n° 4 – June 2013

Marine species news

A news-bulletin for marine members of SSC

This newsletter is a product of the IUCN SSC Marine Conservation Sub-Committee (MCSC) and is aimed at the marine members of SSC. It complements the Global Marine and Polar Programme's annual newsletter, *Marine News*, and focuses more specifically on species issues. The richness of this newsletter is a testament to the expanding work within IUCN on marine species.

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MCSC news

The IUCN SSC Marine Conservation Sub-Committee (MCSC) was created in 2005 to focus and brings together marine experts from the IUCN SSC, the IUCN World Commission on Protected Areas, the IUCN Global Marine Programme and other partners such as TRAFFIC. It seeks to bring greater attention and focus to marine species issues and provides an advisory role to the SSC Steering Committee. The MCSC also works closely with the Global Species Programme's Marine Biodiversity Unit and the Global Marine and Polar Programme (GMPP) and takes on specific marine issues not covered by other components of IUCN. Its role is to promote and integrate such that decisions taken by policy-makers and resource managers on the management of marine resources are based on sound and scientific knowledge on species.

The MCSC met at the IUCN SSC Chairs' meeting at the Yas Island Rotana, Abu Dhabi in February 2012 and plan to hold its next meeting in December 2013 at IUCN Headquarters in Switzerland. The MCSC's integration role is important to provide a strategic umbrella to guide and coordinate actions by the marine Specialist Groups and Red List Authorities. In this regard, we kindly invite the marine IUCN SSC members to contact Prof. Yvonne Sadovy (yjsadovy@hkucc.hku.hk) and Dr. Claudio Campagna (ccampagna@wcs.org), co-chairs of the MCSC, to share with the MCSC what are the most important marine species issues that they would like to raise for the next *quadriennium*.

ECOLOGICALLY AND BIOLOGICALLY SIGNIFICANT AREAS (EBSAs): What happened at CBD COP 11 in India?

IUCN Global Species Programme and IUCN Global Marine and Polar Programme

The 11th Conference of the Parties to the Convention on Biological Diversity took an important step for the global ocean commons, the largest habitat for life on Earth. The 193 Parties to the Convention agreed to send key scientific information to the United Nations describing specific places of "ecological or biological significance" in the open ocean and deep sea, including the high seas and seabed area beyond national jurisdiction.

Information Box - The 7 Criteria Used in the Identification of EBSAs

1) UNIQUENESS OR RARITY – areas containing either:
   i. Unique, rare or endemic species, populations or communities; and/or
   ii. Unique, rare or distinct, habitats or ecosystems;and/or
   iii. Unique or unusual geomorphological or oceanographic features.

2) SPECIAL IMPORTANCE FOR LIFE-HISTORY STAGES OF SPECIES – areas supporting critical life-history stages of individual species

3) IMPORTANCE FOR THREATENED, ENDANGERED OR DECLINING SPECIES AND/OR HABITATS –areas containing significant assemblages, or are critical for the survival and recovery of endangered, threatened or declining species

4) VULNERABILITY, FRAGILITY, SENSITIVITY OR SLOW RECOVERY – areas that contain a relatively high proportion of sensitive habitats, biotopes, or species that are functionally fragile (highly susceptible to degradation or depletion by human activity or natural events) or with slow recovery

5) BIOLOGICAL PRODUCTIVITY – areas containing species, populations or communities with comparatively higher natural biological productivity

6) BIOLOGICAL DIVERSITY – areas containing comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity

7) NATURALNESS – areas with a comparatively higher degree of naturalness as a result of the lack of or low level of human-induced disturbance or degradation

After the adoption of the "Nagoya Package" back at the very successful COP10 in 2010, COP11 marked a move in the Convention from negotiation to implementation. In many ways, this COP was also an opportunity to correct and fine-tune issues that are found ineffective, insufficient or problematic in the implementation of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Targets. Expectations of any big "breakthrough" at COP11 were not high and this was considered as a transitional COP by many.

Aichi Target 11

'By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape'

However, this is the first time the world's ocean, including its international waters, comes under scientific scrutiny, combining new facts about the distribution, migration routes and reproductive, nesting and nursing grounds of many threatened species, such as tuna, sharks, turtles and whales. The Global Ocean Biodiversity Initiative, of which IUCN is a partner, has been engaged in compiling and processing the new data.

In order to achieve Aichi Target 11 of the Convention on Biological Diversity (CBD) (see information box to the right), complementary processes to the delimitation of Marine Protected Areas are needed to effectively demarcate those areas of the marine realm that are of most importance for biodiversity.

"Many of these important areas lie outside of national jurisdiction, and thus remain neglected or poorly protected," says **Kristina Gjerde, IUCN Senior High Seas Advisor.** "We need to bring these remote places to the center of government attention."

Over 120 marine 'hotspots' located by experts in the Western South Pacific, the Mediterranean, the Wider Caribbean and Western Mid-Atlantic are now waiting to be approved by the CBD. This approval is needed to encourage the international community to recognize and protect these areas. According to IUCN, the new knowledge gathered on them should be used by those managing marine activities to preserve areas beyond national boundaries, in line with international law.

"We are calling for the Convention to approve the proposed EBSAs and urge the international community to protect them – for the sake of our oceans and the services they provide to people around the world," says **Patricio Bernal, IUCN Coordinator of Global Ocean Biodiversity Initiative.** "If we fail to do this, we risk losing rich marine life before we even have the time to explore it."

The oceans are a vital part of the earth's life support system and are home to an estimated 80% of the world's biodiversity, from tiny phytoplankton to blue whales – the largest creatures on the planet. This life provides us with oxygen, food and water and regulates the earth's climate. While unsustainable human use, climate change and ocean acidification continue to threaten marine biodiversity, only about 2% of the world's oceans is protected – including less than 1% of international waters – and many of these areas remain unexplored.

Sargassum habitat (Photo: Don Kincaid)

Scientists have assessed the biological diversity and number of rare species in EBSAs. They have also looked at how important these areas are for the survival of threatened species and how vulnerable they are to threats such as climate change and human activity, including pollution and illegal and badly managed fishing.

"Unregulated fishing is responsible for the mass mortality of sharks, which can cause dramatic shifts in the whole of the marine environment," says **Kristina Gjerde**. "Plastics are pervasive in all ocean basins, contaminating the food chain with unknown effects. Emerging activities such as deep seabed mining threaten to industrialize the seafloor on a scale as yet unimagined."

One of the areas, the Sargasso Sea, serves as a crossroad for the Atlantic Ocean. Its iconic floating Sargassum seaweeds provide a unique shelter for many species some of which, like the Sargassum anglerfish, are unique to the area. Some 30 species of whales, dolphins, and porpoises breed, live in or migrate through the Sargasso Sea, as do species of tuna, turtles, sharks, rays and European and American eels.

