

IUCN Global Species Programme

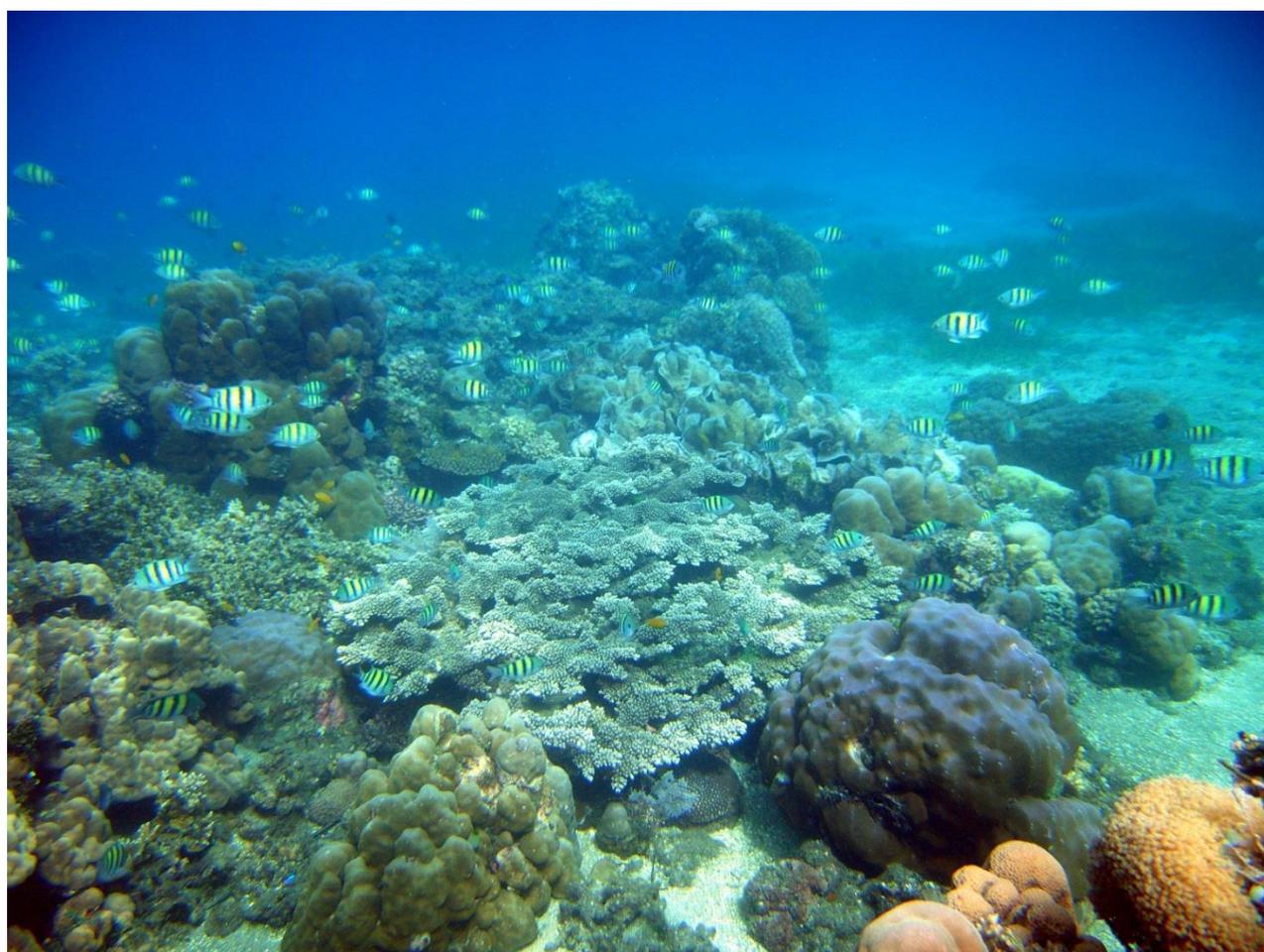
# MBU

## Marine Biodiversity Unit

in partnership with the Species Survival Commission and Old Dominion University

### 2015 in Review

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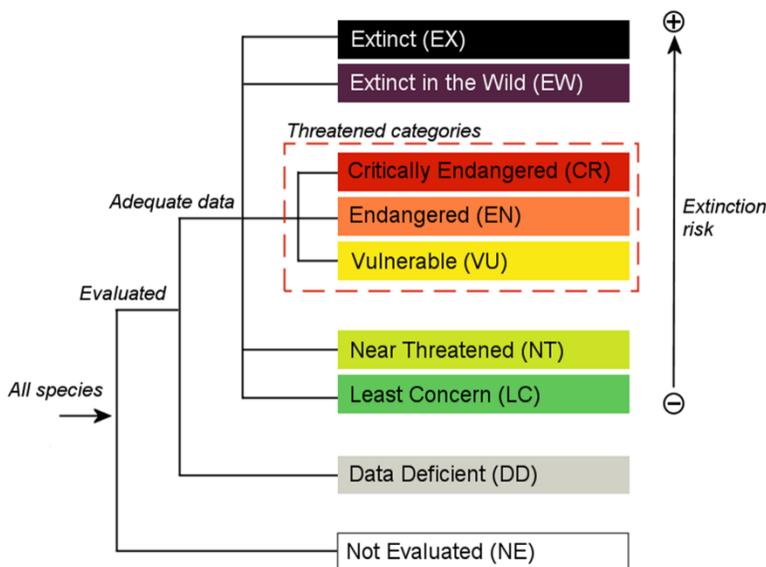


# OVERVIEW & ACCOMPLISHMENTS

As the largest ecosystem on the planet, the marine realm helps support all life on earth through its myriad atmospheric, geological and biological processes. The highly varied biodiversity it harbors underpins many of these processes and provides vital ecosystem services, livelihoods and food security for all humankind. Despite its vast extent and volume, we now know that the threats to its biodiversity rival those found in the terrestrial realm. Unfortunately, our