



The IUCN Species Survival Commission

QUARTERLY REPORT
SEPTEMBER 2020



Klipspringer, *Oreotragus oreotragus*, LC
Photo © Frank E. Zachos, CC-BY

CONTENT

- 2 Executive summary
- 6 Recent activities
- 10 SSC DATA Information System
- 13 A better way to manage species names in IUCN
- 17 Freshwater Species Conservation
- 22 Who shapes the SSC?
- 26 Sponsors and partners



@IUCNssc



@IUCNssc



@IUCNssc



EXECUTIVE SUMMARY

As everyone else in our network, in the SSC Chair's Office we continue to find ways to stay in touch and remain active, adapting to constantly changing conditions and exposed to emerging challenges. From our on-and-off lockdown, taking advantage of being able to connect remotely, the team engages with colleagues around the world, while our carbon footprint is just a fraction of what it was before international travel stopped due to Covid-19. Pressures on species and those whose livelihood depend on them have not ceased, however. Our two most recent intervention letters illustrate this. The first, addressed to national authorities in the Philippines, highlights IUCN's concerns on the impact of a projected bridge on a population of the Critically Endangered Irrawaddy dolphin (*Orcaella brevirostris*). The second, sent to dozens of CEOs of the luxury fashion industry, encourages the use of sustainably produced reptile skins, which have demonstrable positive impact on both species conservation and the well-being of local communities.

Glossy Ibis, *Plegadis falcinellus*, LC
Photo © Gopi Sundar

We continue to move forward with the SSC DATA information system. In 2017, we took the first steps towards harmonizing planning and reporting for SSC groups with the SSC DATA Excel spreadsheets, now we are about to launch a much more user-friendly and versatile SSC DATA system. The pilot phase of this new system took place in September 2020 and engaged around 25 leaders. They invested valuable time and provided key feedback to test this new tool, focused on learning how groups are doing, what targets they pursue and what they accomplish. In this *Quarterly Report*, we outline the anticipated benefits of this new system, its main modules, and next steps.

Several recent high-profile papers have reignited the debate on how species names are important to nature conservation. Seeking to minimize taxonomic errors, the Catalogue of Life (CoL) implements external and internal peer-review processes before publishing global species lists. Mark Costello poses a question to the SSC network: what if IUCN agreed to adopt the CoL as its standard nomenclature for Red Lists?

IUCN is unique in its capacity to bring together scientists, planners, practitioners, and all those involved in the implementation of the [Species Conservation Cycle](#). Will Darwall illustrates this with his account of how the Freshwater Biodiversity Unit (FBU) has collaborated closely for 18 years with SSC Specialist Groups focused on freshwater species: fishes, mollusks, odonates, decapods and plants. They aim to complete globally comprehensive assessments for ~35,000 species through multi-taxa projects providing a baseline on the status of freshwater biodiversity at regional scales. Red List assessments are followed by identifying Key Biodiversity Areas, to activate environmental safeguards, stimulate focus for donors, and catalyze conservation action.

We close this *Quarterly Report* with a conversation with Axel Moehrenschrager, Chair of the Conservation Translocation Specialist Group (CTSG), a name that they adopted in 2018, after three decades as the Reintroduction Specialist Group. This change recognized, among other factors, that they span several types of interventions: reintroductions, reinforcements, ecological replacements and assisted colonization. CTSG have completed an ambitious ten-year strategic plan to align their activities to the post-2020 Global Biodiversity Framework of the Convention for Biodiversity, and the UN Decade on Ecosystem Restoration, set for 2021-2030.

Resumen ejecutivo

Como todos en nuestra red, desde la oficina de la presidencia de la Comisión para la Supervivencia de Especies (CSE) continuamos encontrando formas para mantenernos en contacto y permanecer activos, constantemente adaptándonos a cambios y expuestos a desafíos emergentes. Desde nuestra cuarentena intermitente vemos cómo el equipo se ha relacionado de forma remota con colegas de la red en distintas partes del mundo, al mismo tiempo que nuestra huella de carbono es sólo una fracción de lo que era antes de que los viajes internacionales se detuvieran debido al Covid-19. Sin embargo, las presiones sobre las especies y aquellos cuyo sustento depende de ellas no han cesado. Nuestras dos cartas de intervención más recientes ilustran esto. La primera, dirigida a las autoridades nacionales de Filipinas, destaca las preocupaciones de la UICN sobre el impacto de un puente que espera construirse sobre una población del delfín Irrawaddy (*Orcaella brevirostris*), en Peligro Crítico. La segunda, enviada a decenas de directores ejecutivos de la industria de la moda de lujo, fomenta el uso de pieles de reptiles producidas de manera sostenible, que tienen un impacto positivo demostrable tanto en la conservación de especies como en el bienestar de las comunidades locales.

Seguimos avanzando con el nuevo sistema para el SSC DATA. En 2017, dimos los primeros pasos hacia la armonización de la planificación y presentación de informes para los grupos de la CSE, con SSC DATA en formato Excel; ahora estamos por lanzar un nuevo sistema de SSC DATA, mucho más amigable y versátil. La fase piloto de este nuevo sistema tuvo lugar durante septiembre de 2020 y contó con la participación de aproximadamente 25 líderes; quienes invirtieron tiempo valioso y proporcionaron comentarios clave para probar esta nueva herramienta, enfocada en aprender cómo van las actividades de los grupos, qué objetivos persiguen y qué logran. En este *informe trimestral*, describimos los beneficios anticipados de este nuevo sistema, sus principales módulos y los próximos pasos.

Recientes publicaciones de alto perfil han reavivado el debate sobre cómo los nombres de las especies son importantes para la conservación de la naturaleza. Con el fin de minimizar los errores taxonómicos, el Catálogo de la vida (CoL, por sus siglas en inglés) implementa procesos de revisión por pares externos e internos antes de publicar listas de especies globales. Mark Costello plantea una pregunta a la red de la CSE: ¿qué pasaría si la UICN aceptara adoptar el CoL como su nomenclatura estándar para las Listas Rojas?

La UICN es única en su capacidad para reunir a científicos, planificadores, profesionales y todos aquellos involucrados en la implementación del [Ciclo de Conservación de Especies](#). Will Darwall ilustra esto con su relato de cómo la Unidad de Biodiversidad de Agua Dulce (FBU, siglas en inglés) ha colaborado estrechamente durante 18 años con Grupos de Especialistas de la CSE centrados en especies de agua dulce: peces, moluscos, odonatos, decápodos y plantas. Su objetivo es completar ~35.000 evaluaciones globales de especies a través de proyectos multi-taxa que brinden una línea base sobre el estado de la biodiversidad de agua dulce a escalas regionales. Las evaluaciones de la Lista Roja son seguidas por la identificación de Áreas Clave para la Biodiversidad (KBAs, siglas en inglés), para activar las salvaguardas ambientales, orientar el enfoque de los donantes y catalizar acciones de conservación.

Cerramos este *reporte trimestral* conversando con Axel Moehrenschrager, Presidente del Grupo de Especialistas en Reubicación con fines de Conservación (CTSG, por sus siglas en inglés), nombre que adoptaron en 2018, después de tres décadas como Grupo de Especialistas en Reintroducción. Este cambio reconoció, entre otros factores, que abarcan varios tipos de intervenciones: reintroducciones, refuerzos, reemplazos ecológicos y colonización asistida. El CTSG ha completado un ambicioso plan estratégico de diez años para alinear sus actividades con el Marco Global de Biodiversidad del Convenio para la Biodiversidad post-2020, y el Decenio de las Naciones Unidas para la Restauración de Ecosistemas, establecido para 2021-2030.

