

Which benefits can marine mammals gain from an Ecosystem Approach to Management?

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Oral presentation preferred.

Marine mammals have important substantial (important nutritional and/or spiritual) value for many Arctic communities. The North Atlantic Marine Mammal Commission, NAMMCO, is committed to advise its parties, Faroes, Greenland, Iceland and Norway, on the sustainable and responsible use of marine mammal resources. NAMMCO therefore advises on the management of whaling and sealing activities, thereby sustainable takes. Increasing stocks of narwhal, beluga and walrus off Greenland are clear result examples of sound and science-based management, following advice from NAMMCO – in turns allowing the precautionous increase of removal quotas. However, the continuity of marine mammal stocks as provisioning ecosystem services is not solely dependent on the sound management of whaling and sealing activities. The impacts of other human activities in the Arctic, but also elsewhere, must be integrated in the management advice process. Also in the framework of a changing climate, management advice cannot be given on the basis of a snapshot status, but needs to integrate a predictive dimension. It must attempt to foresee how human activities and their impacts may develop over time and affect both directly and indirectly marine mammal populations. The presentation will illustrate how NAMMCO advice was first focussed on the direct impact of sealing and whaling activities – as direct removals versus stock size and trends, then moved towards the integration of other human impacts such as fisheries by-catch and human disturbances (incl. marine pollution, shipping, anthropogenic noise, overfishing...), and that of climate change corollaries, such as changes in sea ice cover and increased human activities in the Arctic, particularly in pristine areas of high importance for marine mammals. The potential relative effects of removals versus other stressors will be explored, as well as the possible effect of cumulative impacts, with examples both from the NAMMCO area and elsewhere. Applying an Ecosystem Service assessment and an Ecosystem Approach to the management of marine mammals help providing clarity of both the role of marine mammals in the ecosystem and the impact of changes in the ecosystem on marine mammals, and therefore identifying sustainability indicators and enhance monitoring regimes. ES and EBM approaches may also help shaping the future research agenda for informing pro-active and strategic management and thus support the resilience of arctic communities.

