

Report to the Expert Panel:

**Societal Responsibility Indicators -
Strategic Goals and Objectives
A Work in Progress**

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For Environment Canada and
The US Environmental Protection Agency



Executive Summary

“The goal of [SOLEC] is to assemble a basin-wide suite of scientifically valid indicators that will be most useful and understandable in determining the health of the Great Lakes ecosystem to the interested public.”ⁱ

Selection of Indicators for Great Lakes Basin Ecosystem Health

- ❖ This report is the first step in a three-part work-plan focused on addressing the breadth and scope of societal responsibility Indicators as a component of the State of the Lakes Ecosystem Conference (SOLEC) program. Comments, criticisms or discussion, in the form of email and/or telephone communications, regarding proposed direction of the Societal responsibility Suite of indicators are anticipated and encouraged.
 - ❖ This review of societal responsibility is part of a larger project relating to an examination of indicators of societal health in the Great Lakes basin.
 - ❖ This suite of indicators was formerly referred to by the term Stewardship. SOLEC has recently decided to change this term to Societal Responsibility due to issues of clarity and sensitivity.
- ❖ The focus of this report is to review, for comment, the strategic goals of the societal responsibility suite of indicators, and the objectives through which these goals will be achieved.
- ❖ It is the hope of the SOLEC group that with the input of the Expert Panel and, at a later date, the upcoming International Joint Commission (IJC) Workshop, the boundaries and direction of the Societal responsibility Suite will be clearly defined. This will, in turn, help to ensure that future recommended societal responsibility indicators will meet the selection criteria of: sufficient, necessary, and feasible.

Progress Plan for Development and Review of the Societal Responsibility Suite of Indicators

Part 1 – Outline the specific goals of the societal responsibility suite of indicators. The Expert Panel, with input from stakeholders and the public at the September IJC workshop, will define the boundaries for societal responsibility indicators to be incorporated into the larger SOLEC framework.

Part 2 – A list of new societal responsibility indicators will be proposed and defined. Gaps in methodology, data availability, and targets/endpoints will also be addressed at this time. The Expert Panel will examine the long list of proposed indicators, using SOLEC criteria, to determine necessity, feasibility, and sufficiency, after which a shorter list will be proposed at the IJC workshop.

Part 3 – The proposed indicators, under the Expert Panel’s direction, will be tested, refined and validated using pilot tests to assess their effectiveness.

Report Outline:

- ❖ What is SOLEC?
 - Vision and Goals
 - Sustainability Reporting and SOLEC
- ❖ Defining Societal Responsibility Within SOLEC
 - Previous Panel Work
- ❖ Strategic Goals of Revised Suite of Societal Responsibility Indicators
 - Current Work
 - Broadening the Scope of Societal Responsibility
 - Possible Communications Issue

Appendix 1 – Comparison of SOLEC Core Group Structure with other Sustainability Reporting Systems

1. What is SOLEC?

- ❖ The State of the Lakes Ecosystem Conference (SOLEC) is a bi-national program established by the governments of Canada and the United States in 1992 to provide science-based reporting on the state of health of the Great Lakes basin ecosystem, as outlined in the Great Lakes Water Quality Agreement (GLWQA). Environment Canada and United States Environmental Protection Agency are the lead agencies for the SOLEC initiative, with support from partner agencies and organizations.
- ❖ SOLEC does not provide reporting on Great Lakes management or remediation programs. Instead, the SOLEC indicator-reporting framework was developed to **assess and report on the trends and status of ecosystem-health in the Great Lakes basin**. SOLEC indicators are also able to draw from, and address, the objectives of other programs from within the Great Lakes basin including Lake-wide Management Plans (LaMP) and Remedial Action Plans (RAP).

Vision and Goals

- ❖ The vision of the GLWQA and the SOLEC program is to “...restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem.”ⁱⁱ As a method of working towards this vision, the SOLEC conferences, workshops, and reports seek to provide strong scientific information to objectively represent the state of the Great Lakes ecosystem, the stresses (and pressures) that exist on various ecosystem components, and human response to such stress.