Résumé

Comme tout les membres de notre réseau, le bureau de la Présidence de la CSE, continue à trouver des moyens de collaborer et de rester actif, en s'adaptant à des conditions en constante évolution et en s'exposant aux nouveaux défis. Grâce à notre système de verrouillage, qui permet de se connecter à distance, l'équipe est en contact avec des collègues du monde entier, tandis que notre empreinte carbone n'est qu'une fraction de ce qu'elle

était avant l'arrêt des voyages internationaux en raison du Covid-19. Cependant, les pressions exercées sur les espèces et sur ceux dont les moyens de subsistance en dépendent n'ont pas cessé. Nos deux dernières lettres d'intervention l'illustrent bien. La première, adressée aux autorités nationales des Philippines, met en lumière les préoccupations de l'UICN concernant l'impact d'un projet de pont sur une population de dauphin de l'Irrawaddy (*Orcaella brevirostris*) en danger critique d'extinction. La seconde, envoyée à des dizaines de PDG de l'industrie de la mode de luxe, encourage l'utilisation de peaux de reptiles produites de manière durable, qui ont un impact positif démontrable à la fois sur la conservation des espèces et le bien-être des communautés locales.

Nous continuons à avancer avec le système d'information SSC DATA. En 2017, nous avons fait les premiers pas vers l'harmonisation de la planification et des rapports pour les groupes CSE avec les feuilles de calcul Excel SSC DATA. Nous sommes maintenant sur le point de lancer un système SSC DATA beaucoup plus convivial et polyvalent. La phase pilote de ce nouveau système s'est déroulée en septembre 2020 et a mobilisé environ 25 dirigeants. Ils ont investi un temps précieux et fourni des commentaires clés pour tester ce nouvel outil, axé sur l'apprentissage de la façon dont les groupes fonctionnent, les objectifs qu'ils poursuivent et ce qu'ils accomplissent. Dans ce *rapport trimestriel*, nous décrivons les avantages attendus de ce nouveau système, ses principaux modules et les prochaines étapes.

Plusieurs articles récents de grande envergure ont relancé le débat sur l'importance des noms d'espèces pour la conservation de la nature. Cherchant à minimiser les erreurs taxonomiques, le Catalogue of Life (CoL) met en œuvre des processus externes et internes d'examen par les peer-review avant de publier des listes mondiales d'espèces. Mark Costello pose au réseau CSE la question de savoir : « Qu'advient-il si l'UICN acceptait d'adopter le CoL comme sa nomenclature standard pour les Listes Rouges ? »

L'UICN est unique dans sa capacité à rassembler les scientifiques, les planificateurs, les praticiens et tous ceux impliqués dans la mise en œuvre du [cycle de conservation des espèces](#). Will Darwall l'a illustré par son récit sur la façon dont l'Unité de Biodiversité d'eau douce (FBU) a collaboré étroitement pendant 18 ans avec des groupes de spécialistes de la CSE axés sur les espèces d'eau douce : poissons, mollusques, odonates, décapodes et plantes. Ils visent à réaliser des évaluations globales complètes pour environ 35 000 espèces grâce à des projets multi-taxons fournissant une base de référence sur l'état de la biodiversité d'eau douce à l'échelle régionale. Les évaluations de la Liste rouge sont suivies de l'identification des zones clés pour la biodiversité, afin d'activer les sauvegardes environnementales, stimuler l'intérêt des donateurs et de catalyser les actions de conservation.

Nous clôturons ce *rapport trimestriel* par une conversation avec Axel Moehrenschlager, Président du Conservation Translocation Specialist Group (CTSG), un nom qu'ils ont adopté en 2018, après trois décennies en tant que groupe de spécialistes de la réintroduction. Ce changement a permis de reconnaître, entre autres, qu'ils couvrent plusieurs types d'interventions : réintroductions, renforcements, remplacements écologiques et colonisation assistée. Le CTSG a mis au point un plan stratégique décennal ambitieux pour aligner ses activités sur le cadre mondial de la biodiversité de la Convention sur la biodiversité pour l'après-2020 et sur la Décennie des Nations unies pour la restauration des écosystèmes, prévue pour 2021-2030.

RECENT ACTIVITIES

July - September 2020



CONFERENCES

WHERE THE SSC CHAIR'S OFFICE ATTENDED OR OFFERED A LECTURE



MEETINGS

WHERE THE SSC CHAIR'S OFFICE PARTICIPATED



INTERVENTIONS

LETTERS SENT TO GOVERNMENTS OR COMPANIES TO PROPOSE ACTIONS FOR SPECIES AND HABITATS UNDER THREAT





Virtual meetings
Photo © Topiltzin Contreras

Conferences and meetings

(Jon Paul Rodríguez, JPR; Domitilla Raimondo, DR; Kira Mileham, KM; Bibiana Sucre, BS; Orlando Salamanca, OS; Jafet Nassar, JN; Aritzaitz Rodríguez, AR; Nahomy De Andrade, NDA; Mayerlin Ramos, MR; Edgard Yerena, EY; Simeon Bezeng, SB)

CONFERENCES

- *Revertir el Rojo: Ciclo de Conservación de Especies a nivel nacional. Análisis efecto cambio climático en vertebrados terrestres amenazados en Lista Roja UICN, Comité Español UICN.* 29 June 2020, Málaga, Spain, online presentation. (JPR)
- *Reverse the Red: Building National Collaborations to Save Species. GEO BON Open Science Conference and All Hands Meeting 2020.* 6 July 2020, Leipzig, Germany. Online event. (JPR)
- *¿Sabes qué es la UICN y la Red List? El aleteo de la mariposa.* 29 July 2020, Mexico City. [Online interview](#). (JPR)
- *Computer Science in Modern Biology, Student Advancement Workshop.* 10-14 August 2020, Miami University. Miami, USA. Online panel. (JPR)
- *Opening remarks. Hainan Gibbon Conservation International Symposium: Global Efforts for Saving Hainan Gibbon.* 20-21 August 2020, Beijing, China. Online event. (JPR)
- *IUCN Species Survival Commission, Challenges Facing the Flora and Ecosystems of the Arabian Peninsula and Immediate Actions Required: A Revival of the Arabian Plant Species Specialist Group.* 25 August 2020, Qur'anic Botanic Garden, Qatar. Online presentation. (JPR)
- *Briefing on synthetic biology: possible uses and limitations.* 26 August 2020, Caracas, Venezuela. Moderation of online event. (JPR)

MEETINGS

- *IUCN Council Meeting*. 11 August 2020, Gland, Switzerland. Online meeting. (JPR)
- *WFN Alumni Network Development Symposium*. 12 August 2020, London, UK. Online meeting. (JPR)
- *SSC Steering Committee Meeting*. 1-4 September 2020, Caracas, Venezuela. Online meeting. (JPR, DR, KM, BS, OS, JN, AR, MR, SB, NDA, EY)
- *SSC Leaders Meeting*. 10 September 2020, Caracas, Venezuela. Online meeting. (JPR, DR, KM, BS, OS, JN, AR, MR, SB, NDA, EY)
- *IUCN Council Meeting*. 14 September 2020, Gland, Switzerland. Online meeting. (JPR)

INTERVENTIONS

High-level interventions address conservation issues of serious concern, through letters to governments or companies, which highlight the threats to species and /or habitats and, using expert advice, proposing suitable action to influence decision-making and help to avoid or reduce any adverse impacts on biodiversity. Each letter provides the background and technical information, and a thorough review process led by the SSC Chair's Office, engaging the appropriate Specialist Groups, experts across the network, the IUCN regional offices and IUCN programmes.

