



Endangered Black Sea bottlenose dolphin *Tursiops truncatus ponticus* in an Important Marine Mammal Area in the war zone in the Black Sea. Photo: Elena Gladilina.

used in spatial planning in Malaysia, to create marine protected areas in Bangladesh and Viet Nam, by the United States Navy to avoid using low-frequency sonar in cetacean habitat, to establish International Maritime Organization Particularly Sensitive Sea Areas in the Mediterranean where fin and sperm whales are struck by ships, and by shipping companies transiting the Indian Ocean for route planning to reduce the risk of hitting whales. In total, the freely available IMMA package of shapefiles has been downloaded over 725 times from the IMMA website (marinemammalhabitat.org/imma-eatlas).

Yet, despite recent identification, some IMMAs are already threatened. In the Upper Gulf of California IMMA, the Critically Endangered vaquita *Phocoena sinus* has been reduced to c. 10 individuals despite numerous efforts to save the species from extinction. In six IMMAs created along the Ukrainian coast of the Black Sea around the habitat of threatened dolphin and porpoise subspecies, Black Sea harbour porpoises *Phocoena phocoena relicta* and Black Sea bottlenose *Tursiops truncatus ponticus* and common dolphins *Delphinus delphis ponticus* are dying and stranding in what has become a war zone. In the Bazaruto Archipelago to Inhambane Bay IMMA, off Mozambique, the Critically Endangered East African subpopulation of the dugong *Dugong dugon*, and the Endangered Indian Ocean humpback dolphin *Sousa plumbea* are threatened by seismic surveys for oil and gas development.

The Marine Mammal Protected Areas Task Force, joined by Whale and Dolphin Conservation (UK), is now initiating a programme to monitor and implement Important Marine Mammal Areas.

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Introducing the Seaweed Specialist Group of the IUCN Species Survival Commission

In June 2023, the IUCN Species Survival Commission created the Seaweed Specialist Group. This international group of scientists and practitioners will work to assess and improve the conservation status of seaweeds, build networks and partnerships to prioritize conservation actions and communicate the importance of seaweed species.

Seaweeds (macroalgae) are found in all oceans and seas, with > 10,000 known marine species that include the red (Rhodophyta, c. 6,200 species), brown (Ochrophyta, c. 1,800) and green (Chlorophyta, c. 1,800) taxa. However, climate change and other anthropogenic stressors threaten many seaweeds globally, including iconic habitat-forming species such as kelps, fucoids and rhodoliths. The Seaweed Specialist Group has a global ecosystem and conservation focus, and we use our combined knowledge to inform decision-making and science-based actions for seaweed conservation. The group is diverse in geographical distribution and technical expertise, with members from all continents, because addressing the global and local challenges that seaweeds face requires diverse perspectives and skills.

Given the number of seaweed species, the Seaweed Specialist Group will initially prioritize conservation assessment, planning and action for key taxa. For example, there is an urgent need for management and conservation initiatives for more than 120 species of Laminarian kelps. Kelps are the dominant habitat-forming species found



Giant kelp forest of *Macrocystis pyrifera* in Baja California, Mexico, August 2023. Photo: Eduardo Sorensen, Mission Blue/Mas Kelp.

along over 30% of the world's coastlines. They support thriving ecosystems and local livelihoods and provide various benefits to people, yet their conservation status needs to be better understood. Moreover, recent ocean warming and marine heatwaves combined with other anthropogenic stressors (e.g. exploitation, overgrazing and pollution) have resulted in the loss of > 90% of kelp forests in regions of Australia, the USA and Mexico, with significant implications for associated biodiversity and local economies. By 2025, the Seaweed Specialist Group aims to assess the conservation status of at least 120 Laminarian species.

The Seaweed Specialist Group invites researchers and practitioners, especially those in phycology, ecology, climate change and conservation, to reach out with inquiries, offers of collaboration, and contributions that support our conservation efforts.

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Workshop for the protection of Chinese giant salamanders

The Chinese giant salamander *Andrias davidianus* is the largest extant amphibian, is categorized as Critically Endangered as a result of overexploitation and habitat loss (Tapley et al., 2021, *Oryx*, 55, 373–381) and requires conservation attention. *Andrias davidianus* is actually a species complex, and has recently been divided into several species: *A. sligoi* (Turvey et al., 2019, *Ecology and Evolution*, 9, 10070–10084), *A. jiangxiensis* (Chai et al., 2022, *Zoological Research*,

43, 469–480) and *A. cheni* (Gong et al., 2023, *Chinese Journal of Zoology*, 58, 651–657). It is likely there will be further taxonomic splits. Although the current conservation needs of these species are partially understood (Chen et al., 2018, *Ecology and Evolution*, 8, 3098–3108), the conservation actions needed to prevent the extinction of the named and as yet unnamed species need to be clarified.

With this purpose in mind, the NGO Green Camel Bell, the Zoological Society of London and the Chengdu Institute of Biology, Chinese Academy of Sciences, held a workshop on the conservation of Chinese giant salamanders, in Lanzhou, China, in October 2023. The attendees, representing a diverse array of stakeholders, agreed on a series of key actions: research to resolve the taxonomic conundrums, field surveys to identify and protect remaining pure populations, investigations to identify how Chinese giant salamander farming could benefit conservation, refinement of the process for releasing individuals from farms, work to encourage legislative changes, research to improve our understanding of the species' behaviour and ecology, and adoption of better practices to protect against pathogen introduction and transmission.

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