New tracking technologies have allowed researchers to examine migration routes of many species, including Pacific leatherback sea turtles which are threatened by poaching and bycatch. Better protection of these EBSAs could ensure the survival of this species, listed as Critically Endangered on The IUCN Red List of Threatened Species™.

Related Workshops 2013:

- **11-15 March 2013:** IUCN-WCPA-SSC Workshop on Identification Criteria and Delineation of Sites Contributing Significantly to the Global Persistence of Biodiversity. Washington, USA.
- **8-12 April 2013**: South-Eastern Atlantic Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas (EBSAs). Swakopmund, Namibia.
- **6-7 May 2013**: UN Intersessional Workshop on Biodiversity. New York, USA.
- **8-13 July 2013**: FSBI Deep Sea Fish Biology Symposium. Glasgow, UK.
- **19-23 August 2013**: Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction. New York, USA.
- **14-18 October 2013: CBD SBSTTA 17. Montreal, Canada.**
- **21-27 October 2013**: 3rd International Marine Protected Areas Congress (IMPAC3). Marseille, France.

CITES CoP16 - Historic Marine Decisions

IUCN Global Species Programme

A historic vote to improve the sustainability of the international trade of eight species of sharks and rays that are listed as threatened on The IUCN Red List of Threatened Species™ has been among the key decisions taken at the CITES wildlife trade summit in Bangkok.

Great Hammerhead Shark (*Sphyrna mokarran*) – Endangered (Photo: Jeremy Stafford Deitsch)

"The decisions taken at CITES will help secure the survival of many threatened species in the wild," **says IUCN Director General, Julia Marton-Lefèvre.** "We are delighted to see that the scientific expertise on the biology, conservation and trade of species provided to the Convention by IUCN's Species Survival Commission and TRAFFIC was key in supporting evidence-based decision making at the Bangkok meeting."

The conference saw a record number of countries vote to regulate the international trade in the Oceanic Whitetip Shark, three hammerhead species, the Porbeagle shark and the two existing species of manta rays through placing them on CITES Appendix II, meaning that these species can still be internationally commercially traded but now with regulations in place and records of non-detriment findings (sustainable use) required. Parties also voted to ban the international commercial trade in the Critically Endangered Freshwater Sawfish by transferring it from CITES Appendix II to Appendix I.

The rising demand for shark fins, shark meat, gill plates, and aquarium animals is seriously threatening the survival of these species, according to IUCN. Up to 1.2 million Oceanic Whitetip Sharks, which are fished for their large and distinctive fins, pass through the markets of Southeast Asia every year and over 4,000 manta rays are harpooned for their gills.

"This is a historic step towards better protection of these marine species," **says Nick Dulvy, Co-Chair of the IUCN Species Survival Commission (SSC) Shark Specialist Group.** "Now, after nearly two decades of slow and fragmentary progress, Parties agreed that CITES can complement existing national fisheries measures to ensure that global trade is sustainable and legal."

Oceanic Whitetip Shark (*Carcharhinus longimanus*) - Vulnerable (Photo: IUCN Photo Library Shane Gross)

Introduction from the Sea, meaning the procedures that countries need to follow when a CITES listed species is "taken in the marine environment not under the jurisdiction of any State" was another marine issue addressed at CITES CoP16. Text was added to an existing resolution regarding the implications of chartered boats landing species in the high-seas. Further text was also added to clarify implementation issues and a new source code created for specimens taken in the marine environment not under the jurisdiction of any State.

Parties also made decisions at CITES CoP16 in relation to ongoing international illegal trade in the Humphead Wrasse, *Cheilinus undulates* – an Endangered, Appendix II listed species that was one of the first commercially fished species to be addressed under CITES. Another decision was taken for Parties involved in the harvest and/ or trade of toothfish to report their progress in terms of reporting to the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), in particular its Catch Documentation Scheme (CDS).

"Some of the decisions made in this meeting will be challenging to implement," **says Richard Jenkins, UK Manager of IUCN's Global Species Programme.** "However, there is real hope now that international trade in sharks and shark products, as well as the other species addressed here, will become more sustainable and their conservation status subsequently improved."

The following are the scientific names of the shark, sawfish and manta ray species addressed by CITES and the Appendices into which they were placed at CITES CoP16:

Oceanic Whitetip Shark (*Carcharhinus longimanus*) – Vulnerable (included in Appendix II)
Scalloped hammerhead Shark (*Sphyrna lewini*) -. Endangered (included in Appendix II)
Great Hammerhead Shark (*Sphyrna mokarran*) - Endangered (included in Appendix II)
Smooth Hammerhead Shark (*Sphyrna zygaena*) -Vulnerable (included in Appendix II)
Porbeagle (*Lamna nasus*) - Vulnerable (included in Appendix II)
Freshwater Sawfish (*Pristis microdon*) – Critically Endangered (transfer from Appendix II to Appendix I)
Giant Manta Ray (*Manta birostris*) - Vulnerable (included in Appendix II)
Reef Manta Ray (*Manta alfredi*) – Vulnerable (included in Appendix II)

Economic incentives benefit conservation of bonefish, ladyfishes and Tarpon IUCN Global Species Programme

For the first time, all species of Tarpon, ladyfishes and bonefishes - marine species found globally in warm-water seas - have been assessed for The IUCN Red List of Threatened Species™. Of the 17 known species, two, Tarpon (*Megalops atlanticus*) and Roundjaw Bonefish (*Albula glossodonta*) are classified as Vulnerable. One species, Bonefish (*Albula vulpes*) is listed as Near Threatened, three species are listed as Least Concern and 11 are classified as Data Deficient.


Tarpon (*Megalops atlanticus*) Photo: Albert Kok

This is the first time that fishery scientists, fish ecologists, and conservationists have come together to jointly produce an assessment of the threats facing these recreationally and economically important coastal fishes.

"Bonefish & Tarpon Trust (BTT) has long championed research and conservation of bonefish, tarpon and their habitats as a means to protect healthy fisheries, restore fisheries that have declined, and ensure healthy fisheries for the future," says **Dr Aaron Adams, Executive Director of the Bonefish and Tarpon Trust, a Senior Scientist at Mote Marine Laboratory and lead author of the paper**. "BTT is pleased that the International Union for Conservation of Nature (IUCN) hosted the expert group to conduct this global review, which will greatly assist research and conservation efforts, and bring these species the attention they deserve."


Tarpon (*Megalops atlanticus*) Photo: Albert Kok

Bonefishes and tarpon species support recreational fisheries that have significant economic impacts, including lucrative fishing destinations that have supported coastal communities for generations. The review found that bonefish and tarpon populations appear most stable in regions supporting economically valuable destination and catch-and-release fisheries. This new information will be invaluable in helping governments make decisions that will safeguard the future of these species and fisheries which hold interest from recreational fishing stakeholders.

