

**STEWARDSHIP FORUM**  
**JUNE 7 2011**

**STEWARDSHIP INDICATORS WORKSHOP**

**WORKBOOK**



**Stewardship  
Network of  
Ontario**

## INTRODUCTION

There is a growing concern that the indicators typically used to report on stewardship progress are not adequate to properly assess the collective contribution of stewardship programs to biodiversity conservation (*The State of Stewardship in Canada, 2009*). Reporting on the numbers of participants or acres involved in stewardship does not provide enough information about the environmental, biodiversity, economic and social benefits of stewardship activities. In turn, this information gap hinders efforts to make the case for ongoing investment, build capacity, develop a long-term vision for stewardship and provide accountability to both funding partners and landowners.

The *State of Ontario's Biodiversity 2010* report (SOBR) included six indicators to measure stewardship progress:

- Protected Areas and Conservation Lands in Ontario by Ecozone
- Sustainable Forest Management and Certification (area of certified forest)
- Participation in Environmentally Sustainable Agriculture Program (number of participants in Ontario's EFP program)
- Area with Stewardship Activities
- Number of Individuals Volunteering to Conserve Biodiversity
- Participation in Provincial Tax Incentive Program (CLTIP and MFTIP)

Although these were useful indicators, concerns have been raised that they did not tell the whole story. At the Ontario Stewardship Forum held in June 2010, speakers Alan Dextrase and Brian Innicki summarized these issues during a session on Stewardship Indicators. They noted that although considerable effort and expenditures are being expended to conserve biodiversity through a wide range of actions, losses are still occurring. We need measures to show whether stewardship activities are worthwhile and are making a positive difference, despite a context of continuing biodiversity losses due to a range of pressures, including climate change, habitat loss, invasive species, population growth, pollution and overharvesting.

Many traditional indicators focus on inputs and program achievements rather than the effectiveness of those activities in terms of changes in the landscape (i.e. direct environmental indicators). For example, we can report on how many Environmental Farm Plans have been developed, but we don't know whether they are being implemented, nor how effective they actually are in protecting or improving environmental quality and biodiversity. Given the dynamic nature of ecosystems and the time scale over which change occurs, we also need to consider indicators that report on past activities (lag indicators) as well as those that indicate what may happen in the future (lead indicators). Clearly we need a broader spectrum of indicators, both quantitative and qualitative.

### How do we define stewardship?

The definition of stewardship used in the *Stewardship Strategy of Ontario, 2007* is:

**Stewardship is an ethic by which citizens care for our air, land, water and biodiversity as parts of a natural life-support system and collectively act to sustain and enhance it for generations to come.**

This definition implies action by citizens, generally but not exclusively on private lands, and on a voluntary basis. It does not include actions taken by governments on public lands, nor regulatory controls on land or resources.

Support for continued funding and participation in stewardship programs depends on being able to make the case that stewardship is contributing to society's broader goals. The conservation community has traditionally used arguments based on science to try to influence decision-makers, with limited success. We might be more successful if we could clearly demonstrate the linkages between ecological information and other fields that are of interest to the public and politicians, such as economics, education, health, human well-being and climate change.

## **EXPERT PANEL**

On April 15<sup>th</sup>, 2011, SNO and MNR convened an Expert Panel to address these issues. Panel members included representatives from Ausable Bayfield Conservation Authority, Centre for Environmental Stewardship and Conservation, Conservation Ontario, Hamilton Conservation Authority, MNR, OMAFRA, Ontario Stewardship, and Natural Heritage Information Centre. At the Expert Panel workshop, participants discussed stewardship outcomes and targets from the draft 2011 Ontario Biodiversity Strategy, identified audiences for communication, and brainstormed a long list of potential indicators that could be used to show whether targets are being met. The following is a summary of highlights from the Expert Panel workshop.

