Conservation Zones under the Maharashtra (state) Regional Town Planning Act. (KSR #27).

Network

Capacity building

i. Completion of the project on development of a decision support tool to improve restoration projects with emphasis on freshwater wetland vegetation. Report published. (KSR #18).

Communicate

Communication

i. Talks presented in 2018 raising awareness of global conservation of freshwater wetland plants. (KSR #28).

ii. Wetland vegetation restoration literature review completed and report published. (KSR #28).

iii. Project on use of charophytes for description and monitoring of inland waters in Sicily has been initiated and an article is being prepared. (KSR #28).

iv. More than 10 new species of genus *Callitriche* are being described, and conservation assessments being developed. (KSR #1, 2, 3, 4, 7, 8, 15, 18, 20, 21, 22).

v. Initiation of project on global conservation assessment of the genus *Cryptocoryne*. (KSR #1, 2, 3, 4, 7, 8, 15, 18, 20, 21, 22).

Acknowledgements

We would like to acknowledge the IUCN SSC for technical support.

Summary of activities 2018

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Main KSRs addressed: 1, 2, 3, 4, 7, 8, 15, 18, 20, 21, 22.


KSR: Key Species Result
Mission statement
The Galapagos Plant Specialist Group promotes the conservation of all Galapagos native plants and plant-like organisms (including algae, fungi, lichens and similar taxa), with the intention to be inclusive rather than exclusive.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we expect to have draft reassessments for at least 10 vascular plants and at least 50 lichens submitted to the IUCN Red List Unit, and to have increased the effort directed to threatened plant conservation by the Charles Darwin Research Station and the Galapagos National Park Directorate.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) begin re-evaluation of endemic vascular plants; (2) Red Listing of all ca. 200 endemic species of lichenised fungi.
Research activity: (1) evaluate the conservation status of the Scalesia forests on the islands of Santa Cruz and Isabela; (2) assess the value of water-saving technology on the recovery of threatened plant populations.

Plan
Planning: contribute to research and conservation planning in Galapagos.

Act
Conservation activities: restore threatened and endangered plant populations within protected and populated areas.

Activities and results 2018
Assess
Red List
i. Reassessment of endemic vascular plants begun (in collaboration with the Crop Wild Relative Specialist Group); two Galapagos endemic crop wild relatives reassessed. (KSR #1)
ii. One endemic species of lichenised fungus assessed (in collaboration with the Lichen Specialist Group); research student employed for data entry and funding requested. (KSR #1)

Research activity
i. Progress with field work to evaluate the conservation status of the Scalesia forests on the islands of Santa Cruz and Isabela. (KSR #27)
ii. Assessment of the value of water-saving technology for restoration of farms and urban areas with endemic and native species. (KSR #16)

Plan
Planning
i. Planning workshop on research and conservation in Galapagos held in March 2018. (KSR #18)

Act
Conservation activities
i. Action Plan produced for ecological restoration on Baltra and Plaza Sur islands (KSR #24)
ii. Fully restored Mina de Granillo Negro site, Floreana Island. (KSR #24)
Acknowledgements

The group’s activities depend heavily on the staff and programmes of the Charles Darwin Research Station in Galapagos and we are grateful for their support, including financial support for attendance at planning workshops. Arizona State University (Tempe) contributed to lichen Red Listing and conservation workshops. Many others in and outside Galapagos contribute importantly to plant conservation in the islands, especially the Galapagos National Park Directorate, local authorities, schools and private individuals, as well as the institutions that employ Galapagos Plant Specialist Group members and enable them to work on Galapagos plant conservation, too numerous to name individually. We are grateful to them all.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 1, 16, 18, 24, 27

KSR: Key Species Result
Mission statement
The aims of the Global Tree Specialist Group (GTSG) are: to promote and implement global Red Listing for trees and to act in an advisory capacity to the Global Trees Campaign.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we will have completed conservation assessments for the world’s tree species using the IUCN Red List categories and criteria. The goal is to complete IUCN Red List assessments for all species included in Global-TreeSearch. However, it may be necessary to accept nationally equivalent assessments for endemic species of some countries. A Global Tree Assessment report will be produced with analyses of the major threats to tree species, conservation measures underway, and priority conservation needs. This will draw attention to tree species that are Data Deficient and in need of further taxonomic work or field survey. It will provide a road map of major actions needed to conserve trees on a global scale relating to the post Global Strategy for Plant Conservation (GSPC) agenda, implementation of the Reducing Emissions from Deforestation and Forest Degradation (REDD+) initiative at national level and the Sustainable Development Goals.

Targets for the 2017-2020 quadrennium
Assess
Red List: assessment of all tree species (ca. 60,000).

Network
Membership: strengthen group membership. Synergy: (1) collaborate with other plant SSC groups; (2) enable planning and collaboration through meetings.

Communicate
Communication: (1) publish a GTSG newsletter; (2) publicise the conservation status of trees.

Activities and results 2018
Assess
Red List
i. Red List assessments for 15,537 tree species were prepared, with 5,678 submitted to the IUCN Red List Unit and 2,010 published. This is more than the 12,000 assessments anticipated and includes endemics of Brazil, Colombia, Indonesia, Madagascar, Malaysia, and Mexico together with Sapotaceae and Annonaceae. (KSR #1)
ii. Training and review workshops were held in Indonesia, Madagascar, Ethiopia, Kenya, Georgia, Laos, Bahamas, Sabah (Malaysia) and Australia. Over 150 people from more than 40 institutions were trained. (KSR #1)

Network
Membership
i. We have 10 new members of the group.

Synergy
i. In 2018 we have collaborated with the China Plant Specialist Group (submitted 500+ tree assessments together), Brazil Plant Red List Authority, Eastern African Plant Red List Authority, Central African Plant Red List Authority, Crop Wild Relative Specialist Group, and Palm Specialist Group. (KSR #29)
The Southeast Asian regional meeting of the GTSG was held in February 2018 in Bogor, Indonesia. The aim was to discuss tree conservation and the Global Tree Assessment project in Southeast Asia. The focus was on sharing progress in tree Red List assessments on a national level, and also to discuss the implementation of the Global Tree Assessment in the region. The outcomes identified who should be involved, ways to share information, methodology and lessons learnt across regions. Individual GTSG members were also invited to Global Tree Assessment meetings in Madagascar, Kenya, Bahamas, Sabah (Malaysia) and Australia. (KSR #29)

Communicate

Communication

i. Three GTSG newsletters were published. (KSR #28)

ii. Two publications were produced in 2018: The Red List of Fraxinus (January 2018) gives the conservation status for all 53 species of Fraxinus. The Red List of Nothofagus (December 2018) includes conservation assessments for all 37 species of Nothofagus. (KSR #28)

Acknowledgements

We are most grateful to BGCI for providing the Secretariat for the GTSG, and for the generous support from botanic gardens including the Missouri Botanical Garden, Morton Arboretum and Rio de Janeiro Botanic Garden. Support from the University of Bournemouth is also acknowledged. The rewarding partnership with Fauna & Flora International continues to be extremely important to the GTSG, helping to ensure that IUCN Red List assessments for trees inform priority conservation action through the Global Trees Campaign. We also wholeheartedly thank Fondation Franklinia, CEPF, Mohammed bin Zayed Species Conservation Fund, University of St Andrews/STFC, the Rufford Foundation, CBD/Japanese Biodiversity Fund, DeltaAnalytics, Keidanren Nature Conservation Fund and The IUCN-Toyota Red List Partnership for their support.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 1, 28, 29

KSR: Key Species Result
Co-Chairs
Vickie Caraway (1)
Lauren Weisenberger (2)

Red List Authority Coordinator
Matthew Keir (3)
Maggie Sporck-Koehler

Location/Affiliation
(1) Department of Land and Natural Resources, U.S. Fish and Wildlife Service and State of Hawaii, Hawaii, US (Retired)
(2) U.S. Fish and Wildlife Service, Honolulu, HI, US
(3) State of Hawaii’s Department of Land and Natural Resources, Division of Forestry and Wildlife, Hawaii, US

Number of members
125

Mission statement
The mission of the Hawaiian Plant Specialist Group (HPSG) is to prevent the extinction of native Hawaiian plants and provide for their recovery through a cooperatively administered off-site plant conservation system, in collaboration with on-site management partners to sample, propagate, and reintroduce rare plants; and to advance the preservation of native plants and their habitats through effective communication and public education.

Projected impact for the 2017-2020 quadrennium
In 2018, the Lyon Arboretum Hawaiian Rare Plant Program (HRPP) and the Laukahi (both HPSG members with statewide missions) developed Species Actions Plans for 85 plant taxa, addressing: (1) revitalising aging in vitro collections or developing new protocols for long-term storage, (2) guidance for future collection and storage efforts for these taxa, (3) developing methods to share feedback on propagule collections between plant conservation agencies/organisations, (4) application of a provenance tracking system to facilitate communication between HRPP and collectors, (5) adoption of common standards for data sharing, (6) providing recommendations for a breeding programme to revitalise the conservation value of certain collections. HPSG was instrumental in the establishment of a network of Rare Plant Facilities across the major islands of Hawaii. The mission of these facilities is to maintain and increase rare plant taxa for establishment back into appropriate habitats. In conjunction with these nurseries, HPSG established the Genetic Safety Net list, consisting of plants with 50 or fewer plants remaining in the wild. This list evolved into the Plant Extinction Prevention Program (PEPP), a statewide organisation that addresses conservation action for these critically rare plants. Our seed bank partnership has concentrated on collection of species for seed storage research. In conjunction with the USDA-ARS National Center for Genetic Resources Preservation, the partnership has provided a Best Practices Manual for genetic storage of Hawaiian plant propagules. Through this careful process, the Hawaii Seed Storage Initiative will become a model, world-class gene bank.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete Red List assessments of Plant Extinction Prevention species.
Research activities: number of guidelines developed.

Act
Technical advice: development of online Rare Plant Restoration Guideline based on workbook developed for the 2012 World Conservation Congress workshop held at Lyon Arboretum.

Communicate
Communication: participation in the 2020 World Conservation Congress.
Activities and results 2018

Assess

Red List
i. In 2018, a total of 53 Hawaiian plants were assessed for the Red List, bringing the total assessment to 484 plants, approximately 35% of the Hawaiian flora. (KSR #1)

Acknowledgements

The Hawaiian Plant Specialist Group would like to send out mahalo to all of our members and partners, especially to the Laukahi network, Lyon Arboretum’s Hawaiian Rare Plant Program, the Plant Extinction Prevention Program, National Tropical Botanical Gardens, the Hawaii Seed Bank Partnership, the State of Hawai‘i’s Division of Forestry and Wildlife, and the U.S. Fish and Wildlife Service.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5
Assess 1
Main KSRs addressed: 1
KSR: Key Species Result

Survey on Nihoa Island
Photo: Vickie Caraway

Alectryon macrococcus, Critically Endangered
Photos: HRPP, Lyon Arboretum
**Mission statement**
To support conservation of Korean plant diversity, for present and future generations, through interdisciplinary collaboration, applied conservation biology and professional development.

**Targets for the 2017-2020 quadrennium**

**Assess**
Red List: (1) complete reassessment of 20 species of Korean endemic plants; (2) assessments of Regional Red List status for North Korea reviewed by the Korean Plant Specialist Group (KPSG); (3) assessments of Regional Red List status for South Korea will be independently reviewed; (4) publication of North Korean Vascular Plants annotated checklist through the Global Biodiversity Information Facility (GBIF); (5) assessment of 50 sub-endemic vascular species from the Korean Peninsula.

Research activities: publish two books addressing Red List assessments of Korea’s higher vascular plants.

**Plan**
Policy: examine whether the guidelines by the Ministry of Environment (ME) successfully and appropriately apply the IUCN Red List criteria at the regional level.

**Act**
Conservation actions: implement conservation actions related to ex situ and in situ conservation, including plant introductions.

Technical advice: provide technical advice on biodiversity policy to the national institutions and universities in Korea.

**Network**
Capacity building: (1) plan a workshop on the restoration and reintroduction guidelines for the stable conservation of rare plants; (2) plan a workshop to build capacity among plant conservation practitioners to contribute toward achieving the Convention on Biological Diversity’s Global Strategy for Plant Conservation (GSPC) 2020 targets; (3) provide a Conservation Biology course to increase Red Listing capacities with the help of Korea National Arboretum.

Synergy: participate in workshops presented by KPSG and Korea National Arboretum (KNA).

**Communicate**
Communication: (1) build a website for the higher vascular plants of the Korea Red List; (2) build a website for the higher vascular plants of the Korea Plant Red List.

**Activities and results 2018**

**Assess**
Red List
i. KPSG and KNA have finished discussing the new research project of the reassessment of endemic species. (KSR #1)

ii. We have built a website for the vascular plants of the Korea Red List (http://hosting03.snu.ac.kr/~quercus1/IUCN%20Red%20List%202018-1.htm) as a window for the process of information exchange and participation. (KSR #1, 8)

iii. Six species endemic to the Korean peninsula were published on the IUCN Red List during 2017-2018, as a result of the three-year Korea National Arboretum-funded project to assess the conservation status of the Korean Peninsula flora. (KSR #1)
Research activities

i. Publication of two books addressing Red List assessments of Korea’s higher vascular plants, which included methods, procedures and results. In these publications, we provided conservation advice based on results. We also provided advice in regards to the Korean higher vascular plants Red List. Titles: (1) The Red List of Selected Vascular Plants in Korea, and (2) The Red List of Vascular Plants in Korea updated 2018. (KSR #1, 8)

Plan

Policy

i. Two research articles produced to examine whether the guidelines by the Ministry of Environment (ME) successfully and appropriately apply the IUCN Red List criteria at the regional level and whether the Rare and Endangered National List can be considered well-founded, and addressed an assessment and review of the IUCN Red List for vascular plants in the Korean peninsula. (KSR #43)

Act

Conservation actions

i. We have completed a basic inventory to monitor an endangered species, Scrophularia takesimensis, in Uleung Island. Ongoing population monitoring will be scheduled in 2019 for the population viability analysis. (KSR #12)

Technical advice

i. Our members have provided technical advice on biodiversity policy to the national institutions and universities in Korea, in relation to the most common errors involved when applying the species extinction concept of the Red List criteria at the regional level in case of plant population extinctions in South Korea. (KSR #5)

Network

Capacity building

i. KPSG and KNA held a workshop on the restoration and reintroduction guidelines for the stable conservation of rare plants from 5–8 September 2018. Courses on rare plant reintroduction were organised by members of KPSG and KNA with two guest speakers (Dr. Joyce Maschinski from Fairchild Tropical Botanic Garden and Matthew A. Albrecht from Missouri Botanical Garden). These courses provided opportunities to promote biodiversity conservation actions.

ii. As part of the National Arboretum’s capacity building programme to preserve biodiversity, a workshop was organised to strengthen the competence of plant conservation practitioners to achieve the Convention on Biological Diversity’s Global Strategy for Plant Conservation (GSPC) 2020 targets. Two experts in the restoration of rare plants from the Center for Plant Conservation (CPC) and the Missouri Botanical Garden shared experiences and know-how in related fields and discussed ways to restore and reintroduce rare plants in Asia.

iii. We are planning the 2019 Conservation Biology course to increase Red Listing capacities with the help of KNA. (KSR #5)

Synergy

i. Our members have participated in the workshops organised by KPSG and KNA. (KSR #29)

Communicate

Communication

i. We have built a website for the vascular plants of the Korea Red List (http://hosting03.snu.ac.kr/~quercus1/IUCN%20Red%20List%202018-1.html) as a window for the process of information exchange and participation. (KSR # 28)

Acknowledgements

We are grateful to all the members of the Korea National Arboretum and other colleagues from Korea who provided essential advice, invaluable guidance, and supplementary information on the plant species included in the database.

Summary of activities 2018

| Species Conservation Cycle ratio: 5/5 |
|---|---|---|
| Assess | 4 | 4 |
| Plan | 1 | 1 |
| Act | 2 | 2 |
| Network | 4 | 4 |
| Communicate | 1 | 1 |

Main KSRs addressed: 1, 5, 8, 12, 28, 29, 43

Resolutions addressed: WCC-2016-Res-016

KSR: Key Species Result
Mission statement

The IUCN SSC Macaronesian Islands Plant Specialist Group (MIPSG) will act as a mechanism for driving and implementing urgent conservation actions across the region, supported by solid and updated scientific evidence, in a collaborative framework that encompasses regional Universities, Botanic Gardens and Administrations.

Projected impact for the 2017-2020 quadrennium

Considering that two of the main weaknesses previously identified for the Macaronesian Region are ‘Lack of laws or enforcement’ and ‘Poor education and awareness’, by the end of 2020 we envision to have accomplished several public outreach activities, and to have promoted meetings with political actors, aimed at an effective application of scientific results for improving and enforcing existing nature protection laws. We also aim to have completed assessments for all Azorean endemic species, in order to provide environmental government stakeholders with a tool to implement conservation actions in the archipelago.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) complete and publish new Red List assessments on Macaronesian plants on the IUCN Red List of Threatened Species website; (2) update existing assessments on Macaronesian plants on the IUCN Red List of Threatened Species website.

Research activities: (1) monitor populations of Critically Endangered and Endangered taxa and diagnosis of their current threat status; (2) monitor the distribution ranges of invasive plants, animals, and other consequences of global changes; (3) develop completed cartography of habitat types; (4) develop activities such as enrichment of public biological databases, and seed and herbarium material held by different institutions; (5) application of genetic and taxonomic information to reveal populations, cryptic species or lineages worthy of increased protection; (6) monitor populations of Critically Endangered, Endangered, and Vulnerable taxa.

Plan

Planning: (1) upscale the application of multi-disciplinary research results (reproductive biology, genetics, taxonomy, ecology) in the planning of reinforcements, reintroductions and/or assisted migrations of plant endemics; (2) develop Critically Endangered and Endangered species recovery plan documents in the Canaries.

Act

Conservation actions: (1) in situ and ex situ conservation (seeds and living collections) of Critically Endangered and Endangered plants and preventive sampling of seeds of more widely distributed plant taxa; (2) eradication/ control of invasive plants and mammals in protected natural spaces.

Network

Synergy: (1) network with research institutions related to the conservation of insular floras; (2) develop an early warning network for the detection of invasive alien species.

Communicate

Communication: develop different outreach programmes aimed at stimulating actions and social awareness of the importance and degree of threat of insular floras.

Scientific meetings: (1) organise periodical meetings of the MIPSG panel members by video-conference or in the Macaronesian archipelagos, during FloraMAC congresses;
include sessions/discussion panels on the activities and deliverables of the MIPSG in FloraMAC or other regional or international island plant biology meetings.

Activities and results 2018

Assess

Red List

i. Two reassessments were carried out for endemic Azorean plant taxa: Euphorbia stygiana H.C. Watson subsp. santamariae H. Schaef. and Pericallis malvifolia (L’Hér.) B. Nord. subsp. caldeirae H. Schaef. Assessment of new Umbilicus taxa described for Cabo Verde and reassessment of Umbilicus schmidtii. (KSR #1)

Research activities

i. In Azores, the Seed Bank collection of Faial Botanic Garden was enriched, as well as the collections of the Universidade dos Açores herbaria (AZB and AZU). In Madeira, exchange of seeds and herbarium material was conducted with two national and foreign institutions (University of Madeira and Jardín Botanico Viera y Clavijo, Canary Islands). A list of native trees from Cabo Verde was compiled. (KSR #43)

ii. Publication of checklist of crop wild relative (CWR) species for Cabo Verde. (KSR #18)

iii. Monitoring was achieved by the Faial Botanic Garden for two species in three islands of the Azores in 17 project areas (areas under Project LIFE VIDALIA (LIFE17 NAT/PT/000510)). Additionally, monitoring of 19 species was also conducted under seed banking activities and of four species, in the islands of Faial and Pico. (KSR #12)

iv. Monitoring was achieved in Azores by the Faial Botanic Garden for invasive species present in 17 project areas (areas under Project LIFE VIDALIA (LIFE17 NAT/PT/000510)) in three Azorean islands. Additionally, monitoring of 30 invasive plants was achieved in Terceira by the University of Azores. (KSR #13)

Plan

Planning

i. In Azores, Faial Botanic Garden developed one conservation project: LIFE VIDALIA (LIFE17 NAT/PT/000510). Other results include publication of three papers and one review in a book chapter for Cabo Verde. (KSR #31)

Act

Conservation actions

i. Thirty-seven samples of 19 taxa were collected, processed and stored in the Azores Seed Bank. In Canaries, in situ actions were conducted during 2018 for species with “approved recuperation plans” (Helianthemum bystropogophyllum, Helianthemum inaguense, Isoplexis chalcantha, Kunkeliella canariensis, Lotus kunkelii, Pericallis appendiculata var. preauxiana, Pericallis hadrosoma, Sideritis discolor, Solanum vespertilio ssp. doramae). (KSR #31)

ii. In Azores, Faial Botanic Garden developed control activities in five protected natural spaces on the island of Faial. In Madeira, within the scope of the Life Recover Natura Project control of Phalaris sp., about 5.7 ha at Desertas Grand Island were controlled and within the scope of the After LIFE LIPS Project, maintenance work on the Nicotiana glauca species was conducted in Ilhéu de Cima (Porto Santo Island). Control of Carpobrotus edulis, Arundo donax and Ricinus communis was also conducted at Dunas da Piedade (eastern Madeira Island) in about 10 ha and control of Ulex europaeus and Cytisus scoparius was also conducted at Paúl da Serra (central plateau area at Madeira island), in about 150 ha. (KSR #13)

Communicate

Communication

i. A kick-start meeting took place 29–30 November 2018 in Gran Canaria. (KSR #28)

ii. A communication was presented at FloraMAC 2018 Madeira. (KSR #28)

Acknowledgements

We thank the Cabildo de Gran Canaria for sponsoring the kick-off meeting of the group on 29–30 November 2018 through the budget of the Jardín Botánico Canario "Viera y Clavijo" – Unidad Asociada al CSIC. We would also like to thank Dirección Regional de Ciencia e Tecnología and Dirección Regional do Ambiente, Governo Regional dos Açores, for helping cover the costs of a training workshop that will take place during 2018 in the Azores archipelago and the SSC Internal Grants for co-sponsoring this workshop.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

Assess 5

Plan 1

Act 2

Communicate 2

Main KSRs addressed: 12, 13, 18, 28, 31, 43

KSR: Key Species Result
Mission statement

The mission of the Madagascar Plant Specialist Group (MPSG) is to increase the knowledge on Madagascar plant diversity (flora and habitats) by assessing and/or reviewing their conservation status (especially for IUCN and CITES) and promote their conservation by identifying conservation priorities, giving recommendations for their survival, and reinforcing people’s efforts toward the conservation of plant diversity.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision that we will complete the assessment of 3,500 Madagascar plant species, which represents one of the targets of the Barometer of Life. By achieving that goal, we hope to increase our knowledge of the Key Biodiversity Areas (KBAs) of our country. Through the implementation of conservation programmes developed by ourselves and in collaboration with our partners, we hope to bring to the local communities the capacity to restore the threatened crop wild relative species and patrimonial species through setting up of nurseries, in situ and ex situ conservation activities and developing management plans for natural resources. We also plan to generate more knowledge for Data Deficient species by conducting research on lost species that have not been collected for more than 50 years. Since the MPSG is also part of the CITES scientific authority of Madagascar, the assessments that have already been done or will be done during the 2017-2020 quadrennium, especially those on orchids, succulents and timber wood (palissander, rosewood and ebony), will contribute to reinforce implementation of CITES’ rules.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) reassess and review assessment of a total of ca. 1,700 Madagascar plant species; (2) review assessment of a total of ca. 350 endemic species belonging to different taxonomic groups or belonging to specific habitats; (3) assess and review assessments of ca. 2,000 Madagascar trees; (4) start a national Red List for plants.

Research activities: research on lost species from Madagascar.

Plan

Planning: elaborate a conservation strategy for threatened wild yams and the most used yams from Madagascar.

Act

Conservation actions: (1) traditional knowledge and conservation and restoration of patrimonial plant species in Vohibola forest (KBA); (2) elaborate a national strategy for plant conservation in Madagascar.

Network

Capacity building: workshop on the integration of Knowledge Products mobilised by IUCN through IBAT to support decision making.

Activities and results 2018

Assess

Red List
i. The 730 species assessed in the framework of the Critical Ecosystem Partnership Fund (CEPF)/Botanic Gardens Conservation International (BGCI)/MPSG report, added to the 920 species that were already assessed prior to 2017, bring the total number of species assessed to ca. 1,700 species. (KSR #2)
ii. All the endemic species were reviewed by MPSG in 2017/2018. (KSR #2)
During the first year of the project, 730 species, of which 157 are Least Concern, were assessed and reviewed in December 2018. Seventy-six species were submitted. Three students received training during the training workshop on the IUCN SIS database together with 20 members of MPSG in May 2018. Those students undertook field assessment of one species each and drafted a conservation action plan for each species. Student reports are to be presented in a thesis for their master’s degree. (KSR #2)

We are looking for training and funding to help us develop our National Plants Red List. (KSR #2, 9)

Research activities

The survey on lost species from Madagascar allowed us to identify 1,740 species; i.e. species that have not been collected in the last 50 years and may be presumed extinct. Out of those 1,740 species, 413 are only known from the type specimen or from one locality, there with a very high risk of extinction. By overlapping protected areas, vegetation types and deforestation history maps with the distribution of the lost species, we were able to identify the sites where some species have a greater chance of being re-collected. Those are the species that are located within protected areas or in still-intact types of vegetation. Thus, the results of our study will guide us in our future search of lost species in the field. This research allowed one student to write a master’s degree thesis, which will be defended in June 2019. (KSR #12)

Plan

Planning

National strategy for the conservation of Madagascar wild yams drafted and to be validated by the Ministry of Environment. (KSR #15)

Act

Conservation actions

Besides Ravenala madagascariensis, five flag species which are used by the local communities of the project site of the classified forest of Vohibola were identified and described. All five species, which are endemic to Madagascar (Faguetia falcata, Intsia bijuga, Faucheria glutinosula, Asteropelia multiflora and Humberto-dendron sabotreau), are used by the population and are all threatened. Participative action plans were drafted for all five species and restoration for some of the species was undertaken by planting seeds, cuttings or offspring. We now aim at classifying the forest as a protected area. One master’s student participated in the project and wrote a master’s thesis on the five flag species and was trained in assessing conservation status in the field. Final report was submitted to CEPF who funded the project. (KSR #37)

Network

Capacity building

The workshop on the integration of Knowledge Products mobilised by IUCN through IBAT to support decision making aimed to discuss the use of integrated global datasets (e.g. The IUCN Red List of Threatened Species™, ProtectedPlanet™ and the World Database of Key Biodiversity Areas), as well as emerging and national datasets (e.g. Red List of Ecosystems, Rebioma and other Malagasy tools), to aid decision making, national reporting, and implementation of the National Biodiversity Strategy and Action Plan (NBSAP) for Madagascar. The workshop was well-attended, with about 50 participants from five different ministries (Environment, Land-use Planning, Agriculture, Mines, and Fisheries), NGOs, national foundations, German Development and Cooperation Agency (GIZ), European Union, and one company from the private sector. Overall, we received very positive outcomes and good feedback from the participants on this workshop and the usefulness of IBAT for Research and Conservation for informing decision making in Madagascar and for reporting on national strategies, especially on the NBSAP. (KSR #18)

Acknowledgements

We thank the Critical Ecosystem Partnership Fund (CEPF) that helped us to cover different costs: the funding of the project in Vohibola forest, the assessment of the trees from western Madagascar KBAs, the training workshop and the review workshop for the trees from western KBAs. We also want to thank Sarah Oldfield from the Global Tree Specialist Group, Malin Rivers and Emily Beech from BGCI who provided Red Listing training and assistance during the western KBAs trees project.