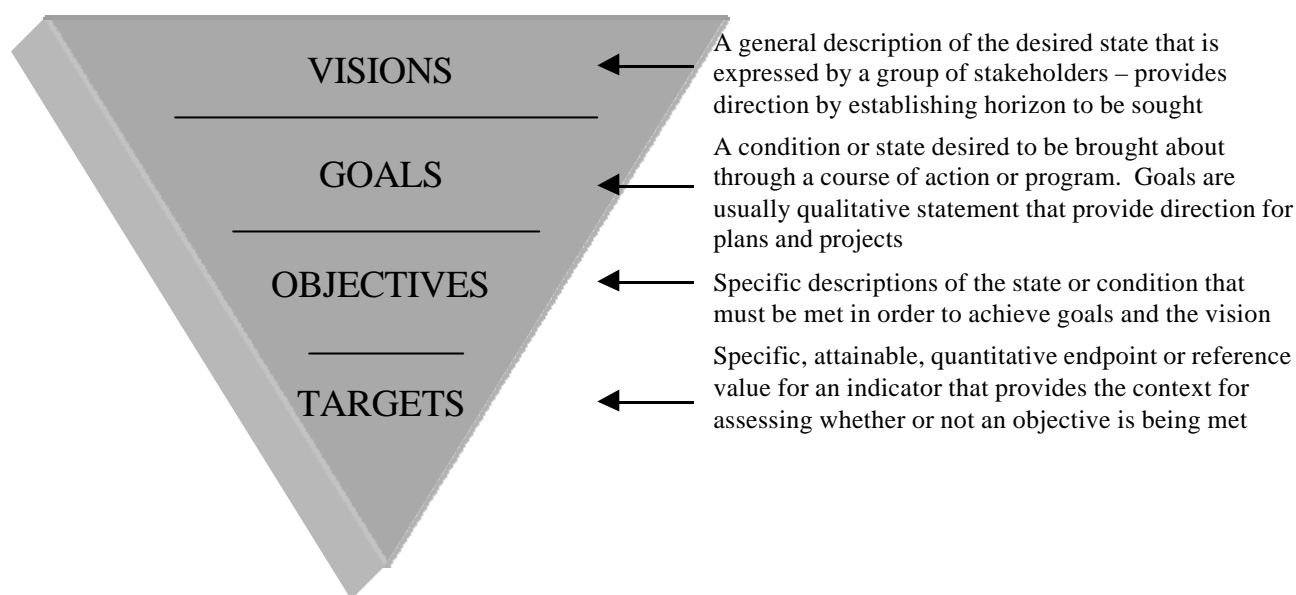


Figure 1. A Conceptual Model of Relationship between Program Vision, Goal, Objectives, and Targets, including definitions of each. Modified from State of Great Lakes, 1999

- ❖ SOLEC is able to organize and present information to encourage *knowledge-based decision making* in the Great Lakes basin. The primary goals of the SOLEC program, as stated in the Terms of Reference are as follows: ⁱⁱⁱ
 1. Provide science-based information, through an integrated system of reporting, on the state of the Great Lakes basin ecosystem.
 2. Strengthen decision-making and facilitate effective management of programs and natural resources of the Great Lakes basin ecosystem.
 3. Provide a forum for communication and networking among stakeholders
 4. Inform local decision-makers of Great Lakes environmental issues.

Sustainability Reporting and SOLEC

- ❖ The SOLEC indicator program is representative of an *integrated sustainability reporting system*, therefore, "...a process of producing and communicating policy relevant information on key interaction between people and the natural environment."^{iv} (for a more detailed outline of SOLEC and comparison to other reporting systems please see Appendix 1)
- ❖ A key element of sustainability reporting frameworks is their incorporation of **Societal Indicators** into larger environmental reporting systems, thereby addressing the *interconnections* between **environmental** and **social** (economic, institutional, etc.) sectors. These indicator-based frameworks are able to translate the concept of sustainability into quantifiable terms and descriptive measures, or 'action oriented signs and signals'.^v

