

## Section 4

# Future Work on Indicators

### Phase-in Approach

To begin the assessment of the state of the Great Lakes through the use of indicators, 33 summary reports were prepared for SOLEC 2000. These indicators were chosen based on the availability of data and on the cooperation of the report authors. For many of the indicators, the data were incomplete, i.e., lacking time series or geographic coverage, but an initial assessment of the ecosystem component could be made with the information available.

SOLEC organizers were pleased with the number of indicator reports that were generated, but they recognize that additional effort is needed. There is now an expectation that updates can be provided on this first set of indicators at future SOLEC events. Likewise, additional indicators are expected to be phased in at each future SOLEC until the entire suite is fully reported.

### Concept of Tiers

In order to facilitate the implementation of the indicators, they have been grouped into three tiers. Tier 1 indicators are those for which at least some data are believed to exist, and an indicator report can be generated. All 33 indicators in this report are designated Tier 1, along with 10 others. Not all 43 belonging to this group have been reported on because some did not have identified authors. Additional indicator development, refinement and testing of some Tier 1 indicators will continue.

Tier 2 indicators are those for which data are not currently available, but for which an active project is underway. Activities could include establishing a monitoring program, developing the details of the indicator, or conducting research and testing of the

indicator. Most of the 10 indicators currently designated Tier 2 are included in the SOLEC Coastal Wetlands category.

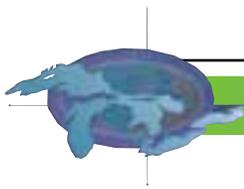
An active research effort to fully develop Tier 2 indicators is called the **Great Lakes Coastal Wetlands Monitoring Consortium**. A cooperative agreement between the Great Lakes Commission and U.S. Environmental Protection Agency, Great Lakes National Program Office has been established for the first large scale, binational, collaborative effort to assess the ecological health of Great Lakes coastal wetlands. A consortium brought together by the Great Lakes Commission will:

- design and validate SOLEC indicators to assess the ecological integrity of Great Lakes coastal wetlands;
- design a long-term program to monitor Great Lakes coastal wetlands; and
- create and populate a binational coastal wetlands database accessible to all scientists, decision makers, and the public.

This consortium currently includes Great Lakes wetland scientists and resource managers from both federal governments, states/provinces, non-profit organizations, and academia. Funding for the first two years exceeds \$500,000 (U.S.), and the project may be continued for up to six years.

Tier 3 indicators are those for which data do not exist, monitoring programs need to be established, or the indicator itself needs more developmental work and/or testing. There are currently 27 of these "orphans," with representation of all SOLEC indicator categories. These indicators require deliberate attention before they can be phased into the reporting process at a future SOLEC.

U.S. Environmental Protection Agency/Great Lakes National Program Office issues an annual request for proposals for projects that help provide progress



toward the goals of the Great Lakes Water Quality Agreement. To facilitate development and testing of some of the Tier 3 indicators, projects were requested in 2001 specifically to develop, test and implement “underdeveloped” SOLEC indicators. Up to \$300,000 (U.S.) may be awarded to move Tier 3 indicators toward fully implemented, Tier 1 designation.

### **Commitments and Ownership**

No one organization has the resources or the mandate to examine the state of all the Great Lakes ecosystem components. In collating the available information for the indicator reports, a number of difficulties became apparent while attempting to summarize different sources of information collected using different sampling and analytical methods at different locations at different times. Some differences were impossible to resolve. For the Parties to report on an on-going basis, a monitoring program with consistent protocols would have to be the primary source of the information, and a commitment to maintain such a program would be required.

Many organizations routinely collect and analyze data about some part of the ecosystem. A consensus by environmental management agencies and other interested stakeholders about what information is necessary and sufficient to characterize the state of Great Lakes ecosystem health would facilitate more efficient monitoring and reporting programs. The relative strengths of the agencies could be utilized to improve the timeliness and quality of the data collection and the availability of the information to multiple users.

For state of the Great Lakes reporting to be sustainable, commitments are required for agencies to accept lead roles to collect and interpret data and report on selected indicators prior to each SOLEC. Data for some indicators are distributed throughout several agencies. One agency, or perhaps co-lead agencies, should accept the lead role for the purpose of SOLEC reporting. The lead agency need not necessarily be the same as the one(s) conducting the monitoring, but a close association should exist between the two.