SEAMOUNT CONSERVATION

What is the issue?
Seamounts are underwater mountains of volcanic origin that rise from the seafloor. They are regarded as hotspots of marine biodiversity and are home to many endemic species. Seamount biodiversity and ecosystems face a number of threats including deep sea bottom fishing and deep sea mining. Damage to seamounts and their overexploitation can have widespread consequences on ocean health, food security, medicine and other benefits that oceans provide to humans. Many aspects of seamounts are poorly understood: fewer than 300 out of 200,000 existing seamounts have been explored so far. There is an urgent need to ensure seamount conservation through measures such as marine protected areas. Threats to seamount ecosystems need to be taken into account when developing environmental impact assessments of activities that may affect them. A clear set of rules is also needed for sample sharing and use of genetic resources derived from areas beyond national jurisdiction.

Why is this important?
Seamounts play an important and only partially understood role in marine ecosystems, extending well beyond the seamounts themselves. Damage to seamounts and their overexploitation can have widespread consequences on ocean health, food security, medicine and other benefits that oceans provide to humans. Inversely, their conservation can help advance towards several Sustainable Development Goals (SDGs) including SDG2 – to end hunger and achieve food security, and SDG14 – to conserve and sustainably use the oceans.

Seamount biodiversity and ecosystems face a number of threats including deep sea bottom fishing and deep sea mining. Many seamount species grow and reproduce slowly and are therefore highly vulnerable to unsustainable fishing and mineral exploration, through potential overexploitation and habitat destruction. Seamount ecosystems have low ability to recover from such damage and no evidence of regrowth has been documented in these ecosystems. Other threats include pollution, invasive alien species, ocean warming, deoxygenation and ocean acidification.

Global seamount distribution © Yesson et al., 2011
marine communities and creates an imbalance between species, with commercially-important fishes unable to replenish their stocks.

The high level of biological endemism of seamount ecosystems and the fact that seamounts remain largely unexplored mean that they may contain new genetic resources that could be used to develop new medicines.

**What can be done?**

Threats to seamounts and their associated biodiversity need to be taken into account in the development of schemes aimed at conserving marine biodiversity in ABNJ.

**Improving global governance of ABNJ:** The UN Convention on the Law of the Sea (UNCLOS) sets out the obligations of States to protect, conserve and manage the ocean, including ABNJ. However, it does not create comprehensive means for ensuring conservation, leaving most activities largely unchecked. Negotiations are underway to create an Implementing Agreement to UNCLOS, which would help close the existing ABNJ governance gap.

**Improving management of fish stocks in ABNJ, including monitoring and control of fishing activities by all states:** This can involve long-term closures of vulnerable marine areas to fishing activities, ensuring fishing activities avoid contact with the seabed and precautionary catch limits to prevent overfishing, and a requirement for environmental assessments of activities that may adversely impact fish stocks and ecosystems. Coastal or flag states can also adopt measures to ensure deep sea fisheries adhere to international guidelines, and remove subsidies which encourage industrial fishing in ABNJ.

**Increasing engagement of international and regional organisations:** For example, the International Seabed Authority (ISA), responsible for mineral resources of the deep seabed in ABNJ, and the International Maritime Organization (IMO), responsible for shipping activities, can limit their activities in areas designated as vulnerable to damage.

Networks of marine protected areas can also limit or ban human activities in ecologically or biologically significant areas, preventing environmental degradation.

**An expedition exploring the Walters Shoal seamount** south of Madagascar (23 April to 18 May 2017) is a key stage in an IUCN-led project aimed at improving the conservation and sustainable use of seamount ecosystems in the South West Indian Ocean.

**Where can I get more information?**

Information on seamount conservation can be found here: [iucn.org/marine-and-polar/our-work/international-ocean-governance/conservation-seamounts-ecosystems](https://iucn.org/marine-and-polar/our-work/international-ocean-governance/conservation-seamounts-ecosystems)

Information on the expedition to the Walters Shoal seamount can be found here: [iucn.org/science4highseas](https://iucn.org/science4highseas)