Summary of activities 2018

| Species Conservation Cycle ratio: 4/5 |
| Assess | 5 |
| Plan | 1 |
| Act | 1 |
| Network | 1 |

Main KSRs addressed: 2, 9, 12, 15, 18, 37

KSR: Key Species Result
Mission statement
No formal mission statement.

Projected impact for the 2017-2020 quadrennium
Globally, mangrove species and mangrove ecosystems are still under grave threats due to urbanisation and other forms of exploitation. The impact of these threats is potentially exacerbated by global climate change, such as sea level rise. We aim to complete an updated assessment of the approximately 80 species of mangroves within this quadrennium, with particular reference to how these anthropogenic impacts may influence their long-term survivorship. We also expect to contribute significantly to IUCN’s new initiative on Red Listing ecosystems. We shall also continue to contribute to the current knowledge base for global mangrove conservation, through organising international workshops and symposia.

Assess
Red List: (1) complete assessment of 80 species of mangroves; (2) participate in the Red Listing of significantly threatened ecosystems.

Network
Scientific meetings: promote information and experience sharing among Mangrove Specialist Group members.

Communicate
Research activities: publication of a special issue on mangrove conservation.

Activities and results 2018
Assess
Red List
i. Talks started with relevant assessment units for a reassessment at the species level and an assessment at the ecosystem level. (KSR #2)

Communicate
Research activities
i. Submission deadline and handling (review, response to authors, etc.) of more than 35 manuscripts on mangrove conservation; eight papers published (online) by end of 2018. (KSR #32)
Summary of activities 2018

Species Conservation Cycle ratio: 2/5

Assess 1

Communicate 1

Main KSRs addressed: 2, 32

KSR: Key Species Result

Lumnitera racemosa flowers, Bali, Indonesia
Photo: John Yong

Bruguiera gymnorhiza flowers, Merbok, Malaysia
Photo: John Yong

IUCN Least Concern

Plantae
Co-Chairs
Vikash Tatayah (1)
Stéphane Baret (2)

Red List Authority Coordinator
Kersley Pynee (3)

Location/Affiliation
(1) Mauritian Wildlife Foundation, Vacoas, Republic of Mauritius
(2) Parc National de La Réunion, Réunion, France
(3) National Parks and Conservation Service, Ministry of Agro Industry and Food Security, Port Louis, Republic of Mauritius

Number of members
40

Mission statement
To conserve native plants of the Mascarene Islands.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we hope to significantly advance towards finalisation of the national Red List of endemic plants of Mauritius and Rodrigues. We also hope to establish or reinforce collaboration with a number of international conservation organisations, and take actions significantly improving the conservation of at least 10 endemic plant species. We expect to keep a fully up-to-date database of all plants present in La Réunion in order to deliver regular Red List reassessments of the entire Réunion Flora to guide our conservation actions. We envision producing factsheets on techniques for how to grow each rare plant species from La Réunion, and publishing several conservation action plans for our most threatened endemic plant species. We also expect to prevent the complete loss of a patrimony and a unique biodiversity in the world: La Réunion dry forest. And, last but not least, we hope to increase knowledge and information exchange between researchers and conservationists on-the-ground to ultimately improve the conservation of rare plant species from La Réunion.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete the assessment of 200 endemic plants from Mauritius and Rodrigues.
Research activities: (1) update on a regular basis the database of all plants present in La Réunion, including rare plant species; (2) develop new knowledge to improve the conservation of rare plant species from La Réunion (both research and grey literature).

Plan
Planning: publish emergency action plans for Extinct in the Wild plant species (22 species) and national or local action plans for rare plant species (39 species).

Act
Conservation actions: (1) conserve in situ and/or ex situ 50 Critically Endangered plant species from Mauritius and Rodrigues; (2) contribute to the successful implementation of the project ESPECE (Études et Sauvegarde des Plantes En danger Critique d’Extinction; www.reunion-parcnational.fr/); (3) contribute to the successful implementation of the project LIFE+ forêt sèche, which aims to prevent the complete loss of a patrimony and a unique biodiversity in the world: La Réunion dry forest (general information at www.foretseche.re/en/).

Network
Capacity building: conduct training courses in plant conservation.
Synergy: develop or reinforce collaboration with at least three international conservation organisations.

Communicate
Technical advice: publish factsheets on techniques for how to grow each rare plant species from La Réunion.
Activities and results 2018

Assess

Red List

i. We have pre-assessed 281 endemic plants from Mauritius; ca. 20 have been entered into the IUCN SIS database. (KSR #1, 2, 32)

Research activities

i. In 2018, in terms of ex situ conservation, 633 individuals of the 28% of threatened flora (including CR, EN, VU) are planted in ex situ collections in the Conservatoire Botanique National de Mascarine garden. Eighty-eight new batches of threatened species (mainly CR and EN) harvests (3,380 diaspores across 48 species) will feed these collections or in situ conservation operations in the short term. From the CBNM nursery, a total of 67 individuals across 16 threatened taxa have contributed to the ex situ collections of our scientific and technical partners. (KSR #32)

ii. New knowledge on rare plants acquired with the discovery of a new taxon for La Réunion (Leptadenia cf. madagascariensis), a new fern with a hybrid origin, and new pollinators on Hibiscus boryanus (more info here: www.cahiers-wio.org), as well as a new publication on the role of woody plant fleshy-fruits. (KSR #32)

Plan

Planning

i. Two new national conservation action plans for Extinct in the Wild species have been published. (KSR #15)

Act

Conservation actions

i. Discussions and collaborations initiated with four institutions to conserve in situ and/or ex situ 50 Critically Endangered plant species from Mauritius and Rodrigues. (KSR #29)

ii. Phases 1 to 3 of project ESPECE have been finalised; harvest and multiplication have just been initiated in 2018. (KSR #25, 27)

iii. For the implementation of Project LIFE+ forêt sèche: 17,589 indigenous individual plants have been planted, of which 7,320 are threatened. (KSR #31)

Network

Capacity building

i. Four training sessions on databases (online and face-to-face) and propagation were organised, contributing to training in plant conservation. (KSR #17)

Synergy

i. Discussions and collaborations were initiated with three institutions: Conservatoire Botanique National de Brest (France), Botanical Gardens Conservation International, and Missouri Botanical Gardens Conservation International. We would like to thank also all the people who worked with the IUCN SSC Mascarene Island Plant Specialist Group in La Réunion to preserve our rare plant species (National Botanical Garden, Forestry services, National Park, CIRAD, University of La Réunion). This includes NGOs (such as the friends of plants and nature -APN-, Plant Ali and others) and individuals who are all instrumental to restore our rare forest habitats to save our threatened plant species: José Minatchy, Max Félicité, Raymond Lucas and many others. Special thanks go as well to our dear colleagues who have contributed significantly to improve our knowledge on rare plants species and their conservation in La Réunion: Christian Fontaine, Frédéric Picot, Dominique Strasberg, Joel Dupont, Vincent Bouillet and many others.

Communicate

Technical advice

i. Techniques for how to grow 18 rare new species from La Réunion have been described through a specific factsheet. (KSR #18)

Acknowledgements

We thank all our partners: National Parks and Conservation Service, Forestry Service, Mauritius Herbarium, Rodrigues Regional Assembly, Mauritian Wildlife Foundation, Missouri Botanical Garden, Conservatoire Botanique National de Brest (France), Royal Botanical Gardens Kew (for Mauritius and Rodrigues), Botanical Gardens Conservation International. We would like to thank also all the people who worked with the IUCN SSC Mascarene Island Plant Specialist Group in La Réunion to preserve our rare plant species (National Botanical Garden, Forestry services, National Park, CIRAD, University of La Réunion). This includes NGOs (such as the friends of plants and nature -APN-, Plant Ali and others) and individuals who are all instrumental to restore our rare forest habitats to save our threatened plant species: José Minatchy, Max Félicité, Raymond Lucas and many others. Special thanks go as well to our dear colleagues who have contributed significantly to improve our knowledge on rare plants species and their conservation in La Réunion: Christian Fontaine, Frédéric Picot, Dominique Strasberg, Joel Dupont, Vincent Bouillet and many others.

Summary of activities 2018

| Species Conservation Cycle ratio: 5/5 |
|---|---|
| Assess | 3 |
| Plan | 1 |
| Act | 3 |
| Network | 2 |
| Communicate | 1 |

Main KSRs addressed: 1, 2, 15, 17, 18, 25, 27, 29, 31, 32

KSR: Key Species Result
Mission statement
The Medicinal Plant Specialist Group (MPSG) is a global network of specialists contributing within our own institutions and in our own regions, as well as world-wide, to the conservation and sustainable use of medicinal plants. The MPSG was founded in 1994 to increase global awareness of conservation threats to medicinal plants, and to promote sustainable use and conservation action.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision a significant increase in knowledge of the conservation status of priority species of medicinal and aromatic plants, planning and actions to conserve and sustainably use these species, and to promote sustainable use and conservation action.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete IUCN Red List assessment of 1,500 priority species of medicinal and aromatic plants.
Research activities: increase the visibility and recognition of the contribution of medicinal and aromatic plant conservation and sustainable use to livelihoods, health, food security, and biodiversity.
Plan
Policy advice: promote the recognition of the sustainable use, trade and conservation of medicinal and aromatic plants in policy and action at the global, regional and national levels (action via Convention on Biological Diversity (CBD), CITES, World Health Organization (WHO), International Treaty on Plant Genetic Resources (ITPGR), and other policy fora).
Act
Conservation activities: (1) develop and implement Plants for People initiatives for medicinal plants in at least three regions; (2) contribute to the implementation of the FairWild Standard and certification scheme for sustainable use of wild plants for at least 50 species, 50 companies and 20 countries.
Network
Synergy: increase the visibility and recognition of the contribution of medicinal and aromatic plant conservation and sustainable use to livelihoods, health, food security, and biodiversity.
Communicate
Communication: increase the visibility and recognition of the contribution of medicinal and aromatic plant conservation and sustainable use to livelihoods, health, food security and biodiversity.

Activities and results 2018
Assess
Red List

i. In partnership with the Albuquerque BioPark, we identified a preliminary list of 300 priority species of North American medicinal plants for assessment, and have subsequently identified a comprehensive list of ca. 3,200 North American medicinal plant species for assessment/reassessment within an ongoing North American regional Plants for People (medicinal plants) initiative, should funding and Red List support continue. The initial 300 priorities include 16 WHO monographed species, 10 CITES Appendix II-listed species, 43 species included as herbs in trade by the American Herbal Products Association, and 100 medicinal plant species and close
relatives considered conservation priorities by the United Plant Savers. Approximate 120 draft assessments were completed in 2018. (KSR #1)

ii. One assessor (Albuquerque BioPark staff) was trained in Red List assessment. (KSR #5)

iii. Some ad hoc progress on medicinal plant assessments via other regional projects, e.g. 20 medicinal plant species included in freshwater plant assessments for the Lake Malawi/Nyasa/Niassa catchment. None of these is included, however, in the 1,500 species identified as MPSG global priorities for Red List assessment. (KSR #2)

**Research activities**

i. The Wild at Home report was finalised and launched for the social media FairWild week 2018, providing an update on the IUCN Red List assessment of known medicinal plants (only ~7% were found assessed; of those 20% are threatened): Jenkins, M., Timoshyna, A. and Cornthwaite, M. (2018). Wild at Home: Exploring the global harvest, trade and use of wild plant ingredients. Cambridge, UK: TRAFFIC. Available at https://www.traffic.org/site/assets/files/7339/wild-at-home.pdf and launched by IUCN here: https://www.iucn.org/news/species/201806/wild-home-threats-and-opportunities-trade-wild-plants. (KSR #28)


iii. Initial discussion with Canadian Wildlife Federation to launch an iNaturalist citizen-science project to collect current population distribution, size, and trend data for priority species of North American medicinal plants. (KSR #29, 31)

**Plan**

**Policy advice**

i. Application of CITES non-detriment findings (NDF) guidance for perennial plants: CITES 9-step perennials NDF guidance, developed by TRAFFIC and German government (BfN), and applicable to CITES Appendix II listed medicinal and aromatic plants, is now available in English, Spanish, Chinese, Georgian, Korean, French, Italian and soon in Portuguese. The last four translations were carried out by countries themselves, showing how valuable they consider the guidance to be. Use of the 9-step guidance has now been written into Georgia’s legislation for managing trade. (KSR #26)


iii. MPSG engagement in CITES processes: There is an opportunity for specific engagement at, and as a follow-up to, the upcoming CITES Conference of Parties (CoP) in August 2019 (postponed from May 2019), with CITES Secretariat submitted document on the work on medicinal plants. (KSR #26)
iv. There was no progress on the publication of the revised WHO/IUCN/WWF/TRAFFIC Guidance on Conservation of Medicinal Plants; the Wild at Home publication provided a relevant update on the known threats (assessed against the IUCN Red List) to medicinal plants, opening the opportunity to engage with a range of key collaborators. (KSR #26)

v. Recognition of the role of medicinal and aromatic plants (MAPs) and FairWild in supporting the delivery of Target 12 (and Objective 3) of the Global Strategy for Plant Conservation: Information is being provided to the Global Partnership for Plant Conservation (GPPC) in an ad hoc manner, and MPSG members’ contributions will be further coordinated in the run-up to the 2020 CBD CoP in China. Meanwhile, the MSPG Co-Chair is invited to speak at the Global Plant Conservation Congress in October 2019, Chengdu, China. (KSR #26)

**Act**

**Conservation actions**

i. Some progress in 2018 on identifying a core regional partnership in Latin America for a regional Plants for People initiative. (KSR #29, 30, 31)

ii. Core partnership for North American initiative developed and implemented with Albuquerque BioPark, NatureServe US. Other North American partner organisations under discussion. (KSR #29, 30, 31)

iii. Risk analysis factors for sustainable wild harvest of fungi drafted in consultation with members of IUCN SSC fungi Specialist Groups and other experts. Presentation of a brief talk and poster at the Royal Botanic Gardens, Kew State of the World’s Fungi symposium, September 2018. (KSR #36)
**Network**

**Synergy**

i. Partnership identified and being followed-up on with the United Plant Savers (UPS), an IUCN Member (the Head of the organisation is an MPSG member), to launch the special edition of the Journal of Medicinal Plant Conservation (flagship publication of UPS) as a partnership product between MPSG and UPS. This is now planned for 2020, prior to the IUCN World Conservation Congress 2020. (KSR #34)

ii. Linkages with other Specialist Groups: collaboration/communication established with Orchid, Carnivorous Plant, Global Trees, Palm, Cacti and Succulent Specialist Groups on Red List assessment/reassessment of priority species of North American medicinal plants. Engagement with the IUCN Sustainable Use and Livelihoods Specialist Group, in particular around the Central Asia sustainable use workshop. (KSR #33, 34)

**Communicate**

**Communication**

i. Website: Co-Chair personal investment in creating a new platform to develop a website independent of IUCN’s limitations in self-web-site management; no funding or other support yet available. (KSR #28, 33, 34)

ii. Conferences and presentations: (1) ‘CITES and certification of medicinal and aromatic plants’: presentation at a CITES Plants Committee side-event, July 2018 (Anastasiya Timoshyna); (2) ‘Sustainability, livelihoods and health: implementing best practices for wild harvesting and trade in plants’: presentation at the meeting of the working group on Traditional Chinese Medicine, July 2018 (Anastasiya Timoshyna); (3) ‘Wild plants trade: Opportunities of Sustainable and Legal Trade’: presentation at the IUCN Sustainable Use and Livelihoods in Central Asia workshop, September 2018 (Anastasiya Timoshyna); (4) ‘Succeeding with CITES: Sustainable and equitable Jatamansi trade from Nepal’: presentations at the project launch, September 2018 (Anastasiya Timoshyna); (5) Keynote address on conservation and sustainable use of Latin American medicinal plants, XII Latin American Botanical Congress, Quito, Ecuador, October 2018 (Danna Leaman); (6) Sustainable and equitable trade in wild medicinal and aromatic plants: Case studies from China, Nepal, Viet Nam and India, CITES and Livelihoods International Workshop, November 2018 (Anastasiya Timoshyna). (KSR #28, 33, 34)

**Summary of activities 2018**

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Main KSRs addressed: 1, 2, 5, 26, 28, 29, 30, 31, 33, 34, 36

**Acknowledgements**

We thank the following donors and organisations for support in 2018: New Mexico BioPark Society / Albuquerque BioPark for funding a full-time Red List assessor position and for choosing to focus on North American medicinal plants, and we thank Clayton Meredith for his amazing work in this capacity; NatureServe US for contributions to determining priorities for Red List assessments of North American medicinal plants, and to a major publication on the conservation status assessment of *Hydrastis canadensis* (Goldenseal); TRAFFIC International for support in developing risk analysis factors adapted to fungi, as well as the implementation of a project on *Nardostachys grandiflora* (supported through the UK’s Darwin Initiative Grant); Latin American Botanical Association for support to participate in/present to the XII Latin American Botanical Congress. The German Federal Agency for Nature Conservation (Bundesamt für Naturschutz, BfN) is acknowledged for providing financial support to the implementation of projects concerning medicinal plants and CITES.
Mission statement
Implementation of field conservation projects for Critically Endangered Mediterranean plants with authorities and local populations / Identification of Important Plant Areas in Mediterranean countries / Raising plant conservation profile in the Mediterranean / Networking with botanists and conservationists / Sharing best practices in plant conservation / Education and raising awareness of the public and stakeholders at regional, national and local levels.

Projected impact for the 2017-2020 quadrennium
For the end of the quadrennium, the Mediterranean Plant Specialist Group (MPSG) intends to continue to make IUCN Red List assessments of the most threatened restricted endemic taxa, as well as to implement ex situ and in situ conservation actions with a special focus on non-European Union Mediterranean countries. The networking of specialists in the conservation of Mediterranean flora will be strengthened. The MPSG will continue to offer multilateral programmes for the conservation of flora and raise awareness among donors and policy makers. MPSG will continue to be a partner and adviser of CEPF (Critical Ecosystem Partnership Fund) and of the IUCN Centre for Mediterranean Cooperation.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete thirty Red List assessments.

Act
Conservation activities: (1) in situ conservation measures implemented for 30 threatened plants; (2) ex situ conservation measures implemented for 50 threatened plants; (3) identify 50 Key Biodiversity Areas (KBAs) for plants.

Activities and results 2018
Assess
Red List
i. Twenty-two Red List assessments and reassessments sent to the Red List Unit. (KSR #1)

Act
Conservation activities
i. Twenty-five in situ plant conservation projects implemented. (KSR #31)
ii. Thirty-five ex situ plant conservation projects implemented. (KSR #31)
iii. Thirty KBAs for plants identified. (KSR #22)

Acknowledgements
We thank the following donors and partners that fund our projects and greatly helped to implement the in situ and ex situ conservation actions: MAVA Foundation, Switzerland; Söller Botanical Garden Foundation, Balearic Islands; Hortus Botanicus Karalitanus – University of Cagliari, Sardinia; CIHEAM Mediterranean Agro-Nomic Institute of Chania, Crete; Department of Forests, Cyprus; Office of the Environment of Corsica – Conservatoire Botanique National de Corse, University of Catania, Sicily; Agricultural Research Institute, Cyprus; The IUCN Centre for Mediterranean Cooperation, Malaga, Spain.
Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 22, 31

KSR: Key Species Result

Paeonia morisii, Endemic of Sardinia
Photo: Aline Perez-Graber

Genista aetnensis, Endemic of Sicily, Sardinia and Corsica
Photo: Aline Perez-Graber

In situ conservation of Rhamnus persicifolia, an extremely rare endemic tree of Sardinia (CARE MEDIFLORA Project)
Photo: Bertrand de Montmollin

Plantae
Mission statement

Orchidaceae are the largest family of flowering plants and they occur in a wide range of ecosystems and habitats. A charismatic group, many species are important in horticulture. Habitats of orchids are, however, threatened throughout the world, and the Orchid Specialist Group (OSG) is dedicated to their conservation and sustainable use.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision a substantial advance in our understanding of threats to orchids. This will be achieved in the following ways: (1) global assessments will be published for a range of taxonomic and geographical subsets of orchids; (2) meetings will be organised to facilitate the exchange of information between orchid conservation practitioners (members of the OSG and others) to ensure that best practice is followed in orchid conservation; (3) we will strive to involve young orchid conservationists from a diversity of countries, especially those with high orchid diversity and perceived threat; (4) we will work with the CITES authorities and others to improve awareness and monitoring of orchid trade, much of which is currently undocumented, illegal and unsustainable.
Plan

Policy advice
1. The final version of the review of orchid conservation was submitted on schedule and has appeared in *Botanical Studies*. It has also been translated for a French orchid magazine. (KSR #26)

Network
Proposal development and funding
1. Funds raised for 15 full and partial bursaries for students from developing countries to attend IOCC VII.

Synergy
1. Consolidation of two new working groups within OSG is underway: Trade Group functioning well and Molecular Identification Group now taking shape. A PhD student who will work on the development of molecular tools has started with the Chair of the Molecular Identification Group and the Chair of the OSG.

Communicate

Scientific meetings
1. Planning for IOCC VII on schedule and webpage launched. (KSR #28)

Acknowledgements
We thank the Lennox Boyd Trust, Orchid Conservation International and the Linnean Society for contributions towards the bursary fund for the 7th International Orchid Conservation Congress. We are most grateful to friends and family of the late Amy Morris who also funded a bursary.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

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Orchis militaris, type species of the family, at one of only three sites in England
Photo: Maarten Christenhusz

Reintroduced Cypripedium calceolus in northern England
Photo: Leif Bersweden

Orchis militaris, type species of the family, at one of only three sites in England
Photo: Maarten Christenhusz

Orchid species

Reintroduced Cypripedium calceolus in northern England
Photo: Leif Bersweden

Ophrys tenthedinifera, a species likely to migrate northwards due to climate change
Photo: Maarten Christenhusz

KSR: Key Species Result
Chair
Thomas Couvreur

Red List Authority Coordinator
Ariane Cosiaux

Location/Affiliation
(1) Institut de Recherche pour le Développement, UMR DIADE, Montpellier, France
(2) Institute of Geography and Sustainability, University of Lausanne, Lausanne, Switzerland

Number of members
36

Mission statement
To conserve palms by assessing the threats that they face and developing programmes to protect palm species for the future.

Targets for the 2017-2020 quadrennium
Assess
Red List: expedite assessment of Least Concern palms (work led by Royal Botanic Gardens, Kew).
Research activities: study the ethnoecology of Raphia mambillensis in North Western Cameroon.

Network
Synergy
i. We have updated our member list, adding 13 new members, mainly young researchers.

Activities and results 2018
Assess
Red List
i. Red Listing of palms is continuing. All African palm species have been published on the IUCN Red List in 2018. Regional assessments in Colombia are being finalised. Several Haitian palms have also been assessed. (KSR #1)

Research activities
i. A PhD has started on this project in 2019. (KSR #43)

Acknowledgements
We thank the following donors: Environment Agency of Abu Dhabi (United Arab Emirates) via the Chair of the IUCN Species Survival Commission (SSC); the French Foundation for Research on Biodiversity (FRB) and the Provence-Alpes-Côte d’Azur region (PACA) region via the Centre for Synthesis and Analysis of Biodiversity data (CESAB) RAINBIO research project; Agence Nationale de la Recherche, France (grant number ANR-15-CE02-0002-01); Agropolis Fondation under the reference ID 1403-026 through the «Investissements d’avenir» programme (Labex Agro: ANR-10-LABX-0001-01).
Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 43

KSR: Key Species Result

NV Borassus aethiopum, Least Concern, Bafia
Photo: TLP Couvreur

NV Borassus aethiopum Bafia
Photo: TLP Couvreur

Plantae

NV Borassus aethiopum Bafia
Photo: TLP Couvreur

Raphia sp Oyem Gabon
Photo: TLP Couvreur
Mission statement
The Seagrass Species Specialist Group (SSSG) contributes to and encourages seagrass science and conservation, with the goal of protecting seagrass species biodiversity worldwide and preserving the functions and values of seagrass habitat, including its role in protecting threatened and endangered species that depend on seagrasses for their survival.

Projected impact for the 2017-2020 quadrennium
At the time of the 14th International Seagrass Biology Workshop (ISBW14) in the United States (November 2020), 10 years will have passed since the last species status review was completed (Short, F.T. et al. (2011). Extinction risk assessment of the world’s seagrass species. Biological Conservation 144(7):1961–1971. [DOI: 10.1016/j.biocon.2011.04.010]). The SSSG will affirm the proposed updates at ISBW14. During the workshop, the Red List Authority will organise a conversation about a seagrass ‘Green List’, including contributions for a global database of seagrass population and species recovery efforts that have proved successful around the world.

The SSSG is comprised of approximately 70 seagrass biologists worldwide who have volunteered to participate and contribute their time by reviewing the status of seagrasses in their bioregions and contributing their knowledge. This has been effective over three successive International Seagrass Biology Workshop sessions, beginning with ISBW10 in Canada (2012). Looking forward to ISBW14 in the United States, the SSSG plans to seek final approval of the proposed updates confirmed at the last meeting. The Red List Authority will present the results of our updated Red List contributions and solicit a final round of feedback from the SSSG prior to publishing the seagrass Red List of Threatened and Endangered Species in 2021. We plan to continue strengthening the contributions to the Red List and to advance coordination of data on natural and human assisted recovery of species in our database.

As our climate and oceans are rapidly changing, it becomes critical for the SSSG to continue encouraging research that contributes to an effective Red List assessment process, such that we are better prepared to review and investigate changes to global seagrass species conservation status in the future. We expect continued inclusion of the IUCN forum at seagrass workshops will expand the number of researchers who are aware of the Red List Authority and also the number of specialists actively contributing their research to the results of the IUCN Red List of Threatened Species SSSG and progress towards recovery.
**Targets for the 2017-2020 quadrennium**

**Assess**
Red List: complete reassessment of seagrass species with changed status or taxonomy.

**Activities and results 2018**

**Assess**
Red List

i. Collated and reviewed species nominations with supporting information, as a result of the 2018 International Seagrass Biology Workshop in Singapore, 11–17 June. (KSR # 1)

**Summary of activities 2018**

Species Conservation Cycle ratio: 1/5

Assess 1

Main KSRs addressed: 1

KSR: Key Species Result
Mission statement
The mission of the Seed Conservation Specialist Group is to promote seed conservation by providing a network for knowledge-sharing in different ecosystems around the world, and aiding in prioritisation, capacity building, and development of best practices.

Projected impact for the 2017-2020 quadrennium
At the end of 2020, we expect that the sharing of experience and knowledge among our group members and the global conservation community will help to identify gaps in the seed conservation of vulnerable species and inform world policies for ecosystem restoration and species recovery. In particular, we hope that our collective efforts in identifying these gaps in knowledge will encourage improvements to seed banking processes in countries of Latin America, East Asia and other areas that are identified as regions with high conservation needs. Through the policy documents developed for seed conservation, we hope that our efforts will contribute towards at least a 15 percent increase in species from each ecological region being conserved for the future through effective seed banking.

Targets for the 2017-2020 quadrennium
Assess
Research activities: conduct and publish a regional and topical gap analysis of seed conservation expertise.

Act
Technical advice: create IUCN Guidelines on Seed Conservation.

Network
Membership: recruit at least 100 members for the new Specialist Group.

Communicate
Communication: create an online global Seed Conservation Directory of Expertise.