- **Concerns on the Impact of a Bridge Project On a Critically Endangered population of Irrawaddy dolphins (*Orcaella brevirostris*) in the Philippines.**

In August 2020, IUCN Director General, Bruno Oberle, and SSC Chair, Jon Paul Rodríguez, sent a letter to Mark A. Villar, Secretary of the Department of Public Works and Highways of the Republic of the Philippines, expressing concern on the likely impacts of the proposed Panay-Guimaras-Negros (PGN) Bridges Project on biodiversity in the Guimaras and Iloilo Straits, and in particular, on the survival of a Critically Endangered population of Irrawaddy dolphins (*Orcaella brevirostris*). IUCN recognizes the importance of connecting the Panay, Negros and Guimaras Islands to facilitate efficient and safe inter-island transport and thus improve the region's economy. However, studies conducted by various research groups indicate these areas support the greatest densities of dolphins who use the areas for feeding, resting, giving birth and nurturing their calves. Construction of the bridge entrances and exits could destroy the habitat and pollute surrounding areas with disruptive noise. Dolphins, like bats, rely on sound and use echolocation to navigate, find prey and communicate with one another in social groups. Irrawaddy dolphins and their habitat are protected under several Philippines laws. In addition, these coastal waters provide important habitat for dugongs (*Dugong dugon*), which are Critically Endangered in the Philippines and also protected by law. The Irrawaddy dolphin population in the Iloilo-Guimaras Straits is very small. Studies conducted by Silliman University, University of St. La Salle, and Tropical Marine Research and Conservation, indicate that only 10-30 remain, with their core habitat limited to the Pulupandan-Bago estuary and coastal waters of Buenavista. The dolphins play an integral part in the lives of fishermen in Iloilo, Guimaras and Negros, who use sightings of the dolphins

to help them locate concentrations of fish and shrimp. In a global context, Iloilo and Guimaras Straits are recognized as Important Marine Mammal Areas. The Iloilo-Guimaras Straits population is one of only three known isolated populations of Irrawaddy dolphins in the Philippines. The other two populations inhabit Malampaya Sound, Palawan (also Critically Endangered) and coastal waters of Quezon. In the event that the government decides to proceed with this project, IUCN request that planners investigate and consider alternative locations for the bridge entrances and exits or bridge alignments that would allow for the safe and efficient transport of people and goods without sacrificing the region's biodiversity. Ensuring that Irrawaddy dolphins and dugongs survive in the Iloilo-Guimaras Straits will not only contribute to the conservation of global biodiversity but will also help to preserve the natural heritage of the Ilonggo people.

- **Letter to the CEOs of the Luxury Fashion Industry.**

In September 2020, SSC Chair, Jon Paul Rodríguez, as well as Dilys Roe, Tomas Waller, and Grahame Webb, Chairs of the Sustainable Use and Livelihoods, Boa & Python, and Crocodile Specialist Groups, respectively, and Daniel Natusch, Macquarie University, sent a letter to the CEO of the luxury fashion industry, to express concerns about the decisions taken by some luxury fashion groups to ban or cease to use the skins of wild animals, such as crocodiles, alligators, snakes, and lizards. Scientific evidence shows that the trade in those skins is in fact sustainable, contributes to wildlife conservation and recovery, and supports the livelihood of local communities. Also SSC wants to communicate that there has been a concerted push to ban exotic skin use due to misinformation about COVID19 transmission. There is no evidence, however, that reptiles transmit zoonotic diseases like coronaviruses. The benefits that trade in precious skins and exotic leathers provide to nature and people, as well as to the adoption of UN Sustainable Development Goals, are supported by scientific evidence. This trade is one of the great conservation success stories of our time. Species once close to extinction have recovered and are now subject to meticulous management. While improvements can and will continue to be made in supply chains, the reptile skin trade today is supporting and encouraging sophisticated and innovative science-based management programs, that provide incentives for people to protect the species they rely on for their income and livelihoods. Legal trade also encourages people to value and protect natural habitats and ecosystems, rather than converting them to intensive forms of land use. This has the knock-on effect of conserving the rest of biodiversity and ecosystem services that those habitats offer. The legal trade provides sustainable livelihoods for millions of people around the planet, many of them impoverished and living in remote areas, with few if any alternatives for a cash income. The meat of reptiles used for leather is utilised by people, providing an important source of protein and food security. This is the humanitarian problem the UN Sustainable Development Goals encourages corporations to address. This trade, already dependent on the engagement of luxury fashion brands, provides livelihood security in times of economic uncertainty and resource volatility, and buffers rural people against the looming threat of climate change. SSC works with many luxury fashion groups to ensure sustainable trade in reptile leather.



SSC DATA - Orlando Salamanca and Jafet Nassar
Photo © IUCN SSC

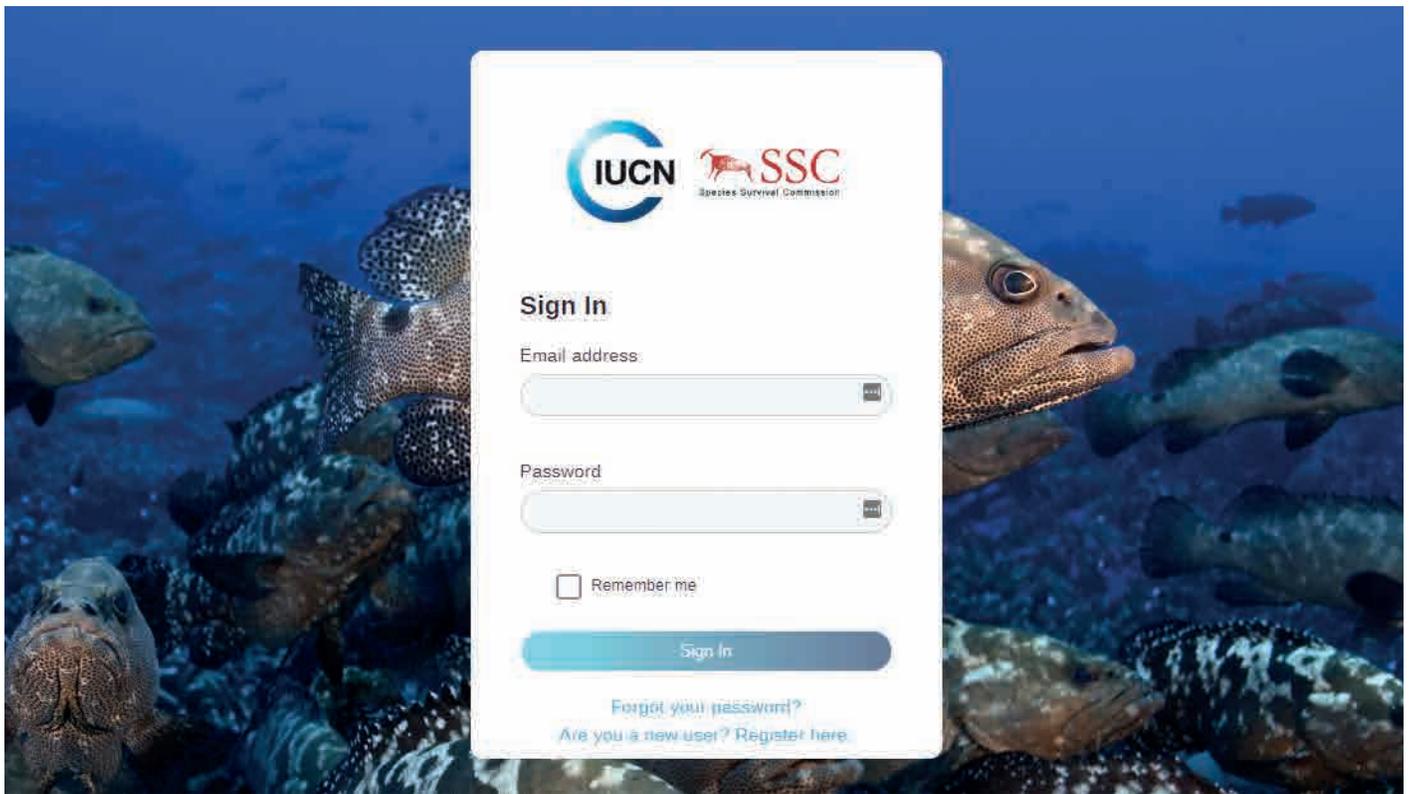
SSC DATA Information System our new platform to track our impact