“Local fishermen have a strong economic incentive to support conservation, as the economic impact of a fish released numerous times during its lifespan exceeds the monetary value of its protein,” says **Dr Andrij Horodysky, Assistant Professor at Hampton University and co-author of the paper**. “The establishment of similar fisheries in developing nations may provide an economic incentive to promote conservation while simultaneously supporting local development and infrastructure that attracts conservation minded anglers.”

For many coastal fish species, the challenges for conservation and management go beyond addressing the threats posed by habitat loss and habitat degradation that occur worldwide. An additional and much more pressing threat is an overall lack of information on things as basic as abundance, habitat use and harvest. This global review demonstrates that tarpons, bonefishes, and ladyfishes frequently suffer from all these threats, greatly inhibiting the formulation of conservation and management plans.

“Although some of these species have survived millions of years of evolution on this planet, their greatest challenges may lie ahead, as habitat loss and coastal development continue to increase,” says **Professor Kent Carpenter, manager of the IUCN Global Species Programme Marine Biodiversity Unit at Old Dominion University in Virginia**. “Given the wide distributions of many tarpons, bonefishes and ladyfishes, regional conservation initiatives and management plans should be initiated wherever they are possible.”

Juvenile tarpon habitat (Photo: Aaron Adams)

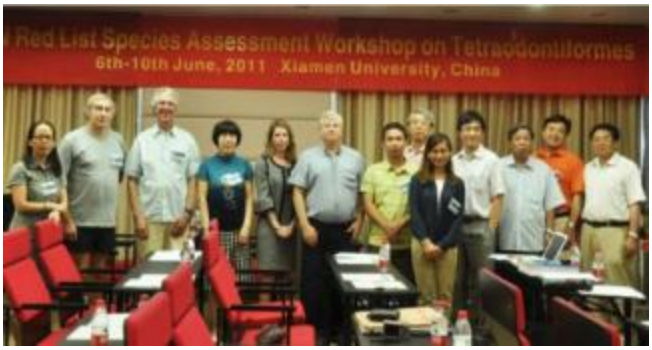
Given the economic and cultural importance of these species throughout their geographic ranges, more attention must be given to gathering information needed for the management of these species and addressing known threats, particularly in developing nations. This review provides the foundation from which such efforts may be launched.

Global assessments of marine species: Marine Biodiversity Unit (MBU) workshops in 2011, 2012 and beyond

Four regional and international workshops were conducted in 2012, and approximately 1,070 species were assessed. Preparations are underway for a number of Red List workshops already scheduled for 2013, to assess an estimated 1,600 marine species for inclusion on The IUCN (International Union for Conservation of Nature) Red List of Threatened Species™.

The MBU workshops’ results and successes were highlighted at the IUCN World Conservation Congress, held in September 2012 in Jeju, Korea. At this globally significant event, the MBU convened a symposium paneled by experts representing a number of Species Specialist Groups, and national and regional Red List Partners. This workshop facilitated discussion on existing conservation policies and identified conservation priorities that need to be in place in order to prevent further biodiversity loss.

The MBU has made significant progress since its inception in 2005, with 50 completed workshops and more than 11,500 species now assessed under the Categories and Criteria of The IUCN Red List. There are now more than 7,200 marine species published on The IUCN Red List, of which 5,779 are direct contributions from cumulative MBU workshops’ assessments. The Global Species Programme's MBU continued to add marine species assessments with the following workshops:



Global Tetraodontiformes June 2011, Xiamen, China

241 species were assessed with 2.5% listed in as threatened. Fishing is by far the biggest threat identified for these groups and this group includes the genus Takifugu, some of which are served as the Japanese delicacy 'fugu'.

Gulf of Mexico Endemic Fishes, August 2011, Corpus Christi, USA

In partnership with the Harte Research Institute, 67 species were assessed with 15% identified as threatened. Threats are by-catch, habitat loss, fishing, BP Deepwater Horizon oil spill, and pollution. Increased monitoring and additional surveys in the deeper part of the Gulf were recommended. The workshop occurred one year after the capping of the BP Deepwater Horizon oil spill.

Brazil Regional Endemic Fishes: Catfishes, Snooks and Mullets, August 2011, Brasilia, Brazil

47 species were assessed, and of these, nine (19%) are listed at an elevated risk of extinction and 14 (30%) are listed as Data Deficient. Threats to these species are intensive fishing and habitat modification.

Global Anguilliformes, August 2011, Washington D.C., USA
396 species were assessed with 1% listed as threatened and 37% as Data Deficient. Most species of eels inhabit deeper waters that are less likely to be disturbed by anthropogenic activities and habitat destruction. However, critical knowledge gaps need to be addressed, especially for some species that are known only from a few specimens.

Habitat-Forming Bivalves, October 2011, Virginia Beach, USA
125 species were assessed with approximately 53% listed at a lower risk of extinction. Threats include overfishing, disease, habitat destruction and pollution.

Global Cone Snails, October 2011, Chicago, USA
Over 500 species were assessed to complement the habitat-forming bivalve workshop

Fishes of the Eastern Central Atlantic, July 2012, Dakar, Senegal

Made possible by a matching grant from the Mava Foundation, this was the first workshop held in a continuing effort to conduct a comprehensive regional Red List of Marine Fishes for the Eastern Central Atlantic. Approximately 393 species were assessed in collaboration with more than 25 regional and international experts.

Caribbean Shorefishes, August 2012, Montego Bay, Jamaica

307 fish species were assessed, the majority of which were listed as Least Concern. However, several endemic species known only from a few locations among coral reefs were listed in threatened categories.

Caribbean Shorefishes, Port of Spain, Trinidad and Tobago, January 2013 – 227 species assessed

Seventeen regional and international experts assessed 227 Caribbean fishes, comprising 16 families. Preliminary results show that the majority of the species were listed as Least Concern, while seven species placed in threatened categories are Caribbean endemics with restricted distributional ranges that are negatively impacted by habitat degradation and invasive species.

Global Anguilliformes, San Francisco, California, January 2013 – 143 species assessed

In August of 2011, the first steps were taken towards completing the extinction risk assessment of the world's Anguilliformes. A follow-up workshop was held at the California Academy of Sciences in San Francisco in January of 2012 to complete assessments of the speciose Ophichthid eel family. The Ophichthid eels, also known as the Sand Eels or Worm Eels, are a little-known, cryptic family of 227 burrowing eels. Many are found in deep water, however there are several shallow water species, such as the beautifully patterned *Ophichthus bonaparti*, which mimic toxic seasnakes and have captured the interest of aquarists. None of the Ophichthid eels were found to be in threatened Categories, and the majority

(62%) was assessed as Least Concern. Ophichthids are notoriously difficult to study and observe, resulting in 38% of Ophichthid eels being assessed as Data Deficient. The relatively high proportion of Data Deficient species in the family Ophichthidae, and in the order Anguilliformes, emphasizes the need for further research.