Activities and results 2018
Assess
Research activities
i. The Co-Chairs and Deputy Chair have begun discussing and working with data from the Seed Conservation Directory of Expertise (see ‘Communication’ below) to conduct a regional and topical gap analysis of seed conservation expertise. (KSR #32)

Act
Technical advice
i. The Co-Chairs have discussed a plan to create IUCN Guidelines on Seed Conservation in association with the IUCN World Conservation Congress 2020. (KSR #26)

Network
Membership
i. We have recruited 149 members so far (now approved in the Commission System), and sent invitations to over 200 interested individuals in total.
Communicate

Communication

1. The Seed Conservation Directory of Expertise was created and is publicly available at https://www.bgci.org/resources/bgci-tools-and-resources/directory-of-expertise-seed-conservation/. (KSR #28)

Acknowledgements

We thank the U.S. Forest Service and Botanic Gardens Conservation International for providing funding for the Seed Conservation Directory of Expertise. We thank Guangxi University, Lyon Arboretum – University of Hawai‘i, and National Tropical Botanical Garden for funding and institutional support of the Co-Chairs’ and Deputy Chair’s participation in specialist group meetings and related activities.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

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KSR: Key Species Result
Mission statement

The mission of the IUCN SSC Sonoran Desert Plant Specialist Group is to assess the extinction risk of all Sonoran Desert plant species, educate the public about Sonoran Desert species and threats, and implement conservation plans supported by the Red Listing process.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, the IUCN SSC Sonoran Desert Plant Specialist Group (SDPSG) strives to have made substantial progress in beginning the ambitious agenda of assessing all Sonoran Desert species. At the same time, we expect to make substantive progress in surveying and removing high priority invasive species through greater coordination. Conservation planning will begin concurrently with the Red List assessments on high priority species chosen through the process of prioritising Sonoran Desert plants for assessment and by working with other Specialist Groups to create a comprehensive list of threatened species across taxa.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) identify target assessment groups for 2019-2020; (2) assess 250 species of Sonoran Desert plants.

Research activities: (1) complete vetting process of taxonomic list; (2) compare vetted plant list with remits of other Specialist Groups and agree on how to coordinate overlapping species; (3) complete a draft list of endemic species found in the Sonoran Desert; (4) monitor the distribution of invasive plant species.

Plan

Planning: coordinate with other Specialist Groups to create an up-to-date list of threatened species in the Sonoran Desert and initiate conservation planning across taxonomic groups. Proposal development and funding: submit three funding proposals to support assessments and expert workshops.

Act

Conservation actions: (1) control of invasive plants in protected natural spaces; (2) in situ and ex situ conservation (seeds and living collections) of Critically Endangered and Endangered plants and preventive sampling of seeds of more widely distributed plant taxa.

Communicate

Communication: (1) create logo; (2) regular communications and updates to members through an e-newsletter; (3) create a web presence and social media, e.g. Twitter and Facebook accounts.

Scientific meetings: (1) organise SDPSG meetings during regional meetings such as the Arid Lands Symposium; (2) include sessions/discussion panels on the activities and deliverables of the SDPSG in the Arid Lands Symposium or other relevant regional or international meetings.
Activities and results 2018

Assess

Research activities
i. We are vetting our plant list with the Plant List and the World Flora Online and will complete the process in 2020. (KSR #1)

Communicate

Scientific meetings
i. We are planning an informal gathering at the Botany meetings in Tucson, Arizona, in July 2019 to discuss priorities and next steps. (KSR #28)

Acknowledgements

We thank the McDowell Sonoran Conservancy for providing support as a host organisation to initiate this new Specialist Group.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

Assess 1
Communicate 1

Main KSRs addressed: 1, 28
Mission statement
With more than 19,800 species of plants under the scope of the Temperate South American Plants Specialist Group (TSAPSG), and considering that the strategic plan for SSC indicates that the assessment of plants needs to be substantially enlarged to represent adequately the diversity of life, we are focusing our efforts to assess: endemic species, whose vulnerability is more likely because their restricted distribution; wild harvested species, whose are actually under different pressure of use; and trees.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we expect to assess 216 new species and to improve our procedures of Red List assessment.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete assessment of 50 species of terrestrial plants by the end of 2018; (2) complete assessment of 66 species of terrestrial plants by the end of 2019; (3) complete assessment of 100 species of terrestrial plants by the end of 2020.
Coccoloba tiliacea, Vulnerable
Photo: Pablo Demaio

Inga salensis, Vulnerable
Photo: Pablo Demaio

Cochlospermum tetraporum, Endangered
Photo: Pablo Demaio

Coccoloba filibea, Vulnerable
Photo: Pablo Demaio
Mission statement
To support and strengthen nature conservation in a changing climate.

Projected impact for the 2017-2020 quadrennium
By 2020, we aim to have made a significant contribution to strengthening nature conservation in a changing climate. By fostering collaboration between climate change and biodiversity experts working at the interface between science, policy and practice, we hope to: (1) provide the IUCN Species Survival Commission with strategic guidance, support and information on climate change related risks to biodiversity and conservation responses; (2) promote coordinated responses to climate change within and among the IUCN Species Survival Commission, IUCN programmes and IUCN partner organisations; and (3) catalyse and support sound science, effective policy and evidence-based conservation practice informed by a deeper understanding of climate change, its impacts on biodiversity and the responses required. Through the activities our group carries out, we will advance: (a) understanding of climate change impacts, (b) assessment of vulnerability, (c) development of adaptation responses, and (d) climate change policy.

Targets for the 2017-2020 quadrennium
Assess
Research activities: (1) document, attribute and monitor climatic change impacts; (2) assess vulnerability of species arising from climatic change and publish a paper on understanding and use of climate change vulnerability assessments; (3) develop and recommend climate change adaptation measures and monitor their effectiveness.

Plan
Planning: develop and recommend climate change adaptation measures and monitor their effectiveness by publishing updated guidance (species conservation planning). Policy: inform IUCN policy and outreach on climatic change issues.

Network
Synergy: support the SSC.

Communicate
Communication: assess vulnerability of species arising from climatic change and generate updated guidelines.

Activities and results 2018
Assess
Research activities
i. The Climate Change Specialist Group (CCSG) convened a workshop to perform climate change vulnerability assessments for approximately 250 plant species native to Kutai National Park, Indonesia. The trait-based analysis measured species’ susceptibility to fire and drought, conditions expected to escalate as the climate warms. Researchers identified climate-resilient species and recommended them for reforestation efforts to expand crucial habitat for the threatened East Bornean orangutan and other species. Final results and recommendations were compiled into a report, *Reforesting for the Climate of Tomorrow*, which will be published in 2019 in English and Indonesian. (KSR #38)

ii. The CCGS is conducting an extensive review of human responses to climate change and their impacts on biodiversity. Once concluded, the results will be integrated into existing protocols to strengthen vulnerability assessments. (KSR #38)
Editors of Wiley’s *WIREs Climate Change* journal solicited a review paper from the CCSG on the rapidly emerging field of climate change vulnerability assessments (CCVAs). The resulting paper, ‘Foden, W.B., Young, B.E., Akçakaya, H.R., et al. (2018). Climate change vulnerability assessment of species. *WIREs Climate Change* 10(1):e551. [DOI: 10.1002/wcc.551]’, was co-authored by 18 CCSG members and published online in October 2018. It provides clarity on the key concepts, steps, terminology, and aspects to consider when performing and interpreting CCVAs and how the results can be used to inform Red List assessments. (KSR #32)

Species vulnerability to climate extremes has been adopted as a new CCSG activity to fill knowledge gaps on how extreme events (e.g., droughts, floods) can affect species, and integrate those findings into climate change vulnerability assessments to guide, inform and improve adaptation planning and species management. A paper proposing a methodology for assessing species’ vulnerability to extreme events (largely based on the IUCN’s climate change vulnerability assessment methodology for species by Foden et al. 2013 and piloting this on mammals globally) was submitted to *Nature Climate Change*. (KSR #32)

The CCSG helped convene a workshop in October 2018 to develop clear guidelines for using prehistoric data to protect biodiversity. Fifteen participants from around the world attended a three-day workshop in Copenhagen, Denmark, to identify where and when rapid climate transitions occurred in the paleoclimate record and what can be learnt from those reference points to predict and manage ecological responses in today’s climate. They also discussed how technological advances can be harnessed to provide early warnings of accelerated climate change. The workshop produced a paper outline which is currently being prepared for publication. (KSR #32)

The CCSG is working with the US Geological Survey (USGS) to assess species’ innate capacity to adapt to climate change. Two papers are currently being drafted for publication with the ultimate goal of producing a decision framework that can be used to assess and facilitate species’ natural adaptive capacity. (KSR #32)
High altitude species like this Wiñay Wayna orchid (*Epidendrum secundum*), found along the Inca Trail in Peru, are under pressure even in areas where their habitats are protected. Warming temperatures cause their zones of suitable climate to move up mountain slopes, thereby reducing their size and ultimately causing them to disappear altogether.

Photo: Wendy Foden

Predators like this cat-eyed mangrove tree snake (*Boiga dendrophila*) in areas likely to be altered by sea-level changes can be especially hard hit because of habitat loss or degradation to these fragile zones between land and sea. When areas of mangroves become inundated by rising sea levels, these predators will have nowhere else to forage.

Photo: David Bickford
Plan
Planning
i. The CCSG is playing an active role in the Conservation Planning Specialist Group’s (CPSG) plans for updating the Species Conservation Planning guidelines. The group is in discussion with the CPSG’s education officer regarding developing related online training material. (KSR #38, 39)
ii. The CCSG submitted a funding proposal to the Indianapolis Zoo for a project to promote innovative climate change adaptation. This was unsuccessful, but a presentation on the topic was given at the US National Adaptation Forum. (KSR #38, 39)

Policy
i. The CCSG provided insight on several key policy documents, including an Issues Brief on species and climate change for the IUCN Global Species Programme. (KSR #40)
ii. The CCSG provided input into the Convention on Biological Diversity’s (CBD) recommendation on “Biodiversity and climate change: ecosystem-based approaches to climate change adaptation and disaster risk reduction,” which was discussed during the 14th meeting of the Conference of the Parties to the Convention on Biological Diversity in Sharm El-Sheikh, Egypt, in November 2018. (KSR #40)
iii. The CCSG collaborated with the Invasive Species Specialist Group (ISSG) to review a report on climate change and invasive species. The report was so successful, the CCSG was invited to help turn it into a CBD technical document. (KSR #40)

Network
Synergy
i. The CCSG circulated a poll to SSC Specialist Groups to investigate opportunities for potential collaboration. Responses provided crucial information on how different specialist groups are dealing with climate change and what challenges they are experiencing. The survey yielded several opportunities to collaborate and offer assistance on various projects. (KSR #29)
ii. The CCSG is collaborating with the Conservation Planning Specialist Group to develop training materials and resources for integrating climate change into conservation planning. (KSR #29)
iii. The ability to develop, run, and interpret models was identified as a limiting factor in integrating the threat of climate change into specialist group work and activities. In response, the CCSG compiled a list of resources (made publicly available on our website) to help SSC Specialist Groups, Red List Authorities, Task Forces, and others develop, run, and interpret models on species distribution and demographic modelling. (KSR #29)

Communicate
Communication
i. Spanish translation of the original IUCN SSC guidelines for assessing species’ vulnerability to climate change was completed and the document is being prepared for publication, to make the guidelines more widely accessible. (KSR #28)


Acknowledgements
We thank the following donors and collaborators: Environment Agency – Abu Dhabi, Yorkshire Wildlife Park Foundation, Indianapolis Zoological Society, Inc., Center for Macroecology, Evolution, and Climate at the University of Copenhagen, the Environment Institute at the University of Adelaide, Kutai National Park, and the US Geological Survey.

Summary of activities 2018
Species Conservation Cycle ratio: 4/5
Assess 6
Plan 5
Network 3
Communicate 2
Main KSRs addressed: 28, 29, 32, 38, 39, 40

The metabolic rate of Komodo dragons (Varanus komodoensis) is directly dependent on temperature, and as the climate warms, they will need more food to grow, stay healthy, and to reproduce. Over time, this will most likely result in a population of smaller individuals or a population decline as competition for food increases and more calories are needed.
Mission statement
The Conservation Genetics Specialist Group (CGSG) will establish guidance for pressing genetic policy and management issues. CGSG also provides genetic advice on policy and management within IUCN’s Species Survival Commission (SSC) and expert knowledge and assistance to SSC Specialist Groups. CGSG will facilitate a fuller appreciation, evaluation and conservation of genetic diversity and resources at all levels, providing a forum for all stakeholders to value and conserve this crucial element of Planet Earth’s life systems.

Projected impact for the 2017-2020 quadrennium
Genetic diversity is one of the three major components of biodiversity, but still overlooked in most plans for conserving biodiversity. We foresee that raising the awareness of genetic diversity as one of the key requisites for species to adapt and survive will directly benefit species action plans. In addition, the implementation of genetic criteria into the Red List assessment process will help us to define the conservation status more precisely.

Targets for the 2017-2020 quadrennium
Plan
Policy: (1) engage with the Convention on Biological Diversity (CBD) 2020 process; (2) propose an IUCN resolution on genetics in CBD targets; (3) develop IUCN guidance for monitoring changes in genetic diversity; (4) develop a guidance document on biobanks and planning for conservation of intra-specific genetic diversity.

Network
Capacity building: (1) develop Guidelines on Distinct Genetic Diversity during the development of A Global Standard for the Identification of Key Biodiversity Areas; (2) build regional capacity for conservation genetics advice with an aim of having self-supporting regional groups in five years; starting groups will contain domiciled individual and non-domicile advisors active in regional research and capacity building, under the understanding that non-domicile individuals will step back from group after five years.

Synergy: every Specialist Group chair has a direct contact point(s) in CGSG, who is responsible for rapid response to genetic questions, advice, support and escalation of major issues to the wider IUCN CGSG.

Communicate
Communication: (1) publish position statement for the use of genetics in defining conservation units; (2) provide online resources for definitions of genetic terminology, guidelines on sampling and study design, and distinguish among technical approaches; (3) be pro-active in communicating the activities of the CGSG; (4) raise awareness of conservation genetics within the broader community.

Technical advice: produce a guidance document for the use of genetics in Red Listing.
**Activities and results 2018**

### Plan

#### Policy

i. In the context of the Convention on Biological Diversity (CBD) 2020 process, the CGSG contributed to the document: “Supporting achievement of Aichi Biodiversity Target 12 of the Strategic Plan for Biodiversity 2011-2020”. (KSR #26)

ii. To contribute to IUCN guidance for monitoring changes in genetic diversity, the CGSG established a working group scoping the international literature and working on a scientific paper. (KSR #26)

iii. Guidance document on biobanks and planning for conservation of intra-specific genetic diversity is in development for 2020. (KSR #26)

### Network

#### Capacity building

i. Mike Bruford contributed to the current set of Guidelines on Distinct Genetic Diversity during the development of A Global Standard for the Identification of Key Biodiversity Areas (he is a member of the KBA Standards Group), but more work needs to be done for the next version to adequately include genetic diversity. (KSR #18)

ii. An African subgroup has been established for conservation genetics advice in addition to the already-established groups in America, Europe, Oceania and Asia. The group was launched at the Conservation Symposium, Kwazulu Natal in November 2018. Mike Bruford attended and gave a keynote presentation to launch the group and a symposium was held where group members gave presentations. (KSR #18)

#### Synergy

i. With the availability of a specific person (Silvia Perez-Espona) as a part time secretary based at University Edinburgh, we have established a central focal person for contact. Contacts with CCSG have been established for establishing a connectivity plan for large carnivores in Europe. CGSG was present at the Conservation Planning Specialist Group annual meeting in Bangkok. Gernot Segelbacher is a member of the Technical Group of the Task Force on Synthetic Biology. (KSR #29)

#### Communicate


ii. G-BiKE COST Action, involving CGSG members, was funded and kicked off in March 2019 (see point iv below), and is upgrading the existing ConGRESS website to include genomic indicators (www.congressgenetics.eu/Default.aspx) (KSR #28)

iii. A number of different sessions have been organised by members of the CGSG: (1) First Meeting of the African Chapter of CGSG; (2) European Congress of Conservation Biology (ECCB) in Jyväskylä, Finland; (3) GEOBON Meeting in Beijing, China; (4) Wildlife Society Conference in Cleveland, US; (5) Oceania Congress of Conservation Biology (SCBO) in Wellington, New Zealand; (6) Evolution Conference in Montpellier, France; (7) involvement in the FutureEarth BioGENESIS project; (8) providing bi-annual newsletter; and (9) running Twitter feed. (KSR #28)

iv. An EU Cost Action Programme (G-BiKE) has been developed by several members to raise awareness of genetic tools in a conservation background. (KSR #28)

### Technical advice

i. We have recently recruited Prof. Cock Van Oosterhui to CGSG, who will lead the making of the guidance document for the use of genetics in Red Listing.

### Acknowledgements

We thank the organisers of the First African CGSG Meeting, especially CGSG members Ian Rushworth, Isa-Rita Russo, Paulette Bloomer and Catherine Sole.

### Summary of activities 2018

Species Conservation Cycle ratio: 3/5

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<td>Network</td>
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Main KSRs addressed: 18, 26, 28, 29

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC Conservation Planning Specialist Group is to save threatened species by increasing the effectiveness of conservation efforts worldwide. For over 40 years, we’ve accomplished this by using scientifically sound, collaborative processes that bring together people with diverse perspectives and knowledge to catalyse positive conservation change. We provide species conservation planning expertise to governments, Specialist Groups, zoos and aquariums, and other wildlife organisations.

Projected impact for the 2017-2020 quadrennium
Through the implementation of the IUCN SSC Conservation Planning Specialist Group (CPSG) 2017-2020 Strategic Plan, we will more efficiently prioritise and plan for target species; develop and apply best practice planning methods that are based on a One Plan approach; increase species conservation planning capacity across the SSC, governments and other key partner organisations; improve the ability of governments to reach biodiversity targets through species conservation planning; and continuously improve species conservation planning methods by evaluating their impact and effectiveness. Together, these goals will allow us to enhance our and the SSC’s ability to plan more effectively for threatened species and ultimately improve the status of biodiversity worldwide.

Assess
Red List: explore deployment of a more rapid risk assessment tool for Specialist Groups-driven risk assessments, particularly for species-rich taxonomic groups, to accelerate the diagnosis of taxa for which planning might be needed.

Plan
Planning: (1) deploy a universally applicable conservation needs assessment tool; (2) improve complementarity between Red Listing, conservation needs assessments, and conservation planning; (3) develop and test new mechanism(s) for evaluating the impact of conservation plans and enhancing the SSC’s species conservation planning process to increase probability of implementation and facilitate future evaluation; (4) implement and manage the SSC monitoring and evaluation mechanism; (5) lead, guide and support SSC Specialist Groups in species conservation planning.

Act
Conservation actions: (1) increase awareness and consideration of potential ex situ conservation roles and activities where appropriate among all species conservation planners and population managers; (2) provide tools and processes for evaluating and incorporating ex situ options into species conservation and collection planning; (3) promote integrated species conservation planning by involving both in situ and ex situ communities in the One Plan approach to species conservation and collection planning processes.
**Network**

Capacity building: (1) establish and implement CPSG’s Species Conservation Planning Training Programme; (2) launch Species Conservation Planners Development Path programme. By 2020, a minimum of 50 participants will have passed through the development path.

Synergy: establish CPSG Species Conservation Planning Learning Network (sPLAN).

Technical advice: (1) provide a generic process for species prioritisation for planning, adaptable to a range of relevant situations; (2) increase the rate of conservation planning (number of species with identified conservation needs and actions); (3) explore opportunities to strengthen the tools and processes used for single-species conservation planning activities; (4) develop a suite of planning tools and templates that can be applied to planning activities for multiple species on a landscape; (5) contribute to enhancing the SSC Species Conservation Planning Guidelines; (6) increase the value to SSC planning of the IUCN SSC Species Conservation Planning Tools Library; (7) create facilitation skill sub-section of the species conservation planning processes tools library; (8) within our area of influence, develop a clear and practical response to the challenges facing countries in achieving Biodiversity Targets; (9) assist governments to use the SSC species conservation planning process to help them meet their obligations under Target 12 of the CBD 2020 Strategic Plan; (10) play a meaningful role in influencing the next iteration of biodiversity targets, post 2020, ensuring that species conservation planning is included in the next set of internationally agreed biodiversity conservation targets; (11) CPSG to expand capacity in Southeast Asia.

**Activities and results 2018**

**Assess**

**Red List**

i. After exploring options for developing a more rapid risk assessment tool for Specialist Groups, we decided the best option was to refer Specialist Groups with high Red List commitments to the Red List Unit for support. (KSR #6)

**Plan**

**Planning**

i. A prototype of a conservation needs assessment tool was developed following a one-day workshop in Minnesota in February 2018. The tool will be tested out at a Red List workshop in 2019. (KSR #15)

ii. We began to research Red List data using selected mammals and birds as examples in order to evaluate the extent of apparent concordance between identified Threats, their specific priority, and the identified Actions Needed. Information on the following was collected: Threats, Actions in Place, and Actions Needed. The research will be ongoing through the first half of 2019. Our new process “Assessing to Plan” (A2P) was designed as an add-on to Red Listing workshops in order to help move threatened species into the action planning stage. (KSR #15)

iii. We developed a counterfactual method for evaluating the impacts of Population and Habitat Viability Assessments (PHVAs) and are in the process of piloting it. We are testing out a plan implementation tracking tool that we developed on two 2017 projects. (KSR #16)

iv. In 2017, we established an online inventory of SSC-enabled conservation planning projects, dating back to 2012, that new and future projects can be added to. (KSR #16)

v. We continued to support and guide SSC Specialist Groups in species conservation planning through our training courses and the development of new planning tools. (KSR #20)

**Act**

**Conservation actions**

i. We taught two courses and one mini-course on how to apply the IUCN Guidelines on the Use of Ex Situ Management for Species Conservation to multi-stakeholder groups in Brazil, Taiwan, and Thailand. We delivered keynote addresses at the Brazilian and Southeast Asian zoo associations’ annual conferences. We published a chapter titled ‘Integrating Ex Situ Management Options as Part of a One Plan Approach to Species Conservation’ in the book *The Ark and Beyond*. We submitted the ‘Ex Situ Management for Conservation’ chapter for the *Encyclopedia of the UN Sustainable Development Goals: Life on Land*. We submitted an article to the journal *Zoo Biology* on the Integrated Collection Assessment and Planning (ICAP) multi-species assessment and planning tool. We participated in a workshop in Nuremberg, Germany on the application of the One Plan approach to small cetacean conservation planning and provided expertise during the workshop on the use of the IUCN SSC Ex Situ Guidelines in prioritising application of ex situ management activities to overall conservation management. (KSR #25)

ii. We started the development of a multi-species assessment and planning processes for ex situ conservation activities (i.e. ICAP, ex situ conservation assessment), and applied the processes in multiple workshops, including...
confiscated turtles in Taiwan and Amazon parrots in Brazil. The ICAP process was adopted by the European Association of Zoos and Aquaria (EAZA) for regional collection planning. We provided assistance to the Species Conservation Toolkit Initiative (SCTI) in developing tools for plant ex situ management. (KSR #25)

**iii.** We facilitated nine workshops which had involvement from both in situ and ex situ communities: Whooping Crane Population Viability Assessment (PVA), Javan Leopard PHVA, Amazon Parrot ex situ conservation assessment, Asian songbirds ICAP/Regional Collection Plan (RCP), turtle and tortoise ICAP, Formosan threatened species ICAP, pangolin conservation workshop, cetacean workshop, and Tamaraw action plan workshop. (KSR #25)

**Network**

**Capacity building**

**i.** We developed and circulated a course prospectus which details 10 courses we offer linked to species conservation planning. We delivered nine courses to over 200 participants including Facilitation Skills, Applying IUCN Ex Situ Guidelines, and Disease Risk Analysis, an increase from 2017. Additionally, we launched our first free online Facilitating Species Conservation Planning Workshops course, which was positively received. Out of the 42 participants in the online course, 60% were IUCN SSC Specialist Group members, with others being from IUCN member state government authorities (e.g. ICMBio in Brazil). (KSR #17)

**ii.** Species Conservation Planners Development Path programme: The Development Path was launched with eight mentees in the inaugural cohort. Each mentee was assigned their
own mentors. Mentees will progress at their own pace, but most candidates will be ready to co-facilitate multi-stakeholder planning workshops in 2019. We began to identify candidates for a Technical Development Path to be mentored in tools such as Population Viability Analysis and their application to participatory planning processes. (KSR #17)

Synergy

i. Species Conservation Planning Learning Network (sPLAN): We established a trial learning network through Facebook but it did not receive the desired level of engagement. We set up a second trail network through Google and will receive feedback from participants in spring 2019. In addition, we will launch a monthly webinar series in early 2019, in part as a response to feedback from course participants to maintain contact and continue their learning. (KSR #29)

Technical advice

i. A decision-making subgroup within CPSG was established, which will work towards developing a generic process for species prioritisation for planning. (KSR #21)

ii. We expanded our planning capacity and made progress toward developing a multi-species planning tool. (KSR #21)

iii. We initiated the development of a modified process for single-species conservation planning that specifically incorporates the aspect of human behaviour change management. Experts in behaviour change and social marketing were collaborated with to design an expanded conservation planning process, which integrates traditional tools used for quantitative population risk assessment with techniques used for addressing human behaviour change in order to reduce threats to endangered species. The National Planning for Chimpanzees in Liberia (2019-2021) was chosen as an initial test case for the enhanced process. We were able to explore the integration of interacting PVA and species distribution modelling (SDM) quantitative tools during the Javan Leopard PHVA workshop in Indonesia. (KSR #18)

iv. The “Assessing to Plan” (A2P) tool and process was developed and will be tested in 2019. We continued the development of multi-species assessment and planning processes for ex situ conservation activities. (KSR #18)

v. As we worked towards expanding our capacity for conservation planning through training and tool development, we were able to increase awareness of the tools available in our Tools Library. (KSR #18)

vi. A draft of the ‘Facilitator’s Handbook to Species Conservation Planning’ was produced and feedback is currently being sought. Once it is ready, the handbook will be circulated as a valuable resource for all conservation planners, which will be made available through our Tools Library. (KSR #21)

vii. We began to work with the 2020 Biodiversity Task Force to develop a single, unified approach to CBD’s Target 12 on behalf of the IUCN SSC as a whole. (KSR #21)

viii. We established CPSG Southeast Asia, our 11th Regional Resource Centre, which will help increase our impact in the region. (KSR #21)

Acknowledgements

The Global Conservation Network (GCN) is a non-profit that supports the activities of the IUCN SSC Conservation Planning Specialist Group (CPSG). We thank all of our 132 generous institutional and individual donors, our 280 members, our 11 CPSG Regional Resource Centres and host institutions, and our many project partners. With their support, CPSG’s work is made possible. A special thanks to Minnesota Zoo for hosting our offices for over 40 years.

Summary of activities 2018

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<th>Species Conservation Cycle ratio: 4/5</th>
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Main KSRs addressed: 6, 15, 16, 17, 18, 20, 21, 25, 29

KSR: Key Species Result
Mission statement
The Invasive Species Specialist Group (ISSG) aims to reduce threats to natural ecosystems and the native species they contain by increasing awareness of invasive alien species, and of ways to prevent, control or eradicate them.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, the ISSG envisions indications of reductions in the global overall rates of biological invasions and targeted successful management options by national governments. Robust and current data and information are invaluable for planning management, action ranging from prevention of introductions to ongoing management of invasions. By providing this support to our stakeholders, we hope to contribute to significantly reduce the impacts caused by biological invasions both by preventing introductions of invasive alien species and enforcing optimal management of ongoing invasions. Biodiversity indicators allow decision makers to see the result of their decisions, the development of sound indicators is supported by sound and current data. The ISSG is using the data it collates to develop practical and informative indicators leading to better decision making. The planned global assessment of the impacts of invasive alien species on the natural environment to be completed by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), that the ISSG is supporting, will use all the data and information generated during the development of Invasive Alien Species (IAS) indicators and an expert group will compute the qualified impacts of IAS on the natural environment. The ISSG envisions that this informed assessment will be a key resource when the next Strategic Plan on Biodiversity will be developed in 2020.