In our previous update, we commented on the upcoming testing phase of the new SSC DATA Information System. The pilot phase took place in mid-September 2020 and engaged around 25 SSC Leaders distributed among the different types of SSC groups. We highly appreciate the feedback and time that these leaders invested in testing our master information retrieval tool. So, once again, many thanks for your participation and valuable contributions.

SSC DATA Information System

SSC DATA is our systematic process of monitoring the activities carried out by the network to effectively understand our conservation impact. SSC DATA is key to know how SSC groups are doing, what targets they pursue and what they accomplish each year.

In 2019, while attending the Leader's Meeting in Abu Dhabi, the SSC Chair's Office team presented for the first time the proposal to go through an outsourcing process to develop a new information system platform for the SSC DATA annual reporting process. This new proposal announced a transition route that will replace the use of Excel spreadsheets for a sophisticated and versatile information system.



Anticipated benefits

As result of implementing the new SSC DATA, we have identified the following anticipated benefits:

- A more friendly platform
- A more versatile data reporting platform
- Real-time reporting
- Targets are entered into the system before the quadrennium starts
- Speed up process of preparing single-group reports
- Speed up process of preparing Species Report of SSC & GSP
- Integrated management tool:
 - Coordination in real-time among group collaborators
 - SSC Groups and Chair's Office will easily track target progress
 - Availability of real-time results analysis (e.g. main trends)
 - Facilitates sharing group information among SSC Leaders
 - Improves real-time support to SSC group targets

Main system modules

The SSC DATA Information System is composed of two main sections: My group and SSC Network.

My group - This section is designed to enter all the information related to a particular group. SSC Leaders will find the following submenus in it:

- Group Information: records basic group information (such as mission statement, impact for the quadrennium, etc.).
- Targets: displays a view with the group's targets information. Under this submenu, groups will be allowed to set new targets and report their results each year.
- KSR: displays a view of how your group's targets contribute to the achievement of particular Key Species Results.
- Gallery: shows the group photos uploaded.
- Documents: shows the group documents uploaded.
- Acknowledgements: records the group partners that are going to be acknowledged.
- Collaborators: lists the group collaborators registered in the system.

SSC Network - Under this section, groups would be able to view information related to the entire SSC Network. This section will include the following submenus:

- Other Groups: lists SSC groups registered in the system. Users will be allowed to view other groups' information.
- KSR: displays the view of the Key Species Results and their progress in terms of their planned and actual values.
- Collaborators: lists all collaborators registered in the system.
- Partnerships: shows the list of all SSC groups' partners registered in the system.

Next step

SSC Leaders have been invited to use this platform to set their groups' targets for the new quadrennium (2021-2024), in alignment with the indicators established in our Species Strategic Plan 2021-2024.



African elephant, *Loxodonta africana*, VU
Photo © Frank E. Zachos, CC-BY

A better way to manage species names in IUCN

Mark John Costello

Faculty of Bioscience and Aquaculture, [Nord Universitet](#), 8049 Bodø, Norway, and
School of Environment, [University of Auckland](#), Auckland, New Zealand.

Several high-profile papers recently reignited debates about how species names are important in nature conservation (Garnett and Christidis 2017, 2018, Thomson et al. 2018, Costello 2019, Garnett et al. 2020). Clearly many scientists feel strongly about both how taxonomy applies species names and the use of such names in nature conservation, and 'best practice' is evolving (Costello and Wieczorek 2014).

To its credit, the taxonomic community has published world lists of over 85% of all, and near 100% of marine, species names online (Roskov et al. 2020). This has been driven by the taxonomic community realising that both their science and practice will benefit from easier access to quality assured nomenclature. Of course, like the literature, science does not stand still, and new discoveries will mean nomenclature and taxonomic classifications will change with new knowledge. Also, errors can occur in online databases as they occur in the literature. Because of easier access to online resources both the correct and any incorrect information can be rapidly and widely propagated.

Thus, it is important that databases are as correct and updated as quickly as possible. To minimise errors, the Catalogue of Life (CoL) has an external and internal peer-review process before it publishes global species lists. However, that does not mean that these are the best possible lists because some experts may not offer their lists for inclusion. Taxonomic editors can update the World Register of Marine species (WoRMS) within minutes because it is a centralised system (Costello et al. 2013, 2018). However, these are the experts who have volunteered their time for this scientific service, and it is possible that additional taxonomists might be able to add value on their work.

There is no dispute about the correctness of most species names because the codes of nomenclature provide rules for naming. However, particularly for charismatic megafauna, there can be disagreements about species and sub-species status (e.g., Costello 2020) (Box 1). On the one hand one might argue that this should not matter because conservation aims to protect “biodiversity” from genes to ecosystems, and thus sub-species should also be protected. After all, ‘species’ are but one measure of biodiversity. However, species are the only formally standardised measure and do affect funding and conservation priorities. Thus, not only is there an issue of access to fit-for-purpose species nomenclature but also how to manage differences of taxonomic opinion on species status.