Arabian Gulf Fishes, Doha, Qatar, Training Workshop: March 2013, Assessment Workshops: November 2013, February 2014 – Approximately 500 species

In collaboration with the Qatar Museum Authority and Qatar University, funding was recently secured from the Qatar National Research Fund to carry out regional Red List assessments for all 500 bony fishes of the Arabian Gulf. Although the region is rich in marine biodiversity, comprehensive information on species-specific threats and population status of bony fishes does not exist, making it a challenge to effectively identify conservation priorities to ensure that protection is afforded to the areas and species where it is most needed. The proposed research will directly address this information gap by providing comprehensive data on the population and conservation status of all 500 bony fishes present in the Gulf. Analyses of these data will allow for the quantification of previously unknown threatened species richness and patterns of threat in the region, and will form the foundation for improved management practices and policy to more effectively safeguard Qatar's marine resources.

Eastern Central Atlantic Fishes, Accra, Ghana, May 2013 – Approximately 500 species

The workshop slated for Accra, Ghana in May 2013, is the second and final workshop in a series of Regional Red List Assessment workshops for marine fishes of the Eastern Central Atlantic supported by a grant from the MAVA Foundation. This workshop will be conducted in partnership with several regional organizations, including the IUCN West Africa Regional Marine and Coastal Office. The improved knowledge of the conservation status of marine fishes in the Eastern Central Atlantic through the completion of Red List Assessments will provide conservation managers the tools to better counteract the detrimental effects of region-specific threats such as: overexploitation, coastal habitat modification and destruction and pollution in this unique and important marine biogeographical region.

A school of large groupers Photo: Octavio Aburto/iLCP

European Shorefishes, Two Assessment Workshops, September 2013 and March 2014 – Approximately 650 species

The project will be coordinated by IUCN Regional Office for Europe, based in Brussels (Belgium), with integral support from the Global Species Programme's Marine Biodiversity Unit. The MBU will complete extinction risk assessments for approximately 650 European marine fishes, including those naturally reproducing in the Mediterranean Sea, the Black Sea, the Baltic Sea, the North Sea and/or in the European part of the Atlantic Sea. To accomplish this, regional and international scientific experts will participate in two assessment workshops held in the region in 2013-2014. This new assessment will supplement the existing European Red Lists for birds, mammals, amphibians, reptiles, butterflies, dragonflies, saproxylic beetles, freshwater fishes, selected molluscs and vascular plants, providing a detailed and comprehensive picture of the status of biodiversity in Europe.

Shorefishes of the Gulf of Mexico, Corpus Christi, Texas, USA, Red List Assessment Workshop, Fall 2013, Marine Observation Protocol Workshop, 2014 – Approximately 540 species

The identification and implementation of conservation priorities for marine species in the Gulf of Mexico is largely being conducted in the absence of comprehensive species-specific information on conservation status. To address this gap, IUCN-US, in collaboration with the MBU, the IUCN Species Survival Commission and the Harte Research Institute for Gulf of Mexico Studies, Texas A&M University at Corpus Christi, proposes to provide comprehensive regional-level Red List Assessments for all Gulf of Mexico bony- fishes, sharks and rays, marine mammals, sea turtles, corals, seagrasses, mangroves, seabirds and selected invertebrate groups such as reef-building oysters, lobsters, cephalopods, and sea cucumbers. The resulting standardized, comprehensive dataset will include species-specific information on taxonomy, population, habitat, life history, use and trade, potential and current threats, existing conservation measures, and range maps of all marine species in the Gulf of Mexico. This data will help develop a spatial modeling capacity to incorporate into Harte's existing BioGoMx database, improving knowledge of threatened species and allowing for more effective identification of site and species-specific marine conservation priorities, risk assessment, disaster preparedness, and recovery of natural resources in the region.

IUCN SSC marine Specialist Groups and Taskforce updates

IUCN WCPA SSC Joint Taskforce on Biodiversity and Protected Areas

"Understanding factors behind marine protected area benefits to biodiversity.

The WCPA SSC Joint Taskforce on Biodiversity and Protected Areas is working in collaboration with an interdisciplinary team of experts convened by SESYNC (the National Socio-Environmental Synthesis Center) to examine factors affecting the success of marine protected areas (MPAs) in coastal communities. This project aligns with Objective 1 of the Task Force addressing the important question of 'what are the factors that are responsible for protected area success or failure? The Task Force will contribute data on biological and social outcomes from coastal marine protected areas to future analyses, which aim to document and identify the benefits of MPAs at local, regional and national scales to inform marine policy and on the ground management actions. To supplement existing data, the Task Force is also engaging in active data collection, collating information on abundance and biomass of vertebrate and invertebrate populations from within coastal marine protected areas. To find out more about this project or how you can contribute data please contact Helen Fox (Helen.Fox@WWFUS.ORG) and (Stephen Woodley (stephen.woodley@iucn.org)."

"Supporting the development of a shadow list for Ecologically and Biologically Significant Areas (EBSAs).

Objective 2 of the WCPA SSC Joint Taskforce on Biodiversity and Protected Areas is to lead a wide consultation process to develop a globally agreed methodology to identify sites of global significance for biodiversity, applicable in all regions to terrestrial, freshwater and marine realms. These sites are called Key Biodiversity Areas (KBAs). Following the recommendations of a framing workshop held in June 2012 in Cambridge, a marine working group has been created in collaboration with the Global Ocean Biodiversity Initiative (GOBI) to strengthen the synergies between the identification of EBSAs and the

KBA process, and to ensure clear communication and collaborations. In particular, Key Biodiversity Areas could provide a shadow list for the Ecologically and Biologically Significant Areas (EBSAs) adopted by the Convention on Biological Diversity. A session to discuss criteria to identify sites of significance for marine species (in particular top predators) and their relationships to KBAs and EBSAs will be held during IMPAC3, in October 2013."

IUCN SSC Invasive Species Specialist Group (ISSG)

Styela clava **(Photo: Arjan Gittenberger from the Dutch Ascidians Homepage)**

Alien species in the marine biome can be transported by various means: in ship ballast water, as hull-fouling organisms, in consignments of bait, in consignments of live food, through the aquarium trade and even as pathogens carried by the introduced organisms. The Invasive Species Specialist Group – ISSG features many of these marine alien and invasive species in the Global Invasive Species Database (GISD) disseminating information on the ecology, distribution, impacts and management of these species. The ISSG is currently working on these initiatives related to marine alien and invasive species:

- The development of the upcoming Marine Alien Invasive Species Strategy for the MEDPAN Network.
- Working with the Flanders Marine Institute (VLIZ) compiling an annotated global dataset of marine alien and invasive species to be used to flag species on the World Register of Marine Species (WoRMS) as 'introduced' and 'invasive'.
- Leading the development of an '*Invasive Alien Species Pathway Management Toolbox'* as part of the Global Invasive Alien Species Information Partnership initiative of the CBD. Pathways of introduction and spread of alien species in the marine biome is an important component of this toolbox.