Targets for the 2017-2020 quadrennium
Assess
Research activities: (1) complete 20% of proposed linkages between the ISSG knowledge products and other significant knowledge products of the IUCN and partners, such as the Red List, Protected Planet, ECOLEX, etc.; (2) aim to complete at least 200 Environmental Impact Classification of Alien Taxa (EICAT) assessments for the most harmful alien invasive species, and post them on the Global Invasive Species Database (GISD) also as preliminary profiles; (3) develop an interlink between GISD and Global Register of Introduced and Invasive Species (GRIIS), to display 30% of information available in GRIIS also through the GISD webpage; (4) prepare at least 100 species profiles for GISD; (5) update all four Biodiversity Indicators related to invasive species; (6) support the completion of a global assessment of the impact of invasive alien species.
Activities and results 2018

Assess

Research activities

i. ISSG has established links to the Red List and we also hope to establish links to Protected Planet.

ii. About 30 Environmental Impact Classification of Alien Taxa (EICAT) assessments are being finalised, after revision of the methodology based on comments received during the online consultation.

iii. Development of an interlink between GISD and GRIIS still to be completed. Web portal is being redesigned to permit displaying GRIIS data into GISD.

iv. Ca. 30 GISD species profiles have been produced, based on those with the highest EICAT impact categories. To be published in GISD by 2019.

v. ISSG is well on schedule in the task of updating three Biodiversity Indicators related to invasive species and is seeking funding in the update of one: (1) Trends in introduction events: this indicator is being worked on by a team of scientists from iDiv in Leipzig including several ISSG members. Data has just been submitted by my team to the data analysis leads. (2) Trends in vertebrate eradications: Island Conservation: an IUCN member that includes ISSG members is responsible for the update of this indicator. The update was committed for completion in April this year; however, there has been a change in personnel and we are waiting for news on who will lead this work. (3) Trends in pathways of introduction of alien and invasive species: proposed to the Biodiversity Indicators Partnership (BIP) to include in the BIP suite. All metadata on the development of this indicator, including methodology, have been submitted and results of the expert group assessment are expected. Data for an update this year is ready. (4) Legal response indicator: survey forms have been completed and country NSO are being contacted for country updates. We have also applied for funding to facilitate this work and are awaiting responses. (KSR #32)

vi. We are well on schedule for the global assessment of the impact of invasive alien species. The assessment will be in the form of scientific papers submitted to a leading journal. The team at iDiv (Leipzig) – the same team working on the indicators, including members of Group on Earth Observations (GEOBON) – will be co-authors. (KSR #32)

Acknowledgements

We thank the Italian National Institute for Environmental Protection and Research (ISPRA) for supporting the work of the Chair. We also thank the Convention on Biological Diversity for the support provided to the database work of the ISSG, through the GIASI Partnership, and using support from the European Union.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

| Assess | 6 |

Main KSRs addressed: 32

KSR: Key Species Result
Mission statement
The IUCN SSC Conservation Translocation Specialist Group (CTSG) aims to make a profound difference by empowering responsible conservation translocations that save species, strengthen ecosystems, and benefit humanity.

Projected impact for the 2017-2020 quadrennium
Advancements of the Conservation Translocation Specialist Group in terms of conservation science, policy development, and action are integral to the mission of the IUCN generally and the Species Survival Commission specifically. Strategic alignment of increased guideline translations, increased science, hosting the second global conference, and upscaling training programmes will result in more effective conservation translocations around the world. By 2020, responsible conservation translocations will continue to increase for more species, in more places, more of the time for benefits to nature and humanity. Such positive conservation actions, which help to restore species and ecosystems, will continue to increase global optimism that conservation is worthwhile, effective, and worthy of increased investments around the world.

Targets for the 2017-2020 quadrennium
Assess

Act
Conservation actions: (1) IUCN Reintroduction Perspectives book document will be submitted to the IUCN Editorial Board for sign-off by end of 2017 or early 2018; (2) encourage translation of the IUCN Guidelines for Reintroductions and Other Conservation Translocations into two more languages; (3) respond to global issues regarding conservation translocation policy or practice as they arise.

Network
Capacity building: run training courses on IUCN Guidelines for Reintroductions and Other Conservation Translocations on four continents by 2020.

Communicate
Scientific meetings: (1) host Reintroduction Conference in Chicago, USA, 10 years after the first conference in 2008; (2) begin to work with individuals from SSC and CTSG to launch a 2020-2030 CTSG Strategic Plan at the 2020 World Conservation Congress in France.

Activities and results 2018
Assess
Research activities
i. Many case studies for a 2020 Reintroduction Perspectives book are lined up already, and the publication process has begun. (KSR #43)

Act
Conservation actions
i. IUCN Global Reintroduction Perspectives: 2018 book completed and published. (KSR #24)
ii. Chinese translation of the IUCN Guidelines for Reintroductions and Other Conservation Translocations now complemented by Czech translation. (KSR #24)
iii. Assisted on programmes around the world, including jaguars in Ecuador, gorillas in Congo/Gabon, endangered bird programmes in Oceania, vultures in South Africa, tigers in Cambodia, Bald Ibises in Europe, Extinct in the Wild herps in Oceania, Extinct in the Wild Guam Kingfisher, etc. Regarding policy, have made amendments for Pakistan’s National Wildlife Code which are expected to come into effect imminently. (KSR #24)

Network
Capacity building
i. Training course on IUCN Guidelines for Reintroductions and Other Conservation Translocations completed in Chicago, USA. This now increases the number of continents on which training courses have been run since 2016 to three, with Australia, Europe and North America. In 2019, a training course will take place in Costa Rica and in 2020, in Brazil. (KSR #18)

Communicate
Scientific meetings
i. Reintroduction Conference in Chicago completed, as a huge success. (KSR #28)

ii. A Future Reintroduction Conference is planned for Perth in 2021 and planning is well advanced with West Australian government agencies. (KSR #28)

Acknowledgements
For 2018, we are thankful for all members of the CTSG, support from SSC’s Secretariat, support from IUCN’s Communications Unit, and Chairs of thematic/taxonomic specialist groups that have reached out to us for support. We thank Lincoln Park Zoo for hosting the 2nd International Wildlife Reintroduction Conference, and the Government of Western Australia for stepping up to host the next 2021 conference. We are particularly grateful to the CTSG’s long-standing Programme Officer, Pritpal Soorae, and to the CTSG International Training Team of Doug Armstrong, Sarah Converse, Jamie Copsey, John Ewen, and Phil Seddon. Moreover, we particularly appreciate the organisational support and commitment of the Calgary Zoological Society and the Environment Agency of Abu Dhabi.

Summary of activities 2018
Species Conservation Cycle ratio: 4/5

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Main KSRs addressed: 18, 24, 28, 43

KSR: Key Species Result
Mission statement
The IUCN SSC Species Monitoring Specialist Group (SMSG) aims to enhance biodiversity conservation by improving the availability and use of data on species populations, their habitats and threats.

Projected impact for the 2017-2020 quadrennium
By 2020, the capacity of the SSC network and its partners for data collection, analysis, sharing and use is enhanced, resulting in at least ten significant initiatives starting to fill identified taxonomic and geographic gaps in species data needed for IUCN Red List assessments. We therefore expect Red List assessments for at least 30 species to use richer data sets.

Targets for the 2017-2020 quadrennium

Assess
Research actions:
1. Review of SOS portfolio data completed and taxonomic and geographic trends identified; (2) survey of SSC taxonomic Specialist Groups completed and trends in taxonomic and geographic data gaps, as well as Specialist Group monitoring capacity needs, identified; (3) at least one scientific paper published annually promoting the goals of the group and IUCN data products; (4) at least one project implemented per year to demonstrate monitoring tools and best practices and deliver the group’s strategic plan; (5) at least three monitoring frameworks produced for specific uses (e.g. protected areas, Key Biodiversity Areas, business, restoration, etc.); (6) a database of monitoring systems, tools and data sources is available online; (7) at least one IUCN data product per year is improved through input from the SMSG.

Act
Technical advice: at least eight monitoring plans are developed for taxonomic Specialist Groups, including at least two for taxa previously unmonitored systematically.

Network
Capacity building: at least one training webinar per year offered to SSC groups and their partners to improve capacity for monitoring.
Proposal development and funding: funding secured annually (CHF) for core and project costs (value of grants received: US$ 150,000).

Activities and results 2018
Assess
Research actions:
1. Review of SOS portfolio data completed, paper ready for submission to peer-reviewed journal. (KSR #32)
2. Survey of SSC taxonomic specialist groups completed, report produced, paper in preparation. (KSR #32)
3. In 2017-18, seven papers (equivalent to 3.5 per annum) were published by the SMSG Chair (with members) on biodiversity monitoring issues. (KSR #32)
4. SMSG projects implemented in 2018 included: “A Global Audit of Biodiversity Monitoring” and “Biodiversity Monitoring and Reporting Frameworks for Business”. Updates are on the SMSG website at: https://www.speciesmonitoring.org/programmes--projects.html (KSR #32)
5. Draft monitoring guidelines produced for business. (KSR #14)
6. A preliminary list of tools and data sources is available online. A full database of known monitoring projects and an additional database of all available data sets will be completed in 2019.
vii. The Chair is an active member of the IUCN Green List of Species Task Force and in 2019 will help finalise the standard and the guidelines. (KSR #14)

Network
Proposal development and funding
i. (1) Funding from the Cambridge Conservation Initiative Collaborative Fund used to implement A Global Audit of Biodiversity Monitoring project; (2) funding from Enel supported the IUCN Global Business and Biodiversity Programme and the SMSG Chair to implement the project Biodiversity Monitoring and Reporting Frameworks for Business; (3) funding secured from Audemars-Watkins Foundation by Centre for African Wetlands for protected area project in Ghana. (KSR #19)

Acknowledgements
Thanks to Prof Jaboury Ghazoul (Ecosystem Management Group, ETH Zürich) for providing an institutional home for the chair in 2018. We also thank the following donors for providing financial support to Species Monitoring Specialist Group projects: Audemars-Watkins Foundation, Cambridge Conservation Initiative Collaborative Fund, Enel, and the IUCN Global Business and Biodiversity Programme. Key partners who helped drive our projects forward in 2018 included: BirdLife International, Centre for African Wetlands, Enel, ETH Zürich, Eye on Earth Alliance, Fauna and Flora International, GEOBON, IUCN, Newcastle University, Royal Society for the Protection of Birds, UNEP-WCMC, University of Cambridge, University of Ghana, University of Oxford, and the Zoological Society of London.

Summary of activities 2018
Species Conservation Cycle ratio: 2/5
Assess 7
Network 1
Main KSRs addressed: 14, 19, 32
Resolutions addressed: WCC-2012-RES-41
KSR: Key Species Result
Mission statement
The group is commissioned to serve as a first response for wildlife health concerns relevant to conservation around the world. The focus of the group is on health impacts that relate to the conservation of species, some of which are negative to wildlife population persistence and a threat to endangered species.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision wildlife health will be recognised as a critically important dimension of species survival, enabling the SSC to more proactively and effectively manage wildlife disease threats and threats to wildlife health from human activities, spill over of domestic animals and human diseases or inappropriate reactions to wildlife disease events. We will focus our efforts on policies that support prevention and management of disease, including disease-specific recommendations (e.g. to governments), as well as simplified processes to facilitate timely international movement of emergency diagnostic specimens for conservation purposes under CITES and in terms of growing restrictions to timely diagnosis under Nagoya Protocols and similar initiatives. We apply the IUCN-OIE Guidelines for Wildlife Disease Risk Analysis as well as embedded wildlife health considerations in future IUCN and United Nations (Convention on Migratory Species (CMS), Global Environment Outlook (GEO), Convention on Biological Diversity (CBD), etc.) knowledge products to help proactively reduce disease risks and impacts of human activities on wildlife health. Through our regionally-diverse expert membership, we will aggregate information on wildlife disease events and adverse impacts on wildlife health as well as provide technical support on investigations of key wildlife morbidity and mortality events for enhanced understanding of disease pathways and drivers to inform conservation action. Through our ongoing work with international and regional partners (e.g. UN CBD, World Health Organization (WHO), Wildlife Disease Association, World Organisation for Animal Health, UNEP GEO, UNEP CMS), we will continue to highlight and raise awareness of the links between the health of humans, animals and the environment and showcase how ‘One Health’ approaches can help mainstream biodiversity and ecosystem services.

Targets for the 2017-2020 quadrennium
Assess
Red List: ten technical assessments delivered to SSC taxonomic groups.
Research activities: five wildlife mass morbidity/mortality events investigated.

Plan
Policy: policy for simplified process for international movement of emergency diagnostic specimens of conservation species adopted.

Act
Technical advice: ten technical recommendations delivered.

Network
Documents review: ten SSC documents reviewed.
Membership: expand WHSG membership representation to 100 countries.
Synergy: ten external outreach events/materialsforums (e.g. policy conventions, social media) delivered showcasing relevance of wildlife health to One Health.

Activities and results 2018
Assess
Research activities
1. Role of two different diseases (Haemorrhagic septicaemia and Peste des petits ruminants)

ii. WHSG members reported morbidity and mortality events in over 100 species or taxonomic groups over the past four years. Information is currently being reviewed for categorisation of events (e.g. isolated, ongoing; scale of event) and will be disseminated to relevant Specialist Groups in 2019 to inform threat assessments. A significant number of reports are lacking precise information on cause of death, highlighting a systemic issue in wildlife health capacity. (KSR #7, 23, 32)

iii. Implemented process of annual (at least) member-sourced information collection on mass mortality events in wildlife. This is being paired with policy outreach to facilitate effective wildlife disease investigation, including a CITES resolution that would help promote timely movement of diagnostic specimens, and awareness raising in WHO and CBD about relevance of wildlife health for biodiversity and health. The WHSG also worked with the World Organisation for Animal Health (OIE) to report on wildlife disease events and is in the process of reviewing reports of wildlife disease events submitted to OIE in 2018 and the previous decade. (KSR #23)

Plan

Policy

i. Policy for simplified process for international movement of emergency diagnostic specimens for conservation species has involved lobbying at Conferences of the Parties (CoPs) and related CITES committee meetings, with help from member states and a range of other conservation groups (e.g. marine), and from membership to provide evidence to justify a change in CITES rules. The WHSG served on the working group assembled by the CITES Secretariat to produce the draft resolution voted on and ultimately approved at CoP17 in 2019. Adopted CoP18 documents available: CITES COP 18 Decision 18.717 on simplified procedures for permits and certificates. (KSR #23, 26)

Act

Technical advice

i. WHSG provided input to the Canid Specialist Group on wildlife vaccinace for media inquiry; input in progress on wildlife mortality events informing threat assessments. (KSR #23)

Network

Documents review

i. WHSG provided feedback on IUCN’s “Synthetic Biology and Biodiversity Conservation” document; also provided input on IUCN position papers for CBD. (KSR #23)

Membership

i. We now have 85 countries represented in our membership, with strengthened channels for engagement of regional coordinators for regional activity and ongoing qualified member recruitment from under-represented countries.

Synergy

i. Cooperation and technical advice: (1) ‘National wildlife disease surveillance informing One Health’, UK Animal and Plant Health Agency DoWs 20 Years of National Wildlife Disease Surveillance conference, APHA Weybridge, UK, 5 December 2018; (2) ‘One Health Tropical - Temperate Cline and disease. Will climate change merge these ecosystemic distinctions?’

Acknowledgements

We thank the following donors that provided core funding for the group’s activities (e.g. website administration, article publication, expert participation in UN policy fora): USAID Emerging Pandemic Threats PREDICT-2 project, EcoHealth Alliance, and the Royal Veterinary College. We also wish to thank Ms. Amanda Andre who assisted us with the WHSG member renewal process.

Summary of activities 2018

Species Conservation Cycle ratio: 4/5

Assess 3

Plan 1

Act 1

Network 1

Main KSRs addressed: 7, 23, 26, 29, 32

Resolutions addressed: WCC-2016-Res-014 and WCC-2016-Res-064

KSR: Key Species Result
Mission statement
For nature and for people: building global understanding on sustainable use of wildlife.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we foresee that key influential conservation debates and policies will reflect a better understanding and knowledge, intervening and changing particularly influential decision-making dynamics that have potentially large impacts. We seek to build a stronger base of knowledge and understanding on key high profile and important issues, create much greater awareness among a broad range of constituencies of the importance and role of sustainable use of wildlife for conservation and livelihoods, and boost the ability of the Indigenous Peoples and local communities who live with wildlife to effectively participate in conservation decision making.

Targets for the 2017-2020 quadrennium
Assess
Technical advice: fund and initiate SSC situation analysis on conservation and livelihood impacts of hunting.

Plan
Policy advice: (1) Wild Life, Wild Livelihoods report disseminated; (2) engage with planning and activities aimed at influencing the London Illegal Wildlife Trade (IWT) Conference; (3) hold “OPEN COMMUNITY VOICES” day in association with the London IWT Conference; (4) highlight research findings on Communities and IWT at Oxford-led conference pre-London IWT conference.

Synergy: establish and support the CITES Rural Communities Working Group.
Technical advice: (1) Latin America workshops held; (2) develop dialogue, resources and guidance on integration of indigenous and local knowledge into small scale fisheries management.

Act
Capacity building: First Line of Defence (FLoD) initiative rolled out in further East/Southern African countries.

Communicate
Capacity building: populate the Communities and IWT Learning Platform, conduct periodic analyses of lessons learnt and run learning activities including webinars.
Communication: (1) build a new major website on sustainable use, to act as a repository for knowledge, enhance understanding of the diversity and impact of sustainable use approaches, serve as a resource for communications efforts and media engagement and provide useful general guidance for implementing sustainable use; (2) develop and implement strategic communications plan; (3) launch Interactive Learning Platform to raise awareness of the importance of incentives, rights and sustainable use among a broad conservation and development audience to increase understanding and acceptance of the role of sustainable use in supporting conservation and livelihoods outcomes; (4) contribute to the Collaborative Partnership on Wildlife (CPW) high level policy document on sustainable wildlife management, CPW strategic plan, publications on hunting in North America and Europe and other selected high profile wildlife management issues to be identified; (5) develop internal SULi communications materials.
Technical advice: (1) publish new Annex on harvesting of threatened species; (2) disseminate briefing paper on trophy hunting to suitable policy makers at appropriate conservation fora; (3) raise awareness about the role of sustainable use for both conservation and livelihoods and key international policy forums; (4) engage at CITES to raise awareness about sustainable use and support rural communities process.

Activities and results 2018

Assess

Technical advice
i. We have not been successful in securing funding for the SSC situation analysis on conservation and livelihood impacts of hunting, although remain hopeful this will be achieved in 2019. (KSR #19, 21)

Plan

Policy advice
i. UN Environment launched the report Wild Life, Wild Livelihoods: Involving communities in sustainable wildlife management and combating illegal wildlife trade (written in partnership with the International Institute for Environment and Development [IIED]) in February 2018; see https://www.unenvironment.org/news-and-stories/press-release/wild-life-wild-livelihoods-involving-communities-sustainable. This report was a formal submission (in response to a Decision) to UN Environment Assembly 3, and was presented at meetings of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Standing Committee and the Convention on Biological Diversity (CBD) Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA). (KSR #26)

ii. SULi participated in a number of planning meetings in the run up to the London Conference on IWT and helped influence the agenda, including a community panel in one of the main plenary sessions and several side events involving community representatives. (KSR #26)

iii. The Community Voices event was held on 10 October 2018 at London Zoo and involved 32 community representatives from 15 countries as well as 79 participants from community support NGOs, donor agencies and academia. Community representatives were invited to meet with UK VIPs including HRH’s William and Harry at a reception immediately afterwards. A community statement on IWT was developed as a key output of the event and read out at the London Conference on IWT 2018 as part of the community panel session in the main plenary. (KSR #26)

iv. We organised a workshop on communities and IWT as part of the Evidence to Action research conference, where we presented various pieces of SULi work. Community representatives attending the Community Voices event also participated and were featured in the conference video. (KSR #26)

Synergy
i. SULi provided support to the Rural Communities Working Group through supporting its meeting in February 2018, preparing the meeting report, supporting the Chair (Namibia) with technical advice, and providing technical inputs at the 70th meeting of the Standing Committee to CITES where this issue was presented to the Parties (September 2018).
However, community participation in CITES remains unresolved, and we are continuing to provide technical advice and support in the run up to the CITES CoP in 2019. (KSR #29)

**Technical advice**

* i. At the London Conference on IWT in October 2018 it was announced that Peru would host a regional IWT conference in 2019. It was agreed this would be a good hook for a Latin American workshop. Planning has been ongoing on the agenda, which will now have a major focus on community engagement to tackle IWT and agreement has been reached with the Peru government to link the workshop outcomes to the conference. Efforts are still ongoing to secure funding for the event but promising leads have emerged with the UK Department for Environment, Food and Rural Affairs (DEFRA), TRAFFIC and the Center for International Forestry Research (CIFOR). (KSR #26)

* ii. We convened (with partners) a workshop at the IUCN-CEESP Communities, Conservation and Livelihoods International Conference in Halifax, Canada in May 2018, focused on integrating traditional knowledge into small-scale fisheries management. Linked to this, we have started to collect and collate case studies on integration of traditional knowledge in fisheries and documentation of purposes, challenges, benefits, etc., and development of guidance. (KSR #26)

**Act**

**Capacity building**

* i. IUCN (including SULi) and IIED released important guidance and a toolbox for field projects seeking to engage communities in combating poaching for illegal wildlife trade, from the First Line of Defence project (FLoD; see https://www.iucn.org/news/eastern-and-southern-africa/201805/iucn-and-iied-launch-guidance-local-communities-first-line-defence-against-illegal-wildlife-trade-flod). Unfortunately, we were unsuccessful in a funding application to the UK IWT Challenge Fund but continue to explore opportunities with other donors to roll out the FLoD approach, including developing suitable training materials. (KSR #17)

**Communicate**

**Communication**

* i. We launched the People Not Poaching web portal (www.peoplenotpoaching.org) at the London Conference on IWT in October 2018. The portal is supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), IWT Challenge Fund and USAID (via TRAFFIC). Through the remainder of 2018 and ongoing, we are continuing to identify relevant case studies to add to the database on the web portal as well as uploading key resources on communities and IWT. (KSR #33)

* ii. As part of CPW, we co-organised the 2nd Wildlife Forum which was held at CBD CoP 14 in Sharm el Sheik on 21 November 2018. We presented the IIED/SULi Learning Platform as part of the Forum. We also provided inputs to a CPW video on sustainable use which was launched at the Forum. (KSR #33)

**Technical advice**

* i. We continue to disseminate the paper and information from within it as and when opportunities arise, including in December 2018 through a letter to The Guardian of which many SULi members were signatories. (KSR #26, 28)

**Acknowledgements**

We would like thank the Abu Dhabi Environment Agency for its core support to SULi without which none of these activities would be possible, particularly ongoing and ad hoc technical advice, requests for attendance at meetings, communications and networking. For the Community Voices event and People Not Poaching web portal, we would like to thank the German Government (BMU and BMZ)’s Partnership against Poaching and Illegal Wildlife Trade, implemented by GIZ; the UK Illegal Wildlife Trade Challenge Fund; and USAID (via the TRAFFIC-led W-TRAPS project).
### Summary of activities 2018

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Species Conservation Cycle ratio: 4/5

Main KSRs addressed: 17, 19, 21, 26, 28, 29, 33

KSR: Key Species Result

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2nd Wildlife Forum
Photo: SULI archives
Mission statement
Avert the extinctions of Critically Endangered land and freshwater vertebrates in Southeast Asia.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision a number of Asian Species Action Partnership (ASAP) species (Critically Endangered land and freshwater vertebrates found in Southeast Asia) will have benefited from effective conservation action. ASAP will have: created an enabling environment to catalyse effective conservation action for ASAP species with a focus on those most neglected; increased funding available for the conservation of ASAP species; developed a comprehensive capacity building and training strategy to improve Southeast Asian leadership and conservation capacity; and developed appropriate tools and mechanisms to raise the profile of ASAP species, increasing understanding and awareness of the urgent need to avert ASAP species extinctions.

Targets for the 2017-2020 quadrennium

Plan
Planning: (1) ASAP strategy developed and priorities agreed; (2) conservation action of ASAP species promoted with increased implementation (ongoing) and specific conservation strategy and action plans developed for at least three ASAP species; (3) ex situ Working Group with clearly defined goals created.

Network
Capacity building: capacity building and training strategy developed and priorities agreed. Proposal development and funding: an increase in funding available to support ASAP species conservation and prevent extinctions. Synergy: at least 80 organisations are official ASAP Partners.

Communicate
Communication: ASAP species communication strategy developed and being implemented.

Activities and results 2018

Plan
i. The ASAP 5-year strategy has been finalised and first year implemented in 2018; the official strategy launched in March 2019. (KSR #31)
ii. A conservation action plan for Rhinoplax vigil launched in 2018; a regional conservation action plan for Manis javanica has been produced; a conservation needs assessment was carried out as part of a Red Listing workshop for Asian Tortoises and Freshwater turtles. (KSR #31)
iii. Co-chairs of the ASAP ex situ working group are in place and identifying ASAP species to initiate ex situ conservation efforts and partnerships. (KSR #25)
Network
Capacity building
i. A capacity development and training strategy has been developed. Priorities and roadmap are to be agreed in 2019. (KSR #17)

Proposal development and funding
i. We have been engaging with ASAP partners and donors to increase funding for ASAP species conservation. Work is ongoing into development of a new funding mechanism for ASAP species conservation. (KSR #30)

Synergy
i. At the end of 2018, we had 80 organisations signed up as ASAP Partners. (KSR #28)

Communicate
Communication
i. A communication strategy has been developed with planned implementation to start in 2019. (KSR #28)

Acknowledgements
We thank Wildlife Reserves Singapore as the host organisation for the ASAP Secretariat and the major financial contributor to the initiative. We are extremely grateful to all organisations that have contributed to the core costs of the ASAP Secretariat: IUCN SSC through their partnership with the Environment Agency – Abu Dhabi, European Association of Zoos and Aquaria (EAZA), Global Wildlife Conservation (GWC), Synchronicity Earth through their partnership with the Taiwan Forestry Bureau, TRAFFIC, WCS and an anonymous donor. We also thank Croeni Foundation and Pixel Ninja for their continued support with our website. The conservation of ASAP species would not be possible without the continued dedication and innovative approaches of ASAP Partners, along with the donors who support their work.

Summary of activities 2018
Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 17, 25, 28, 30, 31

Resolutions addressed: WCC-2016-Res-009

KSR: Key Species Result

Mekong Giant Catfish (*Pangasianodon gigas*)
Photo: Wildlife Reserves Singapore/David Tan

Vietnamese Pond Turtle/Annam Leaf Turtle (*Mauremys annamensis*)
Photo: Wildlife Reserves Singapore/David Tan

Celebes Crested Macaque (*Macaca nigra*)
Photo: Wildlife Reserves Singapore/David Tan
Mission statement
The BirdLife Partnership strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources.

Projected impact for the 2017-2020 quadrennium
BirdLife’s Preventing Extinctions Programme expects to have had the following impacts by 2020: (1) status of the world’s most threatened bird species improved through the work of BirdLife Species Guardians and other effective action; (2) overall extinction risk across all bird species reduced; (3) the global Red List for birds regularly updated, improved and promoted, with knowledge gaps filled through targeted research and monitoring; and (4) declines in common bird species prevented, halted or reversed.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) partial reactive reassessment of several hundred bird species, and updated fact-sheets for as many relevant Critically Endangered species as possible; (2) comprehensive proactive 4-yearly reassessment of all 11,000 bird species.
Acknowledgements

BirdLife acknowledges and thanks its Founder Patrons, Benjamin Olewine, Ryuzo Kosugi, the Aage V. Jensen Charity Foundation, the A.G. Leventis Foundation, the Tasso Leventis Foundation and all BirdLife Species Champions for supporting its Red List assessments and the taxonomic work that underpins them. Thanks also to Lynx Edicions/HBW and to everyone who contributes information to the Red List assessments, including via the Globally Threatened Bird Forums: www.birdlife.org/globally-threatened-bird-forums.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

Assess 8

Main KSRs addressed: 1

KSR: Key Species Result
**Mission statement**
To coordinate, promote and contribute to all necessary conditions to avoid extinctions of Brazilian flora species, in line with the targets of the Global Strategy for Plant Conservation (GSPC) and with the national mandate to assess extinction risk for the National Red List of Brazilian flora, for the elaboration of action plans and maps of priority areas for the conservation of species threatened with extinction.