- ❖ This present work represents part of a broader, ongoing examination of Societal Indicators within the SOLEC reporting system.
- ❖ Within the Societal group of indicators, the SOLEC program has developed a suite focused on investigating **Societal Responsibility attitudes and activities** in the Great Lakes basin as one measure of the state and direction of human interaction and impact.
- ❖ Therefore, the focus of this report is to provide the Expert Panel with a document that reviews and addresses the present *goals* and *objectives* of the societal responsibility indicator suite. Through this review process, the SOLEC group hopes to confirm that the boundaries and direction of the societal responsibility suite are appropriate and, therefore, to ensure that recommended indicators would meet the SOLEC indicator criteria.

2. Defining Societal responsibility Within SOLEC

Previous Panel Work

Where all people and their governments act as **stewards** and are committed to informed action and supportive policy decisions. In which a **shared governance** process, among diverse and respected traditions, provides an accessible and equitable basis for responsible action and accountability among all people and their institutions.

Portion of Great Lakes Commission Vision Statement^{vi}

- ❖ Previous SOLEC Steering Committee and Expert Panel examinations have focus primarily on defining the word “Stewardship” for use within the SOLEC framework of indicators. Although this particular term is no longer used by SOLEC, the understanding of the work in terms of societal responsibility has been clearly and aptly defined as ‘responsible governance’, being directly associated with ‘program actions and responses’ that address issues of sustainability.^{vii} This vision was rooted in the assumption that the existence of partnerships and community initiative in the Great Lakes basin would lead to improved environmental state and reduced environmental pressure.^{viii}
- ❖ The vision for the previous Panel work was defined, in part, by a desire for similarity and congruence with the visions of other significant Great Lakes organizations including: the International Joint Commission (IJC) Beneficial Use Impairments (BUI); the Great Lakes Commission (GLC); and First Nations (see text box above).
- ❖ The goals and objectives of the societal responsibility suite focused on examining the scope, depth, and organizational capacity of *partnerships*, supported by *community* and *government interest*, which would lead to improved state of the environment.

3. Strategic Goals of Revised Suite of Societal responsibility Indicators

Current Work

- ❖ In lieu of the comprehensive Steering Committee review, there does not appear to be any necessity for the alteration or redefining of the current vision of Societal Responsibility (Previously referred to as Stewardship, this definition represents the desired direction of the SOLEC members).
- ❖ Rather, the focus of this most recent work has been an examination of the **Strategic Goals** for the societal responsibility suite. This involved asking the following questions:
 - ❖ “What is the state and direction of societal responsibility activities in the Great Lakes basin such that decision-makers and managers could objectively address the progress towards shared governance and community participation?”
 - ❖ “What is the potential capacity of such societal responsibility activities to improve ecosystem health?”
 - ❖ “How can the larger goal of reporting on societal responsibility be broken down into manageable units?” (Figure 2)
 - ❖ “What types of indicators can be established with targets that allow a *quantitative* measurement?”

