

Title: Mid-ocean ridges and seamounts: oceanography, ecology and exploitation (C)

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Mid-ocean ridges and seamounts are the shallows of the deep ocean and constitute vast habitats for marine life. Though poorly explored, ridges and seamounts have fisheries resources that have been exploited by international fleets for several decades, often in controversial and virtually unregulated operations. Fisheries usually develop before scientific knowledge has been acquired to provide satisfactory advice on management of habitats and resources. This has led to over-fishing, habitat destruction, and calls for global high-seas trawl bans and introduction of area closures or reserves.

Differing opinions prevail on the exploitation of deepwater resources. While calls for enhanced conservation measures are strongest, claims are also put forward that ridges and seamounts have substantial unexploited resources. Defining sustainability criteria based on current knowledge of the resources and impacts of past and present exploitation is exceedingly difficult. ICES recognises that the knowledge base for providing advice to governments and commissions managing activities in the North Atlantic is too weak, and the same is the case in a global context within the UN.

But several recent and ongoing projects from the ICES area and other waters have provided new information. The proposed theme session will stimulate presentation and discussion of recent findings and analyses as well as historical accounts, and would focus on the following topics:

- Influence of oceanic topographical structures on deep and shallow hydrography and circulation;
- Photosynthetic primary production affected by ridges and seamounts;
- Are seamounts and mid-oceanic ridges biodiversity hotspots? How do communities associated with seamounts and mid-oceanic ridges differ from surrounding areas and continental slopes?
- Do species associated with seamounts and ridges show special life history adaptations?
- Food-webs on ridges. Benthic-pelagic coupling and spatial variation;
- Exploitation of ridges and seamounts by fisheries. History, scale and management measures;
- How sensitive are seamount and ridge habitats and biota to exploitation? Can sustainable fisheries be developed?
- New resources on ridges and seamounts.

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