understanding of the conservation status of marine species lags far behind terrestrial species. This seriously impedes the effectiveness of marine conservation efforts.



The IUCN Red List of Threatened Species – the global standard for determining the



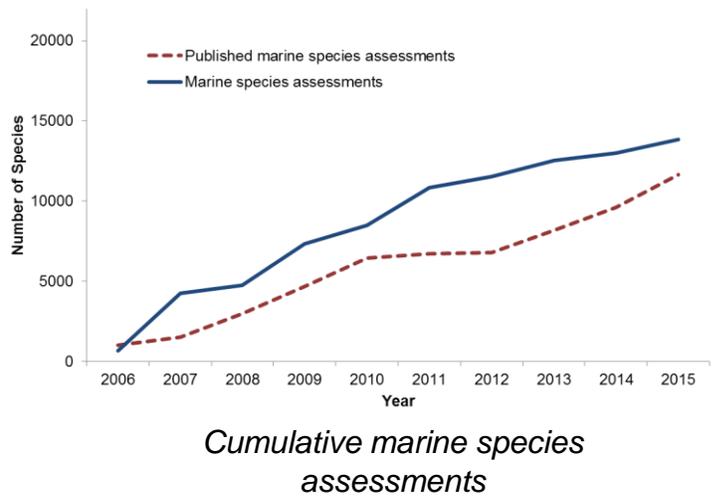
*IUCN Red List Categories*

conservation status of species – categorizes species based on symptoms of extinction risk. The goal of the Global Marine Species Assessment (GMSA) project, the primary focus of the MBU, is to synthesize the available data for 20,000 marine species and complete their IUCN Red List assessments. These comprehensive species assessments are driving conservation priorities at both the species and site levels, resulting in direct benefits to the ecosystem and the people relying on it.