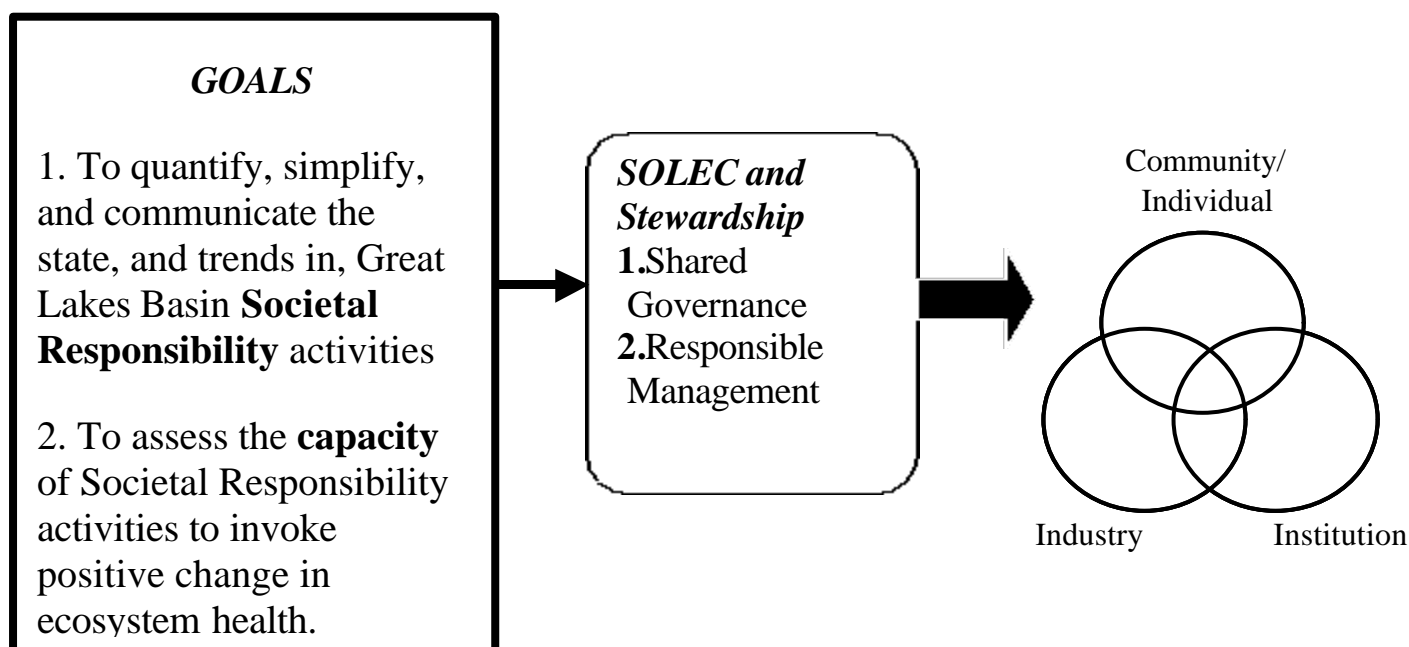


Figure 2: A conceptual model for the breakdown of the larger Societal responsibility Suite goal into actual indicators for measurement and reporting. Included is the separation of SOLEC Societal Responsibility indicators into 3 groups: Community/Individual, Industry, and Institutional (Government, NGO).

Broadening the Scope of Societal Responsibility

- ❖ Similar to the general objectives of the Lake Superior LaMP, increased awareness of societal responsibility activities in the Great Lakes basin, using a suite of indicators, may provide "...guidance in identifying specific, action-oriented principles that can shape social behaviour." ^{ix}
- ❖ In an attempt to build upon the vision and foundations of the original societal responsibility work, it may be pertinent to increase the scope slightly to involve a broader range of objectives. Societal responsibility represents an ideology, or attitude, based on a perception of responsibility, an ability to respond, and a conviction to do so.
 - ❖ Ensuring to establish **measurable** and **quantifiable** values that represent the commitment to steward activities (e.g. measures of time, money, space, etc.)

Community/Individual

- ❖ Although significant difficulty exists in attempting to measure perception, belief, or conviction in any quantifiable way, it may be possible to determine the extent of community and individual commitment by examining quantifiable actions, including hours spent, money spent, or willingness to pay.
- ❖ Issues that may be addressed include:
 - ❖ Public Awareness; Environmental Education
 - ❖ Public and Individual Participation in Societal responsibility programs
 - ❖ Community-Based Partnerships

Institutional

- ❖ The role of elected officials or organized non-governmental organizations (NGOs) differs from interested citizens; within their role as managers, decision-makers, and consultants, these individuals have an explicit obligation to the sustained maintenance of the environment.
- ❖ Measures of institutional commitment should not represent a status report on Great Lakes Environmental Programs (i.e. these indicators do not rate the progress of LaMP or RAP programs). Instead, these indicators could allow a better understanding of the present or future priorities of Great Lakes elected officials.
 - ❖ Integrated Decision-Making and Partnerships
 - ❖ Financial, and Programming Commitments to Societal responsibility Initiatives
 - ❖ Institutional and Legislative Frameworks