**Projected impact for the 2017-2020 quadrennium**
By the end of 2020, we aim to increase knowledge about the state of conservation of Brazilian endemic flora. The focus of extinction risk assessments will be on endemic tree species that occur throughout the country, especially those occurring in territories that have a small number of conservation mechanisms. Re-assessments of threatened or near threatened species will be carried out, focusing on tree species and especially those with economic value. Supporting the extinction risk assessments is a network of approximately 208 experts in the taxonomy and ecology of Brazilian flora. In addition, a new version of the CNCFlora system will be developed, containing a database of threats, Red List Authority assessment reviews, and a module for the National Action Plans that lead to improvements in status and, ultimately, removal of species from the Red List. In a megadiverse country, where native vegetation is being converted or fragmented, conservation actions involving government agencies and local actors must be developed. Thus, by 2020, the Brazil Plant Red List Authority (BP-RLA) will participate in the elaboration of National Action Plans for threatened species with a focus on Critically Endangered species that do not currently benefit from conservation mechanisms.

**Targets for the 2017-2020 quadrennium**

**Assess**
Green List: test the Green List for one species.
Red List: (1) complete assessment of 2,600 Brazilian endemic trees; (2) complete assessment of 884 endemic species from Rio de Janeiro State; (3) review assessment of Brazilian endemic trees from Botanic Gardens Conservation International (BGCI) and Royal Botanic Gardens, Kew; (4) update CNCFlora Information System to version 3.

Research activities: carry out field survey collections in priority areas for the conservation of flora species in Brazil.

**Plan**
Planning: (1) publish territorial action plans for conservation of flora; (2) map priority areas for conservation of flora.
Policy: include species assessed as threatened in the National Official Red List.

**Network**
Capacity building: provide Red List capacity building for botanic experts.
Activities and results 2018

Assess

Red List

i. We completed the assessment of 800 species of endemic trees in Brazil; 116 taxonomists/specialists from the network of Brazilian flora were involved in the taxonomic validation and records of the occurrence. (KSR #2)


iii. We reviewed 782 assessments of Brazilian flora from BGCI and Royal Botanic Gardens, Kew. (KSR #1)

Research activities

i. We carried out four expeditions along with seed collection for ex situ conservation of Critically Endangered Discocactus horstii Buining & Brederoo (photo) and another species of Cactaceae in the Central Brazilian Savanna (Cerrado biome) in Brazil. (KSR# 25)

ii. We carried out three expeditions in the Atlantic Forest in the state of Rio de Janeiro and the state of Bahia and in the Central Brazilian Savanna in the state of Minas Gerais, Brazil. (KSR# 25)

Plan

Planning

i. We published the Territorial Action Plan for the Conservation of Endemic Flora of the State of Rio de Janeiro, including 513 threatened species (http://dspace.jbrj.gov.br/jspui/handle/doc/93). (KSR #15)

ii. We published the priority areas for conservation of the endemic flora of the State of Rio de Janeiro (http://dspace.jbrj.gov.br/jspui/handle/doc/94). (KSR #15)

Acknowledgements

We thank the Secretariat of Biodiversity of the Ministry of the Environment - Brazil, the Secretariat of State for the Environment of Rio de Janeiro, Botanic Gardens Conservation International (BGCI), the Global Environment Facility Fund (GEF), World Wildlife Fund (WWF), Brazilian Biodiversity Fund (FUNBIO), Global Partnership for Plant Conservation (GPPC), Fundação Boticário, Arboretum/Public Prosecutor’s Office of the State of Bahia, the Fundação Flora, Expert Network of the Flora of Brazil 2020/REFLORA that collaborate with CNCFlora/JBRJ and the Botanical Garden of Rio de Janeiro for all assistance and structure provided.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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Main KSRs addressed: 1, 2, 15, 25

KSR: Key Species Result
Mission statement

The mission of the Caucasus Plant RLA is to contribute to increase current knowledge on the taxonomy and ecology of the species in the Caucasus and promote their long-term conservation.

Projected impact for the 2017-2020 quadrennium

By collection of ethnobotanical data, the Caucasus Plant RLA members contribute substantially (most comprehensively for wild plant species traditionally used for food for thousands of years) to the accomplishment of a requirement of the Caucasus Plant Initiative: A Regional Plant Conservation Strategy for 2012-2020 (https://www.mobot.org/MOBOT/Research/pdf/RedBook69mobot.pdf), which is formulated as follows: Indigenous and local knowledge, innovations and practices associated with plant resources, maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care. The team is continuing activities in this direction to collect and publish data on more diverse uses of plants in a broader geographic scale within the Caucasus region, which – by preserving traditional knowledge of human-nature interaction – helps in creation of a basis for sustainable use schemes of wild plant resources. In addition, publication of about 200 assessments on the IUCN Red List of Threatened Species will help in conservation of these species as well as associated habitats.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) finalise editing of 200 assessments in the IUCN SIS database for publication on The IUCN Red List of Threatened Species; (2) assess and re-assess plant species based on field studies of rare plant populations; (3) identify threatened ecosystems and assess risk severity in the Caucasus/one or more countries of the Caucasus.

Research activities: (1) create a comprehensive scheme of the ecosystems of the Caucasus/one or more countries of the Caucasus as a basis for informed in situ conservation of species and their habitats; (2) study climate change effects on species and ecosystems; (3) conduct plant taxonomic research; (4) conduct alien plant research; (5) undertake assessments of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

Act

Conservation actions: create and maintain ex situ collections of wild plants with special focus on threatened species.

Network

Capacity building: conduct IUCN Red List Assessor Training.

Communicate

Communication: publish e-floras the Caucasus/one or more countries of the Caucasus.
Activities and results 2018

Assess

Red List

i. Work is continuing on assessing the status and condition of populations of rare and endangered species of the flora of Armenia. New populations of species included in the Red Book of Plants of Armenia, as well as rare species new to Armenia, have been discovered. (KSR #1, 2, 4, 12)

ii. Work is continuing on monitoring of population structure and dynamics in order to predict population viability of rare plant species, and develop adequate conservation measures. From 2015–2018, research was focused on the assessment of state and plant community confinedness of 218 natural populations of 60 rare medicinal, essential-oil producing and ornamental plant species in Azerbaijan, growing in various habitats of the Great and the Lesser Caucasus within Azerbaijan (among them two relict species, two endemics of Azerbaijan, eight endemics of the Caucasus). (KSR #1, 2, 4, 12)

iii. A project on population viability study and ex situ conservation of regionally threatened priority conservation species (Aquilegia colchica, Dianthus kethkhovali, D. azkurensis, Pulsatilla georgica, Gymnospernum smirnovii) has been implemented by the National Botanical Garden and Botanical Museum Berlin-Dahlem (BGBM, Germany) and Ilia State University, Georgia, phylogenetic study of the genus Campanula has been conducted. (KSR #34, 38)

iv. In 2018, in the second stage of the project “Developing Tools for Conserving the Plant Diversity of the South Caucasus”, within the framework of the Memorandum of Understanding signed between the Botanic Garden and Botanical Museum Berlin-Dahlem (BGBM, Germany) and the Institute of Botany of ANAS, modern research is ongoing to determine the phylogenetic development of selected model plant genera (Scutellaria L., Pyrus L. and Calligonum L.). The goal of the recent study on the diversity and evolution of Scutellaria (Lamiaceae) in Azerbaijan and adjacent countries is to understand the phylogenetic relationships in Scutellaria to get insights into the evolution of Caucasian species and to evaluate species limits. (KSR #1, 2, 4)

v. In 2018, in the second stage of the project “Developing Tools for Conserving the Plant Diversity of the South Caucasus”, within the framework of the Memorandum of Understanding signed between the Botanic Garden and Botanical Museum Berlin-Dahlem (BGBM, Germany) and Ilia State University, Georgia, phylogenetic study of the genus Campanula has been conducted. (KSR #1, 2, 4)

vi. An intensive study of the distribution of invasive and expanding plant species in Armenia is underway, to predict their further distribution, assess the risks, and evaluate the impact on natural ecosystems. (KSR #13)


Research activities


ii. Through computer modelling, an assessment was conducted on the vulnerability of two rare ecosystems of Armenia to predicted climate change, resulting in a forecast on their possible change. This work continues for other rare ecosystems. (KSR #34, 38)

iii. Taxonomic studies of the flora of Armenia are continuing, with numerous new taxa described. Currently, the number of local endemics in Armenia has reached 147. (KSR #1, 2, 4)

iv. In 2018, in the second stage of the project “Developing Tools for Conserving the Plant Diversity of the South Caucasus”, within the framework of the Memorandum of Understanding signed between the Botanic Garden and Botanical Museum Berlin-Dahlem (BGBM, Germany) and the Institute of Botany of ANAS, modern research is ongoing to determine the phylogenetic development of selected model plant genera (Scutellaria L., Pyrus L. and Calligonum L.). The goal of the recent study on the diversity and evolution of Scutellaria (Lamiaceae) in Azerbaijan and adjacent countries is to understand the phylogenetic relationships in Scutellaria to get insights into the evolution of Caucasian species and to evaluate species limits. (KSR #1, 2, 4)

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Airvideo (dron) survey during expedition to Great Caucasus, Azerbaijan
Photo: Emin Husuyev

Ex-situ conservation of Azerbaijan tree species
Photo: Valida Alizade
**Act**

**Conservation actions**

i. Within the framework of the target of the Institute of Botany, Azerbaijan National Academy of Sciences, two projects were carried out in collaboration with the Millennium Seed Bank, Kew (UK): “Saving the Flora of the Caucasus: Azerbaijan wild species collecting” and “Global Tree Seed Bank Project”. These activities play a significant role in achieving Target 8 by 2020 in Azerbaijan. A key goal is to maintain regional genetic variability of endangered plants by seed collecting and conserving natural populations. Both projects were focused on collecting and seed-banking priority species in the country, especially the rarest, most threatened and useful species. As part of the project, the seeds of 276 plant species were collected; out of these, 10 are endemics of Azerbaijan, 36 endemics of Caucasus, 28 are threatened and 6 are relict species. Seed and herbarium collections, as well as data, were successfully saved in the Seed Bank of the Institute of Botany and duplicated at the Millennium Seed Bank, Kew. Collected seeds have been used for germination tests to determine the viability of seed collections to enable their long-term conservation and research. (KSR #11)

ii. A project on population viability study and ex situ conservation of regionally threatened priority conservation species (Aquilegia colchica, Dianthus ketzkhovelli, D. azkurensis, Pulsatilla georgica, Gymnospermium smirnovii) has been implemented by the National Botanical Garden of Georgia. One of the aims of the project is to collect seeds for ex situ collection of target species and to conduct seed viability analyses. (KSR #15)

**Network**

**Capacity building**

i. Training courses were conducted at the National Botanical Garden, Tbilisi, Georgia, by Botanic Gardens Conservation International (BGCI). (KSR #4)

**Communicate**

**Communication**

i. The Institute of Botany is one of the Participating Members of the World Flora Online Project. The online project “Flora of Azerbaijan” (through the website www.tropicos.org) started in 2018 within the World Flora Online. The checklist with the accepted scientific names and synonyms of vascular seedless plants, gymnosperms and monocots has been built, and work on dicots is continuing. By the end of 2019, both the online checklist and a printed version will be available. (KSR #28)

**Acknowledgements**

We thank BGCI for conducting IUCN Red List training in Tbilisi. We also thank Botanic Garden and Botanical Museum Berlin-Dahlem (BGBM, Germany) and Volkswagen Foundation for support of molecular taxonomic studies of selected plant genera of the Caucasus.

**Summary of activities 2018**

<table>
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<th>Species Conservation Cycle ratio: 4/5</th>
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<td>Network</td>
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<td>Communicate</td>
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Main KSRs addressed: 1, 2, 4, 11, 12, 13, 15, 26, 28, 34, 36, 38, 43

KSR: Key Species Result
Mission statement

The mission of the Central African Plant Red List Authority (CARLA) is to promote high quality Conservation Assessments within Central Africa and to use this information to support conservation actions.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision a substantial advance in assessing the preliminary conservation status of the most threatened species in Central Africa. Specifically, using a computer routine, we will establish a working list of the species that could be considered as threatened and then use this information to focus on potentially Critically Endangered and Endangered species, for which we will conduct and submit full assessments to the Red List. We will continue publishing assessments of endemic plants (orchids, Cameroonian plants, trees from the Flore d'Afrique Central region, trees of Principe) and of highly threatened species such as members of Podostemaceae, while also developing the Red Listing skills of young African botanists.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) complete preliminary assessments of species endemic to Central Africa; (2) complete assessments of 150 orchid species endemic to Atlantic Central Africa; (3) complete assessments of the plant species endemic to Cameroon; (4) complete assessments of the 400 tree species endemic to Flore du Congo; (5) produce assessments of endemic tree species from Principe; (6) produce assessments of the 200 threatened plant species of Sao Tomé and Principe; (7) produce assessments of the threatened plant species of Nimba and Lofa-Gola-Mano complex; (8) complete preliminary assessments of species endemic to Gabon.

Activities and results 2018

Assess

Red List

i. Central Africa: a total of 38 species in 10 genera of Annonaceae were reviewed as follows: Annickia (5 spp.), Cleistopholis (2 spp.), Dugetia (2 spp.), Hexalobus (2 spp.), Isolona (8 spp.), Monodora (2 spp.), Neosthenanthera (2 spp.), Piptostigma (12 spp.), Sirdavidia (1 sp.), and Uvariastrum (2 spp.), along with 41 species of Cola (Malvaceae, Sterculioideae), and 19 species of Diospyros (Ebenaceae). (KSR #2)

ii. Orchid species endemic to Atlantic Central Africa: forty assessments were published in 2018, all of which were entered into the IUCN SIS database. (KSR #2)

iii. Tree species endemic to the flora of Congo: two training workshops have been organised at Meise Botanic Garden (Belgium) to train five of their staff members in Red Listing and SIS entry. The first workshop will be held at Meise in June 2019. (KSR #2)

iv. Tree species from Principe: fieldwork has been conducted to acquire distribution data for the 26 species that will be assessed in 2019. (KSR #2)

v. Species endemic to Gabon: 326 preliminary assessments have been performed for the High Conservation Value (HCV) project in 2018,
comprising 44 Critically Endangered, 154 Endangered, 121 Vulnerable, 5 Near Threatened and 2 Least Concern species; these are accessible on the Threatened plant species of Gabon website (http://www.tropicos.org/Project/Threatened_Plants_Gabon). Overall, 2,099 taxa have been assessed as potentially threatened for Gabon, based on an automatic procedure using IUCN Red List criterion B and unverified lists of specimens. (KSR #2, 22)

Acknowledgements

Martin Cheek, Poppy Lawrence, Isabel Baldwin and Ben Fish are acknowledged for the preparation of the datasets. The IUCN-Toyota Red List Partnership is acknowledged for its contribution to the completion of many assessments done by Kew. The Fondation Franklinia supports the ECAT project at Meise Botanic Garden. The Global Trees Campaign, which supports Red Listing work in Principe carried out by the Fundação Príncipe, the Missouri Botanical Garden and the University of Coimbra, is a partnership between Fauna & Flora International and Botanic Gardens Conservation International. The American Orchid Society supports MBG work on assessments of the orchids endemic to Atlantic Central Africa. We are also grateful to the Foundation Prince Albert II de Monaco for the supporting the High Conservation Value project in Gabon.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

Assess 5

Main KSRs addressed: 2, 5, 22

KSR: Key Species Result
Mission statement
The mission of the Indonesian Plant Red List Authority (IPRLA) is to conduct comprehensive risk assessment for Indonesian plant species occurring in the country and as the basic information to be used for further conservations and sustainable forest management in Indonesia.

Projected impact for the 2017-2020 quadrennium
This quadrennium will become a very important period for Indonesia, as we start to work on assessing the conservation status of at least 350 plant species native or naturally occurring in Indonesia. We targeted endemic and most commercial plant species for our Red List assessments, because such species are likely under serious threat, mainly due to land conversion to oil palm plantations, mining and other agricultural practices. We predict that by year 2020, the national Red List data will be used as a standard guideline for government and related stakeholders to undertake best forest management practices.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete assessment of 350 species, including commercial timber species, trees, non-tree species, and ornamental species, with a mainly Malesian distribution, most of which are narrow endemic to Indonesia.
Research activities: book writing, publish the first Indonesian Red Data Book, containing 50 commercial timber species (in Indonesian language).

Network
Capacity building: (1) Red List training and workshop for assessors; (2) Red List training and workshop for trainers; (3) Red List training and workshop for assessors in Indonesian language.

Activities and results 2018
Assess
Red List
i. We have already completed Red List training and workshops in West Java (in January 2018) and West Kalimantan (in December 2018). At the first workshop we trained 52 participants from South East Asian countries and in the second workshop we trained 32 participants from West Kalimantan. We are currently completing 100 assessments of timber species (mainly Dipterocarps). (KSR #2)

Research activities
i. We are about to publish the first Red List book for Indonesia; the book is in review by a national publisher. (KSR #43)

Network
Capacity building
i. We conducted two Red List trainings at regional and national level. (KSR #5)
Acknowledgements

We thank the donors for their support of the cost of the Red List training and workshop conducted in 2018: Botanic Garden Conservation International, Global Trees Campaign-Fauna & Flora International, Forum Pohon Langka Indonesia, Indonesian Institute of Sciences, Faculty of Forestry University of Tanjungpura, Darwin Initiative, WWF-West Kalimantan, Tropical Forest Conservation Act Kalimantan (TCFA-Kalimantan).

Summary of activities 2018

| Species Conservation Cycle ratio: 2/5 |
|---|---|
| Assess | Network |
| 2 | 1 |

Main KSRs addressed: 2, 5, 43

KSR: Key Species Result
Mission statement
The mission of the IUCN Marine Fishes Red List Authority is to transform global, regional and local marine conservation capabilities by completing Red List assessments for all marine fishes.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we expect to substantially increase the number of published Red List assessments of marine fishes. Specifically, our focus will be on species in the orders Clupeiformes (sardines, herrings, menhaden and their allies) and Pleuronectiformes (flatfishes), species occupying the deep sea (more than 200 m depth), and species of the Western Indian Ocean. The completion of these assessments will bring us closer to the goal of completing assessments for the more than 17,000 marine fishes, and will improve our knowledge of the status of marine vertebrate biodiversity globally.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) complete assessments of 800 Western Indian Ocean marine fishes, with the main focus on exploited and coral-reef associated families; (2) complete assessments of 403 Clupeiform species; (3) complete assessments of 1,001 deep sea marine fishes.

Activities and results 2018
Assess
Red List
i. Assessments of Western Indian Ocean marine fishes are in progress. (KSR #1)
ii. Assessments of Clupeiform species are completed and published on the Red List. (KSR #1)
iii. Assessments of deep sea marine fishes are in progress. (KSR #1)

Acknowledgements
We thank The IUCN-Toyota Red List Partnership and Total Foundation for their support of marine Red Listing. The continued partnerships with the Deep Aquarium and Oceanario Lisboa, resulting in the hosting of two marine Red List Officers, have been most successful. We also thank the many scientists who have participated in the Red List assessments workshops.

Summary of activities 2018
Species Conservation Cycle ratio: 1/5
Assess 3

Main KSRs addressed: 1
KSR: Key Species Result
The Marine Fishes RLA is providing first time Red List assessments for more than 15,000 marine fishes that are not included in other marine fish groups. These include the damselfishes (Pomacentridae: Perciformes) and lizardfishes (Synodontidae: Aulopiformes)

Photos: Beth Polidoro
Mission statement

Our goal is to assess the conservation status of the whole flora of New Caledonia by 2020. New Caledonia contains some 3,371 native species of vascular plants, of which 74% are considered endemic. This exceptional floristic diversity is threatened by accelerating development. The Red Listing activities will: (1) bring a valuable tool for local institutions in charge of setting conservation priorities, and (2) allow knowledge improvement by identifying Data Deficient species.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we intend to assess the entire New Caledonian flora using the IUCN Red List of Threatened Species to generate the critical information needed to catalyse and prioritise conservation actions on the most threatened plants of New Caledonia. Through this process, we are generating information on their distribution, habitats, ecology, population trends, threats and ultimately their probability of extinction (extinction risk), which is the starting point for conservation. This information will then be used for conservation planning and priority setting at the national level, to inform private sector decision making and for education and public awareness, which will impact positively the conservation status of New Caledonian flora and sustainable development at the national level.

Targets for the 2017-2020 quadrennium

Assess

Red List: complete the IUCN Red List assessment of the entire New Caledonian Flora (3,400 species).

Research activities: publish scientific papers about our Red List Authority’s (RLA) work and its results.

Communicate

Communication: (1) raise awareness among citizens and decision makers about the vulnerability of New Caledonian flora; (2) expand the scope of communication beyond local citizens and decision makers.

Activities and results 2018

Assess

Red List
i. In 2018, our RLA assessed 370 plant species, the grand total now being at around 1,600 species. We will obviously keep on working hard to achieve our goal, but the pace might slow a little over the next years because of taxonomic doubts for a good portion of remaining species, huge amounts of time that go into redaction and submission phases, and of course all the other activities we are engaged in as a local non-profit. (KSR #2)

Communicate

Communication
i. Our results are regularly sent over to local authorities, mostly to add new species to the provincial legislation (Environment Codes). In addition, thanks to funding from the European Union, we were able to create a photo exhibit and present it in many places in New Caledonia. This helped raise awareness among citizens and decision makers, and we will continue to offer the exhibit for various events or actors throughout the territory. (KSR #36)
Acknowledgements

We thank the following donors, who helped Endemia set up the New Caledonia Plant Red List Authority in 2014 and allowed it to coordinate the assessment effort: the North and South Provinces of New Caledonia, the French government (by way of the Direction for Agriculture, Forests and Environment), as well as Société Le Nickel, Koniambo Nickel SAS and Vale NC. Moreover, we want to thank our scientific and technical partners in and outside of New Caledonia: IRD (French Research Institute for Development), IAC (Agronomical Institute of New Caledonia), NOU and P herbaria. And of course we give huge thanks to all members of our RLA and outside contributors, whose outstanding efforts have helped us accomplish all this work.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

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<th>Activity</th>
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<td>Assess</td>
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Main KSRs addressed: 2, 36

KSR: Key Species Result

Roches Ouaieme, a micro-endemism hotspot in the Northeast
Photo: Vincent Tanguy

Dracophyllum ouaiemense, Critically Endangered
Photo: Gildas Gâteblé

Araucaria humboldtensis, Endangered
Photo: Pete Lowry
Co-Chairs
Anne Frances (1)
Margaret (Peggy) Olwell (2)

Red List Authority Coordinator
Amanda Treher (1)

Location/Affiliation
(2) United States Bureau of Land Management, Washington D.C., US

Number of members
6

Mission statement
The mission of the North American Plant Red List Authority is to conduct conservation status assessments of plants native to North America in order to increase conservation efforts.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we envision an expanded presence for the North American Plant Red List Authority. Specifically, we will develop a website and expand our membership to increase diversity. We will continue seeking collaborations to leverage resources among those conducting conservation status assessments, particularly botanical gardens. Through these collaborations, we hope to increase the number of Red List assessments for priority species in North America, including trees, medicinal plants and rare species. We will continue working with the IUCN Red List Unit on ways to streamline the conversion of NatureServe’s Global Ranks to draft Red List assessments.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) publication of *Hydrastis canadensis* (Goldenseal) on the IUCN Red List; (2) review and submission of *Eurybia furcata* (Forked Aster) assessment; (3) contribution of NatureServe data and expertise to Red List assessment of oaks; (4) publish Red List assessments; (5) begin collaboration with Medicinal Plant Working Group and Albuquerque BioPark to complete assessments of North American medicinal plants; (6) collaboration with Morton Arboretum and Botanic Gardens Conservation International (BGCI) to continue US portion of Global Tree Assessment; further develop ability to port data from NatureServe’s database into the IUCN SIS database using SIS Connect; use a number of common US trees to pilot the Least Concern pipeline; (7) co-lead training session on Red List assessment and Global Ranking at American Public Gardens Association (APGA), with BGCI and Morton Arboretum.

Plan
Planning: conduct monitoring for the CITES-listed medicinal plant American Ginseng (*Panax quinquefolius*) in Indiana and Illinois.

Network
Capacity building: (1) two members of the RLA to attend a “Train the Trainer” workshop in Arizona in 2017; (2) co-lead training session on Red List assessment and Global Ranking at APGA.

Membership: expansion of membership to increase diversity (gender, age, and organizational representation).

Synergy: form official collaboration with multiple institutions to advance Red List assessments and Global Ranking of US trees.

Communicate
Scientific meetings: (1) co-present session at Gene Conservation of Trees meeting in Chicago, in 2016, and publish proceedings; (2) attend and present at Ginseng Symposium in 2017, publish proceedings.
Activities and results 2018

Assess

Red List

i. Assessment of *Eurybia furcata* published. (KSR #1)

ii. Formed strategic partnerships to publish more Red List assessments by 2020. (KSR #1)

iii. In fall 2018, a partnership began with the Medicinal Plant Working Group and Albuquerque BioPark to complete assessments of North American medicinal plants; NatureServe shared information on species and is providing some training on assessing rare plants. (KSR #1)

iv. Extensive work completed on a definitive list of trees in the US, including Puerto Rico and the Virgin Islands; taxonomic reconciliation and defining “tree” worked out; some draft assessments completed by Morton Arboretum; NatureServe completed Global Ranks of rare trees to be shared with Morton Arboretum to use as basis for Red List assessments. (KSR #1)

Network

Membership

i. Unofficial membership outreach to increase diversity.

Synergy

i. Partnership with multiple institutions to advance Red List assessments and Global Ranking of US trees ongoing and work continued in 2018. (KSR #29)

Acknowledgements

We thank the Bureau of Land Management, US Botanic Garden, Morton Arboretum, Botanic Gardens Conservation International US, Albuquerque BioPark, US Forest Service, NatureServe, and others for their support of this work.

Summary of activities 2018

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Main KSRs addressed: 1, 29

KSR: Key Species Result
Co-Chairs
Ning Labbish Chao (1) (Previous Co-Chair)
Min Liu (2) (Previous Co-Chair)
Orangel Aguilera (3) (2018 Elected Co-Chair)
Ying Giat Seah (4) (2018 Elected Co-Chair)

Red List Authority Coordinators
Orangel Aguilera (3) (Brazil, South America)
Ying Giat Seah (4) (Malaysia, Asia)

Location/Affiliation
(2) Xiamen University, Xiamen, China
(3) Departamento de Biologia Marinha (GBM), Universidade Federal do Fluminense, Rio de Janeiro, Brazil
(4) FiSHA - School of Fisheries and Aquaculture Sciences, University of Malaysia, Terengganu, Malaysia

Number of members
55

Social networks
Facebook:
Global Sciaenidae Conservation Network

Mission statement
The mission of the IUCN SSC Sciaenidae Red List Authority is to revise and submit the assessments of all 300 species of sciaenid fishes and to redefine the goal of the second phase of the Global Sciaenidae Conservation Plan.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we will complete the first global assessment of sciaenid fishes and will submit it to IUCN for final publication. A significant threat to Sciaenidae conservation has become more prominent since 2016 due to the popularity of Sciaenid Maws (dried gas bladder) for food and medicinal use in Asian countries. Larger species of Sciaenidae are sought to extract their gas bladders for the luxury market demand. The case of the Gulf of California totoaba (Totoaba macdonaldi), a Critically Endangered species, has caused the near extinction of the endemic Vaquita (Phocoena sinus). Several large Sciaenidae species of the genus Argyrosomus and Boesemania are greatly sought after in Southeast Asia and conservation actions are urgently needed. Sciaenid species are popular food fish and are mostly captured for local food supplies. It is a very difficult resource for which to enforce policies regulating the capture of threatened species.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) organise a Red List assessment and training workshop, planned for 25–29 September 2018, at the Universiti Malaysia Terengganu, Malaysia (expecting 50 members to participate); (2) complete submission of global Sciaenidae Red List assessments; (3) final revision of global Sciaenidae Red List assessments.