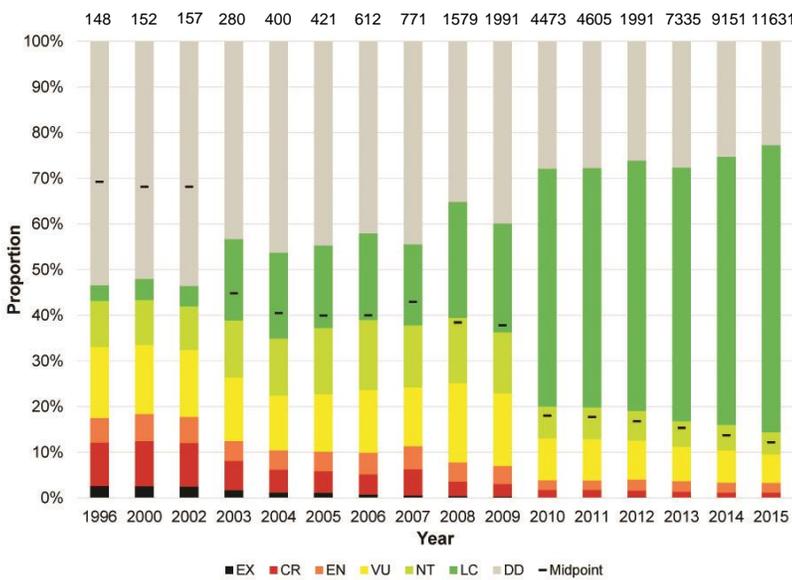
Prior to 2015, nearly 13,500 marine species have been assessed using Red List criteria primarily through the action of the MBU and its partners in the Species Survival Commission. In 2015, an additional 1,500 marine bony fishes were assessed at the regional or global level at four workshops held in Fiji (Oceania coral-associated bony fishes, two workshops), Mexico (Gulf of Mexico shorefishes), and Hong Kong (South China Sea bycatch). In addition, approximately 4,000 global and regional marine species assessments were added to the IUCN Red List website.

Throughout 2015, we have concluded the first step – assessments of marine bony fishes – for a number of our regional assessment initiatives, including those in Europe, the Persian Gulf, the Eastern Central Atlantic and the greater Caribbean.

Over the past two decades we have substantially increased the representation of marine species on the Red List, providing comprehensive species-specific baseline data, as well as spatial, temporal, and taxon-specific trends in threat. Our results have, and will continue to, guide national, regional and international marine conservation decisions, including petitions to include species on CITES and the US Endangered Species Act.



We have continued to support marine conservation education at Old Dominion University, Arizona State University, Christopher Newport University, and Texas A&M University. Five graduate students have gained career-building experiences



working on our projects, including organizing and facilitating assessment workshops, analyzing data, and communicating the results. At least 15 undergraduate students have been trained and contributed to our mission in 2015. The Conservation Scholars program, funded by the National Fish and Wildlife Foundation and run by Dr. Tom Lacher at Texas A&M, supported an internship to contribute to our Gulf of Mexico initiative.



*Substantial progress was made in 2015, but action is urgently needed in the face of numerous anthropogenic threats to marine biodiversity, including overexploitation, habitat destruction and climate change. We thank all of those who have supported our efforts in 2015, and look forward to continuing to support marine biodiversity conservation in 2016.*

# CONSERVATION OUTCOMES

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## Informing International Environmental Justice

MBU manager Dr. Kent Carpenter was called to the International Court of Justice to provide testimony on the impacts of dredging of coral reefs in disputed areas of the South China Sea. Using data from the IUCN Red List and his personal observations in the region, he was able to identify species that may be negatively affected by these actions. For example, of the 500 coral species present around the Spratly Islands, 139 were listed as threatened and another 138 were listed as Near Threatened. Given the pristine nature of these reefs and the high biodiversity, the impacts are “close to catastrophic.” The testimony represents a unique application of Red List data in the marine realm and may pave the way for future inclusion of such effects in the dialog of international environmental disputes.

## Eastern Central Atlantic (ECA) Regional Initiative

In 2015, we completed many of our regional initiatives, including those in Europe, the Greater Caribbean, Persian Gulf and Eastern Central Atlantic. Our ECA initiative, supported by the MAVA Foundation, is poised to guide concrete marine conservation actions, especially in the countries covered by the Regional Marine and Coastal Conservation Programme for West Africa (PRCM). Our preliminary



results were presented at the PRCM Forum in 2015 to an audience including institutional and non-governmental development and conservation stakeholders. As the PRCM countries have agreed to increase the network of West African marine protected areas, our results will help guide effective and efficient protected area placement to maximize conservation outcomes.