Industry

- ❖ Industry represents an important component of societal responsibility, with the program responses and actions of industry carrying a large amount of potential impact.
- ❖ Within the Societal Suite of indicators, there is the provision for indicators of the activities of industry as a measure of the overall financial health of the Great Lakes basin. As a component of societal responsibility, this sub-section should, perhaps, relate more specifically to measuring the **internalization of the marginal costs (time, financial, other resources) of environmental programming** incurred by industry.
 - ❖ Voluntary Pollution Initiatives and Self Regulation Commitments
 - ❖ Green Technology: costs and benefits of Sharing, Research and Development, and Partnerships
 - ❖ Resource Efficiency Agendas and Actions
 - ❖ Resource Conservation Agendas and Actions

Appendix 1 - Comparison of SOLEC Core Group Structure with Other Sustainability Reporting Systems

“Ultimately, the choice of a framework and a core set of indicators must meet the needs and priorities of users ... national experts, civil society groups and decision-makers responsible for the development and use of indicators to monitor progress...”^x United Nations, 2001

Role of Indicator Frameworks

- ❖ Indicators act as a medium for the presentation of measurements and are able to simplify complex phenomenon. Indicator frameworks represent a tool for system analysis; a methodology for gathering and organizing information to allow knowledge-based decision-making. Indicator assessment capabilities include: ^{xi}
 - ❖ Translation of physical and social science knowledge into manageable units of information.
 - ❖ Measurement and calibration of progress towards overall vision and goals.
 - ❖ Provision of an early warning alarm to prevent economic, social and environmental damage.
 - ❖ Communication of ideas, thoughts and values.

The SOLEC Core Group Structure

For greater detail on its evolution, structure, and descriptions of individual indicators, please see the SOLEC web site at <http://www.on.ec.gc.ca/solec/>

- ❖ An examination of the SOLEC terms of reference, as well as a review of SOLEC literature, outlines the vision of a healthy and resilient Great Lakes basin, capable of supporting a diverse range of ecosystems. As a method of working toward this vision, the goal of the SOLEC program clearly states the intention to provide strong scientific information on the state, the pressures and stresses, and human responses that shape and affect the overall health of the Great Lakes.
 - ❖ In addition to a strong and healthy ecosystem, part of the SOLEC vision includes support for the Great Lakes ecosystem by a *caring, conscientious human population*.

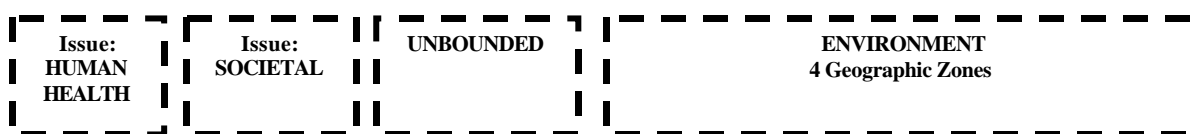
SOLEC indicators are presently divided into of 3 broad groupings:

Environment: (4 geographic zones: Open and Nearshore Waters; Coastal Wetlands, Nearshore Terrestrial; and Watersheds)

Issues: Human Health, Societal (including Urban Issues, Societal responsibility, Socio-economics)

Unbounded: (crosscutting issues such as climate change, acid rain)

SOLEC GROUPINGS:



Within each of these grouping, indicators are further divided into 3 types based on the Pressure, State, Response model (PSR):

1. **Pressure** – describe natural processes and human activities that impact, stress or pose threat to environmental quality
2. **State** – addressing the state of the environment, the quality and quantity of natural resources, and the state of human and ecological health
3. **Response** – include individual and collective actions to halt, mitigate, adapt to, or prevent damage to the environment. They also include actions for the preservation and the conservation or the environment and natural resources.

The PSR model is commonly used by large-scale sustainability reporting programs. Its primary strength is that the model is based on the concept of causality between humans and the natural world, thereby allowing a feedback system between the two, making it more akin to the real world.^{xii} By structuring the SOLEC framework using this well-tested model, it allows relevant indicators to be easily translated to the SOLEC framework from other programs and vice versa.

