



Division for Ocean Affairs and the Law of the Sea
Office of Legal Affairs
Att. Mr. João Miguel Madureira
Room DC2-0450
New York, NY 10017

Wädenswil, Switzerland, February 29, 2016

Lessons learned from the Regular Process

Dear Mr. Madureira, Co-Chair of the Working Group,

We applaud the efforts of the Regular Process in undertaking the United Nations World Ocean Assessment (Assessment). It is a remarkable accomplishment.

Thank you for providing the opportunity to share our views on lessons learned from the first cycle of the Regular Process. Our observations fall into two categories, those for structure and those for substance.

Comments on Structure

The Assessment suffers from the lack of a system in the framework and referencing of the document. It would be of benefit for the second cycle to standardize the output, if necessary instituting workshops to assist with meeting the new criteria.

The main concern on structure relates to the lack of references cited for the information provided. For a document of this caliber to be credible and so that the reader may investigate further into the supporting information, citing references should be the standard for all information presented.

Provisions for a system of peer review would also serve to enhance the credibility of the output of the second cycle.

Comments on Substance

In general the first impression is that although there exists a vast and longstanding scientific literature base documenting the impacts of anthropogenic underwater noise on numerous marine species, groups and populations,¹ noise is either under-considered or not considered at all in the various sectorally focused sections of the Assessment. The second observation is that noise is not addressed as an ecosystem or ocean basin-wide problem, which shows a lack of understanding of the behavior of noise underwater as well as of the life cycles of pelagic and highly migratory species. Third, only the chapters

¹ See for example bibliographies at http://www.un.org/depts/los/general_assembly/noise/OceanNoise_Bibliography_updated_2015_final.pdf, http://www.un.org/depts/los/general_assembly/noise/noise_USA.pdf, <http://www.nap.edu/openbook.php?isbn=0309094496>, http://www.un.org/depts/los/general_assembly/noise/noise_belgium.pdf, <http://www.osti.gov/scitech/biblio/5212049>, <http://www.denix.osd.mil/nr/upload/underwaterexplosions.pdf>, <http://csi.who.edu/biblio/joint-interim-report-bahamas-marine-mammal-stranding-event-15-16-march-2000>, http://nmfs.noaa.gov/pr/pdfs/acoustics/shipping_noise.pdf

Shipping (Chapter 17, page 36) and *Offshore Mining Industries* (Chapter 23, page 11) mention that other species in addition to marine mammal groups are impacted by noise from human activities although the animals documented to be affected include fish, sea turtles, invertebrates and birds.

The chapters *Shipping*, *Offshore Mining Industries* and *Offshore Renewable Energy* (Chapter 22, page 9) do the best job of discussing noise issues. Perhaps in the cases of shipping and energy this is because these sectors have existing international bodies (the International Maritime Organization and the International Energy Agency, respectively) or active industry organizations such as the World Shipping Council that are beginning to take notice of the acoustic impacts that their activities generate. These chapters make some use of citing references to support their conclusions but would all benefit from additional sources.

The chapter *Submarine Cables and Pipelines* (Chapter 19, page 9) states that the noise disturbance from the installation of a submarine power cable is “likely to have no more than a temporary effect” but does not give the source for this critical assumption. The chapter *Marine Mammals* (Chapter 37, page 8) briefly discusses the impacts to marine mammals of noise from a variety of sources and does cite some of the information presented, but this material would be more credible if it were supported with additional references.

These appear to be the only allusions to anthropogenic underwater noise in the entire Assessment, other than the few times that it is mentioned in a general list of other impacts to the marine environment but is not discussed specifically.

Summary

1. The sections noted as well as the entire Assessment would benefit from additional citations, a standardized structure and peer review; these would also be recommendations for the second cycle.
2. The substantive gaps include the lack of discussion on impacts to species in addition to marine mammals, no discussion of the impacts from commercial sonar in the chapter *Capture Fisheries* (Chapter 11), no discussion of the impacts of military sonar, and the lack of recognition of anthropogenic underwater noise as an ocean basin-wide concern requiring broad ecosystem based solutions.
3. Anthropogenic noise is unique among pollutants in the ocean due to the nature of sound underwater and the animals it impacts. Managing noise will require the development of a new paradigm based on ocean basin-wide solutions.

We hope you will find our feedback useful and thank you again for having provided us with this opportunity.

Sincerely yours,



Sigrid Lüber
OceanCare President