Related Links

Invasive Species Specialist Group (ISSG) < http://www.issg.org/>

Global Invasive Species Database (GISD) < http://www.issg.org/database/welcome/>

Flanders Marine Institute (VLIZ) < http://www.vliz.be/en/intro>

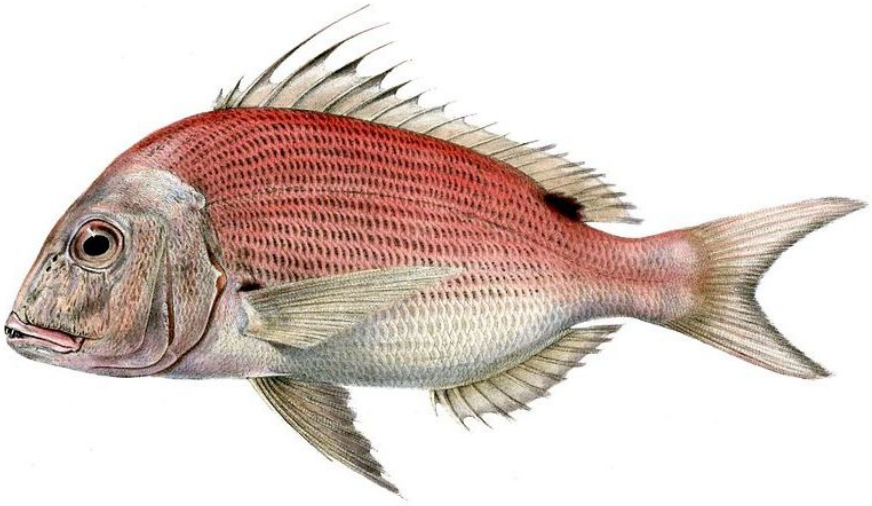
World Register of Marine Species (WoRMS) < http://www.marinespecies.org/>

Global Invasive Alien Species Information Partnership (GIASIPartnership) <http://giasipartnership.myspecies.info/node/18>

IUCN SSC Snapper, Seabream, Grunt Specialist Group (SSG SG)

The new SSG SG is focusing on Red List assessments of >500 species; diverse conservation needs; and continued building of our regional workgroups. Initiatives include:

- Initial Red List assessments have been conducted for all snappers and grunts of the Mediterranean, East and West Atlantic (Lutjanidae and Haemulidae, >80 species), seabreams worldwide (Sparidae, 136 species), and smaller sea grunt families (e.g., bonnetmouths).
- The Specialist Group is also undertaking a European Regional Red List Assessment of the seabreams and grunts.
- Specialist Group members are working on MPA and regulatory initiatives in some regions including the conservation of snapper spawning aggregations using outreach with local fishers.
- Internal reviews of all species accounts are underway at the IUCN Marine Biodiversity Unit (MBU) at Old Dominion University.
- The MBU is also coordinating pending regional assessments of European, Gulf of Mexico and Persian Gulf SSG SG species.



Bluespotted seabream, *Pagrus caeruleostictus*, a widely distributed East Atlantic species, one of >130 species of seabreams undergoing IUCN Red List assessment.

IUCN SSC Wildlife Health Specialist Group Responds to Marine Mortality Events

The IUCN SSC Wildlife Health Specialist Group (WHSG) strives to serve as a first response for wildlife health concerns globally through our network of professionals around the world. Last year, undiagnosed dolphin and seabird mortality events were observed off the coast of Northern Peru. Through the input and expertise of its members, the WHSG compiled and disseminated summary information and updates to partners at IUCN, WHO, and UNEP, and via the WHSG website (www.iucn-whsg.org). WHSG members have also provided updates on the recent Southern Right Whale mortality events off the coast of Argentina. The WHSG is a resource for the entire IUCN community and we hope to expand our collaboration with the marine conservation community through Specialist Groups liaisons, sharing of information and guidelines, and other opportunities to integrate or address health considerations.

WHSG
WILDLIFE HEALTH
Specialist Group

WHSG@EcoHealthAlliance.org / Twitter: @IUCNWildHealth / Facebook: IUCN SSC Wildlife Health Specialist Group

IUCN SSC marine Specialist Group feature stories

A billion-dollar business puts species and people at risk
IUCN SSC Grouper and Wrasse Specialist Group

At least 12% of groupers – globally-important food fish species that live on coral and rocky reefs – face extinction, putting the livelihoods of hundreds of thousands of people around the world at risk, finds a report published today by the International Union for Conservation of Nature Species Survival Commission's (IUCN SSC) Grouper and Wrasse Specialist Group.

The Nassau grouper (*Epinephelus striatus*) once formed numerous, immense spawning groups. However, heavy fishing has reduced these spawning groups and overall population numbers to critically low values. Photo: Enric Sala/SCRFA

The overall percentage of threatened groupers could be much higher as there is insufficient data for about 30% of the species, according to The IUCN Red List of Threatened Species™.

The study points to overfishing and the booming international luxury seafood trade as major threats to the survival of some grouper species, and to the livelihoods of those who depend on them for food and income. Its authors call for urgent conservation and management efforts to prevent further declines of these species.

"The declines in some grouper fisheries are alarming," says **Yvonne Sadovy, Co-Chair of the IUCN SSC Grouper and Wrasse Specialist Group and lead author of the study**. "Most of them are not managed at all and their natural ability to reproduce can't keep up with increasing demand. The rapidly growing international trade in groupers further reduces their populations."

More than 300,000 tons of groupers – or 90 million individuals – were caught globally in 2009, mostly in Asia, where they are particularly sought-after for the luxury restaurant trade. Groupers are the foundation of the US$ 750 million international live reef fish market centered in Hong Kong and growing in mainland China, where consumers are ready to pay over US$ 200 per kilogram of the species. They are also important food fish in developing countries like Indonesia and the Philippines, where pressure to export reef fish is growing, according to the study.

Live groupers on display for sale in a Hong Kong market. Photo: Matthew Craig

Groupers are among those species that are most vulnerable to fishing because of their longevity, late sexual maturation

and the fact that many form large mating groups known as 'spawning aggregations'. Despite their economic importance, few grouper fisheries are regularly monitored or managed, and many are in decline.

In the US Caribbean, the Nassau Grouper (*Epinephelus striatus*), which is commonly fished during its brief aggregation periods, has been essentially wiped out. Of the several dozen well-documented breeding grounds, only two continue to support large numbers of the species, and these have also been considerably reduced. In Southeast Asia and the Pacific, several species are considered to be threatened by the international trade, including the Square-tailed Coral Grouper (*Plectropomus areolatus*), also often taken from its spawning aggregations.

"Overfishing is like mismanaging a bank account," says **Matthew Craig, Co-Chair of the IUCN SSC Grouper and Wrasse Specialist Group and one of the authors of the report**. "The current fish population is our principle balance, hopefully earning interest in the form of new fish born. If those initial assets are continually withdrawn faster than the interest accumulates, the principle, that is the fish out there now, will be quickly depleted. It's easy to see how rapidly we could lose all the money, or in this case, all of the fish."