### **Indicator Terminology**

Various terms are commonly used to describe different kinds of indicators and what they can communicate. For example:

- Program indicators (e.g. dollars invested, number of participants, number of trees planted)
- Direct environmental indicators (e.g. increase in forest cover)
- Social indicators (e.g. growth in stewardship ethic)
- Economic indicators (e.g. value of ecosystem services provided)
- Proxy or sentinel indicators (e.g. number of rare species as an indicator of biodiversity)
- Lag indicators (report on past activities)
- Lead indicators (project what may happen in future)
- Defence indicators (justify the importance and value of investing in stewardship)

### **Audiences**

Expert Panel members recognized that there are a number of different audiences for communications about stewardship progress:

- Politicians
- Institutions (corporations, funding organizations, NGOs, government)
- Media
- Stewardship community
- Public (landowners, farmers, First Nations, new Canadians, urban and rural communities)

We need to identify what stories we want to tell to each audience. For example, many politicians today are interested in jobs, infrastructure and economic opportunities. If the stewardship community doesn't learn to talk the "language of economics" it will continue to be marginalized.

## Criteria

A number of factors come into play when selecting indicators. Ideally, they should provide effective measures of progress towards outcomes. The data should be straightforward and inexpensive to collect. The indicators should be consistent across the geographic area being reported on. And they should tell a compelling story and be meaningful to the people who will receive them. The Expert Panel accepted the following draft criteria to assist in evaluating potential indicators of stewardship progress in Ontario:

**Table 1: Evaluation Criteria and Considerations**

| <b>Criteria</b>   | <b>Considerations</b>  |
|-------------------|--|
| <i>Effective</i>  | Does the indicator measure desired stewardship outcomes?   |
| <i>Compelling</i> | Is the indicator meaningful to the audience?   |
| <i>Reliable</i>   | Is there a consistent methodology for collecting the data?<br>Will the data be updated regularly over time?  |
| <i>Practical</i>  | Is it easy and inexpensive to collect the data during or following program delivery?<br>How can this be accomplished? (e.g. on a voluntary basis, as a condition of a grant or incentive, through a participant survey etc.) |
| <i>Accurate</i>   | Are the data used to measure the indicator accurate? (e.g., no/little duplication, not based mainly on extrapolation).<br>Is the data set comprehensive enough to represent the situation in Ontario?                        |

## Suggested Indicators

The following table presents the results of the brainstorming by the Expert Panel. It includes the questions that we would like to be able to answer about the social and cultural results, environmental and biodiversity results, and economic results of stewardship actions. The second column lists some suggested indicators that could address those questions, along with a summary statement about the key challenges associated with each group of indicators.

**Table 2. Expert Panel Brainstorming: Suggested Indicators of Stewardship Progress**

| What we want to know  | Suggested indicators   |
|---|--|
| <b>1. What are the social &amp; cultural results?</b>   |  |
| <ul style="list-style-type: none"> <li>Do participants have a new stewardship ethic (understanding, attitudes and behaviours)?</li> <li>Is stewardship benefiting individuals' physical and mental health?</li> <li>Has involvement in stewardship activities increased?</li> </ul>   | <ul style="list-style-type: none"> <li>Percent of people volunteering to conserve biodiversity (using % addresses increasing population; but it is difficult to acquire accurate reporting of the numbers of volunteers so there is a tendency to under-report)</li> <li>Number of participants in "friends groups" (e.g. volunteers in provincial parks)</li> <li>Number and location of farm stewardship projects (using GIS)</li> <li>Implementation surveys (e.g. participation data in voluntary activities from census, Statscan)</li> </ul> <p><i>Challenge: Existing data are not comprehensive nor reliable</i></p>   |
| <b>2. What are the environmental &amp; biodiversity results?</b>  |  |
| <ul style="list-style-type: none"> <li>Is habitat improving?</li> <li>Is the water clean?</li> <li>Is biodiversity better protected and/or conserved?</li> <li>Is watershed health improving?</li> <li>Has a landscape level target been achieved?</li> </ul>   | <ul style="list-style-type: none"> <li>Percent natural cover, forest cover, and agricultural land</li> <li>Acreage and percent of restoration (both active and passive restoration efforts)</li> <li>Percent increase in area of certified forest on private lands</li> <li>Number of trees planted by acreage</li> <li>Number of tree planting projects that receive follow up maintenance</li> <li>Number of acres affected by projects (e.g. planting trees, restoring wetlands)</li> <li>MFTIP/CLTIP: Percentage of eligible properties/participants that participate; Number of acres involved</li> <li>Area of land secured through donation (e.g. gifts of property; conservation easements)</li> <li>Area of land secured through purchase</li> <li>Percent impervious cover</li> <li>Water quality improvements (using data from watershed report cards)</li> </ul> <p><i>Challenge: Difficult to show "cause and effect" link between stewardship actions and environmental/biodiversity results</i></p> |
| <b>3. What are the economic results?</b>  |  |
| <ul style="list-style-type: none"> <li>How many volunteer hours are contributed?</li> <li>How many people are employed in the stewardship sector?</li> <li>Other benefits to the local economy?</li> <li>What is the economic value of conserving biodiversity? (value of ecosystem services)</li> <li>What is the tourism/recreational value of biodiversity?</li> </ul> | <ul style="list-style-type: none"> <li>Hours of volunteerism and estimated dollar value (what is an hour worth?)</li> <li>Expenditure on services provided by contractors</li> <li>Private investment in stewardship</li> <li>Grant money invested</li> <li>Total cost of projects</li> <li>Leveraging of funds</li> <li>Value of ecosystem services created/sustained by stewardship actions (need consistent and defensible method)</li> <li>Avoidance costs (e.g. avoiding clean up, treatment or infrastructure repair costs by undertaking stream rehabilitation)</li> <li>Contribution to GDP</li> </ul> <p><i>Challenge: May require new research/data collection and therefore resources</i></p>   |