Environmental & Sustainability Reporting:

- ❖ The administration of indicators to assess environmental and societal health has increased significantly as part of the establishment of **sustainable development** and **sustainability** as the long-term goal of nations, regions, and communities.^{xiii} Essentially, these indicator frameworks are able to translate the concept of sustainable development into quantifiable terms, descriptive measures, and “action-oriented signs and signals.”^v
- ❖ While **sustainability**, by definition, examines the links between **economy, community, and the environment**, the relative importance placed on each sector is not necessarily consistent. The framework used for assessing sustainability can vary significantly depending on the goals and objectives of the user-group. At their extremes, economic reporting gives little or no attention to environmental issues, while environmental reporting gives little or no attention to economic or societal issues.
- ❖ It is, therefore, necessary for user groups **to clearly define their project goals and objectives** to ensure that the indicator suites are structured accordingly and the indicators chosen are relevant.^{xiv}
- ❖ By clearly defining goals and objectives, the coordinators of reporting systems must decide, essentially where, on a scale of sustainability, they wish to situate their

framework with the relative importance of the environment, society, and the economy (the primary foundations of sustainability) clearly mapped.

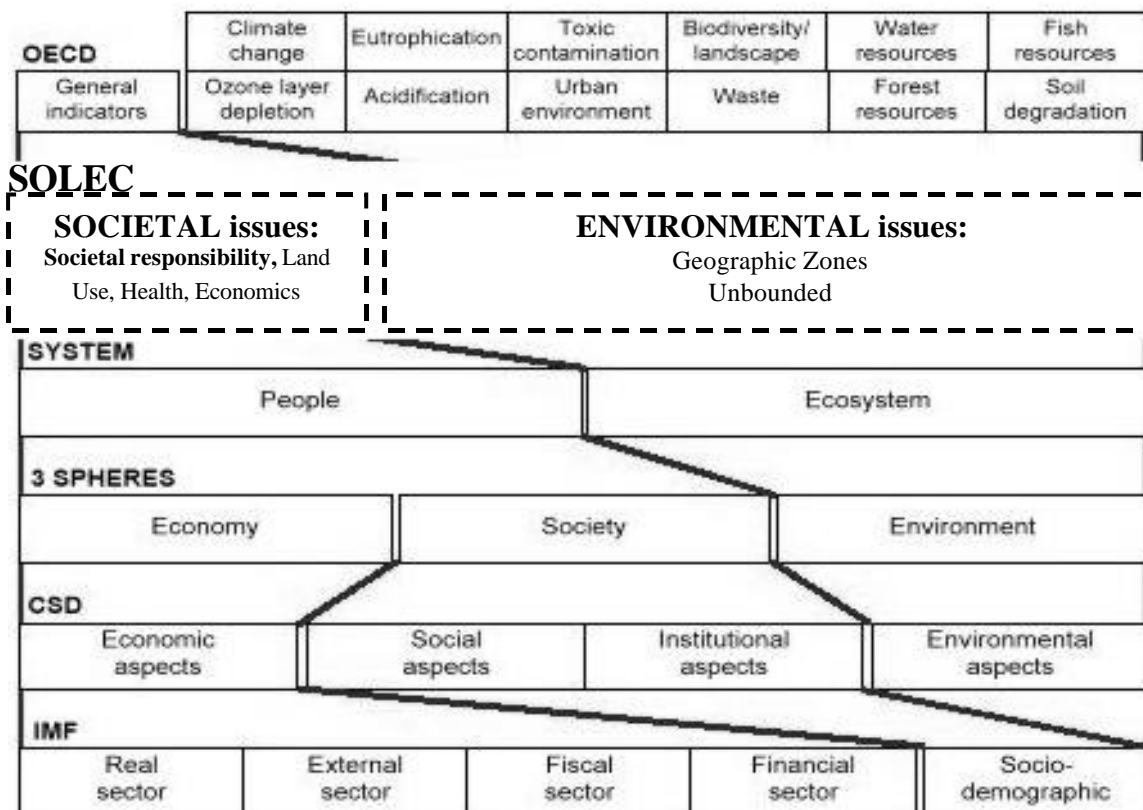


Figure 3. A modified version of a comparison of the weight assigned to the different indices of sustainability reporting by several top reporting initiatives, with the SOLEC framework added from comparative purposes. **IMF** – International Monetary Fund; **CSD** – United Nations Commission on Sustainable Development; **3 Spheres** – World Bank; **System** – World Conservation Union; **OECD** – Organization for Economic Co-operation and Development (Original Source: World Conservation Union.)

Possible Communications Issue

- ❖ With the above review of the SOLEC vision and priorities in mind, it may be important to address, in the near future, the question: **Where does the SOLEC framework fit into such a scale of sustainability reporting?**
- ❖ The present SOLEC Core Group structure of indicators is not consistent with that of other well-established SOE or sustainability frameworks which, in the future, may develop into communications issue. The SOLEC structure may not, therefore, be recognizable to a broad spectrum of environmental managers and decision-makers. As a result, the present core group structure may limit the forecasting abilities of the framework by not providing clear information on factors that affect human behaviour.