Square-tailed Coral Grouper (*Plectropomus areolatus*) Photo: Jack Randall

Improved management by source countries with priority given to local food security considerations, as well as better monitoring and control of international trade are urgently needed to reduce threats to these species, according to the authors.

The study, *Fishing groupers towards extinction: a global assessment of threats and extinction risks in a billion dollar fishery*, was published in the journal *Fish and Fisheries*. It is based on data accumulated by experts over a period of 20 years.

Species Spotlight: Horseshoe Crabs

By Mark L. Botton, Paul K.S. Shin, and Kevin Laurie (Co-Chairs and Programme Officer, respectively, of the Horseshoe Crab Specialist Group)

A cluster of mating American horseshoe crabs (Photo: Mark Botton)

The world's horseshoe crabs are distributed in Southeast Asia (three species) and the East coasts of the US and Mexico (one species). These animals are economically valuable for their blood, which is used by the pharmaceutical industry to test for bacterial contamination, and they are also used as food in Southeast Asia, and as bait in the US conch and eel fisheries. The Horseshoe Crab Specialist Group was established in 2012, in response to widespread reports about declining horseshoe crab populations throughout Asia, and concerns about the lack of knowledge of their status, all three Asian species currently being listed as "data deficient" in the IUCN Red List of Threatened Species.

Since the founding of the Specialist Group in 2012, a new and unexpected issue has arisen that threatens horseshoe crab populations in different ways on both sides of the world. The allowable harvest of American horseshoe crabs appears to be insufficient to meet the US bait industry's needs, and to fill that gap, some bait dealers have started to import horseshoe crabs from Asia. Although the imported crabs are cut into pieces before placing them into baited traps, Asian horseshoe crabs harbour encrusting invertebrates that might become harmful invasive species. In addition, imported parasites and diseases have the potential to infect the American horseshoe crab population, and one Asian species (*Carcinoscorpius rotundicauda*) is known to accumulate Tetrodotoxin (TTX), a dangerous neurotoxin. At the same time, a growing US market provides new economic incentives for fishermen in Southeast Asia to exploit their own horseshoe crab populations, at a time when they are overharvested in many fisheries.

American horseshoe crabs collected for use as bait for the conch fishery (Photo: Paul Shin)

The Specialist Group noted that the proper precautions for the potential introduction of non-native animals and diseases, as identified by the IUCN, were not being followed in this case. Following input from the Species Survival Commission Chair and Invasive Species Specialist Group, we sent letters to the authorities, including the Atlantic States Marine Fisheries Commission (ASMFC), US Fish and Wildlife Service and the National Invasive Species Council, informing them of the potential ecological and health risks associated with the importation of Asian horseshoe crabs. Early in 2013, the ASMFC passed a resolution banning the import and use of Asian horseshoe crabs in state waters along the Atlantic coast. The Specialist Group continues to monitor this situation closely and to provide scientific expertise for the proper management and conservation of horseshoe crabs.

INTERNATIONAL WHALING COMMISSION

Dr Randall Reeves, Chair of the IUCN Cetacean Specialist Group

With the 64th Annual Meeting of the International Whaling Commission (IWC) having taken place from the 11 June to the 6 July 2012, Dr Randall Reeves provides an overview of the priorities and outcomes of the subcommittees of which he is a member.

Scientific Committee Subcommittee on Small Cetaceans:

- The status of ziphiids (beaked whales) in the North Pacific and northern Indian Ocean in particular Baird's Beaked Whale, which continues to be subject to commercial whaling in Japan.
- The use of passive acoustics to determine the distribution and relative abundance of beaked whales to the species level.
- The discovery of a new beaked whale based on observations at Palmyra Atoll in the mid-Pacific;
- Evidence for unexplained declines in abundance of Cuvier's Beaked Whales and Mesoplodon whales ("mesoplodonts") in the waters off California, Oregon and Washington;
- Recognition of the escalating problem of poorly documented hunting of small cetaceans for food, bait or cash, particularly in regions with large, growing and impoverished human populations faced with resource shortages on land and depleted fish stocks in coastal waters. This issue will be the subject of a workshop immediately prior to the 2013 meeting of the Scientific Committee.

Information box - The International Whaling Commission

Set up under the International Convention for the Regulation of Whaling in 1946, whose purpose is to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry. The Commission keeps under review and revises as necessary the measures laid down in the Schedule to the Convention which govern the conduct of whaling throughout the world. The Commission currently has 89 member nations.

It has three main committees: Scientific, Technical, and Finance and Administration. The establishment of the Scientific Committee come from an emphasis within the Convention for scientific advice stating that amendments to the Schedule 'shall be based on scientific findings'. It is further divided into sub-groups (sub-committees, working groups or standing eoting working group) sthat make recommendations to the Commission.

Further information on the Commission and function of the Scientific Committee can be found at http://iwcoffice.org/iwcmain and http://iwcoffice.org/scientific-committee-handbook respectively.

Scientific Committee Subcommittee on Bowhead, Right and Gray Whales:

- Movement of satellite tagged bowheads from Alaskan waters eastward and from West Greenland waters westward such that they were in close proximity to each other in the central Canadian High Arctic
- Acoustic evidence that bowheads are present, possibly in large numbers, in Fram Strait between Svalbard and Greenland through the winter months.
- Satellite tagging, photographic and genetic data showing that a significant proportion of the Gray Whales that feed off Sakhalin Island and Kamchatka in the summer cross the ocean to British Columbia and spend the winter in Mexico, travelling along the US coastline en route back and forth. Recent Sightings in East Asia indicate that there is reason to hope that, with better protection of gray whales in Russia, Japan, Korea and China, their traditional migration along East Asia can be re-established.
- Large numbers of Southern Right Whale calf deaths have occurred almost annually in Argentina (Peninsula Valdes) over the last decade, with the cause still uncertain.
- The Critically Endangered population of right whales in the southeastern Pacific (Chile and Peru) remains Critically Endangered although, recently, four sightings were made in Chile, near Isla de Chiloe, including an observation of reproductive behaviour, a resighting of a previously identified individual, and a sighting of mother-calf pair.

Working Group on Environmental Concerns:

- Pollution, noise and climate change remain key concerns although
- 'New' topics considered in detail were the potential impacts on cetaceans from marine renewable energy projects and the implications of marine debris, specifically both ingestion and entanglement.

Social Media and Citizen Science for Seahorse Conservation

Seahorse, Pipefish and Stickleback Red List Authority

The two orders Syngnathiformes and Gasterosteiformes comprise approximately 275 species in ten families ranging from temperate fresh water sticklebacks and pipefish to tropical marine seahorses and trumpetfish with only a third of these species have been assessed against IUCN Red List criteria.

Even though most of the currently recognised seahorse species have been assessed against IUCN Red List criteria, the vast majority are listed as Data Deficient because we lack of basic information on their

distribution, habitat, and abundance to assess their extinction risk. The Red List Authority is exploring ways to fill these data gaps, reduce the number of Data Deficient seahorses, and ultimately improve conservation prospects for these animals of ecological, biological, economic, and medical importance.

