

Loss of coastal seagrass habitat accelerating globally

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An international team of scientists warns that accelerating losses of seagrasses across the globe threaten the immediate health and long-term sustainability of coastal ecosystems. The team has compiled and analyzed the first comprehensive global assessment of seagrass observations and found that 58 percent of world's seagrass meadows are currently declining.

The assessment, published in the [Proceedings of the National Academy of Sciences](#), shows an acceleration of annual seagrass loss from less than 1 percent per year before 1940 to 7 percent per year since 1990. Based on more than 215 studies and 1,800 observations dating back to 1879, the assessment shows that seagrasses are disappearing at rates similar to [coral reefs](#) and tropical rainforests.

The team estimates that seagrasses have been disappearing at the rate of 110 square-kilometers (42.4 square-miles) per year since 1980 and cites two primary causes for the decline: direct impacts from coastal development and dredging activities, and indirect impacts of declining water quality.

"A recurring case of 'coastal syndrome' is causing the loss of seagrasses worldwide," said co-author Dr. William Dennison of the University of Maryland Center for Environmental Science. "The combination of growing urban centers, artificially hardened shorelines and declining natural resources has pushed coastal ecosystems out of balance. Globally, we lose a seagrass meadow the size of a soccer field every thirty

minutes."

"While the loss of seagrasses in coastal ecosystems is daunting, the rate of this loss is even more so," said co-author Dr. Robert Orth of the Virginia Institute of Marine Science of the College of William and Mary. "With the loss of each meadow, we also lose the ecosystem services they provide to the [fish](#) and [shellfish](#) relying on these areas for nursery habitat. The consequences of continuing losses also extend far beyond the areas where seagrasses grow, as they export energy in the form of biomass and animals to other ecosystems including marshes and coral reefs."

"With 45 percent of the world's population living on the 5 percent of land adjacent to the coast, pressures on remaining coastal seagrass meadows are extremely intense," said co-author Dr. Tim Carruthers of the University of Maryland Center for Environmental Science. "As more and more people move to coastal areas, conditions only get tougher for seagrass meadows that remain."

Seagrasses profoundly influence the physical, chemical and biological environments of coastal waters. A unique group of submerged flowering plants, seagrasses provide critical habitat for aquatic life, alter water flow and can help mitigate the impact of nutrient and sediment pollution.

More information: The article "Accelerating loss of seagrasses across the globe threatens [coastal ecosystems](#)," appears in the *Proceedings of the National Academy of Sciences Early Edition* on June 29. The article was authored by 14 scientists from the United States, Australia and Spain, including Drs. Michelle Waycott (lead author), Carlos Duarte, Tim Carruthers, Bob Orth, Bill Dennison, Suzanne Olyarnik, Ainsley Calladine, Jim Fourqurean, Ken Heck, Randall Hughes, Gary Kendrick, Jud Kenworthy, Fred Short, and Susan Williams.

Source: University of Maryland ([news](#) : [web](#))

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