## Strategic Partnership with The Deep

Thanks to the diligent efforts of Kira Mileham, IUCN SSC, we embarked on a strategic partnership with The Deep, one of the UK’s largest aquariums. The Deep will host a Marine Programme Officer as a full time staff, who will play a key role in the future progress of the GMSA. Further, the position will work closely with the IUCN SSC to develop a model towards engaging global aquariums with the IUCN SSC aquatic network and substantially increasing global marine conservation capabilities.

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**THE DEEP**

For conservation, not profit

# MEET OUR STAFF

*The passion and hard-work of our dedicated team of professionals and students drive the success of the MBU. We also thank our undergraduate student workers based at ODU, ASU, CNU and Texas A&M, who have devoted their time and enthusiasm to our program.*

## Old Dominion University Norfolk, VA



Dr. Kent Carpenter  
Professor and  
Manager



Dr. Gina Ralph  
Post-doctoral  
Researcher

## Graduate Students



Christi Linardich



Jack Buchanan



Mike Harvey

## IUCN Species Survival Commission Tucson, Arizona



Roger McManus  
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Jessica Deal  
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Mia Comeros-Raynal  
Research Associate

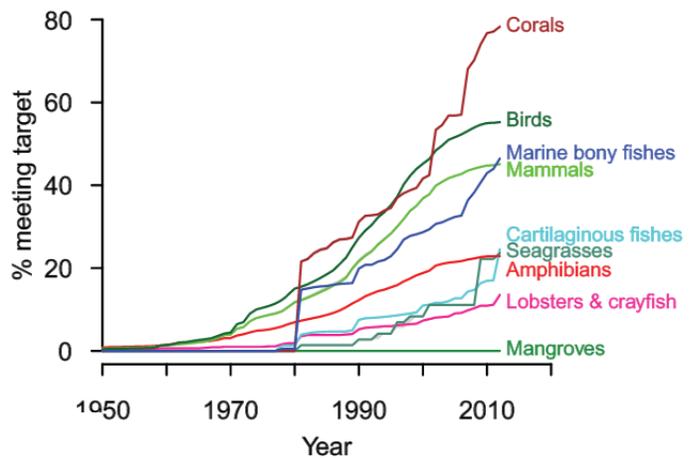
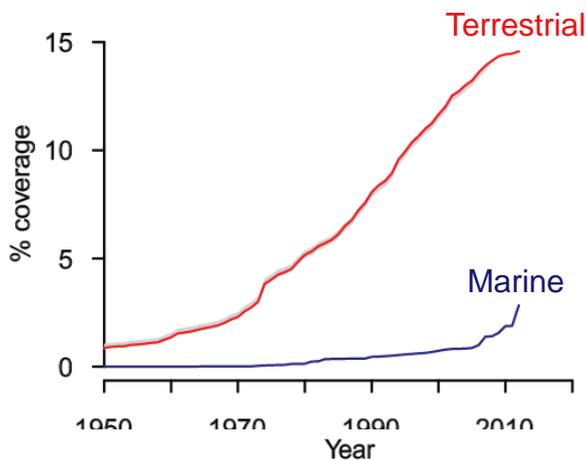
# PUBLICATIONS & PRESENTATIONS

Our work has been broadly publicized to scientists, conservationists, managers and others at conferences and through the peer-reviewed literature. For example, in June 2015, the results of the European Marine Fishes Red List initiative were presented along with the Red List of European Birds at the European Union's Green Week, the largest European conference on environmental policy, ensuring that the data are used to inform conservation decisions.