As one of the most important international users of species names, what if IUCN agreed to adopt the Catalogue of Life (CoL) as its standard nomenclature for Red Lists from a certain date? IUCN could then:

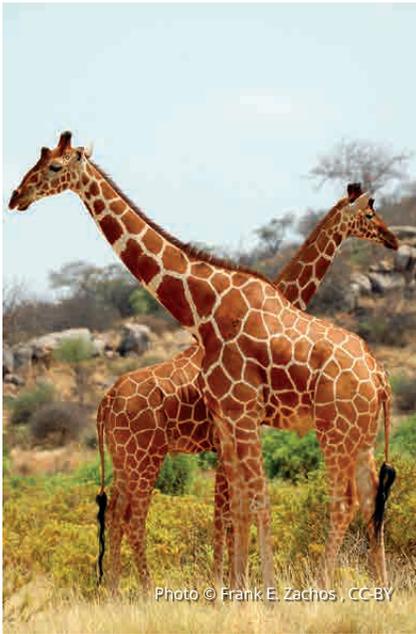
1. be able to list all named species as assessed or not assessed. Thus, clearly identifying gaps in assessments and improving clarity of statistics;
2. refer to an international standard for its nomenclature;
3. not need to directly manage nomenclature within its working groups who could then focus on Red List assessments.

Important consequences of such an endorsement of CoL by IUCN would be that both the conservation and taxonomic communities would pay a greater interest in the completeness, accuracy and currency of CoL. Thus, CoL may receive more and improved species lists for inclusion. There may be calls for increased resources for CoL to improve its infrastructure, be more user-friendly (e.g., web services, downloading data), expand its content, and adapt its governance structure to include users and data providers (Garnett et al. 2020). CoL may need to ask data providers to add comments regarding taxonomic uncertainty around species and sub-species status, and taxonomic classification. This will take time and is technically straightforward. But it is dependent on people and organisations working together to provide a better service for their communities. I suggest it would be a win-win for both taxonomy and conservation management.

Box 1. Species or sub-species?

The photo with two animals is from Kenya and shows the reticulated giraffe *G. c. reticulata*. The photo with the eight animals is from Namibia (Angolan giraffe). As a subspecies it is called *Giraffa camelopardalis angolensis*. Depending on the taxonomy, the two are also considered distinct species as *Giraffa angolensis* and *G. reticulata* respectively.

Giraffe taxonomy is being debated, with the traditional classification recognizing a single species and other classifications recognizing up to eight distinct giraffe species.





Depending on which source you go to you may find African elephants considered one species or two: the African bush elephant (*Loxodonta africana*) and forest elephant (*Loxodonta cyclotis*). The [WWF](#) and [IUCN](#) only recognise one *Loxodonta africana*. [Wikipedia](#) recognises two.

Asian elephants, *Elephas maximus* in Kuiburi National Park in Thailand. It has been shown that the Borneo pygmy elephant is [distinct genetically](#) and physically from other Asian elephants (above photo), and thus should be called sub-species *E. m. borneensis* or perhaps species *E. borneensis*. Yet most online websites still consider it a population of Asian elephants *E. maximus* (which has two subspecies *E. m. indicus* and *E. m. sumatrensis*).

References

- Costello, M.J. 2019. Unhelpful inflation of threatened species. *Science* 365 (6451), 332-333.
- Costello MJ. 2020. How can scientists agree to a list of all species? Accessed at <https://oceansofbiodiversity.blogs.auckland.ac.nz/2020/07/07/how-can-scientists-agree-to-a-list-of-all-species/>
- Costello MJ, Bouchet P, Boxshall G, Fauchald K, Gordon D, Hoeksema BW, et al. 2013. Global coordination and standardisation in marine biodiversity through the World Register of Marine Species (WoRMS) and related databases. *PLoS ONE* 8: e51629. <https://doi.org/10.1371/journal.pone.0051629>
- Costello MJ, Horton T, Kroh A. 2018. Sustainable biodiversity databasing: international, collaborative, dynamic, centralised. *Trends Ecol Evol.* 33: 803-805. <https://doi.org/10.1016/j.tree.2018.08.006>
- Costello MJ, Wieczorek J. 2014. Best practice for biodiversity data management and publication. *Biol Conserv.* 173: 68-73.
- Garnett ST, Christidis L. 2017. Taxonomy anarchy hampers conservation. *Nature* 546: 25-27. <https://doi.org/10.1038/546025a> PMID: 28569833
- Garnett ST, Christidis L. 2018. Science-based taxonomy still needs better governance: Response to Thomson et al. *PLoS Biol.* 16: e2005249. <https://doi.org/10.1371/journal.pbio.2005249>
- Garnett ST, Christidis L, Conix S, Costello MJ, Zachos FE, Banki OS, et al. 2020. Principles for creating a single authoritative list of the world's species. *PLoS Biol* 18(7): e3000736. <https://doi.org/10.1371/journal.pbio.3000736>
- Roskov Y, Ower G, Orrell T, Nicolson D, Bailly N, Kirk PM et al. eds. 2020. Species 2000 & ITIS Catalogue of Life, 2019 Annual Checklist. Available from: www.catalogueoflife.org/annual-checklist/2019
- Thomson SA, Pyle RL, Ahyong ST, Alonso-Zarazaga M, Ammirati J, Araya JF, et al. 2018. Taxonomy based on science is necessary for global conservation. *PLoS Biol.* 16: e2005075. <https://doi.org/10.1371/journal.pbio.2005075>



Workshop participants for the project on freshwater Red List assessments for western Africa. Photo © William Darwall

Freshwater Species Conservation, almost 20 years of collaboration between the IUCN Global Species Programme and the SSC freshwater focused Specialist Groups

Will Darwall

*Freshwater Biodiversity Unit.
IUCN Global Species Programme*

Most of us will agree that IUCN is a complex organisation with many different components meaning it is sometimes difficult to see how we might best work together. In this article I hope to show how IUCN's Global Species Programme (part of the IUCN Secretariat) has collaborated closely with the Species Survival Commissions' Specialist Groups which are specifically focused on freshwater species over the last 18 years.

Since its formation in 2002 the Global Species Programmes' Freshwater Biodiversity Unit (FBU) has focused on a wide range of activities, the majority of which have only been possible through close collaboration with the experts of SSC Specialist Groups. To understand the nature and achievements of this collaboration we thought it useful to provide a summary of this work, focusing on Red List assessments, identification of Key Biodiversity Areas (KBAs), and joint publications. Finally, we show through a project on the Malili Lakes in Sulawesi, how this work can be used to realise SSC's Assess-Plan-Act approach.

Red List Assessments

The FBU has been working closely with five freshwater Specialist Groups for fishes, molluscs, odonates, decapods and plants since 2002, aiming to complete globally comprehensive assessments for all these taxonomic groupings (approximately 35,000 species). The work has largely been approached through regional projects where we simultaneously assess species from all these groups as a combined effort, so providing an immediate and comprehensive baseline on the status of freshwater biodiversity for a region. Given the wide range of trophic levels and ecological roles encompassed within the five taxonomic groups assessed, information on their distributions and Red List status, when combined, provides a useful indication of the overall status of the associated wetlands ecosystems.

In most cases, the FBU manages project implementation and the species information is provided by the experts from the Specialist Groups. For a typical project the Specialist Group Chairs and co-Chairs first identify the best species experts for the region who are then contracted by FBU to deliver the assessments. Where possible the FBU provides training in the Red Listing process through workshops prior to assessments being drafted and workshops are then held to review the draft assessments. In many cases Specialist Groups members assist in the training. We also conduct a threat mapping exercise alongside the Red List training so that expert knowledge of threats to species in the region can be pooled as a shared resource to inform drafting of the Red List assessments. An estimated 500+ Specialist Group members or affiliates and 25+ members of the GSPs FBU have collaborated on this effort since 2002.

