



## The EcoSystem Indicator Partnership (ESIP): Fact Sheets

ESIP, formed as a committee of the Gulf of Maine Council on the Marine Environment, is made up of expert advisors and volunteers from 73 organizations in the U.S. and Canada who provide information for a web-based reporting system for marine ecosystem monitoring.

The first of eight planned fact sheets—four have been published already by ESIP—describes the partnership itself, lists the organizations represented by advisors and volunteers and explains how ESIP was established in 2006 and explains the meaning, use and method of choosing the indicators.

Subcommittees to ESIP selected 22 priority indicators to be used as a first step in assessing overall ecosystem health in the Gulf of Maine. Besides this first explanatory fact sheet, areas chosen as focus areas include the three already published—Aquatic Habitats, Climate Change and Aquaculture—as well as future fact sheets on Coastal Development, Contaminants, Eutrophication and Fisheries.

Each focus topic uses several of the 22 selected indicators, compares them to standards and targets in the states and provinces, and points out trends, or whether a cause and effect relationship exists.

This paper also explains how focus areas were chosen and how indicators for each focus areas interact with and affect the others. For instance, climate change indicators such as precipitation, directly influence aquatic habitats indicators, such as the extent of eelgrass, which the affects fisheries indicators such as production density.

### *ESIP Fact Sheet for Aquatic Habitats*

*Aquatic Habitats in the Gulf of Maine focuses on three indicators to assess the health of habitats: the extent of salt marsh, the extent of eelgrass and the number of tidal restrictions.*

*These indicators were chosen, authors explain, because they "work in concert with each other to provide an essential look at the larger system." Both salt marshes and eelgrass beds are considered prime nursery areas for species that include fish and crustaceans.*

*Salt marsh areas around the Gulf of Maine are estimated at 100,000 acres (40,000 hectares), a number greatly reduced, say experts, since the time of European settlement due to filling, draining and diking the marshes, plus impacts from upland runoff.*

*Eelgrass beds, although the cost of surveys has hampered the regularity of measurement, show a marked decline in some states between 1995 and the present. Experts say recent losses are mostly due to effects from excess nutrients.*

*Tidal restrictions include dikes and causeways which alter the normal flooding and draining of marshes. Problems associated with them include reduced salinities, poor drainage, freshwater flooding, dominance by invasive plants and interference with normal movements of fish.*

*The fact sheet includes maps that indicate locations of obstructions and locations of eelgrass beds and salt marshes.*

*All fact sheets and ESIP information may be found at:  
<http://www.gulfofmaine.org/csip/>*