## Expert Panel Conclusions

The Expert Panel discussions reached five overall conclusions:

**1. Outcomes and targets:** The outcomes provided by the draft 2011 Ontario Biodiversity Strategy provide a broad and valuable framework at the Provincial level. The corresponding targets in the Strategy are less useful for developing stewardship indicators. It is probably more appropriate to develop specific stewardship targets at a regional or watershed level.

**2. Relationship between stewardship and direct environmental measures:** Stewardship is all about empowering *people* to care for the land, air, water and biodiversity. It is difficult to measure the direct environmental results of stewardship actions separately from the results of other actions such as government policies and regulations. The *State of Ontario's Biodiversity 2010* report provides a comprehensive picture of the state of environmental quality and biodiversity. It may be most effective for the stewardship community to focus on measuring the social and economic benefits of stewardship actions where the information is available to do this.

In addition, the Expert Panel suggested taking a case study approach to research that would attempt to link stewardship actions to changes in environmental quality and biodiversity. This would help to provide a better understanding of the effectiveness of stewardship activities that could then be extrapolated to other situations.

**3. Building on existing indicators:** The indicators in the *State of Ontario's Biodiversity 2010* report (SOBR) resulted from a process that used existing information available from groups and agencies across Ontario. They represent a reality check to compare “what we would like to know” with “what information is actually available”. It will be worthwhile to assess these indicators to determine:

- What are their limitations?
- How can data reliability be improved?
- What additional information can be collected to make the indicators more meaningful?

**4. Standardized reporting:** It would be invaluable to develop a core set of reporting requirements among organizations that fund stewardship programs. This could be designed to reduce “double-counting” and provide meaningful information about the social, environmental and economic benefits of stewardship activities.

**5. Rationale for stewardship:** It is often difficult for NGOs and agencies to allocate sufficient time for comprehensive and effective reporting on their activities. But it is important to remember that meaningful indicators, especially those that focus on economic benefits of stewardship, are essential to justify investments and help stewardship organizations to survive and thrive in a highly competitive environment.

## STEWARDSHIP FORUM WORKSHOP

### Purpose and Objectives

The Indicators Workshop at the June 7<sup>th</sup> Stewardship Forum is designed to focus on the third conclusion of the Expert Panel workshop, that it will be most effective and practical to build on the existing indicators used for the *State of Ontario's Biodiversity 2010* report (SOBR).