We have found this regional approach works well as it enables experts from the different Specialist Groups to meet and share their knowledge and it provides a comprehensive information baseline to inform decision making relevant to all freshwater species in a region. More recently we have been fortunate in being able to focus solely on completion of the comprehensive assessment of all fishes and odonates under the IUCN-Toyota Red List Partnership.

In support of this work an estimated USD\$ 1.3 million has been paid to Specialist Group members contracted to conduct Red List assessments using funds made available through projects secured by the FBU. It has, however, not been easy to obtain funding to support species Red Listing which is more often funded as a component of a wider project so it has taken many years to get to the point where we are now excitingly close to achieving comprehensive assessments for all species in these taxonomic groups (Figure 1). We will soon be able to “put freshwater species on the map” in a hope that they start to get the attention they need.

24,659 freshwater species in these priority groupings now published on the IUCN Red List – many more are in the pipeline for publication in 2020/21.

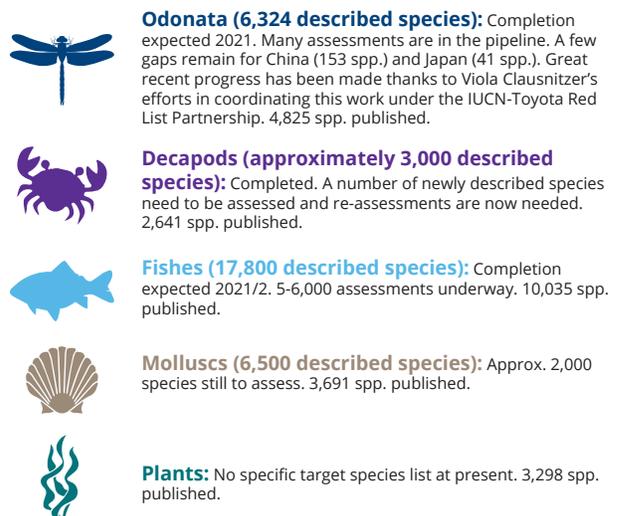


Figure 1 - Progress of freshwater species assessments (IUCN RLTS version 2020-2)

Most regions of the world have now been assessed or have assessments underway (Figure 2) and we hope to have near-comprehensive coverage for most groups by the end of 2021.

IUCN Red List of Threatened Species Global Assessment of Freshwater Fishes

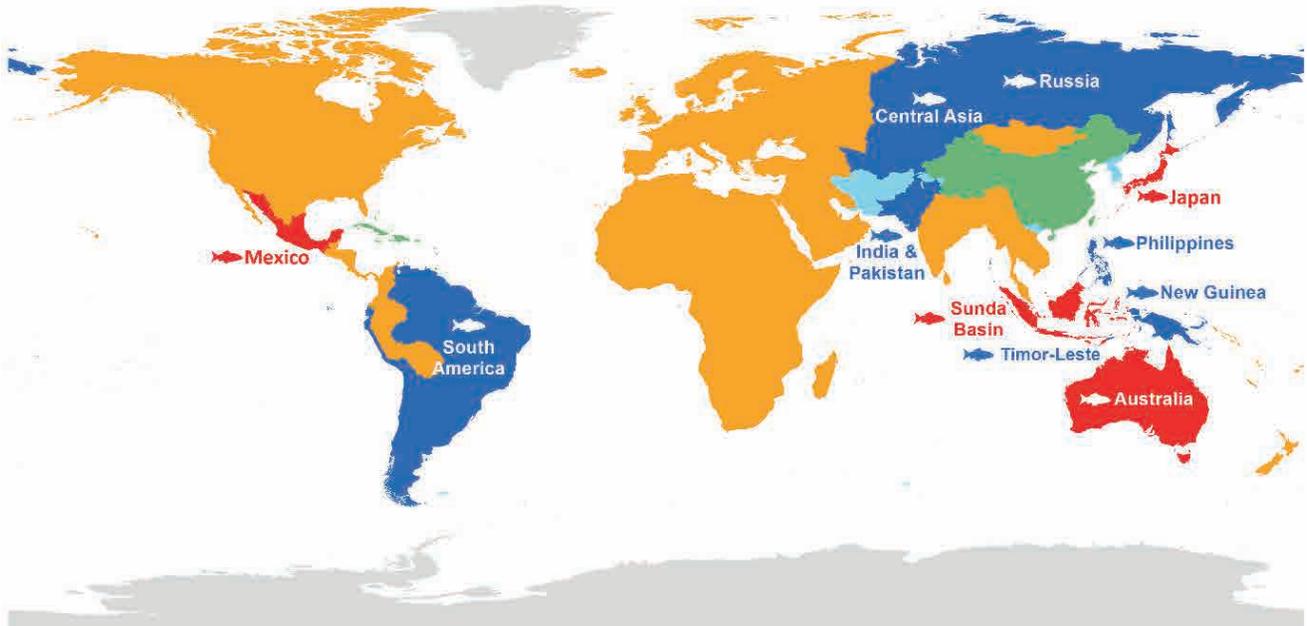


Figure 2 - Progress in the assessment of all described freshwater fishes.

The pace of progress since work began in 2002 is demonstrated for the freshwater fishes (Figure 3) noting that more than 6,000 additional species assessments are currently underway and should be published by the end of 2021.

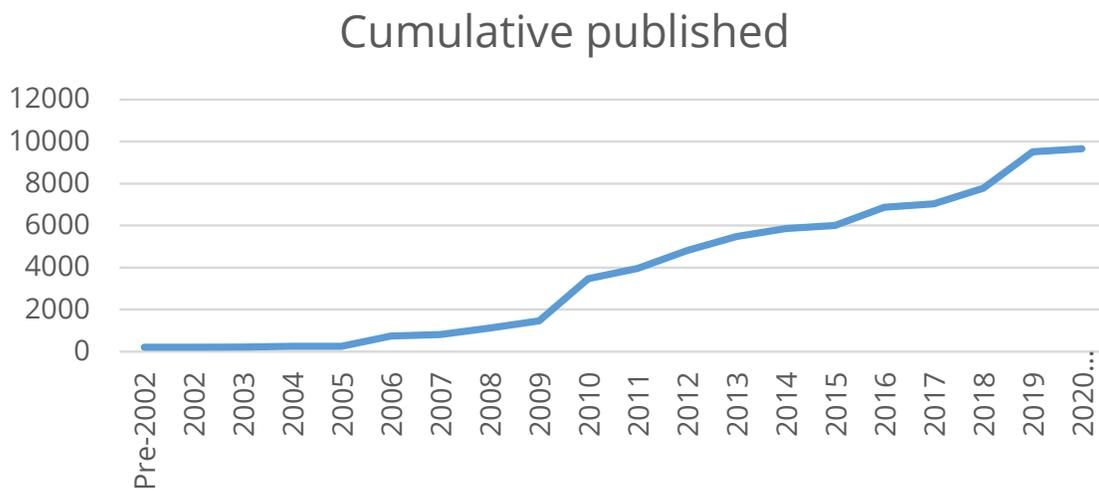


Figure 3 - The number of freshwater fish assessments published on the IUCN Red List each year.

A new Specialist Group

One component of freshwater biodiversity which is notably absent on the Red List is the mayfly, stonefly, caddisfly group with only 12 species assessments published (IUCN RLTS version 2020-2). In recognition of this shortfall, in 2019 the Mayfly, Stonefly and Caddisfly Specialist Group was established following initial discussions with the FBU at the World Mayfly and Stonefly conference in Aberdeen (2015). The FBU aims to initiate efforts to collaborate with this new Specialist Group and start assessing these species as soon as possible.

