



Institute of Zoology

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Unique seamount ecosystems destroyed by trawling

At a scientific meeting held last night (14th November 2006) the Zoological Society of London (ZSL) revealed startling new evidence that deep-sea trawling was destroying seamount ecosystems which are home to an astonishing diversity of species, many of which are new to science.

A scientific report on the severity of the situation was outlined by Dr Alex D Rogers, ZSL Senior Research Fellow, at a Scientific Meeting on Deep-Sea Biology. Significant areas that have a high likelihood of harbouring vulnerable marine ecosystems have been identified and will now be communicated to Governments, fisheries managers and the fishing industry in an effort to stop the destruction and devastation caused by deep-sea trawling in these areas.

Dr Rogers stated: "Our research actively demonstrates the vulnerability of deep-sea corals and their associated biodiversity to trawling across seamounts. Some of the corals destroyed are thousands of years old and will not be replaced. Fish hundreds of years old are also being decimated as a result of the trawling.

"Our results show that oceanic areas not covered by the Regional Fisheries Management Organisations (RFMOs) and other binding regional agreements are home to significant unique aquatic biodiversity. In the case of deep-sea trawling it is, therefore, essential that the burden of proof shifts to Governments and fisheries when deciding whether it is appropriate to exploit these irreplaceable ecosystems."

Speaking at ZSL's Scientific Meeting on Deep-Sea Biology, Dr Rogers brought together the key points illustrated in the UNEP report*. In particular, the report demonstrated that:

- Just over half (52%) of the world's seamounts are located beyond areas of national jurisdiction and the majority of these have summits shallower than 3,000m water depth.
- Stony corals are prominent on sampled seamounts and form a significant component of the species diversity on them, additionally creating and maintaining habitat for other organisms. Consequently, impact of trawling on these corals also gives an indication of the impact on all associated species.
- An "environmental niche factor analysis" (ENFA) was used to model the potential global distribution of deep-sea stony corals on seamounts. The most favourable

- areas for corals were found to be located in the North Atlantic Ocean, and in a band between 20°S and 60°S in the Southern Hemisphere.
- Deep-water trawl fisheries occur in areas beyond national jurisdiction for around 20 major fish species, including orange roughy, alfonsino, roundnose grenadier and Patagonian toothfish. The areas found to be suitable for fishing for these commercial species are, broadly speaking, the southern Indian Ocean, South Atlantic, North Atlantic and South Pacific Ocean.
 - Comparing the distributions of the commercially trawled fish, fishing effort and coral habitat on seamounts, reveals a broad band of the southern Atlantic, Pacific and Indian Oceans between 20°S and 60°S where likely ecosystem damage could be extremely significant. This suggests that further commercial exploration for alfonsino and orange roughy fisheries on large seamounts in the central-eastern Southern Indian Ocean, the southern portions of the Mid-Atlantic Ridge in the South Atlantic, and some regions of the southern-central Pacific Oceans are likely to impact negatively on diverse seamount ecosystems.

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A media briefing on the findings of the Seamounts, Deep-sea corals and Fisheries UNEP WCMC report will be held on Tuesday 14th November at 10.30am at the Zoological Society of London. The briefing will include short presentations from Dr Rogers (ZSL) and Matt Gianni (Deep Sea Conservation Coalition), with the opportunity for short interviews after the presentations. If you would like to attend the briefings, please contact Alice Henchley (ZSL Press Officer).

For further information on ZSL's Scientific Meeting and Dr Roger's work, or to arrange an interview with Dr Rogers please contact **Alice Henchley**, alice.henchley@zsl.org, **(+44) 20 74496361**.

For further information on the DSCC and a UN moratorium on high seas bottom trawling please contact **Mirella von Lindenfels**, Mirella@communicationsinc.co.uk, **+ 44 7717 844 352**.

Notes to editors:

- Seamounts are elevations of the seabed, effectively underwater mountains, where the summit does not reach the surface. They occur in chains or clusters along mid-oceanic ridges, near islands arcs or as single elevations in the seafloor. Seamounts often form biological hotspots, as a result of the presence of hard substrata and strong currents, which lead to numerous species of permanently-attached, filter-feeding animals residing on them. Of these species, corals are some of the most common, and many other species are dependent on their presence to create an appropriate niche environment.
- **Seamounts, Deep-sea corals and Fisheries: vulnerability of deep-sea corals to fishing on seamounts beyond areas of national jurisdiction – UNEP WCMC Report.*
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Supporting Organisations: UNEP World Conservation Monitoring Centre (UNEP WCMC); Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organisation (UNESCO); Department of Nature, Ministry of Agriculture, Nature and Food Quality, Netherlands; Census of Marine Life; National Institute of Water and Atmospheric Research (NIWA).

- The Institute of Zoology (IoZ) is the research division of the Zoological Society of London (ZSL). It is a government-funded research institute specialising in scientific issues relevant to the conservation of animal species and their habitats.
- Founded in 1826, the **Zoological Society of London (ZSL)** is an international scientific, conservation and educational charity: our key role is the conservation of animals and their habitats. ZSL owns and operates London Zoo and Whipsnade Wild Animal Park, carries out scientific research at the Institute of Zoology and is actively involved in field conservation in over 40 countries worldwide. www.zsl.org