## 23 PEER-REVIEWED PUBLICATIONS SINCE 2006

## 3 PEER-REVIEWED PUBLICATIONS IN 2015

Butchart et al. (2015) Shortfalls and solutions for meeting national and global conservation area targets. *Conservation Letters*



Chao et al. (2015) A popular and potentially sustainable fishery



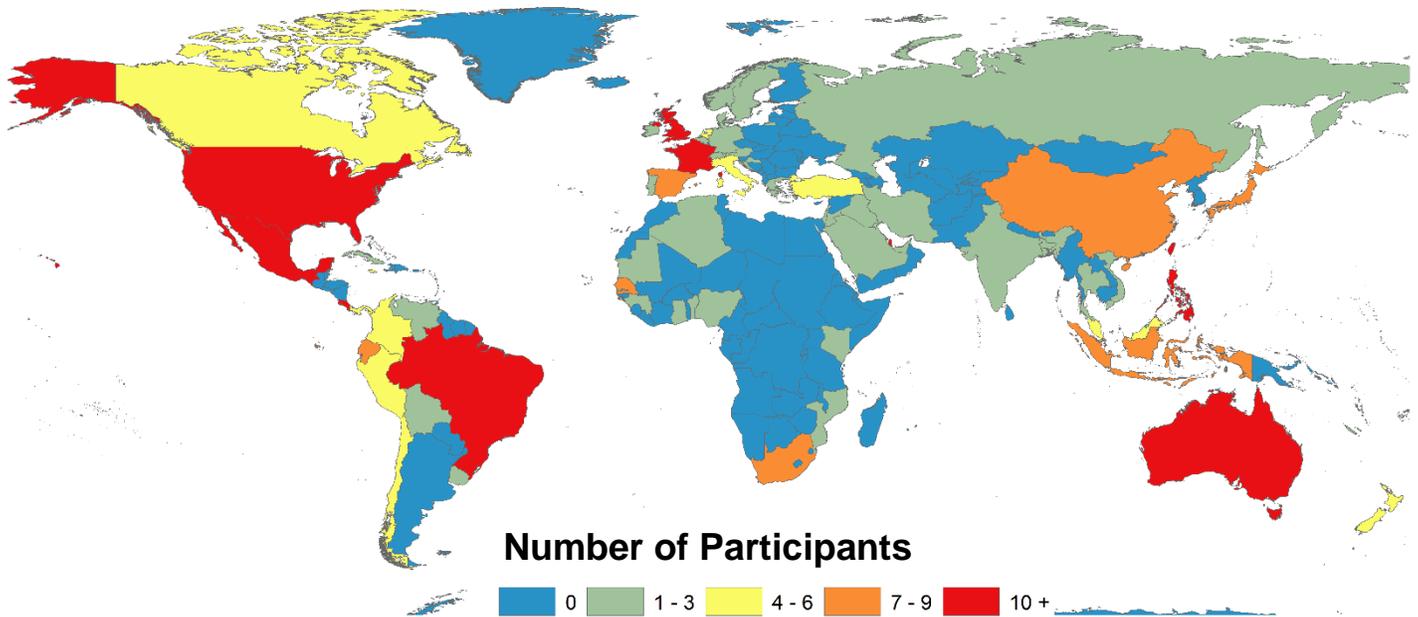
resource under pressure—extinction risk and conservation of Brazilian Sciaenidae (Teleostei: Perciformes). *Global Ecology and Conservation*

Buchanan et al. (2015) Living on the edge: vulnerability of coral-dependent fishes in the Gulf. *Marine Pollution Bulletin*



# ACKNOWLEDGEMENTS

We recognize and thank the essential contributions of our specialists, who volunteer their time and expertise to further the goals of the MBU. In 2015, 51 specialists attended four MBU-led workshops. To date, over 500 specialists from nearly 80 countries have attended at least one workshop. These specialists represent an investment by institutions throughout the world to further our understanding of marine biodiversity and conservation.



We gratefully acknowledge the numerous organizations and agencies that have supported our work to date, including:

International Union for the Conservation  
of Nature  
IUCN Species Survival Commission  
Conservation International  
The Deep

#### **Universities and Research Institutes:**

Old Dominion University  
Arizona State University  
Harte Research Institute for Gulf for  
Mexico Studies

#### **Granting Agencies**

New Hampshire Charitable Foundation  
Thomas W. Haas Foundation  
Agence Française de Développement  
MAVA Fondation pour la Nature  
National Fish and Wildlife Foundation  
Qatar National Research Fund  
Ocean Park Conservation Fund, Hong  
Kong  
Moore Family Foundation