Activities and results 2018
Assess
i. We organised the Third Sciaenidae Red List Assessment Workshop, entitled 'International Union for Conservation of Nature (IUCN) Symposium and Red List Assessment 2018', from 24–28 September 2018, held at the Universiti Malaysia Terengganu, Malaysia. The symposium was attended by 180 local participants and about 30 specialists from the Southeast Asian and Indian subcontinents. The symposium comprised three keynotes, 21 invited speakers and a three-month-long IUCN Red List Exhibition. It was officiated by the Minister of Water, Land and Natural Resources of Malaysia. For the 'Indian Ocean Sciaenidae Red List Assessment Workshop', a total of 33 species of Indo-West Pacific Sciaenidae were assessed or revised during the 2-day workshop. (KSR #2)
Acknowledgements

We thank the Taiwan Forest Bureau for awarding the Taiwan International Fund to Bio-Amazonia Conservation International three times to cover travel funds for the workshop. From 2011 to the present, the National Museum of Marine Biology and Aquarium, Pingtung, Taiwan, has provided physical facilities for the Co-Chair (N.L. Chao) of the Sciaenidae Red List Authority to operate in the Indo-West Pacific region. Universiti Malaysia Terengganu hosted the 2018 Workshop on Sciaenidae Red List assessment. The IUCN Marine Biodiversity Unit, Old Dominion University, has provided technical support and facilitators for the Sciaenidae Red List workshops since 2009. Bio-Amazonia Conservation International has provided partial funding to organise the workshops since 2009.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

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Main KSRs addressed: 2

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC Snake and Lizard Red List Authority is to undertake and support IUCN Red List assessments for reptile groups not covered by other Specialist Groups, including most snakes and lizards and the New Zealand Tuatara (Sphenodon punctatus), and to curate IUCN’s global taxonomy for these groups.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, the Global Reptile Assessment will have been both completed – insofar as every described species of reptile will have been assessed on the IUCN Red List at least once – and, with continued financial support, updated to ensure that no assessment is more than 10 years old. The Snake and Lizard Red List Authority, which has responsibility for the majority of reptile species, will be expanded and more formally structured around a series of regional Red List Coordinators, a process which is already underway. For the first time, it will be possible to evaluate the conservation status of reptiles globally and identify priority targets for reptile conservation at a global scale.

Targets for the 2017-2020 quadrennium
Assess
Red List: (1) support the completion of the Global Reptile Assessment (ca. 10,265 squamate species) through clean-up, review and submission; (2) identify new assessments needed and prepare reassessments for outdated assessments.

Network
Membership: expand the network of Snake and Lizard Red List Authority members and regional coordinators to support management of reptile assessments following the end of the Global Reptile Assessment.

Activities and results 2018
Assess

i. 1,119 assessments were published in 2018, with a further 258 submitted for publication by the end of the year. These covered all remaining Australian snakes and lizards, all but 10 South-east Asian lizards endemic to that region, and additional species from other regions in review, principally the New World. Progress elsewhere was stalled by a lack of available funding for remaining assessments and delays to completion of the Horn of Africa review. (KSR #1)

Network
Membership
i. Three additional members were taken on in the Red List Authority (RLA) in addition to 20 in the South Africa Reptile Regional Specialist Group, representing an additional country (Iran) not previously represented within the RLA and extending regional representation within the South Africa Reptile Regional Specialist Group to Angola, Mozambique, Namibia, Zambia, Zimbabwe and Malawi, and a taxonomic group coordinator for one large lizard family, Liolaemidae.
Acknowledgements

We thank Environment Agency – Abu Dhabi for continued support of the Snake and Lizard Red List Authority Coordinator, and IUCN Biodiversity Assessment Unit staff for advancing the Global Reptile Assessment.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

- Assessed: 1
- Network: 1

Main KSRs addressed: 1

KSR: Key Species Result
Mission statement
To support the expansion of invertebrates assessed for the IUCN Red List.

Projected impact for the 2017-2020 quadrennium
Our activities contribute to the continued extremely slow progress towards a meaningful Barometer of Life. Suggestions for new open systems to make this possible will continue to be made.

Targets for the 2017-2020 quadrennium
Assess
Red List: support any invertebrate Red List assessment not currently covered by any Specialist Group.

Activities and results 2018
Assess
Red List
1. A small number of externally provided assessments reviewed. (KSR #1)

Summary of activities 2018
Species Conservation Cycle ratio: 1/5
Main KSRs addressed: 1

KSR: Key Species Result

Red List Authority Coordinator
Justin Gerlach

Location/Affiliation
Peterhouse, Cambridge, UK

Number of members
40

Social networks
Twitter: @tirla1
Website: http://islandbiodiversity.com/tirla.htm

IUCN SSC Terrestrial and Freshwater Invertebrate Red List Authority

2018 Report
Atylana sp.
Photo: Justin Gerlach

Terrestrial flatworm (Anisorhynchodemus sp.)
Photo: Justin Gerlach
Mission statement
The IUCN SSC Red List Technical Working Group reports to the Red List Committee and is responsible for ensuring consistency and developing improvements in: (a) the application of the IUCN Red List Categories and Criteria; (b) the documentation of Red List assessments, including through the design and coding of the IUCN Classification Schemes and creation of GIS data; (c) the design and implementation of Red List Indices; and (d) the use of the Species Information Service (SIS) to facilitate (a) to (c). In particular, the Red List Technical Working Group seeks to ensure that the SSC’s major global and regional biodiversity assessment projects are implemented in a consistent manner.

Projected impact for the 2017-2020 quadrennium
The impact of the Red List Technical Working Group (RLTWG) on species’ conservation status is the delivery of high-quality assessments with appropriate documentation. This will be achieved by ensuring consistency and developing improvements in: (a) the application of the IUCN Red List Categories and Criteria; (b) the documentation of Red List assessments, including through the design and coding of the IUCN Classification Schemes and creation of GIS data; (c) the design and implementation of Red List Indices; and (d) the use of the Species Information Service (SIS).

Assess
Red List: (1) identify major areas of possible inconsistency in the data generated by the different assessment projects, evaluate the nature and extent of the problems, and propose solutions; (2) provide comments and, wherever possible, examples to the Standards and Petitions Committee on the practical consequences of proposed revisions to the Guidelines for Using the IUCN Red List Categories and Criteria; (3) propose developments and improvements to the documentation of Red List assessments, and develop/improve associated guidance, definitions, etc.; (4) monitor and develop when appropriate, the structure, content, guidance and implementation of the Classification Schemes; (5) oversee the continuing development of The IUCN Red List Index, and advise on its use; (6) monitor the development of SIS and its use, make proposals for changes and improvements as needed, and review all requests for changes and modifications to SIS; (7) provide feedback and guidance on the presentation of The IUCN Red List of Threatened Species data on the IUCN Red List website.

Act
Technical advice: (1) monitor the implementation of all the major biodiversity assessment projects, and other assessment work carried out by Red List Authorities, Red List Partners and the IUCN Global Species Programme; (2) identify issues that need to be covered and clarified in the Guidelines for Using the IUCN Red List Categories and Criteria (https://www.iucnredlist.org/resources/redlistguidelines), and refer these issues along with, wherever possible, real examples to the Standards and Petitions Sub-Committee.
Activities and results 2018

Assess
Red List
i. In September 2018, the “Mapping Standards and Data Quality for the IUCN Red List Categories and Criteria” were published, providing an overview of spatial data on the Red List and outlining the spatial data required with each Red List assessment, along with relevant formats and standards, with a particular focus on the distribution map. (KSR #4, 5)

ii. The RLTWG has started investigating both the processes needed and the impacts of adopting new Classification Schemes for the IUCN Red List. In first instance the Threats and Conservation Action schemes have been investigated, but the issues extend to all classification schemes. (KSR #4, 6)

iii. Guidance on the Red List Index Documentation has been drafted in 2018, and will be discussed at the 2019 RLTWG meeting. (KSR #3, 4)

iv. In 2018, the RLTWG suggested several changes and improvements to the IUCN Species Information Service (SIS) Toolkit. This included enhancements and improvements of the Validity Checker and the Criteria Calculator. (KSR #6)

v. The new IUCN Red List website was launched in 2018, and the RLTWG will be discussing feedback on this at the meeting in early 2019. (KSR #8)

Acknowledgements
We acknowledge financial support from the IUCN SSC Chair’s Office and Global Species Programme.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

Assess 5

Main KSRs addressed: 3, 4, 5, 6, 8

Resolutions addressed: WCC 2016 Res 016

KSR: Key Species Result
Co-Chairs
Maarten Bijleveld van Lexmond (1)
Jean-Marc Bonmatin (2)

Location/Affiliation
(1) Charles-Knapp 29, CH 2000
Neuchâtel, Switzerland
(2) CNRS-CBM (Centre de Biophysique Moleculaire), Rue Charles Sadron, F-45071
Orléans Cedex 2, France

Number of members
75

Social networks
Twitter: @TaskForceSP
Website: www.tfsp.info/en/
YouTube: https://www.youtube.com/watch?v=3QcelD-Vb64&feature=youtu.be

Mission statement
The IUCN SSC CEM Task Force on Systemic Pesticides is the response of the independent scientific community to concern around the impact of systemic pesticides on biodiversity and ecosystems. Its intention is to provide the view of science to inform more rapid and improved decision making.

Projected impact for the 2017-2020 quadrennium
Publication of an updated Worldwide Integrated Assessment (WIA) on systemic pesticides and scientific papers on alternatives. Advise and propositions for a new assessment scheme and for regulators.

Targets for the 2017-2020 quadrennium
Assess
Research activities: (1) prepare and publish part 3 of the article series ‘An update of the Worldwide Integrated Assessment (WIA) on systemic insecticides’, mainly focused on alternatives; (2) prepare publication on the presence of neonicotinoid pesticides in sediments; (3) publish the book Systemic Pesticides.

Plan
Policy: publish open letter to policy makers and regulators on use of neonicotinoid pesticides.

Network
Capacity building: hold the first workshop in Africa on neonicotinoids, organised by the South African Academy of Sciences.

Communicate
Scientific meetings: (1) conduct a series of international symposia on the impact of and alternatives to systemic pesticides (France, Taiwan, Philippines); (2) organise the Task Force on Systemic Pesticides (TFSP) Meetings 2018 in Paris; (3) symposium at the French National Assembly, organized by the TFSP.

Activities and results 2018
Assess
Research activities


iv. In July 2018, the WIA published and illustrated a book under the title Systemic Pesticides: A Worldwide Assessment, by De La Salle University Publishing House in Manila. The book was awarded the 2018 Outstanding Scientific Book Award by the National Academy of Science and Technology (NAST) in July 2018. Half of the cash prize accompanying the Award was allocated to the building of CCPII’s (TFSP’s Filipino branch) Biological Field Station on the island of Marinduque. (KSR #23, 28, 31, 32)
v. Articles on butterflies and neonics are rare, but in May 2018 the results of a study by Peneope Whitehorn et al., with the support of TFSP, was published entitled "Larval exposure to the nicotinoidimidacloprid impacts adult size in the farmland butterfly Pieris brassicae". It is intended to continue this study with a tropical butterfly species at the new to-be-established Biological Field Station on Marinduque, the butterfly island of the Philippines. (KSR #23, 28, 31, 36)

Plan

Policy

i. The open letter to policy makers and regulators by Dave Goulson, signed by 242 independent scientists, was published by Science on 1 June 2018 (https://youtu.be/I4XRcOM2Xek). (KSR #23, 28, 31, 33)

Network

Capacity building

i. The first African workshop on systemic (neonicotinoid) pesticides took place in Pretoria from 15–17 November 2018. Its objectives were to bring together experts and researchers on the use and/or impact of neonicotinoid insecticides in Africa, in particular on biodiversity and the agricultural sector, to establish a network for information exchange and joint activities and develop a plan for future activities, their coordination and the dissemination of findings. A delegation of the Task Force on Systemic Pesticides (TFSP), including its Chair and Vice-Chair, had been invited to review the present state of science based on the WIA and the European Academies’ Science Advisory Council (EASAC) report. The WIA, the "Worldwide Integrated Assessment of the Impact of Systemic Pesticides on Biodiversity and Ecosystems", had been prepared by TFSP and examined all literature on neonicotinoids (and also on fipronil). It was published in a special issue of the peer-reviewed Springer journal *Environmental Science and Pollution Research* in January 2015. That same year its conclusions were confirmed by the EASAC report *Ecosystem services, agriculture and neonicotinoids*. Given the great dependence of African economies and societies on agriculture, there is an urgent need to identify and collate data which would allow the potential risks in Africa to be better evaluated. This was the purpose of the workshop being held in November 2018, in which 12 African nations were represented, and which may well lead to an African version of the EASAC report as well as to scientific symposia on the continent. (KSR #17, 23)

Communicate

Scientific meetings

i. Preceded by a preparatory meeting of TFSP members in East Asia, on the island of Marinduque, the Butterfly Breeding Centre of the Philippines, in March 2018, the 11th Symposium organised by the University of Southeastern Philippines (USeP), took place at the Apo View Hotel, Davao City on 27 June 2018. It was followed by the 12th Symposium, organised by the National Taiwan Normal University (NTNU) in Taipei and opened by the Vice-President of Taiwan, Dr. Chien-Jen Chen on 29 June 2018. The 13th Symposium, co-hosted by the Société Nationale de Protection de la Nature (SNPN), took place in Paris at the Assemblée Nationale (Parliament) on 20 September 2018, organised on the occasion of the new French Law on Biodiversity banning the entire use of all neonicotinoid pesticides. It was presided over by Delphine Batho, France’s former Minister of Ecology, Sustainable Development and Energy. Thus, France became the first country in the world to ban all neonicotinoid pesticides (neonics). The ban, which took effect 1 September, goes beyond measures announced this spring by the European Union to restrict the use of these pesticides. In late August, the Province of Marinduque, Philippines, followed suit by passing an ordinance that bans importation, purchase, sale and use of neonics and fipronil on the island. Vice-Governor Romulo Bacorro M.D. attended the symposium at the French Parliament. (KSR #28)

ii. About one third of TFSP’s membership was able to attend the 3-day annual meeting of the TFSP, organised with SNPN. Major themes/projects on the agenda included Alternatives (WIA 4), WIA II, Human Health (WIA III), international conventions and future science publications, insect biomass monitoring, the flyways project and communication worldwide, as well as discussion of major activities in 2019. (KSR #23, 28, 31, 37)

Acknowledgements

ACKNOWLEDGEMENTS MISSING

Summary of activities 2018

<table>
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<th>Species Conservation Cycle ratio</th>
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Main KSRs addressed: 17, 23, 28, 31, 32, 33, 34, 35, 36, 37

KSR: Key Species Result
Mission statement
The mission of the IUCN SSC Task Force on Human-Wildlife Conflict is to support the IUCN SSC network in addressing human-wildlife conflict (HWC) by providing interdisciplinary guidance and expert support, through an integration of ecological and social sciences.

Projected impact for the 2017-2020 quadrennium
The SSC Human-Wildlife Conflict Task Force was created for the 2017-2020 quadrennium. Its remit is to focus on SSC Key Species Result 37 (KSR-37): Livelihoods of people and species conservation are enhanced through improved human-wildlife interaction. The Task Force is not taxon-specific, it focuses on humans and their conflicting interactions with any species. It has predominantly social scientist members, and strongly emphasises interdisciplinary working. The main needs for reducing and managing HWCs worldwide are: (a) better understanding and awareness of the complexities of conflict; (b) more collaboration between practitioners and policy; (c) more resources committed to good HWC management; (d) more proactive conflict mitigation is undertaken; and (e) better confidence among practitioners in how to approach and work with conflicts. To this end, the Task Force’s role is: (1) act as an authoritative advisory body on matters of human-wildlife conflict, providing expert advice and a platform for the exchange of best practice; (2) facilitate interdisciplinary approaches to human-wildlife conflict mitigation by encouraging the collaboration of experts from biological as well as social sciences, economics, humanities and other fields; and (3) build capacity to support the SSC network by developing technical or framework guidance materials, tools and training as needed by those working on human-wildlife conflict issues.

Targets for the 2017-2020 quadrennium
Plan
Policy: (1) publish academic papers on HWC; (2) provide support and advice to governments, organisations and individuals on HWC matters.

Network
Capacity building: (1) identify the capacity needs for practitioners working on HWC; (2) work with SSC specialist groups to develop species specific resources on HWC; (3) develop training material for practitioners of HWC.

Membership: maintain a diverse membership of the TF both in topic and species expertise.

Synergy: (1) produce an IUCN definition and position statement on HWC; (2) collaborate with specialist groups within the SSC and other IUCN commissions on HWC matters.

Communicate
Communication: (1) produce a website for the HWC Task Force; (2) produce and maintain a resource library to highlight some of the key papers and resources for HWC topics and species; (3) identify and use online platforms to communicate to relevant audience members the work of the TF and key information regarding HWC; (4) attend relevant meetings and events to present the work of the TF and network with relevant attendees.
Activities and results 2018

Plan

Policy
i. The Task Force worked on several papers on new thinking in HWC. (KSR #26)

ii. The group was contacted by governments, organisations and individuals regarding advice on HWC on many occasions. The Task Force has provided advice on problems or suggested practitioners/resources that can assist. (KSR #26)

Network

Capacity building
i. Development of a global survey of training and information needs for HWC was conducted in 2018. (KSR #18)

ii. The Task Force worked with the Asian Elephant Specialist Group on joint HWC guidelines. (KSR #18)

iii. The Task Force is in the process of developing a training programme for practitioners of HWC. (KSR #18)

Membership
i. Three additional members were appointed to the Task Force in 2018 to diversify the species and topic expertise.

Synergy
i. The Task Force held its third annual meeting in September 2018, attended by 16 members, in Oxford, UK. (KSR #26)

ii. The IUCN definition of HWC was developed at the third annual meeting, refined afterwards and sent to IUCN SSC leaders. The definition will be announced in 2019 through an IUCN position statement. (KSR #26)

iii. The Task Force collaborated with several SSC Specialist Groups and other bodies working on HWC (Asian Elephant Specialist Group, Crocodile Specialist Group, Bear Specialist Group, Conservation Planning Specialist Group, IUCN Integrated Tiger Habitat Conservation Programme, IUCN Asia Protected Areas Partnership, IUCN Asia Regional Office, World Bank). (KSR #29)

Communicate

Communication
i. The website of the HWC Task Force is www.hwctf.org. It is complete and being kept up to date all the time. Resources and Members sections are updated as needed. (KSR #28)

ii. A resource library was developed on the Task Force website with resources on multiple topics and species in relation to HWC. It provides the most up-to-date literature on key topics in HWC, with over 900 selected papers, guides and other publications and resources, currently used by people from 140 countries. The resource library went live in January 2018 at http://www.hwctf.org/resources/document-library. (KSR #28)

iii. The Task Force formed a collaboration with the People & Wildlife e-group (700+ members) in 2018 and currently runs the group. Facebook (800+ follows) and Twitter (500+ followers) accounts were created for the Task Force allowing the dissemination of Task Force news and HWC related news, reports, publications and guidance. (KSR #28, 29)

Scientific meetings
i. Task Force members have attended a number of the events and been involved in the development and design of some. Presentations and workshops have been given by the Chair and several others. The Task Force initiated the concept of an international conference on HWC to be held in 2020 and completed the initial stages of planning in 2018. (KSR #28)

Acknowledgements
We thank Chester Zoo for funding the salary for our part-time Programme Officer, and the meeting costs of two annual meetings. The Wildlife Conservation Research Unit of Oxford University provided in-kind support to these meetings. We are grateful for a grant from SSC towards the costs of our third annual meeting of the Task Force in 2018.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

Plan 2

Network 7

Communicate 4

Main KSRs addressed: 18, 26, 28, 29

Resolutions addressed: WCC-2016-Res-068, WCC-2016-Res-085

KSR: Key Species Result
Mission statement
The Oil Palm Task Force (OPTF) aims to inform the debate on the sustainability of palm oil, using the latest research and scientific information, and give guidance to, for example, IUCN about its policies and strategies that affect or are affected by palm oil. We aim to make use of IUCN’s extensive knowledge networks on biodiversity and environmental issues, social, economic and cultural issues, and policy to comprehensively guide thinking on the complex issues of agro-industrial and small-holder oil palm in the world’s tropical regions. The OPTF will act as an authoritative advisory body on oil palm and how this relates to global sustainability objectives, and an intermediary between the oil palm industry, the IUCN network, and the other stakeholders in the oil palm discussions.

Projected impact for the 2017-2020 quadrennium
Oil palm threatens tropical wildlife when plantations are developed in forested areas. We seek to minimise impacts on tropical wildlife by helping promote palm oil production practices that avoid negative impacts on threatened wildlife species, such as orangutans, while maximising socio-economic benefits from palm oil production. The broader sustainability context of vegetable oil production requires that the task force also looks at other oil producing crops to ensure that reductions in palm oil production and concomitant reductions in conservation threats do not lead to disproportionate increases of production of other vegetable oil crops and even larger negative conservation impacts elsewhere.

Targets for the 2017-2020 quadrennium

Assess
Research activities: coordinate the IUCN review process of the draft Situation Analysis (with support from the SSC Chair’s Office), incorporate the comments and suggested edits into the final Situation Analysis, and publish Situation Analysis.

Plan
Planning: develop study on the socio-economic impacts of oil palm and how these affect biodiversity and environmental outcomes.
Policy: global mapping of oil palm and other vegetable oil crops.

Network
Membership: expand Task Force membership and coordinate membership registration with IUCN.
Synergy: (1) conduct third workshop for discussing situation analysis and developing OPTF strategies 2018-2020; (2) internal IUCN meetings to discuss strategic objective of IUCN Oil Palm Task Force to focus on palm oil production in forest frontiers; (3) conflict of interest statements from all Task Force members.

Communicate
Communication: (1) develop Task Force website; (2) translation of Oil palm and biodiversity. A situation analysis by the IUCN Oil Palm Task Force into Indonesian.
Sustainable oil palm increasing requires that high conservation values and high carbon stocks are protected when areas are opened up for development, while riparian forests provide further protection for forest and freshwater flora and fauna. While development in forest areas reduces forest cover, there are potential socio-economic benefits if companies work well with local communities, an important consideration for the Sustainable Development Goals, which the Oil Palm Task Force is looking into.

Photo: Erik Meijaard

Oil palm is highly controversial, hated by many environmentalists for its impact on tropical forests and species, and loved by many others for its socio-economic benefits in tropical producer countries.

Truck and oil palm fruit loading facilities in West Kalimantan
Photo: Douglas Sheil

Activities and results 2018

Assess
Research activities
i. We received nearly 600 comments from 40 external reviewers indicating major interest in the draft Situation Analysis. Comments were incorporated into the final version, which was published in June 2018. The English version of the study had been downloaded 6,637 times in the 6 months of 2018 following its publication, making it the 8th most downloaded IUCN report ever. The French version had been downloaded 2,536 times in 2018, showing major interest in the topics from Francophone countries. There was major media attention to the publication of the report and its findings appear to have changed to global debate on palm oil, and especially the consequences of a palm oil ban on the production of other vegetable oil crops. (KSR #32)

Network
Membership
i. Membership increased by five.

Synergy
i. Third workshop for discussing situation analysis and developing OPTF strategies 2018-2020 accomplished in London in June 2018. The workshop discussed the process of the Situation Analysis development and formulated strategies for going forward. A decision was made to focus the work of the Task Force on oil palm in high forest cover regions and to look into the socio-economic impacts of palm oil.

ii. Following the London meeting, we conducted a number of conference calls and a meeting organised by IUCN-NL in Amsterdam to fine-tune Task Force strategies and determine how follow up work could be funded. No follow-up funding was identified, however, slowing down the implementation of further activities.

iii. All Task Force members submitted conflict of interest statements and endorsed their online publication in compliance with IUCN policies. The process started in 2018, when the first members submitted their statements and endorsements.

Communicate
Communication
i. Website developed: https://www.iucn-optf.org/ (KSR #28)

ii. Indonesia is the largest palm oil producer in the world and we considered it important to translate the Situation Analysis into Indonesian. Funding was obtained to finance the translation and layout of the Indonesian report, to be published in 2019.

Acknowledgements
We thank Austindo Nusantara Jaya for funding the Indonesian translation of the Situation Analysis on Oil Palm and Biodiversity.

Summary of activities 2018

Species Conservation Cycle ratio: 3/5

Assess 1
Network 4
Communicate 2
Main KSRs addressed: 28, 32
Resolutions addressed: WCC-2016-Res-061

KSR: Key Species Result
Mission statement
The IUCN SSC Post-2020 Biodiversity Targets Task Force aims to provide a focus and leadership on species issues in the framework of the post-2020 Strategic Plan for Biodiversity to the Parties to the Convention on Biological Diversity (CBD), through coordination with IUCN Secretariat. The Task Force seeks to do this by collating inputs and views from across the SSC network, and providing scientific and technical expertise on species related target(s).

Projected impact for the 2017-2020 quadrennium
At the end of 2020, there will be a deeper understanding amongst CBD Parties of the importance of an ambitious target for species conservation and the challenges of meeting that within the 10 years of the 2011-2020 Strategic Plan for Biodiversity. This understanding will be reflected in a strong target for species conservation being kept in the post-2020 Strategic Plan (or Framework for Biodiversity), and with a more realistic mechanism for measuring progress, and the stronger engagement of the species conservation community, represented by SSC, in delivering this new target.

Targets for the 2017-2020 quadrennium
Plan
Policy: (1) ensure that, in 2020, any new or revised conservation targets relating to species under the CBD and associated Protocols and Multilateral Environmental Agreements (MEAs) are ambitious while achievable, practical and helpful in terms of implementation of the overall goals of the CBD. These goals are the conservation and sustainable use of biodiversity, and the fair and equitable sharing of benefits arising out of use of genetic resources; (2) work with the IUCN Secretariat to support the development of a short policy position paper framing and outlining what is needed for species conservation for the next decade, within the framework of the CBD and other MEAs/mechanism of biodiversity/living in harmony with nature (2021-2030); what will Target 12 look like post 2020?; (3) position the Assessment-Plan-Action approach for species conservation: for example, by ensuring the IUCN Red List informs and feeds into the CBD post-2020 process, as well as a mechanism for measuring conservation actions at the national level (i.e. hold CBD Parties accountable for reporting).

Act
Technical advice: work in collaboration with the IUCN Secretariat to provide scientific and technical guidance to Parties on species conservation planning and implementation.