Accordingly, the objectives of the workshop are to:

- Increase understanding of the existing indicators, what they can tell us, and their limitations,
- Solicit ideas about how to improve the existing indicators and make them more meaningful, and
- Seek advice on an approach for the next SOBR

### Workshop Agenda

1. Introductory Presentation – Suzanne Barrett, Chair of SNO
  - Discussion: do you agree with the conclusions of the Expert Panel?
2. Presentation on Indicators used for the 2010 SOBR – Rebecca Zeran, Partnership and Outreach Advisor, Biodiversity Policy Section, MNR
3. Roundtable discussions to address:
  - How could comprehensiveness and data reliability be improved?
  - Could the data be presented more effectively?
  - What additional information could be collected to make the indicators more meaningful?
  - How could your organization participate?
  - Would you like to propose any other indicators?
  - Any other comments or advice
4. Plenary to share highlights and discuss next steps

### Draft Worksheets

The following worksheets will be available for you to use during the workshop discussions. There is a separate worksheet for each of the SOBR 2010 indicators that address stewardship. The final worksheet is intended for your suggestions about any other indicators you would like to suggest, and your ideas for follow-up activities.

## A. Protected Areas and Conservation Lands in Ontario by Ecozone

**Data used to report on the indicator:** Protected areas include provincial and national parks, conservation reserves and wilderness areas. Conservation lands include lands and easements held by conservation authorities, Nature Conservancy of Canada, Ducks Unlimited Canada, Ontario Nature and affiliated clubs, Ontario Heritage Trust, and members of the Ontario Land Trust Alliance.

**Notes about the indicator:** Complete data sets for conservation lands were not available.

|   |  |
|---|--|
| <b>1. How could comprehensiveness and data reliability be improved?</b>   |  |
| <b>2. Is the indicator effective and compelling? If not:</b> <ul style="list-style-type: none"> <li>• Could the existing data be presented more effectively?</li> <li>• What additional information could be collected to make the indicator more meaningful?</li> </ul>              |  |
| <b>3. How could you participate? e.g.</b> <ul style="list-style-type: none"> <li>• Does your organization collect any of this information?</li> <li>• Would you be willing to share it to contribute to the next SOBR?</li> <li>• Are there any barriers to participation?</li> </ul> |  |
| <b>4. Any other comments or advice?</b>   |  |



## B. Sustainable Forest Management and Certification

**Data used to report on the indicator:** Lands certified under the Canadian Standards Association (CSA), Forest Stewardship Council (FSC), and Sustainable Forestry Initiative (SFI).

**Notes about the indicator:** Certification is not the only measure of sustainable forest management in Ontario (Ontario's forest management planning process is premised on the principles of sustainability, whether a forest is certified or not). We cannot separate voluntary certification from regulatory certification within the Area of Undertaking. There is little private forest certified in southern Ontario. Sustainable forest management most certainly occurs in woodlots across Ontario that are not certified under a standard.

|   |  |
|---|--|
| <p><b>1. How could comprehensiveness and data reliability be improved?</b></p>  |  |
| <p><b>2. Is the indicator effective and compelling? If not:</b></p> <ul style="list-style-type: none"> <li>• <b>Could the existing data be presented more effectively?</b></li> <li>• <b>What additional information could be collected to make the indicator more meaningful?</b></li> </ul>                     |  |
| <p><b>3. How could you participate? e.g.</b></p> <ul style="list-style-type: none"> <li>• <b>Does your organization collect any of this information?</b></li> <li>• <b>Would you be willing to share it to contribute to the next SOBR?</b></li> <li>• <b>Are there any barriers to participation?</b></li> </ul> |  |
| <p><b>4. Any other comments or advice?</b></p>  |  |

### C. Participation in Environmentally Sustainable Agriculture Program

**Data used to report on the indicator:** OMAFRA data on the number of farms participating in the Environmental Farm Plan (EFP) program, the number of EFP projects undertaken and the percentage of EFP projects completed that involve biodiversity-related BMPs (e.g., restricting livestock access to waterways, establishing buffers, restoring wetlands, and controlling invasive plant species).

