United States Environmental Protection Agency

The National Coastal Condition Assessment 2010

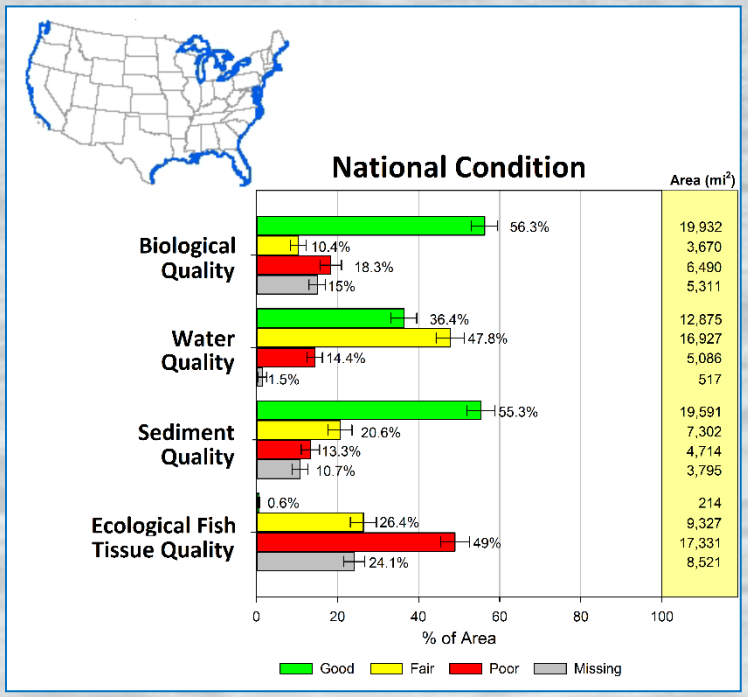
The National Coastal Condition Assessment 2010 (NCCA 2010) is the fifth in a series of reports assessing the condition of U.S. coastal waters. It is part of the National Aquatic Resource Surveys (NARS), a series of statistically-based surveys designed to provide the public and decision makers with nationally consistent and representative information on the condition of all the nation's waters.

In the summer of 2010, the U.S. Environmental Protection Agency (EPA) and its state and federal partners sampled 1,104 sites in estuarine and Great Lakes nearshore waters, representing 35,400 square miles of U.S. coastal waters. They used the same methods at all sites to ensure that results would be nationally comparable. This report examines four indices as indicators of U.S. coastal condition: a benthic index, a water quality index, a sediment quality index, and an ecological fish tissue contaminant index.

Key Findings

Biological Quality

A majority of coastal and Great Lakes nearshore waters support healthy communities of bottom-dwelling (benthic) macroinvertebrates (such as worms and clams) that are indicators of biological quality. The report finds that that 56% percent of the nation's coastal and Great Lakes nearshore waters are rated good for biological quality, 10% are rated fair, and 18% are rated poor, based on the benthic index. Data are incomplete or missing for 15% of waters.



Water Quality

Water quality is rated good in 36% of coastal and Great Lakes nearshore waters, fair in 48%, and poor in 14%, based on the water quality index. Components of the water quality index include phosphorus, nitrogen, water clarity, chlorophyll *a*, and dissolved oxygen concentrations. The most widespread of these stressors is phosphorus (rated poor in 21% of waters).

Sediment Quality

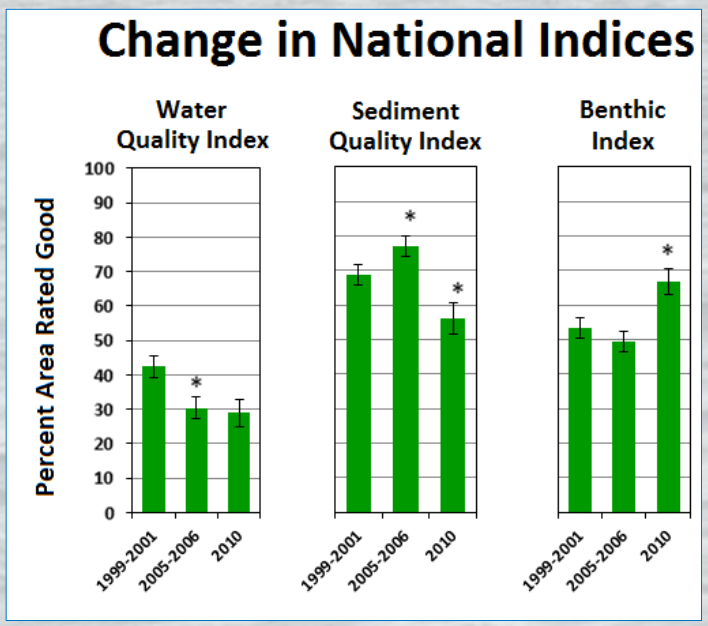
Sediment quality is rated good in 55% of coastal and Great Lakes nearshore waters, fair in 21%, and poor in 13%. This finding is based on an index of sediment quality that has two component indicators: sediment contaminants and sediment toxicity. Overall, 79% of coastal waters are rated good based on low levels of sediment contaminants and 57% of waters are rated good based on the toxicity effects of contaminants.

Ecological Fish Tissue Quality

This report assesses the potential harm that fish tissue contaminants pose to predator fish, birds, and wildlife. Based on this ecological index, less than 1% of coastal and Great Lakes nearshore waters are rated good, 26% are rated fair, and 49% are rated poor. Data are incomplete or missing for the remaining 24% of waters. These findings indicate that contaminants in fish may have long-term adverse effects on fish-eating wildlife. With the exception of a supplemental study in the Great Lakes, analysts did not evaluate human health risks for the NCCA 2010.

Change in Coastal Condition

The NCCA 2010 examines change in coastal condition over three periods: 1999-2000, 2005-2006, and 2010. Between 2005-2006 and 2010, water quality remained unchanged, biological quality improved 17% and sediment quality declined by 22%. While these results might appear contradictory, these indicators do not necessarily respond to stressors in the same manner, nor do the indicators included in the NCCA reflect all stressors that affect coastal waters.



Implications

EPA and its federal, state and tribal partners continue to work together to answer important questions about the condition of the nation's coastal waters. The NCCA 2010 findings support the need for continued attention to coastal stressors at national, regional, state and watershed scales to identify and mitigate challenges where they exist and protect areas that are still in good condition.

Read the *National Coastal Condition Assessment 2010* and learn more about NARS at
http://www.epa.gov/national-aquatic-resource-surveys
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