



**Second intergovernmental conference for the development of a new international legally binding instrument for the conservation and sustainable use of biodiversity beyond national jurisdiction under the United Nations Convention for the Law of the Sea.  
United Nations Headquarters, New York**

**Statement delivered by the Deep Ocean Stewardship Initiative  
29 March 2019**

**Re: Measures such as area-based management tools, including marine protected areas**

The Deep Ocean Stewardship Initiative welcomes this opportunity to provide some context from a scientific perspective on this discussion regarding 4.1 objectives - noting the reference to 'building resilience to climate change' in subparagraph (2)(OPTION 1)(f).

Climate change is redistributing, compressing, and stressing marine habitats, communities, and species through warming, deoxygenation, and acidification. Rising atmospheric CO<sub>2</sub> has caused a suite of changes in marine environments. The direct uptake of atmospheric CO<sub>2</sub> leads to lowered pH and a decreased aragonite saturation state, which can harm marine organisms in a number of ways, including lowering the ability of calcifying organisms to form hard shells and disrupting communication between marine mammals.

Rising atmospheric CO<sub>2</sub> levels also cause warming of the surface waters, which is responsible for oxygen loss both directly, by reducing oxygen solubility in seawater, and indirectly, via increased thermal and salinity stratification, which reduces mixing and ventilation. At the same time, warming increases respiration rates, tipping eutrophic areas into hypoxia or creating seasonal hypoxic zones. Warming also leads to higher rates of sea level rise, which can change tidal amplitudes, affecting many processes on the bottom of the ocean.

ABMTs can protect deep ocean ecosystems in several key ways:

- All or part of such areas can serve as refugia for species and ecosystems at risk from multiple threats, including over-exploitation and environmental shifts associated with climate variability and change;
- They can help to maintain the ocean's role in global biogeochemical cycles by conserving ecological processes that enhance the deep ocean's capacity to serve as a greenhouse gas sink;
- They can serve as scientific controls when compared with unprotected areas that are affected by exploitation, when both areas are experiencing impacts of climate change.

ABMTs should be designed and implemented to take advantage of our best scientific understanding of the relevant ecological linkages between the surface waters, the twilight zone, the deep ocean, and the deep seabed. Where scientific information is uncertain, ABMTs



comprise a central element of a precautionary approach. In this regard, it is useful to refer to Article 6 of the UN Fish Stocks Agreement, which provides that the precautionary approach shall be applied widely in order to protect living marine resources and preserve the marine environment, and, in particular, that States shall be more cautious when information is uncertain, unreliable, or inadequate.

### **Designation Process.**

Echoing the comments of CARICOM and others, for the establishment of ABMTs (including MPAs) to be effective, the designation process will need to be robust and scientifically sound. Regarding *Consultation and assessment of the proposal*, OPTION I, subparagraphs (2) Option A (e)'s inclusion of "the scientific community" is appropriate given that scientific networks play an important role in contributing data and knowledge to the consultation and assessments of proposals. Such scientific and technical input should be credible and reputable as regarded by the scientific community at large, and, therefore, regarding subparagraph (7), Options A-D are most appropriate.

### **Monitoring and review.**

Regarding item 4.5, '*Monitoring and Review*' ongoing monitoring and review of ABMTs including MPAs can help ensure that they continue to respond to a changing climate. Therefore, DOSI prefers OPTION I, as it is more detailed and includes assessment of effectiveness. Explicitly including scientific oversight, such as in item (2) Option A, is crucial to strengthen the efficacy of monitoring and review of ABMTs. In addition, such a monitoring and review process should be transparent, unbiased and independent.

### **Connectivity**

Regarding item 4.1, '*Objectives*' the inclusion in OPTION I of connectivity in paragraph (e) Option A, of resistance to stressors related to climate change in paragraph (f), and of scientific reference areas in paragraph (h) are encouraging. As noted in the opening paragraphs of this statement, maintaining ecological linkages, working towards resilience in the face of climate change, and incorporating sound scientific research into deep sea management decisions are of the utmost importance.

For further information, please see the following DOSI policy briefs:

- <http://dosi-project.org/wp-content/uploads/2018/05/Climate-Policy-Prief-Climate-2018.pdf>
- <http://dosi-project.org/wp-content/uploads/2015/08/BBNJ-Policy-brief-climate-change.pdf>

Thank you Madame Facilitator.