Key Biodiversity Areas

Once species have been assessed to determine their distributions and which are threatened, the next step is to identify the sites which are most important for conserving those species. These sites are known as Key Biodiversity Areas (KBAs), defined as sites contributing significantly to the global persistence of biodiversity, in terrestrial, freshwater and marine ecosystems. We feel that KBAs represent one of the most powerful tools to further conservation of freshwater species as they trigger environmental safeguards, stimulate focus for donors and for conservation action, and are embedded in global policies for environmental protection. We all know how hard it is to get people excited about conserving freshwater species but once a site is confirmed as a global KBA it triggers actions to help protect those species within the site. KBAs help put freshwater species on the conservation map.

FBU initiated work on the identification of “important sites of freshwater biodiversity” back in 2002, leading to several peer-reviewed publications and input to development of the KBA Global Standard published in 2016 and the guidelines for its application. Since 2010 the FBU has been closely collaborating with SSC experts in many regions of the world (Figure 4) to identify freshwater sites as potential KBAs (Figure 5). SSC experts are critical to the process through confirming the presence of what we call the KBA “trigger species” in the sites proposed.

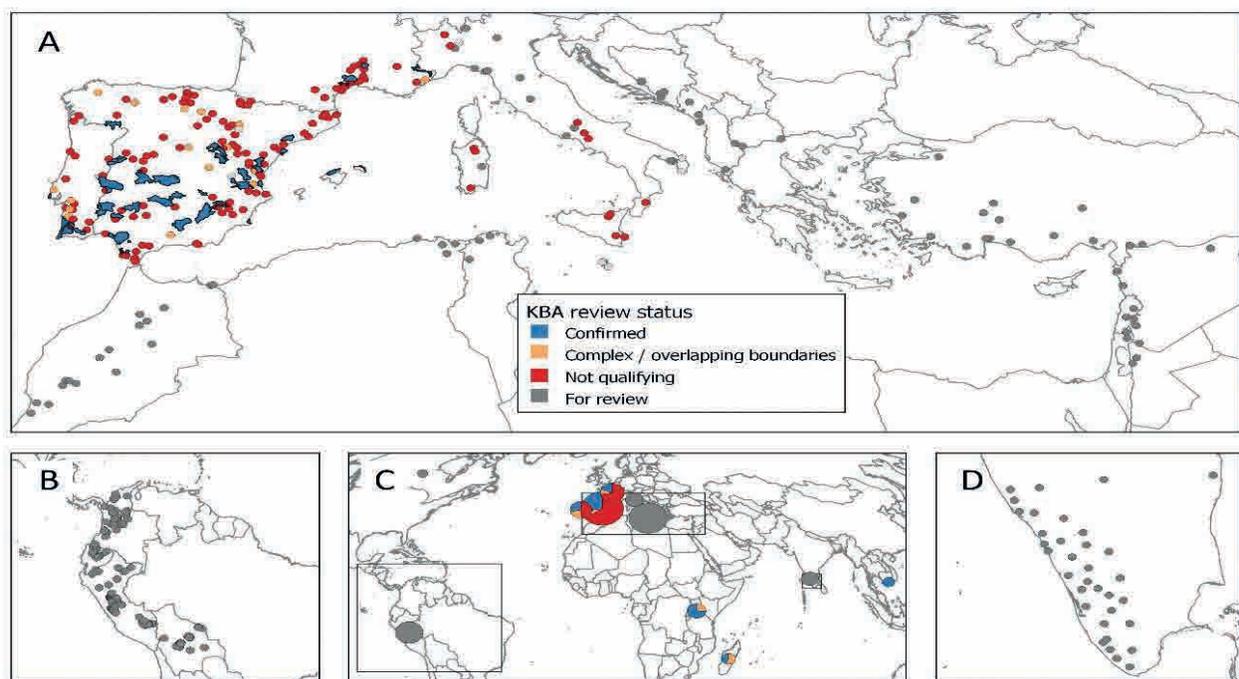


Figure 4 - Locations of FW KBAs proposed, or confirmed.



Figure 5 - Summary of progress on freshwater KBAs

ASSESS-PLAN-ACT

In 2019 we completed a project for Lake Mahalona, one of the Malili Lakes (known as “Wallace’s Dreampond” due to the amazing species radiation of freshwater fishes, gastropod molluscs, and shrimps) in Sulawesi, Indonesia, which represents a showcase for the Assess-Plan-Act approach adopted by SSC. In summary, the project objective was to ASSESS the status of Lake Mahalona’s freshwater biodiversity (species and sites) and to use this information to develop and implement a catchment management PLAN and to then implement some of the plans key recommendations (ACT) (Figure 6).



Figure 6 - Assess - Plan - Act activities for the conservation of freshwater species in Lake Mahalona, Indonesia.

This is probably one of the most successful and exciting projects run by the FBU in that, for the first time, we were able to demonstrate how the Red Listing and KBA assessments can be used to plan and implement conservation actions. We have since shared the project outputs with the Conservation Planning Specialist Group for potential use as a training case study.

Joint Publications

Finally, the collaboration between GSP and the SSC continues beyond the collation of data in that SSC experts are in most cases co-authors on [reported outputs](#) (30+ reports). We also have approximately 35 published papers in peer-reviewed journals, including one paper in [Science](#), showcasing our work, and many of these are either led or co-authored by members of the SSC.

We hope that this overview demonstrates the great history of successful collaboration between the IUCN Global Species Programme and the wonderful experts within the SSC Specialist Groups. Together we can make things happen!



Axel Moehrensclager
Photo © Conservation Translocation
Specialist Group

Who shapes the SSC?

Interview with Axel Moehrensclager, IUCN SSC Conservation Translocation Specialist Group Chair

Since its establishment, the Conservation Translocation Specialist Group has confronted the ongoing and massive loss of biodiversity by using reintroductions. In this interview with his Chair, he relates the path followed, the lessons learned and the process that this group plans for the next decade.

Formerly known as the Reintroduction Specialist Group, in 2018 the group was renamed to Conservation Translocation SG. What was the strategy behind this decision?

In short we wanted to have a greater impact for conservation. We realize the tremendous opportunity to work with others around the world to make a difference for species, for ecosystems, and for people by using translocations as a potentially powerful tool. We deal with any conservation situation where species are moved between different sites in nature or between populations under human care and the wild.

Conservation translocations have increased thirty-fold in thirty years. Published records now document over 2000 species, including for example corals, mushrooms, orchids, butterflies, frogs, vultures, and elephants. In fact the species number is sure to be a vast underestimate as so many conservation translocations are carried out by community groups, governments, and non-government organizations around the world without publication in the primary literature.

Conservation translocations do not replace other conservation strategies such as the protection of habitats or the limitation of threats facing species. Instead they build on them. In synergy, conservation translocations have often worked excellently to make the difference in saving species, and restoring ecosystem processes. I often say that the best conservation translocation is one that you never need to do. But sadly - and increasingly - other efforts alone are insufficient to save species and thereby benefit ecosystems.

