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‘Mixed Results’

The results are in, and while the world’s oceans show no significant decline over the past year, their condition should not be mistaken as a clean bill of health.

So say the scientists behind the 2016 Ocean Health Index (OHI), an annual study that evaluates key aspects — biological, physical, economic and social — of ocean health worldwide. The OHI defines a healthy ocean as one that sustainably delivers a range of benefits to people now and in the future based on 10 diverse public goals. This year’s score is 71, unchanged from those for 2013-2015, which were recalculated using the current year’s improved methods.

“We’ve given the oceans their annual checkup and the results are mixed,” said UC Santa Barbara ecologist Ben Halpern, OHI chief scientist. “It’s as if you went to the doctor and heard that, although you don’t have a terminal disease, you really need to change your diet, exercise a lot more and get those precancerous skin lesions removed. You’re glad you’re not going to die but you need to change your lifestyle.”

Established in 2012, the OHI is a partnership between the National Center for Ecological Analysis and Synthesis (NCEAS) and the nonprofit environmental organization Conservation International. The index serves as a comprehensive tool for understanding, tracking and communicating in a holistic way the status of the ocean’s health. It also provides a basis for identifying and promoting the most effective actions for improved ocean management on subnational, national, regional and global scales.

“What is really exciting about having several years of assessment is that we can start to see where and by how much scores are changing year to year and begin to understand the causes and consequences of those changes,” said Halpern, director of NCEAS and a professor in the Bren School of Environmental Science & Management.

Scores for each goal — or subgoal — range from 0 to 100, and the fourth consecutive global score of 71 indicates that while the ocean has remained stable, its condition is far from the desired 100 that would indicate full sustainability.

Two exclusive economic zones (EEZs) demonstrate higher scores and therefore better efforts at sustainability. For example, Germany, with a population of 81 million, ranked fourth among the 220 EEZs assessed with a score of 85. The much-less-populated Seychelle Islands (with about 97,000 people) ranked eighth with a score of 84. These areas exemplify effective social and environmental governance systems for improving ocean health.

Successive years of global OHI assessments also identify potential trends. The Livelihoods & Economies goal, for example, showed the most rapid score increase between 2012 and 2013, possibly reflecting recovery from the recession that began in 2008. Lasting Special Places (a subgoal of Sense of Place) scores improved by an average of 0.5 points per year, likely due to the designation of marine protected areas.

Consistently low scores for Tourism & Recreation (47) highlight countries that are not sustainably maximizing benefits derived from a healthy tourism sector. Scores for Food Provision (54) and Natural Products (48) indicate that many regions are either harvesting unsustainably or not maximizing their sustainable potential to produce more food from the sea. The overarching issue of poor quality data (or no data at all) limits the ability to estimate the status of fish stocks in many regions as well as the overall status of fisheries.

Biodiversity (91) and Coastal Protection (87) goals remain the highest scoring. Reference points for both include maintaining coastal habitats at or about their 1980 levels, so decline of these scores from 100 has occurred in less than four decades. Continuing threats to habitat could lower scores further.

The OHI team works directly with more than 25 countries across priority marine regions, including the Pacific, East Africa and Southeast Asia. Nations in these areas

lead independent assessments known as the OHI+, which have already driven marine conservation actions at national levels by shaping China's 13th five-year plan, Ecuador's National Plan for Good Living and Mexico's National Policy on Seas and Coasts.

By providing an annual comprehensive database baseline for global ocean health, the OHI offers all coastal countries a starting place for assessing the status of their marine resources and environments and utilizing an ecosystem-based approach toward management.

"We believe the Ocean Health Index gives reason for hope by providing a detailed diagnosis of the state of ocean health and also a framework that allows countries to identify and prioritize the most necessary resilience actions to improve ocean health," said Johanna Polsenberg, senior director of governance and policy for Conservation International's Center for Oceans. "This is where our work is most valuable. It may take some time for such actions to be reflected in the scores — but the steps being taken are essential to ensure a healthy ocean into the future."

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.