Network
Synergy: (1) determine the views of members of the SSC on the species conservation planning targets beyond 2020, and their views on potential advice that can be provided to help with implementation of work towards any future species conservation targets. This will allow the Task Force to identify key issues for species in the post-2020 agenda; (2) develop a road map of engagement so that the Task Force, working with IUCN Secretariat, will be ready for the major CBD milestones over the next three years.
Activities and results 2018

Plan
Policy
i. One manuscript has been submitted for publication that assesses Target 12: its nature, links with other Aichi targets and key issues. This arose from the Task Force’s contribution to the IUCN Position Paper for the 22nd meeting of the Subsidiary Body on Scientific, Technical and Technological Advice and 2nd meeting of the Subsidiary Body on implementation (SBSTTA 22/ SBI-2) and there has been significant development of ideas. (KSR #26)

Act
Technical advice
i. Contributed to IUCN Position Papers for CBD meetings (SBSTTA 22, SBI-2, and the 14th meeting of the Conference of the Parties/CoP14); developed an information document together; we also contributed to calls for input from CBD in December 2018 (Notification 2018-063). (KSR #18)

Network
Synergy
i. Survey of SSC members on species conservation needs completed in 2018. (KSR #29)
ii. We have been working reactively during 2018 to both requests from IUCN Secretariat and the timeline established by the CBD process. We will turn to more proactive engagement during 2019, when we will define our milestones to the 15th meeting of the Conference of the Parties (CoP15).

Acknowledgements
We thank the following organisations: BirdLife International, Botanic Gardens Conservation International, Conservation International, the Conservation Planning Specialist Group, EcoHealth Alliance, the Institute of Botany at the Chinese Academy of Sciences, International Institute for Environment and Development, ISPRA (Institute for Environmental Protection and Research), the Morton Arboretum, NatureServe, SSC, South African National Biodiversity Institute, University of Brasilia, Wildlife Trust of India, WWF, and Newcastle University.

Summary of activities 2018
Species Conservation Cycle ratio: 3/5

| Plan | 1 |
| Act | 1 |
| Network | 2 |

Main KSRs addressed: 18, 26, 29

KSR: Key Species Result
Mission statement

To develop a “Green List of Species” to document and incentivise successful species conservation and recovery.

Projected impact for the 2017-2020 quadrennium

Not applicable as the product is still in development.

Targets for the 2017-2020 quadrennium

Assess

Green List: Green List criteria for species conservation actions developed and ready for implementation, including links with Green List criteria for ecosystems and protected areas.

Activities and results 2018

Assess

Green List

i. Published the framework paper and actively solicited feedback on it. (KSR #11)

ii. Draft standard and guidelines produced. (KSR #11)

Acknowledgements

We thank the UK government’s Natural Environment Research Council (NERC) Knowledge Exchange Fellowship programme and World Wildlife Fund (WWF) US for their support in funding the development of the Species Green List. We also thank all those who have contributed their time and knowledge to helping us test the framework on so many varying taxa.

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

Assess 2

Main KSRs addressed: 11

KSR: Key Species Result
Co-Chairs
Stephen Woodley (1)  
Penny Langhammer (2)

Location/Affiliation
(1) World Commission on Protected Areas, Chelsea, Quebec, Canada  
(2) Global Wildlife Conservation, Portland, Oregon, US

Number of members
200

Social networks
Website:  

Mission statement
The Joint IUCN SSC/WCPA Biodiversity and Protected Areas Task Force has two formal objectives. Objective 1 is to understand the drivers of successful biodiversity outcomes in protected areas, on land and in sea. Objective 2 is to consolidate a global standard for the identification of Key Biodiversity Areas.

Projected impact for the 2017-2020 quadrennium
By the end of 2020, we anticipate a substantial increase in the safeguard of sites important for globally threatened, geographically restricted, and congregatory species through: (1) demonstration that protected areas are effective at conserving species and the management inputs necessary to achieve conservation outcomes in protected areas, and (2) application of the global Key Biodiversity Areas (KBAs) standard to identify important sites in need of protection, dissemination of these data through the World Database of KBAs, and enhanced efforts by the KBA Partners and other conservation organisations, governments and the private sector to safeguard KBAs. The work of the Task Force also provides scientific analysis on the drivers of protected area effectiveness. This research was directly built into the IUCN Green List of Protected Areas and provides the basis for countries to manage for effective and equitable protected areas that lead to effective biodiversity outcomes.

Targets for the 2017-2020 quadrennium
Assess
Research activities: (1) completion of peer-reviewed publication of the global Key Biodiversity Areas standard; (2) completion of Guidelines for using A Global Standard for the Identification of Key Biodiversity Areas, Version 1.0; (3) completion of an IUCN guidance document on assessing the value of ecosystem services at sites, for KBAs, protected areas, and World Heritage Sites; (4) completion of research papers on protected area effectiveness and biodiversity outcomes: ‘A global analysis of management capacity and ecological outcomes in terrestrial protected areas’; (5) completion of research papers on protected area effectiveness and biodiversity outcomes: ‘Why Make Protected Areas Effective in Conserving Nature’; (6) training workshops on KBA standard; (7) assist in development of KBA National Coordination Group for Canada; (8) completion of research paper on relationship between Key Biodiversity Areas and systematic conservation planning; (9) completion of research paper on end user engagement process during development of global Key Biodiversity Areas standard.

Plan
Policy: (1) help develop an IUCN-led guidance document on businesses working in or impacting Key Biodiversity Areas; (2) promote KBAs as a key part of the post 2020 conservation targets under the Convention on Biological Diversity (CBD).

Act
Conservation activities: participation in the Key Biodiversity Areas Partnership as representative for the World Commission on Protected Areas (Stephen Woodley).
Activities and results 2018

Assess Research activities
i. We drafted some sections of this paper in 2018 and expect to complete it in 2019. (KSR #22)


v. Might not be necessary now given other published literature. (KSR #32)

vi. We supported the KBA Partnership in conducting KBA training workshops at the Sharjah International Conservation Forum for Arabian Biodiversity, Sharjah, UAE (February 2018) and at the meeting of the KBA National Coordination Group for Uganda, in Kampala, Uganda (December 2018). (KSR #22)

vii. We organised a national Coordination Committee on KBAs for Canada by a set of meetings with government, academics and NGOs. (KSR #22)


Plan Policy

ii. We promoted KBAs as a key part of the post 2020 conservation targets under the CBD. (KSR #22)

Act Conservation activities
i. Ongoing attendance at KBA Committee meeting by Stephen Woodley (WCPA) and Jon Paul Rodriguez (SSC) and with contributions to KBA Partnership policy work. (KSR #22)

Acknowledgements
We gratefully acknowledge the members of the KBA Standards and Appeals Committee, in particular Charlotte Boyd, and the KBA Technical Working Group for their hard work in producing Guidelines for Using A Global Standard for the Identification of Key Biodiversity Areas: version 1.0. We also recognise Jonas Geldmann, Robert J. Smith, Rachel Neugarten, and Jessica Maxwell for their outstanding leadership on the peer-reviewed publications listed in this report. We thank the Science for Nature and People Partnership, the German Federal Agency for Nature Conservation (Bundesamt für Naturschutz – BN), and the Center for Biodiversity Outcomes at Arizona State University for financial support of the publication, Tools for measuring, modelling, and valuing ecosystem services: Guidance for Key Biodiversity Areas, natural World Heritage sites, and protected areas. The KBA workshop at the Sharjah International Conservation Forum for Arabian Biodiversity was generously supported by the Environment and Protected Areas Authority (EPAA) of Sharjah, UAE. We thank Justina Ray from WCS Canada for leadership in KBA identification in Canada and gratefully acknowledge financial support for the Canadian work from Environment and Climate Change Canada.

Summary of activities 2018
Species Conservation Cycle ratio: 3/5

Assess 9

Plan 2

Act 1

Main KSRs addressed: 22, 32

Resolutions addressed: WCC-2016-Res-041

KSR: Key Species Result
Mission statement

The goal of the Marine Mammal Protected Areas (MMPA) Task Force is to facilitate mechanisms to encourage collaboration, sharing information and experience to access and disseminate knowledge and tools for establishing, monitoring, and managing MMPAs and promoting effective spatial solutions and best practices for marine mammal conservation.

Projected impact for the 2017-2020 quadrennium

By bringing to the attention of managers, decision makers and the general public the presence and whereabouts of important marine mammal areas (IMMAs), we are facilitating the consideration of marine mammal habitats in decisions concerning marine spatial planning and the planning of human activities at sea that have or can have a negative impact on marine mammal status. IMMAs have also been brought to the attention of policy makers, having been the subject of Convention on the Conservation of Migratory Species of Wild Animals (CMS) Resolution 12.13. Most of this work, however, is still potential given the recent date in which IMMAs have been made public.

Targets for the 2017-2020 quadrennium

Act
Conservation actions: complete Important Marine Mammal Areas (IMMA) identification in the tropical and temperate Indian and South Pacific Oceans.

Network
Membership: increase Task Force membership through addition of regional group coordinators. Synergy: improve streamlining between the IMMA and the Key Biodiversity Area (KBA) processes.

Activities and results 2018

Act

Conservation actions
i. We have identified IMMAs in two regions: the North East Indian Ocean/South East Asian Seas, and the Extended Southern Ocean. (KSR #26)

Network

Membership
i. We brought in four new members within the regional group coordinator roles.

Synergy
i. We continue to work with our member Charlotte Boyd to facilitate integration between IMMAs and KBAs. (KSR #29)
Acknowledgements

We are grateful to the Global Ocean Biodiversity Initiative (GOBI), to the IKI Office of the Government of Germany, and to the French Agency for Biodiversity for being the major supporters of the IMMA effort.

Summary of activities 2018

Species Conservation Cycle ratio: 2/5

Act 1

Network 2

Main KSRs addressed: 26, 29

KSR: Key Species Result

Identifying Important Marine Mammal Areas (IMMAs) at the Third IMMA Workshop: Regional Workshop for North East Indian Ocean and South East Asian Seas, Kota Kinabalu, Malaysia, 12-16 March 2018

Photo: Erich Hoyt, Whale and Dolphin Conservation; IUCN Marine Mammal Protected Areas Task Force

Blue whale (Balaenoptera musculus) spouting, one of the main species found in the North East Indian Ocean and South East Asian Seas

Photo: Lucy Molleson, Courtesy Whale and Dolphin Conservation
Mission statement
No mission statement.

Targets for the 2017-2020 quadrennium

Plan

Activities and results 2018

Plan
Policy
i. Completed the draft of the technical assessment. (KSR #26)

Acknowledgements
Financial support for development of this assessment was provided by the Federal Office of the Environment of the government of Switzerland, the Luc Hoffmann Institute of World Wildlife Fund – International, the Ministry for the Ecological and Inclusive Transition of France, and by the Gordon and Betty Moore Foundation. The assessment was written based on discussions held at Jesus College, Cambridge, UK (April 2018), the Instituto de Pesquisas Ecológicas, Nazaré Paulista, Brazil (July 2018), and IUCN offices, Washington D.C. (November 2018).

Summary of activities 2018
Species Conservation Cycle ratio: 1/5

Main KSRs addressed: 26
Resolutions addressed: WCC-2016-Res-086

IUCN WCPA/SSC Synthetic Biology and Biodiversity Conservation Task Force

2018 Report
Technical Subgroup meeting in Brazil to work on the Technical Assessment
Photo: Kent Redford

Synthetic Biology and Biodiversity Taskforce
Photo: Kent H. Redford
Co-Chairs
Topiltzin Contreras MacBeath (1)
Ian Harrison (2)

Red List Authority Coordinator
Jörg Freyhof (3)

Location/Affiliation
(1) Universidad Autónoma del Estado de Morelos, Cuernavaca, Mexico
(3) Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany

Number of members
16

Mission statement
To raise the profile of freshwater biodiversity through: (1) coordinating freshwater species conservation activities through the SSC, highlighting emerging patterns and ensuring that increasing attention is given to issues concerning freshwater biodiversity conservation; (2) making freshwater recommendations to the SSC based on the work of the Freshwater Conservation Committee, and ensuring that freshwater species conservation issues are well represented within the SSC and the wider IUCN; (3) assisting the SSC by providing authority and credibility in its engagement with policy processes and major freshwater related events.

Projected impact for the 2017-2020 quadrennium
By 2020, we envision that the Freshwater Conservation Committee can provide stronger recommendations for freshwater conservation priorities, in terms of which species and regions require most urgent action, and how to link conservation action between regions through habitat connectivity. We can achieve this through mobilising the newly assimilated Red List assessment data for application to management and policy. Conservation action will be directed at selected, leading threats to freshwater ecosystems, in particular, invasive species and fragmentation of habitats by dams. By working with partners such as the IUCN World Commission on Protected Areas (WCPA) Freshwater Specialist Group, we can provide guidance for better conservation of freshwater ecosystems in protected areas. By facilitating communication and collaboration between SSC Specialist Groups with a freshwater interest, and by linking this to the work of other IUCN Commissions and the Secretariat, as well as contributing to other major freshwater initiatives beyond IUCN, we will ensure that future freshwater conservation planning is more fully integrated across IUCN’s programmes. Conservation of freshwater species and habitats will be given a higher profile as a core component in wider landscape management, conservation and policy making. Freshwater conservation initiatives will be better coordinated to complement each other, rather than operating in parallel.

Targets for the 2017-2020 quadrennium
Assess
Red List: complete Red List assessments of all freshwater species targeted by IUCN for global coverage (ca. 38,300 species).
Research activities: (1) develop a programme of Conservation Evidence, documenting conservation success (e.g. what is the relationship between conservation success and protected areas, and links between biodiversity and ecosystem services/human health); (2) Ramsar site review; (3) meta-data analysis of freshwater biodiversity and dams/other infrastructure.

Plan
Planning: (1) promote the inclusion and effective management of freshwater ecosystems in protected areas and other effective area-based conservation measures (OECMs).
Policy: (1) publish a paper on review of threats to freshwater wetlands; (2) ensure that freshwater ecosystems are better integrated into the post-2020 global biodiversity outlook.
Act
Conservation activities: develop projects and collaborations focused on freshwater invasive species.

Network
Capacity building: (1) plan and run a workshop, focused on challenges, opportunities and priorities for freshwater biodiversity conservation, at the 2019 SSC Leaders’ Meeting; (2) following the freshwater workshop at the 2019 SSC Leaders’ Meeting, plan and run a cross-linked series of freshwater themed events at the 2020 World Conservation Congress, focused on challenges, opportunities, and priorities for freshwater biodiversity conservation.
Proposal development and funding: fundraising for projects/Programme Officer.
Synergy: (1) be a key partner in developing the IUCN One Programme for Freshwater Biodiversity (as defined by a white paper describing the objectives of the strategy); (2) develop and help coordinate an IUCN Freshwater Network, for sharing information and freshwater objectives, with an online mechanism for sharing information; (3) review freshwater targets and objectives of other Specialist Groups to identify areas of shared or supporting interest; (4) be a key partner in developing the new initiative, the Alliance for Freshwater Life (AFL); (5) be a key partner in a new initiative/NGO focused on fundraising for freshwater biodiversity conservation; (6) the Committee will be seen as a source of advice and coordination on freshwater activities in SSC and partners.

Communicate
Communication: (1) create a list of ‘25 top species’ – representative across taxonomic groups and regions – that highlight some of the main issues associated with freshwater ecosystem conservation; (2) establish effective outreach and communications.

Activities and results 2018

Assess
Red List
i. In 2018, the IUCN Freshwater Biodiversity Unit coordinated the following Red List assessment programmes: (1) Lake Malawi/Nyasa/Niassa Catchment – published reassessments of all freshwater decapods, fishes and molluscs, and of selected freshwater plants, plus delineated Key Biodiversity Areas (KBAs) for freshwater species; (2) Lake Tanganyika – delineated KBAs for freshwater species (Nsombo Tanganyika Conservation Project); (3) Malili Lakes – completed assessments of all freshwater decapods, fishes and molluscs, to be published in 2019 (plus odonates were published in 2017); (4) West Africa – started assessments of all freshwater decapods, fishes, molluscs and freshwater plants; (5) Japan – completed assessments of all endemic freshwater fishes (ca. 60), to be published in 2019; (6) Mexico – completed assessments of all native freshwater fishes (ca. 520), to be published in 2019; (7) Sunda – started assessments of all native freshwater fishes (ca. 1,000), to be published in 2019; (8) Australia – started assessments of all native freshwater fishes (ca. 250), to be published in 2019; (9) Pakistan – started assessments of all native freshwater fishes (ca. 170), to be published in 2019. (KSR #1)

Plan
Policy
i. The Committee worked with several other NGOs and initiatives to prepare a one-page informational document that was submitted to the Convention on Biological Diversity (CBD) COP 14: https://www.cbd.int/doc/c/8814/39c2/Sba8281033b6423eafdb77e/cop-14-inf-45-en.pdf. That document complements a similar
statement made by the 'Partners for Wetlands' (International Organization Partners of the Ramsar Convention on Wetlands): https://www.wwt.org.uk/blog/wp-content/uploads/2018/11/IOP-statement-post-COP13-FINAL.pdf. Subsequently, a few members of the Committee also provided feedback to IUCN on a review of the Aichi targets, and how they might be refined to better include freshwater issues. Some Committee members also prepared a letter to Science in response to the latest Living Planet Index, noting the need to integrate freshwater more fully into the post-2020 CBD targets and have clear links to the Sustainable Development Goals (that letter was published in 2019). Further input was provided to IUCN in 2019 for its response to CBD’s Post-2020 Global Biodiversity Framework discussion paper and several of our recommendations have been included in IUCN’s response document: https://www.iucn.org/sites/dev/files/iucn_response_cbd_post_2020_part_2_target_formulations_and_topics_12_april_2019_final.pdf. Members of the Committee are also engaged with the initiative being led by WWF-UK on ‘Bending the Curve for Freshwater Biodiversity Loss’, which is also considering how global policy targets can be improved to better represent freshwater ecosystems. (KSR #7, 26)

**Network**

**Capacity building**

i. Co-Chairs of the Committee have been engaged in the SSC Leaders’ Meeting planning process and have recommended the inclusion of freshwater-focused sessions in the agenda. (KSR #18)

**Synergy**

i. In September 2017, Committee Co-Chair Ian Harrison helped organise a workshop to create a plan for developing the IUCN One Programme Strategy for Freshwater Biodiversity Conservation. The meeting was hosted by the IUCN Water Programme at IUCN Headquarters in Switzerland and was attended by 19 people from 15 different organisations (or different units within their organisations), including two members of the Freshwater Conservation Committee. Our plan was to assimilate the information from the workshop and turn this into a Framework Strategy for the IUCN One Programme for Freshwater Biodiversity, which would: (i) be presented as a summary document to IUCN’s Council meeting in November 2017, to alert the council to the overall plan for the IUCN One Programme for Freshwater Biodiversity; (ii) subsequently be developed into a more detailed document to be presented at the World Water Forum in March 2018; and (iii) then be proposed for adoption at the IUCN World Conservation Congress in 2020. The logistics of this process are being managed by the IUCN Water Programme. However, administrative changes within the Water Programme in 2018 have slowed the process down, and the Strategy document has not been prepared thus far. Nonetheless, the Water Programme have stated their continued interest in advancing this agenda prior to 2020. Some of the messaging from this meeting was incorporated into a document, submitted to the CBD COP 14 in November 2018, recommending that more targeted actions for the conservation of inland waters should be included in the post-2020 global biodiversity framework. (KSR #29)
ii. Committee members assimilated a list of Specialist Groups, Committees and Task Forces within the IUCN Commissions that have an interest in freshwater. We have focused initially on SSC groups, but have also contacted groups from one or two other Commissions, such as the Commission on Ecosystem Management (CEM). CEM’s Wetlands Ecosystems Group are involved in a process of classifying and mapping freshwater ecosystems globally, so they can be assessed following the Red List of Ecosystems criteria. Claudio Baigun (leader of the CEM Wetlands Group) has been recruited as a member of the Freshwater Conservation Committee. (KSR #29)

iii. Both Co-Chairs and some other members of the Freshwater Conservation Committee have been closely involved with the development of the Alliance for Freshwater Life (AFL), following an initial planning meeting held at Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Berlin, in October 2017. Subsequently, some Committee members helped plan the official launch of the AFL at Stockholm World Water Week in August 2018 (https://programme.worldwaterweek.org/event/8124-a-new-global-initiative-the-alliance-for-freshwater-life). We have also authored a manuscript describing the AFL: Darwall, W., et al. (2018). The Alliance for Freshwater Life: A global call to unite efforts for freshwater biodiversity science and conservation. Aquatic Conservation: Marine and Freshwater Ecosystems 28(4):1015–1022. Some Committee members submitted a proposal (accepted) for a session on ‘The Alliance for Freshwater Life – fostering multidisciplinary freshwater research on local to global scales’ for the 2019 Annual Meeting of the Society for Freshwater Science. (KSR #29)

iv. This initiative is not yet an official NGO, but it is officially formed, under the name Shoal (https://shoalconservation.org), and has a small Secretariat run by Mike Baltzer. The mission of Shoal is to engage a wide range of organisations to accelerate and escalate actions to save the most threatened fish and other freshwater species. Committee members Ian Harrison and Harmony Patricio attended the initial planning meeting of Shoal in January 2018, hosted by the Fishmongers Company. Subsequently, the Committee Co-Chair and some other Committee members have liaised with Mike Baltzer as he has further developed the concept for Shoal. (KSR #29)

Communications

i. Outreach has been achieved through email. The Committee still needs to develop its own website and Facebook page. (KSR #28)

Acknowledgements

We are grateful to Synchronicity Earth and Conservation International for providing support for Co-Chair Ian Harrison to work on Committee activities. Synchronicity Earth and Aurum Funds/Aurum Research kindly assisted in planning and logistics in 2018 for the Committee’s meeting in London. We are grateful to the ongoing assistance and advice from Rachel Hoffman, SSC Director of Conservation Outcomes.

Summary of activities 2018

<table>
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<th>Species Conservation Cycle ratio: 4/5</th>
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<tr>
<td>Assess</td>
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<td>Network</td>
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<td>Communicate</td>
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Main KSRs addressed: 1, 7, 18, 26, 28, 29

KSR: Key Species Result
Mission statement
The mission of the Invertebrate Conservation Committee (ICC) is to foster the conservation of terrestrial and freshwater invertebrates and their habitats around the world. We assess their conservation status, raise awareness and engage in practical conservation of this most species rich taxonomic groups on Earth.

Projected impact for the 2017-2020 quadrennium
Our work will help to increase the taxonomic diversity represented in the IUCN SSC. The higher number of Red List assessments and new Specialist Groups will help to instigate new conservation actions for invertebrate species.

Targets for the 2017-2020 quadrennium

Assess
Red List: add 500 charismatic invertebrate species to the IUCN Red List. Research activities: (1) develop monitoring standards for selected groups of invertebrates; (2) write publication on closing knowledge gaps in invertebrates.

Network
Membership: increase the number of invertebrate Specialist Groups (N=15).

Communicate
Communication: produce guidelines for Invertebrate Conservation in Protected Areas.

Activities and results 2018

Assess
Red List
1. The addition of 500 charismatic invertebrate species to the IUCN Red List is complete: 14 Malagasy millipedes, 37 Nephilidae spiders, 86 Australian stick insects, 36 Birdwing butterflies, 71 St. Helena endemic insects, 107 Azorean endemic insects, 21 Vietnamese cave invertebrates, and 74 South African millipedes have been assessed. (KSR #1)

Research activities
1. Publication on closing knowledge gaps in invertebrates is written, but must be resubmitted to another journal. (KSR #43)

Network
Membership
1. Four new invertebrate Specialist Groups established.

Communicate
Communication
1. Draft contents of guidelines for Invertebrate Conservation in Protected Areas completed, but no progress so far due to lack of time. (KSR #28)

Acknowledgements
We thank the SSC Chair’s Office for financial support for the Charismatic Mega-Invertebrate project and The IUCN-Toyota Red List Partnership for funding of other invertebrate Red List assessments. Furthermore, we are grateful to the Mohamed bin Zayed Species Conservation Fund for its continued and very valued support of invertebrate conservation projects for IUCN SSC Invertebrate Specialist Groups.
Summary of activities 2018

Species Conservation Cycle ratio: 3/5

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Main KSRs addressed: 1, 28, 43

KSR: Key Species Result

*Choerades fimbriata*, a European robber fly, which needs dead wood for development

Photo: Axel Hochkirch
Mission statement
The mission of the IUCN SSC Marine Conservation Committee is to support, enhance and mobilise expertise in marine species conservation for a better future. Its mandate is to ensure that decisions on marine species are directed at long-term population health and based on sound technical knowledge. Specifically, it helps and links volunteer experts from the IUCN Species Survival Commission’s (SSC) network who have special knowledge of particular taxa or of cross-cutting concerns. It also advocates the use of SSC marine knowledge and skills in the broad global community, particularly by policy makers and resource managers.

Projected impact for the 2017-2020 quadrennium
The SSC Marine Conservation Committee (MCC) makes a difference by encouraging and advancing SSC excellence in marine taxa and issues, energising IUCN’s engagement with the ocean, and ensuring SSC marine expertise is put into service effectively around the world. The MCC assists SSC Specialist Groups, stand-alone Red List Authorities and Task Forces to meet their Assess-Plan-Act objectives. We are particularly determined that the World Conservation Congress theme of Restoring Ocean Health will mark real change. The MCC is also energetically promoting far better coverage of ocean concerns in the post-2020 Biodiversity Targets. A key focus of the MCC is to develop tools and approaches to connect SSC expertise with management and policy initiatives globally.

Targets for the 2017-2020 quadrennium
Plan
Planning: ensure that the Marine Conservation Committee (MCC) is working effectively.
Policy: support the World Conservation Congress theme of Restoring Ocean Health.

Act
Policy: promote and mobilise SSC marine expertise to advance ocean conservation globally.

Network
Policy: advance IUCN capacity for marine conservation.
Synergy: support and connect SSC marine expertise.

Activities and results 2018
Plan
Planning
i. Created and presented a framework for MCC action to the SSC Steering Committee. Appointed 12 new members with broad geographic, taxonomic and skills expertise. Developed a mission statement and Terms of Reference for the MCC as well as a draft work plan for the Committee. Established an MCC social media presence, by setting up a website and Twitter page, and held an inaugural virtual MCC meeting. (KSR #21, 28, 29, 30)

Act
Policy
i. The MCC ensures that priority SSC marine concerns are taken to the SSC Chair and Steering Committee and that marine concerns are well represented in SSC planning and priorities by consulting all marine Specialist Groups and Red List Authorities (RLAs) on concerns, priorities, successes, needs and ideas. To help advance Specialist Group effectiveness
in planning, Specialist Group Chairs were consulted on engagement and planning and issues of cross-cutting importance across multiple Specialist Groups/RLAs. The MCC has also consulted the Marine Biodiversity Unit (MBU) on the need for new Specialist Groups. (KSR #21, 28, 29, 30)

**Network**

**Policy**

i. Assisted IUCN to help develop and secure strong marine positions for Aichi post-2020 targets by contributing a briefing on ocean issues. (KSR #21, 28, 29, 30)

**Synergy**

i. Held one hour consultation with each marine-related Specialist Group to discuss and determine priorities for the MCC.

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**Acknowledgements**

The MCC thanks the SSC Chair’s Office – and particularly Jon Paul Rodriguez, Domitilla Raimondo and Rachel Hoffman – for their great support. We also thank Olivier Hasinger from the Global Species Programme for his valuable assistance. The MCC benefits enormously from the tremendous efforts from all SSC marine leaders and experts, and is ever grateful for their energy, insights and excellence.

**Summary of activities 2018**

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Main KSRs addressed: 21, 28, 29, 30

KSR: Key Species Result
**Mission statement**

The IUCN SSC Plant Conservation Committee (PCC) leads IUCN’s efforts in stemming the loss of global plant diversity through its wide-ranging network of plant conservationists. The PCC is responsible for advising and assisting on the overall prioritisation and programme oversight within the SSC to deliver on its plant conservation responsibilities. The PCC works to support and facilitate the activities of the SSC Chair, the IUCN Global Species Programme, and the expert volunteer network of Specialist Groups, Red List Authorities, Task Forces and others, providing overall strategic guidance and direction in accordance with the mandate of the SSC.