For example, on the heels of the symposia Husbandry, Management and Conservation of Syngnathids (http://www.sheddaquarium.org/3625.html) and syngnathid biology (http://syngbio.org/), RLA members set up The Syngnathid Forum, a Facebook Group with the aim of providing a platform for the small yet dispersed syngnathid research community to continue to keep in touch, and to which RLA members are active contributors.

Hippocampus histrix **(Thorny seahorse) Photo: Roland Wantens/GuyLian Seahorses of the World 2008**

RLA members have also assisted in developing a web and smartphone-enabled seahorse database, iSeahorse for Project Seahorse. This database will harness the existing interest of citizen scientists — syngnathid researchers, university classes, aquarium staff, amateur and professional divers, and other people likely to encounter seahorses in the wild — to improve our knowledge of these animals. iSeahorse will acquire data on seahorses around the world, to help monitor these important flagship species over time and create dynamic distribution maps of seahorse populations. The ultimate aim of iSeahorse is to help better assess the extinction risk of seahorses and move them out of the Data Deficient category, which is why the RLA has been so integrally involved. If you are interested in keeping updated as iSeahorse progresses, or helping us through the early stages of this exciting process, please send a message to iseahorse@projectseahorse.org.

Although much of the RLA's efforts to date have focused on seahorses, we are now gearing up to complete IUCN Red List assessments for the other taxa. To date, very few of the roughly 250 non-seahorse species (mostly pipefish) in the family Syngnathidae have been assessed, and many existing assessments are outdated. Other groups that also need expert attention are the Gasterosteidae (sticklebacks) and the Centriscidae (snipefishes and shrimpfishes). Please get in touch if you are willing and able to help us increase representation of these taxa on The IUCN Red List, and in so doing identify species in need of research and conservation action (info@projectseahorse.org).

TOWARDS A GLOBAL ASSESSMENT of the World's Cone SNAILS

by Howard Peters, University of York, UK. (hp510@york.ac.uk) and Mary Seddon, Chair of the IUCN Mollusc Specialist Group

Conus, one of the largest genus of marine invertebrates, is of special significance to biodiversity. Occurring primarily in tropical coastal waters, these snails are predatory and capture their meals of fish, molluscs or worms using complex neurotoxins delivered through detached 'harpoons' evolved from their radulae. The toxins, which may number in excess of 50,000 across the genus, are of considerable interest to biomedical science with drugs synthesized from a small number already on the market for the treatment of intractable pain and with many other applications in research. However, to date, less than 2% of *Conus* toxins have been characterized. The threats faced by cone snails from fishing, pollution and

habitat loss are considerable and varied, and with a carnivorous diet, these gastropod molluscs are at a trophic level where habitat degradation carries special significance in its potential for reducing prey abundance and disrupting their food chain.

Over 630 species of cone snails were assessed at the Biodiversity Synthesis Center at the Field Museum Chicago and the publication of all 632 species is expected within the next two months. "This assessment is a milestone for the assessment of molluscs, with the first comprehensive assessment of a group of exploited marine species with an innovative workshop which brought together shell-dealers, scientists and researchers in a unique partnership to review the status of Cone snails, ably lead by Howard Peters and Callum Robert (University of York).", says **Mary Seddon, Chair of the IUCN Mollusc Specialist Group.** This unusual approach for an IUCN Red List assessment created a dynamic environment where the 'in-water' knowledge of the traders dovetailed with the scientific expertise of the academics to produce an exceptionally insightful narrative of the distribution, trade and threats facing each species. Assessments were then divided into biogeographical regions to which working groups were assigned.

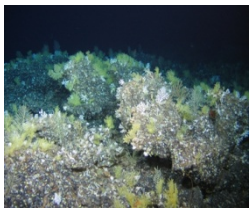
Preliminary analysis shows that with over 30% assessed as threatened, this geographical group comprises nearly two-thirds of the global species at risk owing to a high percentage of endemism, with many species living within highly restricted ranges even occurring just in a single bay or seamount. Those from the Eastern Atlantic are subject to a number of pressures including major conurbations with industrial and domestic pollution such as port construction in Dakar, or projected tourism projects especially in Cape Verde, where many species live in shallow waters alongside beaches suitable for this rapidly expanding industry exposing them to both habitat disturbance and casual shell gathering. Further analyses of the findings will be published later in the year.

Marine news from around IUCN

The Global Marine and Polar Programme publishes an annual newsletter called *Marine News*; to read previous issues or subscribe, visit: http://www.iucn.org/about/work/programmes/marine/gmp_newsletter/

20 May 2013 | News story: The Arctic Biodiversity Assessment **The Arctic is home to over 21,000 species, including many globally significant populations of unique and highly cold-adapted mammals, birds, fish, invertebrates, plants, fungi and microorganisms, some found nowhere else on Earth. In addition to its intrinsic worth, Arctic biodiversity provides innumerable services and values to people. More than a tenth of the world's fish catches by weight come from Arctic and sub-Arctic seas. The Arctic is the breeding ground for millions of migratory birds that fly to every continent, connecting the region with the rest of the world and contributing to global biodiversity.**

17 May 2013 | News story: Towards the "Blue Society" **Since the start of the industrial revolution, human activities have significantly altered the very balance of our planet and the lives we all live. These activities have heavily affected marine ecosystems and the way we use our seas and oceans. IUCN has joined forced with a group of organizations in the Sea For Society project.**



07 May 2013 | News Story: IUCN experts part of new online course on marine biology in the Deep Ocean **TED talks by aquatic explorers including IUCN patron Sylvia Earle, who share what they've seen in the Earth's last frontier — the deep ocean, are now available as part of an online course.**

02 May 2013 | News story: Improved Management of the Bering Strait **The International Union for Conservation of Nature (IUCN), the Natural Resources Defense Council (NRDC), and the University of Alaska Fairbanks (UAF) have undertaken a cooperative project to identify measures that could be adopted to protect important areas of the Bering Strait region, including ecologically and biologically sensitive areas (EBSAs) and to explore ways in which such measures might be implemented.**

02 May 2013 | News story: EU countries must do more to protect biodiversity **European Union countries should step up their conservation efforts and fully implement the *EU Biodiversity Strategy to 2020* to prevent species from going extinct, according to a recent analysis of the European Red List coordinated by IUCN.**

26 April 2013 | News story: Where have the sea turtles gone? **"Sea turtles don't come to nest on our beach anymore!" said Mr. Minh, a member of Sea Turtle Nesting Beach Protection, a volunteer network in Quang Tri Province. Despite the participation of nearly 3,500 local residents and school children in beach protection, a recent survey found that, since 2007, no marine turtle nests have been recorded in Quang Tri, Quang Nam, and Quang Ngai Provinces and the very few nests that remain in Binh Dinh Province are on off-shore islands.**

