

<http://www.scientificamerican.com/article.cfm?id=is-ocean-zoning-the-solution>

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Is Ocean Zoning the Solution to Dying Marine Ecosystems?

Regulating activity across the seas could halt and reverse damage By [Tundi Agardy](#)

By now the world is aware that the oceans are dying a silent death because of coastal development, pollution, overfishing and climate change. Scientists know how to halt or reverse the chronic threats, but in the political arena they have faced defeat after defeat in trying to implement management that actually works. We need a radical shift away from the piecemeal regulation of small areas that has resulted. We need comprehensive zoning of the world's oceans.

Across the globe, it is clear which marine areas are the most important to protect. Estuaries, coastal wetlands, reefs, submarine mountains and food-rich [water](#) flows are among the critical habitats that support wide swaths of the ocean's ecology. But current governance does not allow us to use management tools and policy instruments in a systematic, holistic way. Zoning would. Some countries have established a few isolated zones, mainly marine "protected areas." But these are mere dots on the vast ocean. Comprehensive zoning would address whole ecosystems. It would also improve public understanding and reduce conflicts, by displaying in a clear, graphic way which human actions are appropriate where.

Zoning is simple, straightforward, systematic and strategic. It results in regional maps, in which every watery space is categorized for a particular use or array of uses—from commercial activities to recreational ones, including strictly protected areas that are virtually off-limits. The first step is to identify ecologically vital areas with a high concentration of important processes, such as the delivery of nutrients to plankton and algae that underlie the entire marine food chain. Then one must assess threats to those services and impose zones that prohibit harmful activity while permitting other uses at sustainable levels, such as recreational fishing, aquaculture or tourism.

One example is the multiuse plan that my colleagues and I developed for Asinara, a small island near Sardinia in the Mediterranean Sea. Another example is the recent declaration by the North Pacific Fishery Management Council to close off to commercial fishing all waters along the western and northern coasts of Alaska, stretching out for 200 nautical miles. Australia has established the Great Barrier Reef Marine Park, a large, multiple-use protected area. Comprehensive ocean zoning would create a coherent, global system that clarifies the rights and responsibilities of governments and other stakeholders.

Zoning cannot simply be imposed from the top; that will only cause a huge backlash. A participatory process will generate acceptance; we already zone on land with little angst, by clearly defining who has authority over what, covering private and public lands in a contiguous mosaic. National governments would zone territorial seas and waters in their "exclusive economic zones," but areas beyond would be zoned by countries cooperating under regional frameworks (which, by the way, would help rectify the lawless nature of these commons).

Real leadership is needed to initiate a worldwide process. Work could begin within the United Nations Environment Program's Regional Seas Program or the U.N. Commission on Sustainable Development's high seas group. National agencies, such as the National Oceanic and Atmospheric Administration in the U.S.—especially now with Jane Lubchenko at the helm—could also set up working groups. Unless organizations around the world bravely take the lead soon, we may have no way to correct the ineffective tack we find ourselves on today.

<http://www.mpaglobal.org>

The screenshot shows the MPA Global website search interface. At the top left is the MPA Global logo with the tagline "A database of the world's Marine Protected Areas". To the right are logos for the Sea Around Us Project, WWF, UNEP, WCMC, and IUCN. Below the logos is a navigation bar with links for "about the project", "search mpa database", "feedback", and "login". The main content area is titled "Search Global MPA Database" and includes instructions: "You may search by Country, International Conventions and Programmes, or by the name of the Site, or click on the advanced search checkbox for more options." Below this are four search criteria: "Search Words" (a text input field with placeholder text "type search words here (e.g. part of site name or designation type)"), "Country" (a dropdown menu with "select a country"), "Geographical Region" (a dropdown menu with "Select a Geographical Region Type"), and "Convention/Programme" (a dropdown menu with "select a convention/programme"). A "Search" button and a link to "advanced search" are also present. At the bottom, there is a "Note" stating the database is a work in progress, a "Citation" for the database, and contact information: "contact us at: L.wood@fisheries.ubc.ca +1 (604) 822-1639".

Asinara Marine Park: http://www.mpaglobal.org/index.php?action=showSpatial&site_code=100839

Great Barrier Reef Park: http://www.mpaglobal.org/index.php?action=showMain&site_code=2628