Conservation news

Participatory evaluations reveal positive impacts for small-scale fishing communities in Indonesia and Honduras

Small-scale fishing communities are often particularly vulnerable to economic and environmental shocks, as exemplified by the effects of the Covid-19 pandemic, extreme weather events as a result of climate change, and rising costs associated with the war in Ukraine. It is therefore essential to adopt a community-based approach to marine conservation so as to strengthen resilience. This approach is central to Fauna & Flora's marine programme, within which we support communities to strengthen their roles in the governance and management of the marine resources on which they depend, whilst seeking to improve and diversify livelihoods. On Simeulue Island in north-west Sumatra, Indonesia, Fauna & Flora has been working since 2011 to increase the legitimacy of the traditional fisheries governance system at community level, known as the *Panglima Laot*, to improve the effectiveness and equity of small-scale fisheries management (Wilson & Linkie, 2012, *Oryx*, 46, 495–500). A similar approach is taken in Honduras, where Fauna & Flora has collaborated with five Honduran NGO partners since 2015 to ensure collaborative management of the Atlántida Seascape, which comprises four marine protected areas and the waters connecting them, by supporting fishing communities to take increased responsibility for marine management (Steadman, 2021, *Oryx*, 55, 507–518). In summer 2022, Fauna & Flora project teams conducted participatory impact assessments on both Simeulue Island and in the Atlántida Seascape. These studies gathered data on the changes that communities receiving project support had experienced over the previous 3 and 2 years, respectively.

We held focus group discussions with a representative selection of communities or community groups. Participants were asked standardized questions to identify, rank and determine the well-being impacts of the main changes they had experienced, and to examine how Fauna & Flora project interventions and external factors contributed to these changes. Despite the disparate locations of the Acehnese and Honduran small-scale fishing communities, there were notable similarities in perceived changes. Both sets of respondents reported that their communities or community groups were better organized, and as a result better recognized, for example by the relevant authorities. This observed change resonates with research that highlights improved community organization as the most valued social change from community-based conservation projects (Ban et al., 2019, *Nature Sustainability*, 2, 524–532). Women participating across both projects also reported feeling more empowered and independent from their husbands. Additionally, as a direct result of project interventions, communities across both sites reported an improved capacity to handle and process fish products, increasing sale prices. These positive impacts were experienced in vulnerable communities facing several external stressors, thus highlighting the benefits of strengthening community governance and supporting improved and diversified livelihoods to increase resilience to threats. However, the participatory impact assessments also highlighted areas requiring further support, such as the need to improve market access and reduce the incidence of illegal and unsustainable fishing in Honduras. These findings will be presented to the respective communities and used to inform ongoing project activities.

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Dung beetle conservation now on the IUCN agenda

In 2022, following a year of development, a group of experts in dung beetle research led by Camila Leandro and Fernando-Vaz-de-Mello proposed the establishment of an IUCN Species Survival Commission Specialist Group focusing on dung beetles (families Geotrupidae and Scarabaeidae), insects that rely on animal droppings for food and reproduction. In natural ecosystems, dung beetle species are threatened by habitat modification, fragmentation and loss, and potential changes in the availability of dung as a result of the modification of mammal faunas. In agro-ecosystems, populations are threatened by overapplication of pesticides. In addition, climate change is a threat to the over 6,000 described species.

In August 2022, the Dung Beetle Specialist Group was officially declared by IUCN, and as co-chairs it gives us pleasure to share this news. The new Specialist Group will focus on raising awareness of the importance of dung beetles and their associated ecosystem functions (including nutrient recycling, bioturbation and seed dispersal), and creating enduring partnerships between researchers, entomologists, conservationists and agricultural scientists. We plan to begin by using social media to share our knowledge and interest in dung beetles, introduce the Group's members and hold members' workshops on topics such as citizen science and the science–policy interface, throughout 2023 and 2024.

Scarabaeus laticollis on a fresh cow dung pat in southern France. Photo: C. Leandro.

The IUCN Red List conservation status assessment for 400 South African species of dung beetle began in July 2022 and soon we will launch the assessment of 200 species from Australia and 300 species from South America. In due course, we hope to engage with the agricultural sector (farmers, ranchers and veterinarians) through communication outreach. In the long term, we hope to work on the identification of Key Biodiversity Areas and conservation planning for dung beetles.

If you would like to get involved in the work of this new Specialist Group or contribute your expertise to conservation assessments, please fill in the form at forms.gle/kNW6CMxQHPbMp57b6. The more diverse the network, the more relevant our actions will be for the conservation of dung beetles globally.

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Important Shark and Ray Areas: a new tool to optimize spatial planning for sharks

Spatial planning is a priority for biodiversity conservation, and area-based measures have become a key element for identification of sites that are particularly important for biodiversity. Initiatives have been developed for specific taxa, such as birds (Important Bird and Biodiversity Areas) and marine mammals (Important Marine Mammal Areas) and for biodiversity more generally (Key Biodiversity Areas and Ecological or Biologically Significant Marine Areas). These approaches are now well accepted and utilized in spatial and conservation planning.

Until recently, such an approach had yet to focus on sharks and their relatives, the rays and chimaeras (hereafter collectively referred to as sharks), one of the most threatened faunal lineages (37% of species are categorized as threatened with extinction on the IUCN Red List). Overexploitation, unregulated or poorly managed fisheries and trade and, to a lesser extent, habitat degradation and loss, are driving steep declines in many shark populations. Existing area-based conservation approaches have not been designed with this conservation challenge in mind and have not adequately responded to the risk profile of sharks globally.

To address this, the IUCN Species Survival Commission Shark Specialist Group undertook extensive engagement and consultation to develop the Important Shark and Ray Area framework. Modelled on Important Marine Mammal Areas, the development of criteria considered the diverse life histories and unique attributes of sharks. The criteria are applied to identify areas based on shark vulnerability (e.g. species assessed as threatened on the IUCN Red List), range restriction, life history (reproduction, feeding, resting, movement, undefined aggregations), and special attributes (distinctiveness, diversity; Hyde et al., 2022, *Frontiers in Marine Science*, 9, 968853). Resulting Important Shark and Ray Areas are discrete, three-dimensional portions of habitat that are important for one or more shark species and have the potential to be managed for conservation.

Funded by the Shark Conservation Fund, the Important Shark and Ray Area project has begun working through 13 global regions, covering all marine and inland waters where sharks occur. The project brings together regional experts to contribute knowledge and identify important areas. In the first workshop (in Bogotá, Colombia, in October 2022), 55 experts delineated important areas from the Gulf of California, Mexico, to southern Chile in the Eastern Pacific. This week-long process identified 76 candidate Important Shark and Ray Areas, now under review by an independent review panel. The candidates accepted will appear on the Important Shark and Ray Area e-Atlas, an open access tool for exploring areas important for sharks (sharkrayareas.org/e-atlas). The next workshop will be held in the Mediterranean and Black Sea region in early 2023.

The Important Shark and Ray Area process will give governments and policy makers access to scientifically defined areas that can help them advance actions to conserve sharks. This tool will help countries achieve the Convention on Biological Diversity Global Biodiversity Framework 30 × 30 target (30% of global land and sea conserved through protected areas and other effective area-based conservation measures by 2030). Complementary to other area-based measures, we anticipate that Important Shark and Ray Areas will be integrated into the recognition of global sites that hold high biodiversity. Overall, delineating Important