**Projected impact for the 2017-2020 quadrennium**

The Plant Conservation Committee aims to achieve the following outputs by 2020: (1) barometer of life targets achieved for plants (38,000 plants included on the IUCN Red List); (2) guidelines on including plant diversity in action plans and sector based plans developed; (3) *ex situ* conservation of plants promoted by involving botanic gardens in conservation and support of IUCN SSC groups; (4) each IUCN SSC Specialist Group has a sustainable use focus; (5) quantifiable targets related to plant diversity incorporated into the post-2020 global biodiversity framework.

**Targets for the 2017-2020 quadrennium**

**Assess**

- Green List: test the Green List for Cycads, Kew Caribbean plants, Cacti, and sample Global Tree Campaign Species.
- Red List: (1) manage and drive assessments forward in 13 megadiverse countries (US, Mexico, Colombia, Brazil, Ecuador, Peru, South Africa, Ethiopia, Madagascar, India, Indonesia, China, Australia); (2) champion Red List assessment of CITES-listed plants (those affected by trade, not look-alikes): identify the gaps, encourage Specialist Groups to prioritise assessments; (3) assess conservation status of species important to livelihoods (Plants for People/P4P species prioritised) in order to support conservation action, such as species conservation action plans, national strategies, etc.; (4) non-English speaking national assessment groups to help with translation of classification schemes if requested by IUCN Red List Unit; (5) investigate translate wiki for the IUCN Red List website’s publication of different language assessments; (6) resource to fund IUCN SIS database updates needed for languages; (7) develop a system for automating Least Concern assessments for plants, that includes: (i) clearly defined thresholds for what qualifies as Least Concern, e.g. minimum extent of occurrence (EOO) and number of countries, (ii) determine how habitat information can be automatically brought in and test different spatial ecosystem classification systems, e.g. ecosystem assessment for South America, WWF ecoregions, etc., (iii) determine what land cover layers are best used to determine level of habitat loss, (iv) determine thresholds of habitat loss that mean a species cannot qualify as Least Concern; (8) prioritise Crop Wild Relative (CWR) assessments in hotspots, e.g. Indonesia (underway with Crop Wild Relative Specialist Group; Global Trees to build it in through David Gill), investigate working on Crop Wild Relatives in Brazil with the Brazilian Agricultural Research Corporation (EMBRAPA) and in Ethiopia. Research activities: (1) ensure taxonomic challenges are dealt with by updating plant taxonomic information in SIS to the APG4 flowering plant classification and getting all Specialist Groups to sign off on taxonomy before Least...
Concern assessments are uploaded to SIS; (2) hotspot regions (Indonesia, Brazil, South Africa, Madagascar, Colombia) to list Alliance for Zero Extinction (AZE) sites for plants (once on the Red List); (3) hotspot regions (Indonesia, Brazil, South Africa, Madagascar, Colombia) where possible to identify Key Biodiversity Areas (KBAs) for plants (once on the Red List).

Plan
Policy: (1) produce a policy brief on Crop Wild Relatives (CWR) and their role in adaptation to climate change, and consider turning this into a resolution for the IUCN World Conservation Congress (WCC); (2) champion/support piloting of the FairWild Standard and certification for high risk CITES-listed species, and summarise the case study at the relevant CITES events (in particular as relevant to livelihoods and incentives agenda items); (3) develop the next iteration of the Global Strategy for Plant Conservation that incorporates the views and aspirations of the entire plant conservation community (not just the ex situ community), develop better indicators for the post-2020 global biodiversity targets, and develop tools and data services for conservation practitioners and policymakers, including Convention on Biological Diversity (CBD) national focal points.

Act
Conservation actions: (1) ensure that use and trade of plants is reflected in the work of Specialist Groups as/when appropriate, including to request plant Specialist Groups integrate species use and trade in their work, in particular for the new Specialist Groups; (2) engage with the Sustainable Use and Livelihoods Specialist Group (SULi) on the use and trade aspects/priorities in PCC, and support continuous engagement and communications (for example by initiating the plant-focused sub-group of SULi)

Network
Capacity building: (1) support Specialist Groups to achieve the assessments committed to in the IUCN Species Strategic Plan, through having one on one skype calls with each group and emailing them to encourage progress; encourage them to submit in new languages allowed on the Red List; provide training and reviews of assessments where needed; (2) encourage students to conduct assessments at selected universities where a champion lecturer is able to both teach assessment methodology and review assessments produced.

Synergy: (1) share the framework for agrobiodiversity developed by CONABIO and place on the Global Strategy for Plant Conservation (GSPC) toolkit ‘Plants 2020’; (2) facilitate the identification and engagement of plant Specialist Groups, designate CITES focal points with IUCN Global Species Programme (GSP) and SSC and work together to: (i) review plant Specialist Group engagement with CITES in 2017-18 and report back to PCC, (ii) make Specialist Groups aware of the usefulness of the application of the CITES Non-detriment Findings Guidance for Perennial Plants (the nine-steps methodology) for relevant taxa, (iii) identify how to flag priority issues to the Specialist Groups prior to particular CITES events, (iv) identify Specialist Group members who are involved with wildlife trade discussions and ask how to best support them in strengthening the arguments for plant trade in the international wildlife trade discussions, (v) encourage plant Specialist Groups to contribute to the CITES and livelihoods item, including responding to the current call for case studies on CITES and livelihoods, and also the CITES Rural communities process. Specifically, some of the potential case studies include: Palms; Medicinal plants; FairWild; Madagascar CITES species (ornamental); Central African ebonies—Taylor guitars (check with George Schatz).

Communicate
Communication: (1) select a handful of plant journals to work with, ensure experienced plant assessors are nominated as reviewers for papers that include assessment information, and create links using SIS connect to automatically pull assessment information into SIS; (2) produce guidelines for including species in Mapping Biodiversity Prioritisation (SANBI and UNEP-WCMC. 2016. Mapping biodiversity priorities: A practical, science-based approach to national biodiversity assessment and prioritisation to inform strategy and action planning. Cambridge, UK: UNEP-WCMC.), site prioritisation, and conservation planning for species groups; (3) engage with/contribute to the underpinning materials and publications for TRAFFIC’s public/consumer campaign (with/ via botanic gardens, private sector), to increase the awareness of the use of wild plants in products, highlight issues around their sustainability, and promote the more responsible practices to key companies involved in key plant resources in trade.

Activities and results 2018
Assess
Green List
i. Little progress has been made on testing the Green List for plants due to limited time and funding availability. (KSR #11)

Red List
i. Active Red Listing work is taking place in South Africa, Madagascar, Colombia, Brazil, Indonesia, China and the US. South Africa has assessed 900 plants as part of a Sampled Red List Index; 600 plants are currently being submitted to IUCN for the families Aloeaceae and Proteaceae. Madagascar has assessed 730 tree species from western KBA’s of which 603 species will be submitted in January 2019. Brazil has carried out
assessments of 1,688 endemic plant species (116 reassessments and 1,572 new assessments); among the assessed species, 321 are utilised species with 96 cited in Appendix II of CITES. In Colombia, ca. 1,000 species were assessed, 600 of which are endemic. Indonesia has conducted a number of Red List workshops to assess tree species. China has updated its national Red List for 1,000 woody species and has had a strong focus on assessing 200 of China’s most important medicinal species. India is not yet conducting assessments, but a proposal has been submitted to initiate a Western Ghats Plants specialist group. In the US, NatureServe assessments for medicinal plants have been converted to IUCN Red List assessments and submitted to IUCN. (KSR #1)

**ii.** Brazil assessed the risk of extinction of 96 species that are cited in Appendix II of CITES. The 96 species consist of four Dalbergia spp. (Fabaceae), 8 spp. Cactaceae, and 84 spp. Orchidaceae. (KSR #1)

**iii.** A project on Mesoamerican Crop Wild Relatives (CWR) financed by the Darwin Initiative has been ongoing since the last semester of 2016 and is meant to end by July 2019. The effort has been led by IUCN, with the coordination of the University of Birmingham and CONABIO in Mexico, and with the participation of Mexico, El Salvador, Guatemala and Honduras. This effort has permitted the study of 251 CWR taxa of several economically, biologically and culturally important crops. Taxa were originally selected using several diverse criteria, and mainly included first and secondary gene pools (sometimes tertiary). A Red Listing workshop took place, and most taxa have been analysed and are ready for publication. Conservation planning has been conducted using zonation and adding a genetic diversity proxy to assure its most ample representation both for *ex situ* and *in situ* approaches to conservation. (KSR #1)

**iv.** In 2014, the Threats Classification Scheme (Version 3.2) was translated for use in Brazil’s risk assessments (http://dspace.jbrj.gov.br/jspui/handle/doc/27). In 2018, we revised the habitat scheme utilised by Brazilian Flora 2020 to make it consistent with the Habitats Classification Scheme (Version 3.1). (KSR #6)

**v.** The new IUCN Red List website has a Google translate option that presents assessments in a wide range of languages. (KSR #6)

**vi.** The IUCN Red List Unit has completed required changes to the Species Information System (SIS) to allow assessments in different languages to be managed. (KSR #6)

**vii.** Royal Botanic Gardens, Kew has developed a Rapid Least Concern tool to automate the generation of required data for Least Concern assessments. Users can do one at a time or use a batch option (still testing limits). A test version is available here: https://spbachman.shinyapps.io/rapidLC/. Colombia has piloted using R packages to detect potentially Least Concern species. Brazil has developed a national tool for rapidly assessing Least Concern species. (KSR #1)

**viii.** Assessment of Madagascan Yams (Dioscorea and Tacca) species are underway. Indonesia is also conducting assessments of Crop Wild Relative tree species. Royal Botanic Gardens, Kew has recently funded a Wallacea project which will include Red List assessments for Crop Wild Relatives of the Lesser Sunda Islands. (KSR #1)

**Research activities**

**i.** There has been little progress toward ensuring taxonomic challenges are dealt with by updating plant taxonomic information in SIS to APG4 and getting all Specialist Groups to sign off on taxonomy before Least Concern assessments are uploaded to SIS. (KSR #1)

**ii.** Royal Botanic Gardens, Kew has initiated a project to identify plant-based AZEs in Madagascar (based on non-conifer species already on the Red List). South Africa has prepared data for an AZE analysis which will be completed by October 2019. (KSR #22)

**iii.** In Colombia, a project funded by the Critical Ecosystem Partnership Fund (CEPF) has identified KBAs in the Andes using data from two key taxonomic groups (Bromeliaceae, Ericaceae); this project will be used as a model to identify more KBAs in the future. Madagascar KBAs have been identified with funding from CEPF. South Africa has initiated a nation-wide systematic assessment of all KBAs. Brazil needs to identify funding sources for KBA identification; however, Brazil has produced an analysis on priority areas for conservation using systematic conservation planning software. (KSR #22)

**Plan**

**Policy**

**i.** A new process to explore voluntary certification standards (VCS) and how these can assist in the implementation of CITES requirements for Appendix II-listed medicinal and aromatic plants has been discussed at the CITES Plants Committee, at a stakeholder workshop, and plans are made for the CITES 18th Conference of the Parties (CoP18); see https://www.traffic.org/news/making-cites-work-for-wild-medicinal-and-aromatic-plants/. Among the priority potential species on Appendix II, where this approach will be piloted, are Euphorbia antisiphilitica, Prunus africana, Agarwoods (Aquilaria spp.), and Aloe ferox, as well as other non-CITES listed species (e.g. Boswellia spp.). Additionally, TRAFFIC, the IUCN Medicinal Plant Specialist Group and other partners initiated a project in Nepal on piloting FairWild certification of CITES Appendix II-listed Nardostachys grandiflora; see https://www.traffic.org/news/succeeding-with-
A submission was made to the CBD Secretariat on keeping GSPC in the post-2020 global biodiversity framework with a specific proposal on how the new GSPC targets would be formulated and linked to the Aichi Targets. A first iteration of the new GSPC targets was drafted. (KSR #26)

**Act**

**Conservation actions**

i. There has been ongoing discussion with plant Specialist Groups to include sustainable use and trade issues as part of their activities. We are likely to see the results of this encouragement only during the next quadrennium as these changes take some time to be implemented. (KSR #36)

ii. A meeting was hosted by Keystone Foundation, IUCN SULI, and others in India on sustainable use, which focused primarily on the plant resources. This opens further opportunity to focus on the plants sub-group of IUCN SULI. (KSR #36)

**Network**

**Capacity building**

i. Ongoing Red List training support has been provided to Colombia, Indonesia, Madagascar, and Mozambique. In-country training in plant Red Listing took place in the Bahamas, with good representation from the Caribbean region. Honduran botanists have been trained and show significant interest in developing a national Red List. A new specialist plant group has been formed in Turkey. Royal Botanic Gardens, Kew has initiated a West African Plant Red List Authority. (KSR #1)

ii. Four Red List assessor courses were delivered in Armenia (14 participants); Conakry, Guinea (20 participants); Maputo, Mozambique (15 participants); and Royal Botanic Gardens, Kew (15 participants). The Queen Mary University of London and Royal Botanic Gardens, Kew Msc in Plant and Fungal Taxonomy, Diversity and Conservation piloted a module that included a Red List assessment by each student. Twenty-four relatively high standard assessments were received and are now being finalised and submitted to the IUCN Red List. This will be repeated next year. Training of students in Red Listing and plant conservation is also taking place in Madagascar and Colombia. (KSR #5)

**Synergy**

i. The expectation of the review of plant Specialist Group engagement with CITES was meant to be led by the IUCN Global Species Programme (GSP), but, as far as known, this didn’t happen (due to staff change, capacity issues), so this could be something to take on forward. Some discussions took place with the IUCN SULI Chair on establishing a sub-group of SULI focusing on plant trade and use issues (see e.g. https://www.cites.org/eng/news/cites-further-recognized-as-a-crucial-conservation-tool-that-benefits-wildlife-conservation-and-livelihoods-of-rural-communities_08112018). (KSR #26)

**Communicate**

**Communication**

i. TRAFFIC produced an excellent publication to increase awareness of the use of wild harvested plants, called Wild at Home (see https://www.traffic.org/publications/reports/wild-at-home-an-overview-of-the-harvest-and-trade-in-wild-plant-ingredients/). (KSR #8)

**Acknowledgements**

We thank the IUCN SSC for providing funding to support the meetings of the Plant Conservation Committee.

**Summary of activities 2018**

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Main KSRs addressed: 1, 5, 6, 8, 11, 22, 26, 36, 42

KSR: Key Species Result
Mission statement
Provide information and analyses on the status, trends and threats to species in order to inform and catalyse action for biodiversity conservation.

Projected impact for the 2017-2020 quadrennium

The goal of the IUCN Red List of Threatened Species is to provide information and analyses on the status, trends and threats to species in order to inform and catalyse action for biodiversity conservation.

This goal includes the "traditional" role of the IUCN Red List in identifying particular species at risk of extinction. While the role of the IUCN Red List in underpinning priority-setting processes for single species remains of critical importance, the goal has been expanded to encompass the use of data from the IUCN Red List for multi-species analyses in order to identify and monitor trends in species status and to catalyse appropriate conservation action.

To achieve this goal, the IUCN Red List has three main objectives:
(1) To establish a baseline from which to monitor the change in status of species;
(2) To provide a global context for the establishment of conservation priorities at the local level;
(3) To monitor, on a continuing basis, the status of a representative selection of species (as biodiversity indicators) that cover all the major ecosystems of the world.

With these objectives in mind, the IUCN Red List Committee sets forth ten key strategic results as its measures of success and which it aims to achieve by year 2020:
(1) IUCN Red List taxonomic and geographic coverage is expanded to achieve the Barometer of Life target of 160,000 species assessed;
(2) More IUCN Red List Assessments are prepared at national and, where appropriate, at regional scales;
(3) The IUCN Red List Index is widely used as an effective biodiversity indicator;
(4) The IUCN Red List is a scientifically rigorous tool for conservation;
(5) IUCN Red Listing capacity is built through expanded training programmes;
(6) The IUCN Red List is underpinned by cutting-edge information management technologies;
(7) The IUCN Red List is used effectively to inform policy and action;
(8) The IUCN Red List is widely communicated and recognized;
(9) The IUCN Red List is sufficiently and sustainably financed;
(10) Strategic oversight is provided to the IUCN Red List.

Targets for the 2017-2020 quadrennium
Assess
Green List: implement processes for documenting conservation success ("green listing.")
Red List: (1) complete global comprehensive assessments for 58,836 taxa; (2) complete global non-comprehensive assessments for 56,434 taxa; (3) complete global sampled assessments for 15,765 taxa; (4) conduct core reassessments for long-term indicator groups (mammals, birds, amphibians, corals, cycads, conifers), totalling 25,790 taxa; (5) complete comprehensive reassessments to produce Red List Indices for key new indicator taxa, focusing on marine, freshwater and invertebrate taxa, totalling 3,728 taxa; (6) undertake reassessments for selected regions where appropriate policy or implementation mechanisms, adequate funding and capacity exist (e.g. Europe, Africa), totalling 4,352 taxa;
(7) involve at least 10 new priority countries, 80% of which are mega diverse, in capacity building / twinning activities / and conducting assessments that feed into national decision-making processes (5,000 taxa); (8) conduct sampled reassessments for speciose taxonomic groups, totalling 10,500 taxa (representing ~420,000 taxa); (9) the IUCN Species Information Service (SIS) interface is improved and made easier to use (building on SIS Connect), including new developments (such as dynamic publishing); (10) SIS is developed to allow for increased uptake and use at the national level; (11) the functionality of SIS is enhanced for storing, managing, manipulating and querying data; (12) update key existing documents and tools for supporting global and regional red listing; (13) produce new guidance notes to support the Red Listing process; (14) the Red List Partnership is successfully renewed and strategically grown (three new full partners and new parallel partnership process instituted); (15) the governance structures (Red List Committee and working groups meeting annually and working intersessionally) to ensure the targets in this strategic plan are met; (16) a searchable database for all National and Regional Red Lists is developed and maintained and linked to the global IUCN Red List; (17) IUCN Red List training resources are regularly updated, augmented, translated into additional languages and made available online.

Plan
Policy: (1) Red List data in the Integrated Biodiversity Assessment Tool (IBAT) are used by 80% of international financial institutions (IFIs, etc.) in environmental safeguard screening policies and by 50% of the net worth of Fortune 500 companies to reduce biodiversity risk in investment decisions and business operations; (2) 90% of governments use Red List data in National Biodiversity Strategies and Action Plans (NBSAPs) and all species conservation plans and funding mechanisms make effective and appropriate use of Red List data; (3) Red List data and the Red List Index are profiled appropriately in all assessments and processes informing the post-2020 biodiversity framework and its associated mission, targets and indicators.

Network
Capacity building: (1) the number of Red List assessors and Red List trainers is increased (assessors by 250 via online training and 400 via workshop training; 35 trainers trained); (2) all IUCN and Red List Partner staff directly involved in managing Red List assessment and all SSC Red List Authorities are trained and have passed the Red List online exam. Proposal development and funding: (1) online donation campaigns continue to be explored as a mechanism for generating targeted support for specific re/assessment initiatives; (2) the Red List website includes more proactive requests asking users downloading data to consider making a nominal donation to support continuing making the data available.

Synergy: (1) the IUCN Red List improves linkages with peer organizations and agencies including other biodiversity knowledge products; (2) implement a mechanism for engaging with institutions or organizations not currently meeting all the admission criteria for full Red List Partners, nor the strategic commitment, but interested in making a substantial financial or in-kind contribution.

Communicate
Communication: (1) the IUCN Red List enhances its credibility in the academic and scientific community (40 peer reviewed publications, symposia at Society for Conservation Biology meetings, DOIs continue); (2) the IUCN Red List enhances its external communication potential and effectiveness.

Activities and results 2018
Assess
Green List
I. A Green List task force was set up and in March 2018, a paper was published outlining the Green List methodology. Since the paper was published, we have been working on getting valuable input from 15 SSC Specialist Groups. We are hoping to have a few hundred species assessed across a wide range of taxonomic groups. (KSR #11)
Red List

i. Global comprehensive assessment is ongoing for cycads, mangroves, sharks, birds, amphibians, mammals, corals, and conifers. (KSR #1)

ii. Global non-comprehensive assessment is underway for freshwater crustaceans (crabs and crayfish), horseshoe crabs, Bumblebees (genus Bombus), Groupers (subfamily Epinephelinae), Seagrasses, Tunas and billfishes, Dragonflies (order Odonata), Pteridophytes, Bryophytes, Eudicotyledons, Monocotyledons and Reptiles (class Reptilia). (KSR #1)

iii. The Zoological Society of London (ZSL) is conducting sampled assessments for butterflies, dung beetles and cephalopods, and re-assessment of sampled reptiles. (KSR #1)

iv. Re-assessment for groups that are on the Red List Index (RLI) and first time groups are being tracked on a 6-month basis. (KSR #1)

v. The taxa included on the global RLI have now accounted for both taxonomically and geographically, with the disaggregation of the RLI at national level, using South Africa as an example. (KSR #2)

vi. The establishment of a national Red List coordination group consisting of members from mega diverse countries is underway. In Africa, this process is championed by the Biodiversity for Spatial Prioritisation in Africa (BASPA) project and includes Cameroon, Gabon, Kenya, Ethiopia, Mozambique and Madagascar. In Asia, the following countries will be involved: China, Bangladesh, Myanmar and Indonesia. Small European countries such as France, Norway, Italy, Portugal, Croatia, Denmark and Sweden are also involved. Invitation letters have been sent to mega diverse countries to join the National Red List Alliance. Progress has been slow due to financial constraints. (KSR #2)

vii. Progress has been made on institutional credit, criteria calculator and validity checker. (KSR #6)

viii. SIS Connect continues to be developed to allow assessments to be submitted based on existing assessments (such as national level). Spanish and French language assessments are already accepted in SIS, and for Chinese assessments, the rationales will need to be translated into English. Specifically: (1) 93 assessments are on the Red List in Portuguese (the initial batch of 20 plants from National Center for Flora Conservation – CNCFlora and the rest are reptiles that have come from the Chico Mendes Institute for Conservation of Biodiversity (ICMBio) in Brazil, entered into SIS by Marcelo Tognelli in our Biodiversity Assessment Unit (BAU) in the US); (2) 57 plant assessments from Haiti in French (all done through the auspices of Botanic Gardens Conservation International (BGCI) and the Global Tree Specialist Group); and (3) two plant assessments in Spanish. There are lots more Spanish assessments in the pipeline (e.g. almost 400 trees from the Colombian Plant RLA being submitted via SIS Connect), plus Marcelo is working on getting additional animal assessments in Portuguese done via ICMBio into SIS. The BAU team is working on getting Chinese assessments added. Many of the reptile assessments done for China had English text with a Chinese translation; however, the translation was done before the final edits to the English text was made, so the translations did not match. In addition, some of the translations were copied and pasted into SIS from external Word files which created formatting issues which would impact how the characters would be rendered on the Red List website. As a result, the translated text had to be deleted, but we are still working with the BAU to figure out the best way to do this in the future. No work has been done in SIS or on the website end to translate all field names, headings, classification schemes, etc., into the other languages – the core structure is all still in English. It is just the text fields where the information can be presented in another language and there is a language selection feature in SIS (and on the website) to specify the language being used. (KSR #6)

ix. Some progress has been made and mostly related to SIS Connect. There is still work to be done, and potentially always something to improve. (KSR #6)

x. The Red List Technical Working Group published “Mapping Standards and Data Quality for the IUCN Red List Categories and Criteria” in September 2018, and a new version is underway. (KSR #6)

xi. Several issues related to author’s accreditation, Extinct in the Wild (EW) Red List category, Homo sapiens Red Listing, and the taxonomy guidelines have been identified to be amended in the next Red List guideline document. (KSR #6)

xii. Progress is ongoing to investigate changes and solutions to expanding the Red List Partnership model. This should be completed and signed off by 2020. Additionally, negotiations to include new Red List Partners (i.e. Missouri Botanical Garden and Global Wildlife Conservation) are underway. (KSR #10)

xiii. The Red List Committee convenes meetings twice a year (i.e. face to face and virtually) to track progress on the delivery of the Red List Strategic Plan. Meetings were held 16–18 May 2018 and 7 December 2018. (KSR #10)
The Spanish version of the online exam was released, including the default level exam (three versions for global, regional and full exam) and advanced level exam (two versions for global and full exam). We now have the full course and exam available in all three official IUCN languages. (KSR #6)

**Plan**

**Policy**

i. A new IBAT platform will be launched in 2019 offering enhanced functionality. There are currently 66 subscribers to IBAT. (KSR #7)

ii. Richard Jenkins is still exploring ways to retrieve this information. (KSR #7)


**Network**

**Capacity building**

i. Ten new Red List Trainers received their certificates in 2018 (we now have a network of 75 Red List Trainers); 188 people passed the online course exam (pass mark 75% or more) and 10 people passed the advanced exam (pass mark 90% or more). A total of 696 people participated in 25 Red List Training workshops facilitated by Red List Trainers in 2018. (KSR #5)

ii. Red List Authority Coordinators and Red List Partner staff coordinating projects are already asked to pass the online exam. (KSR #5)

**Synergy**

i. Several linkages have been made with peer organisations and other biodiversity knowledge products such as IBAT, Global Biodiversity Information Facility (GBIF), National Geographic, Threatened Island Biodiversity Database, Red List of Ecosystems, etc. (KSR #10)

ii. Progress is ongoing to develop an evaluation and monitoring process of whether existing partners are continuing to meet the criteria for being an effective partner and also to investigate changes and solutions to expanding the Red List Partnership model. (KSR #9)

**Communicate**

**Communication**

i. The assignment of DOIs to IUCN Red List assessments and re-assessments is standard practice, and has continued throughout the period, with 127,430 DOIs assigned to date. Red List DOIs are being found by Google Scholar if they are cited in other works or if they are uploaded by Assessors to their profiles on sites like ResearchGate. However, it appears there is a way to get Google Scholar to index all of the Red List DOIs (see https://scholar.google.com/intl/en/scholar/inclusion.html#overview) – this is under investigation. Progress has also been made to check on our DOI provider, CrossRef, as they apparently also offer a service to do this. Searching the Web of Science for scientific papers listing the keyword “Red List” since 2017 yielded 931 papers (see link for full details: https://drive.google.com/file/d/1NunsMcHgIj396Mrx7CsmKjztC8m/view). (KSR #4)

ii. The new website for The IUCN Red List of Threatened Species was launched in October 2018. (KSR #8)

**Acknowledgements**

We thank all Red List Committee members and partners for their dedication and immense contributions to achieving the targets of the Red List Committee for the quadrennium.

**Summary of activities 2018**

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Main KSRs addressed: 1, 2, 4, 5, 6, 7, 8, 9, 10, 11

KSR: Key Species Result

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Mission statement

The Standards and Petitions Committee is responsible for ensuring the quality and standards of the IUCN Red List of Threatened Species, developing guidelines for the application of the IUCN Red List Categories and Criteria and ruling on petitions against the listings of species on the IUCN Red List of Threatened Species.

Projected impact for the 2017-2020 quadrennium

The impact of the Standards and Petitions Committee (SPC) on conservation is indirect, through its efforts to maintain and increase the credibility and reliability of the IUCN Red List as the most authoritative source of the conservation status of species.

Targets for the 2017-2020 quadrennium

Assess

Red List: Production of a new version of guidelines for application of the IUCN Red List Categories and Criteria.

Activities and results 2018

Assess

Red List


ii. EX test initiated. (KSR #4)

iii. Consultation with various Specialist Groups on Red List criteria. (KSR #4)

Summary of activities 2018

Species Conservation Cycle ratio: 1/5

Assess 3

Main KSRs addressed: 4

KSR: Key Species Result
Standards and Petitions Subcommittee at a meeting in November 2015 at the University of New South Wales, Sydney, Australia
Photo: Craig Hilton-Taylor