

**Forum: United Nations Environmental Programme (UNEP)**

**Issue: The question of protecting the marine environment and the coastal regions**

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**1. Introduction**— Human activities are releasing gigatonnes of carbon to the Earth's atmosphere annually. Direct consequences of cumulative post-industrial emissions include increasing global temperature, perturbed regional weather patterns, rising sea levels, acidifying oceans, changed nutrient loads and altered ocean circulation. These and other physical consequences are affecting marine biological processes from genes to ecosystems, over scales from rock pools to ocean basins, impacting ecosystem services and threatening human food security.

**2. Definition of Key Terms**— *Marine*: relating to or found in the sea.

*Acidic oceans*: After absorbing a large proportion of the carbon dioxide released by human activities, the oceans are becoming acidic.

*Anthropogenic carbon dioxide*: is that portion of carbon dioxide in the atmosphere that is produced directly by human activities.

**3. History**— Historically, the sea has served as a major transportation network, a source of food and a favourite recreational area. In fact, the survival of the world's poorest people depends on their close relationship with the sea. The economic importance of the sea is evidenced in the ecosystem services provided by way of fisheries, tourism, coastal protection, and in its role as a source of raw materials. This dependency on the sea is now threatened by environmental conditions brought on by global climate change. The coastal regions have experienced increased water level rise in the recent years and increased sightings of natural disasters directly related to anthropogenic carbon dioxide emission.

**4. Key Issues**— Regional weather patterns are likely to change, resulting in an increase in the severity and frequency of storm events, particularly cyclones. Despite having taken millions of years to evolve, marine organisms, under today's conditions, must adapt very quickly to new conditions. Marine organisms will be affected by changes in two main aspects of their environs, namely, by changes in the natural habitat and food supply, and changes in ocean chemistry. There is expected to be a gradual decrease in the quantity of these plants in warmer waters, effectively reducing the amount

of nutrients available to animals further along the food chain.

**5. Major Parties Involved**— China, India, Bangladesh, Vietnam, Japan, United States, Philippines, Egypt and Brazil are the countries potentially most affected by the rising sea levels. Based on satellite picture images and analyses from scientists these countries will have the most people affected from the chronic sea rising levels therefore this topic is very actual for the nations mentioned.

**6. Timeline**— *In the 1970s* after World War II Modern marine conservation became globally recognized in an era known as the "marine revolution"; *At the end of the 1970s* a new emphasis was put on restoring systems within the

environment, along with protecting biodiversity; *November 1988* IPCC established; *December 1990* UN General Assembly Negotiations on a Framework Convention begin.

**7. Evaluation of Previous Attempts**— United States Environmental Protection Agency (EPA) is working to reduce marine degradation in different ways and has a long list of milestones in environmental history. EPA's success has been recognized with the Nobel Prize for work on climate change on October 12, 2007. EPA has many examples of successful achievements, one for example when President Obama signed the Reinvestment and Recovery Act, which provided \$7 billion for EPA projects and programs. The funding protected and promoted jobs that promoted efforts to reduce diesel emissions, and cleanup of hazardous waste sites or leaking underground storage tanks.

**8. Possible solutions**— A very important factor towards achieving sustainable future is raising the awareness of people. That for example can be achieved by creating information centers in metropolises across the world. Through this act people can mind their carbon footprint.

**9. Bibliography**— Current Biology, "Impacts of Climate Change on Marine Organisms and Ecosystems, Cell Press,

Electronically published on July 27, 2009 EPA, "EPA History", Environmental Protection Agency, Electronically published on April 04, 2017

## **10. Appendices—**

*<http://www.sciencedirect.com/science/article/pii/S0025326X17305660>*

*<https://ec.europa.eu/jrc/en/research-topic/coastal-and-marine-environment>*

*[https://en.wikipedia.org/wiki/Integrated\\_coastal\\_zone\\_management](https://en.wikipedia.org/wiki/Integrated_coastal_zone_management)*