**Notes about the indicator:** The indicator did not include information about the various ‘top-up’ programs that encourage uptake of biodiversity-related BMPs under the EFP. Note that biodiversity BMPs are fairly common stewardship activities and it is possible that some of the acres from the EFP projects are included in the “Area with Stewardship Activities” indicator.

|   |  |
|---|--|
| <p><b>1. How could comprehensiveness and data reliability be improved?</b></p>  |  |
| <p><b>2. Is the indicator effective and compelling? If not:</b></p> <ul style="list-style-type: none"> <li>• <b>Could the existing data be presented more effectively?</b></li> <li>• <b>What additional information could be collected to make the indicator more meaningful?</b></li> </ul>                     |  |
| <p><b>3. How could you participate? e.g.</b></p> <ul style="list-style-type: none"> <li>• <b>Does your organization collect any of this information?</b></li> <li>• <b>Would you be willing to share it to contribute to the next SOBR?</b></li> <li>• <b>Are there any barriers to participation?</b></li> </ul> |  |
| <p><b>4. Any other comments or advice?</b></p>  |  |

### D. Area with Stewardship Activities

**Data used to report on the indicator:** Area with stewardship activities reported from Ducks Unlimited Canada, Conservation Ontario and Ontario Stewardship for tree planting, wetland restoration, buffer establishment etc.

**Notes about the indicator:** The data are not comprehensive and do not account for all stewardship action in the province as it only includes larger agencies/programs where data were readily available. Duplication of data is likely (i.e., multiple partners involved in one project). There is no comprehensive, standardized dataset for stewardship in Ontario.

**1. How could comprehensiveness and data reliability be improved?**

**2. Is the indicator effective and compelling? If not:**

- Could the existing data be presented more effectively?
- What additional information could be collected to make the indicator more meaningful?

**3. How could you participate? e.g.**

- Does your organization collect any of this information?
- Would you be willing to share it to contribute to the next SOBR?
- Are there any barriers to participation?

**4. Any other comments or advice?**

## E. Number of individuals Volunteering to Conserve Biodiversity

**Data used to report on the indicator:** Numbers of individuals who donate their time to advancing biodiversity-related initiatives operated by Conservation Ontario, Ducks Unlimited Canada, Nature Conservancy of Canada, Ontario Nature and Ontario Stewardship.

**Notes about the indicator:** This indicator does not capture all voluntary stewardship action in the Province. Data do not include memberships in conservation organizations (a metric used by other countries). Data from 3 of the 5 agencies was estimated annually. There is no standardized method of tracking data from this measure, but it is a fairly simple and important indicator to communicate publicly.

|   |  |
|---|--|
| <p><b>1. How could comprehensiveness and data reliability be improved?</b></p>  |  |
| <p><b>2. Is the indicator effective and compelling? If not:</b></p> <ul style="list-style-type: none"> <li>• <b>Could the existing data be presented more effectively?</b></li> <li>• <b>What additional information could be collected to make the indicator more meaningful?</b></li> </ul>                     |  |
| <p><b>3. How could you participate? e.g.</b></p> <ul style="list-style-type: none"> <li>• <b>Does your organization collect any of this information?</b></li> <li>• <b>Would you be willing to share it to contribute to the next SOBR?</b></li> <li>• <b>Are there any barriers to participation?</b></li> </ul> |  |
| <p><b>4. Any other comments or advice?</b></p>  |  |

## F. Participation in Provincial Tax Incentive Programs

**Data used to report on the indicator:** The number of properties enrolled under the Conservation Land Tax Incentive Program (CLTIP) and the Managed Forest Tax Incentive Program (MFTIP).

**Notes about the indicator:** Data are easily obtained and accurate. They include both private land and land owned by conservation agencies. Consideration was given to reporting on CLTIP participation against the total eligible properties (i.e., since not all property in Ontario is eligible for the program); however, this would not have enabled a simple roll-up of numbers with MFTIP. There was also some consideration of reporting MFTIP under the indicator dealing with sustainable forest management.

**1. How could comprehensiveness and data reliability be improved?**

**2. Is the indicator effective and compelling? If not:**

- Could the existing data be presented more effectively?
- What additional information could be collected to make the indicator more meaningful?

**3. How could you participate? e.g.**

- Does your organization collect any of this information?
- Would you be willing to share it to contribute to the next SOBR?
- Are there any barriers to participation?

**4. Any other comments or advice?**

**Other Comments**

1. Do you have other suggestions for indicators? If so, provide details on:
- Why would this be a good indicator?
  - What data are available?
  - Who is collecting the data?

2. Do you have any suggestions for follow-up activities? Please provide details.