28 Feb 2013 | News story :Mangroves for the Future Programme trains Local Organisations for the development works along the Balochistan and Sindh coasts: **A two-day workshop organised by the Mangroves for the Future Programme on Project Cycle Management and proposal writing concluded here in Karachi today**

28 Jan 2013 | News story :Mangrove policies under review for five island countries: **IUCN Oceania is reviewing existing policies and legislations relevant to the protection and management of mangroves in Fiji, Samoa, Solomon Islands, Vanuatu and Tonga as part of its efforts to help improve local mangrove management in these countries.**

28 Sept 2012 | News story: Protection measures for the Bering Strait identified: **IUCN, the Natural Resources Defense Council (NRDC) and the University of Alaska-Fairbanks (UAF) are undertaking a cooperative project to identify measures that could be adopted to protect Ecologically and Biologically Sensitive Areas (EBSAs) of the Bering Strait region, and to explore ways in which such measures might be implemented.**

18 Sept 2012 | News story : WGWAP shares lessons learnt at IUCN World Conservation Congress: **During IUCN's World Conservation Congress held in Jeju, South Korea, conservation of the critically endangered population of western gray whales was on the agenda. The IUCN Marine and Polar Programme (GMPP), Sakhalin Energy Investment Company (SEIC) and IUCN's Western Gray Whale Advisory Panel (WGWAP) convened a workshop on September 9th, 2012 entitled "Business and IUCN Join Forces: Lessons learned from Western Gray Whale Conservation".**

09 Sept 2012 | News story: Investment in carbon capture— lifeline to poor: **Tens of thousands of people around the world are getting greater access to food because of a new investment fund. IUCN (International Union for Conservation of Nature) supports the Livelihoods Fund, which allows companies to offset their carbon footprint by investing in ecosystem restoration programmes that deliver lasting community benefits, including increased food security.**

08 Sept 2012 | News story :When is a Marine Protected Area really a Marine Protected Area: **As concern increases on the state of natural resources and the degradation of the world's oceans, it is critical to be clear on how countries are progressing with conservation actions for the environment. New guidance issued today on Marine Protected Areas (MPAs) by IUCN (International Union for Conservation of Nature) will significantly improve ocean protection efforts.**

07 Sept 2012 | News story: Crunch time for Caribbean corals: **Time is running out for corals on Caribbean reefs. Urgent measures must be taken to limit pollution and regulate aggressive fishing practices that threaten the existence of Caribbean coral reef ecosystems, according to a new IUCN (International Union for Conservation of Nature) report.**

03 Aug 2012 | News story: The Blue Carbon Initiative reaches South America: **Blue carbon ecosystems, particularly mangroves, tidal marshes and seagrasses are significant for their ability to help mitigate global climate change. Unfortunately these ecosystems are being destroyed at alarming rates, and thus releasing carbon into the atmosphere.**

08 June 2012 | News story: Launch of Marine World Heritage App will bring marine crown jewels a lot closer: **In celebration of World Oceans Day, the IUCN World Commission on Protected Areas and the UNESCO World Heritage Centre are launching a new iPhone application. This year's Oceans Day theme "Youth: the Next Wave for Change" inspired the development of the mobile application, which will act as a window on marine world heritage sites around the world.**

SOS – Save Our Species in the Marine Environment

Dugong Photo: John Smallwood Dreamdivers Ltd

With sharks and rays listed as one of 3 strategic directions in its 3rd call for proposals, SOS - Save Our Species (SOS) is extending its reach deeper into the marine realm. All the relevant information about this 3rd call for proposals is available on the SOS website here (http://www.sospecies.org/sos_projects/apply_for_a_grant/).

Established in 2010, SOS is already funding more than 50 projects worldwide including five working directly with marine mammals including cetaceans, manatees and dugong as well as one working with penguins. SOS funds two types of projects: Threatened Species Grants (TSG) which typically run for about two years. Secondly there are Rapid Action Grants (RAG) which are designed to meet more urgent needs as was the case for SANCCOB who used a RAG to fund work rescuing hundreds of African penguins from an oil slick caused by the Seli I in Table Bay, Cape Town, South Africa that inundated their nesting and feeding grounds.

A summary of marine related projects currently funded by SOS include:

Marine Species

1. **Dugong Emergency Protection Project:** Working with EWT in the Bazaruto Archipelago, Mozambique to protect dugong from bycatch and hunting. http://www.sospecies.org/sos_projects/mammals/dugong/
2. **Saving African Penguins from an Oil Spill:** SOS' 3rd Rapid Action Grant funded SANCCOB's efforts to rescue, clean, rehabilitate and release several hundred seabirds including African Penguins Link: http://www.sospecies.org/sos_projects/birds/southafricanpenguinsii/
3. **Atlantic Humpback Dolphins in Gabon and Congo:** Reducing incidental and deliberate capture by coastal fishermen through community outreach, patrolling and the development of a fisheries exclusion zone. *Project up on SOS website in June*
4. **Vaquita Mexico:** Saving the vaquita from extinction through effective and permanent gear swaps, community outreach and new technology training *Project up on SOS website in June*
5. **Coastal cetaceans Bangladesh:** Reducing coastal cetacean mortality from gillnet entanglement by establishing a safety network that requires small-scale fishermen to monitor their nets and release cetaceans that are found still alive after becoming entangled, in exchange for training and the provision of basic navigation equipment to increment fishermen's at-sea safety during increasingly frequent extreme storms *Project up on SOS website in June*
6. **Preventing Bycatch of Irrawaddy Dolphins in the Mekong River:** Working to provide alternative livelihoods and alternative technologies to gill nets for fishermen in the Mekong http://www.sospecies.org/sos_projects/mammals/preventing_bycatch_of_irrawaddy_dolphins_in_the_mekong_river/

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Apply for a Grant: http://www.sospecies.org/sos_projects/apply_for_a_grant/

Donate to SOS: http://www.sospecies.org/donate/

Job Opportunities

Opportunity for Post-doctoral Research Associate - Marine Conservation Biology

The Department of Biological Sciences at Old Dominion University, a "Doctoral Research-Extensive" state university, has a Post-Doc position available which includes participation in a project to assess a large number of marine species for the International Union for Conservation of Nature Red List of Threatened Species through a collaborative initiative with the IUCN Species Program. Applicants must have a PhD in Biology, Zoology, Oceanography or a related field with a dissertation topic in marine conservation biology or marine ecology. Knowledge of modeling and spatial analyses in ecological settings, GIS experience, and proficiency in Spanish or French are desirable. Click here for more info on the ODU website.

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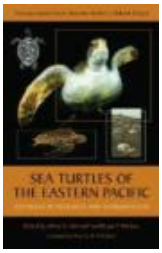
Publications



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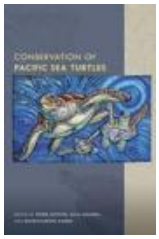

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