Gulf Pulses

ESIP news

What is ESIP?

The EcoSystem Indicator Partnership (ESIP), a committee of the Gulf of Maine Council on the Marine Environment (GOMC), was formed to help assess the health of the Gulf of Maine through the use of indicators. ESIP was created out of an identified need to better understand and convey information on status and trends in the Gulf of Maine ecosystem and the impacts of human use.

Collecting datasets

Il of ESIP's fact sheets are based on datasets collected by various organizations throughout the Gulf of Maine region. At the time of the first printing in May 2012 of the Eutrophication fact sheet, there was little eutrophification information available for the Bay of Fundy. Upon discovery of this gap, ESIP worked with Eastern Charlotte Waterways to find funding for the collection of data on two indicators of eutrophication, chlorophyll *a* and Secchi depth, in the New Brunswick portions of the Bay of Fundy in 2013. The study area was increased in 2015 to include Nova Scotian portions of the Bay of Fundy. In general, chlorophyll *a* is higher when nutrient loading increases. Secchi depth is

used to measure how clear the water is. As nutrient loading increases, Secchi depth is expected to decrease. The study found that chlorophyll *a* was on the high side in the Nova Scotian portions of the Bay of Fundy (Chignecto, Minas, and Annapolis) and the Passamaquoddy estuary in New Brunswick relative to other portions of the Gulf of Maine. Compared to other portions of the Gulf of Maine, Secchi depths in most station locations ranged from medium to high indicating that water clarity in the Bay of Fundy was generally higher than in other portions of the Gulf of Maine.

All information from the 2013 and 2015 studies is available for analysis in the Indicator Reporting Tool (www2. gulfofmaine.org/esip/reporting/gmap2.php).



I See You See

In February ESIP launched a new smartphone app - I See You See (ESIP's ICUC). The app is free through the iTunes and Google Play stores and serves a dual function with respect to the health of the Gulf of Maine and Bay of Fundy (GOM/BOF). First, the app provides users with information on local sites that scientists are interested in monitoring for change (e.g., erosion, invasive plants, changes in crab communities). This site information also helps users understand the breadth of the monitoring programs in the GOM/ BOF, including sites in their own "backyards" and sites at some of their favorite places. Second, the ICUC app allows each user to become a citizen scientist! Their photos, taken at established locations as well as at locations of their own choosing, are used to build a photo library that provides documentation of change in the GOM/BOF. The app encourages the use of citizen



Fisheries Fact Sheet

SIP was originally charged with determining indicators in seven theme areas. Through the work of ESIP's community and subcommittee members, fact sheets summarizing information on these indicators have been produced for six of the seven original theme areas (available at www.gulfofmaine.org/2/ esip-fact-sheets/). The Fisheries fact sheet, the 7th in the series, focuses on three key indicators: ocean jobs, dominant species metric, and diversity. In addition to these indicators, this fact sheet also provides an in depth look at the importance of the lobster fishery to



the region. The ocean sector provides more than 100,000 jobs to individuals in the Gulf of Maine region. At the same time, Gulf of Maine fisheries have become more specialized over time, with a few species contributing to over 80 percent of landings.

> Be on the lookout early in September for this important fact sheet.

Goods and Services

o you ever wonder how much we depend on the natural world? How our lives are connected to nature? Often we think of the raw materials we get from nature, like wood, and food that farmers grow for us, even if we get it at our local supermarket. But do you ever think that the water you drink, the air you breathe, the wonderful vistas that you see when you take hikes in the forest are all "goods" provided for you by nature? The ESIP Steering Committee has been wondering about this too and is moving to develop indicators based on the goods and services provided to people by the GOM ecosystem.

While there are many ways to think about ecosystem goods and services, ESIP will utilize concepts developed by EPA's Final Ecosystem Goods and Services (FEGS) Project. FEGS are those services produced by the environment that

are relevant to particular users of the environment, called beneficiaries. They are qualities, quantities and/ or, features of an ecosystem that people care about and understand – they do not need to be translated into common language.

Over 2016–17, ESIP will be developing a framework within which a pilot set of FEGS indicators will be developed. Once developed, data for the indicators will be acquired, analyzed, and provided to managers through fact sheets and databases to help inform decisions for particular beneficiaries.

For more information check out the July 2016 ESIP journal entry at www.gulfofmaine.org/2/esip-monthly-journals/.

ESIP is always looking for new partners and participants. To become involved, please contact the program manager at ctilburg@securespeed.us.







08.2016