- ❖ The uptake of information by decision-makers and interest groups is a key objective of the SOLEC program, therefore, ensuring familiarity is essential to establishing a comfort level building a rapport.
- ❖ This lack of clarity may lead to a larger amount of indicators for reporting than are necessary, a characteristic of indicator reporting systems that is important to avoid.
- ❖ It may be desirable for the SOLEC Steering Committee, in the near future, to address the Core Group Structure with respect to SOLEC strategic goals, allowing the SOLEC indicator program to be more congruent with other environmental reporting systems.

ⁱ Selection of Indicators for Great Lakes Basin Ecosystem Health. Version 4. For the State of the Lakes Ecosystem Conference. Paul Bertram and Nancy Stadler-Salt. March 2000.

ⁱⁱ Great Lakes Water Quality Agreement, 1978. As amended by protocol on Nov. 18, 1987. United States and Canada.

ⁱⁱⁱ Terms of Reference for State of the Lakes Ecosystem Conference Program (SOLEC). Coordinators: US EPA, Environment Canada. Draft copy, as of 2001-06-18.

^{iv} Assessing Progress Towards Sustainability: The System Method. Robert Prescott-Allen for The World Conservation Union International Assessment Team. Feb. 5, 2001

^v Review and Analysis of Best Practices in Public Reporting on Environmental Performance. Research Paper #9 – Managing the Environment. Michael Keating. Feb. 14, 2001.

^{vi} A portion of the Great Lakes Commission Vision Statement. As shown on the Great Lake Commission web site at <http://www.glc.org>

^{vii} George Francis, SOLEC Steering Committee meeting report, Jan. 1998

^{viii} Selection of Indicators for Great Lakes Basin Ecosystem Health. Version 4. For the State of the Lakes Ecosystem Conference. Paul Bertram and Nancy Stadler-Salt. March 2000.

^{ix} Lake Superior Lake Wide Management Plan, 2000. Chapter 9 - Developing Sustainability in the Lake Superior Basin

^x Indicators for Sustainable Development: Framework and Methodologies. Background Paper 3. Commission on Sustainable Development, United Nations, 9th Session. April 16-27, New York

^{xi} Assessing Progress Towards Sustainability: The System Method. Robert Prescott-Allen for The World Conservation Union International Assessment Team. Feb. 5, 2001

^{xii} OECD Core Set of Indicators for Environmental Performance Reviews - Environment Monograph No. 83. Organisation for Economic Co-operation and Development, Paris, 1993.

^{xiii} the National Roundtable for the Environment and the Economy – Indicator Program. As displayed on the internet site: <http://www.nrtee-trnee.ca>

^{xiv} Lake Michigan Lake Wide Management Plan. Chapter 3 - Indicators and Monitoring of the Health of the Lake Michigan Ecosystem. April 2000.