At our Second International Wildlife Reintroduction Conference, hosted by Lincoln Park Zoo in Chicago in November, 2018, I announced a commitment to change the name and mandate of our specialist group. Planning and delivering such change needed to be done carefully, respectfully, and deliberately over the last 1.5 years given our rich and proud history as the Reintroduction Specialist Group over 30 years.

There were two primary reasons to change the name of our Specialist Group: semantics and breadth. In terms of semantics, we are responsible for four different types of conservation translocations. 'Reintroductions' of extirpated species are certainly included, but so are 'Reinforcements' of existing populations. We also deal with translocations outside of species indigenous range through 'Ecological Replacements' which seek to replace the ecological function of extinct species, or through 'Assisted Colonization' which moves species beyond inescapable current or future threats such as climate change.

In terms of breadth, there were a number of issues to address including ecosystem function, mitigation translocations, and de-extinction. Because of early successes saving species from extinction such as the Arabian oryx, the kakapo, and the black-footed ferret the impression arose that conservation translocations only aim to benefit individual species. This is often not the case. For example, we have documented that conservation translocations on plants, algae, and invertebrates in marine systems are driven by a desire to improve ecosystem function. Increasingly, and especially in Europe, there is much discussion about the exact meaning and potential benefit of 'Rewilding'. In some cases, previously impacted habitats are left to passively recover, but many active efforts rely on conservation translocations and the *IUCN Guidelines for Reintroductions and Other Conservation Translocations* clearly need to be considered.

In our increasing breadth, we also deal with a couple contentious areas. Mitigation translocations of imperiled species are often done to move species in light of industrial developments. From a conservation perspective we would prefer that developments would be prevented through effective science, legislation, and protection. But often they simply are not. And then the dilemma becomes whether one should move the species and, if so, where and under what ramifications. Another very emotional issue deals with the 'de-extinction' of species. Genomics have evolved so rapidly that the potential creation of species such as ones analogous to mammoths, passenger pigeons, or the Xerces blue butterfly may be possible. At the point that one considers putting such species into nature under a conservation premise, such releases need to be scrutinized in terms of risks and benefits through conservation translocation planning processes.

CTSG among the few groups to develop a strategic plan for the next 10 years. What motivated you to develop this plan and what was the process like?

We simply wanted to capture the true potential that we believe we have to help others. Practitioners, nature enthusiasts, managers, and governments around the world are increasingly motivated or pressured to take action on behalf of nature. We never want to impose ourselves on other agencies or groups if they believe they have

planning, decisions, and training well in hand to consider or apply conservation translocations. But increasingly the requests keep coming to assist other specialist groups or agencies all over the world. Because we have no doubt that these trends will continue, we wanted to take a long term strategic perspective that would not only meet the needs of the next year or two but also the longer term.

By launching our 10 year plan in 2020 we have the opportunity to be perfectly aligned in terms of helping to affect a post-2020 Global Biodiversity Framework through the Convention for Biodiversity. Indeed, the next decade is deemed the 'UN Decade on Ecosystem Restoration', and we believe we have a fundamental role and responsibility to play in terms of its delivery. The UN Sustainable Development Goals span to 2030 and we believe that conservation translocations will be quite relevant in terms of biodiversity targets related to SDG focal areas such as Life on Land, Life below Water, and Climate Action.

Finally, by setting our eyes forward towards a 10 Year Vision, we wanted to open the opportunity for other organizations to collaborate with us, to partner with us, or to fund us in long-term, meaningful, innovative, and sustainable ways. We feel privileged by the mandate we have been given and want to share the joy of saving nature with others that seek to make a difference in this world.

What are the main highlights of CTSG's 2030 strategic plan?

Overall I think the structure and level of ambition are the highlights. We focus on six components which we believe need to align collectively to leverage the true potential for this conservation tool to be used responsibly and effectively. These are: Science, Guidance, Policy, Training, Action, and Outreach. Each has numerous strategies that aim to significantly improve upon past activities of our group while addressing emergent needs worldwide.

For me a key highlight within the broader framework is our emphasis on Action. Within the Species Survival Commission we utilize the Assess-Plan-Act framework. Conservation translocations are a tool which, when used responsibly, has tremendous potential to benefit individual species and restore ecosystems. Such gains in turn can have tremendous benefits for people locally, nationally, or globally in ecological, cultural, spiritual, or economic ways. Science, Guidance, Policy, and Training are fundamentally about leading innovation and developing expertise and processes to raise confidence to pursue courageous action.

Outreach is also crucial and it is a weakness where our group needs to improve. When I see discussions about Conservation Optimism, I note that examples of effective conservation translocations inevitably come up. There is something very pragmatic, relatable, and powerful about the central idea that at some point someone will have a species in their hands to release into nature. That simple fact combined with many successes around the world, conveys that conservation can work in powerful ways – we need to get better at sharing this message of action and hope.

How do you distribute responsibilities and structure the Conservation Translocation SG to implement its 2030 strategic plan?

Our plan is so new that the ink is still drying on the pages. Consequently many of the mechanisms are not fully developed or public at this point because further consultation is required. I have enjoyed the advice of the two

previous group chairs and our long-standing Program Officer as they have seen advantages and disadvantages of different approaches over three decades. In the past the group has had a complex mix of geographically and taxonomically targeted focal points which have worked very well when led by individuals that capitalize on their mandates. But some aspects can become confusing in terms of responsibilities and accountability. A central tenant for us will be that we will passively remain a resource for others to reach out to, but we will also be proactive in terms of actively approaching others to collaborate with us in the achievement of specific goals and targets in time-bound ways.

What lessons did you learn from this strategic planning process? What would you recommend to other SSC Group Leaders who want to develop a strategic plan for their group?

Specialist groups are generally quite variable in terms of the participation and engagement of their volunteer members. Depending on the size of specialist groups, it can be difficult to know when to engage the entire group, subsets, or specific leaders on key issues such as strategic development. In our case, I utilized a SWOT (Strength, Weakness, Opportunities, Threats) process by which all members could reflect on past group activities and giving advice for future directions. Individually submitted input ensured that all voices could be heard equally and that diverse view-points could be gathered systematically.

Within our group a broad and diverse group of leading conservationists from around the world debated a core direction for how we wanted to affect change. This yielded our new vision and mission, which are the following:

Vision: A world where courageous action repairs nature's past damage and secures against threats of the future

Mission: To empower responsible conservation translocations that save species, strengthen ecosystems, and benefit humanity

I would recommend to other leaders that they revisit or draft vision and mission statements because the process creates a lot of dialogue and debate regarding general aspirations, without getting bogged down in the specifics of particular tactics. In our case, every word was carefully weighed and chosen. The vision and mission statements became constant beacons to check to ensure that subsequently developed strategies and tactics were well aligned with our central purpose.

Finally once we had created our draft plan, we reached out beyond CTSG to others in SSC, in IUCN, and beyond to ensure that the plan would be feasible, measurable, and impactful. This was important to ensure that our group thinking was not too insular.

Overall our process worked well and I would be happy to discuss it with others that might want to contact me at iucnsscctsgchair@gmail.com. That said, there is a lot to learn from other specialist groups as well and I owe a debt of gratitude to many within CTSG and within SSC in general.

SPONSORS AND PARTNERS





IUCN SSC QUARTERLY REPORT / SEPTEMBER 2020



@IUCNssc



@IUCNssc



@IUCNssc

www.iucn.org