

Sustainability, Social Learning and the Long Point World Biosphere Reserve

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Abstract

Long Point, Ontario Canada, was designated a biosphere reserve by the United Nations Educational, Scientific and Cultural Organization in 1986. The not-for-profit and charitable Long Point World Biosphere Reserve Foundation administers the designation and recently decided to address sustainable development as a complement to their conservation activities. The Foundation hosted four community sustainability workshops to gather ideas on how to proceed on the sustainability front. Four sector-specific workshops were held with representatives from business and industry, service groups, conservation and agriculture. The workshops laid the foundations for community social learning and contributed to participants successfully addressing the complex and contentious issue of sustainability in the Long Point area. Workshop results yielded information on trends affecting the Long Point area and ideas for addressing sustainability through communication, education, ecotourism, agricultural viability and urban issues.

Long Point, Ontario, Canada, a été désignée en 1986 réserve de la biosphère par l'Organisation des Nations Unies pour l'éducation, la science et la culture (UNESCO). La Long Point World Biosphere Reserve Foundation, organisme de bienfaisance à but non lucratif administre cette désignation et a récemment décidé d'intégrer le développement durable à ses activités de conservation. La fondation a tenu quatre ateliers sur la durabilité communautaire afin de rassembler des idées sur la manière d'œuvrer dans le domaine de la

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durabilité. Quatre ateliers propres à divers secteurs ont eu lieu avec des représentants des entreprises et des secteurs industriels, des groupes de prestataires de services, ainsi que des groupes liés à la conservation et à l'agriculture. Les ateliers ont permis de jeter les fondements d'un apprentissage social communautaire et ont fait en sorte que les participants aient pu traiter avec succès de la question complexe et litigieuse de la durabilité dans la région de Long Point. Les ateliers ont permis de réunir des renseignements sur les tendances qui touchent la région de Long Point, ainsi que d'élaborer des idées sur la manière de réaliser la durabilité par le biais des enjeux liés aux communications, à la sensibilisation, à l'écotourisme, à la viabilité agricole et à l'urbanisme.

Key Words

Social learning, sustainability, World Biosphere Reserves

Introduction

Biosphere reserves are designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in recognition of areas working toward sustainability. Biosphere reserves are intended to fulfill three complementary and mutually reinforcing functions: contributing to the conservation of landscapes, ecosystems, species and genetic variation; fostering sustainable economic and human development; and providing logistics support for research, monitoring, education and information exchange (UNESCO 2006).

The Long Point World Biosphere Reserve was designated by UNESCO in 1986. Long Point is a 32 km sand spit located on the north shore of Lake Erie, in Norfolk County, Ontario and is an example of the Great Lakes coastal ecosystem. The Long Point complex is an important staging area for migrating waterfowl, is renowned for superb bass fishing and birding, and is home to the largest number of endangered, threatened and species of concern in Canada (Craig, *et al.* 2003). The biosphere reserve is administered by the Long Point World Biosphere Reserve Foundation (LPWBRF), a charitable, not-for-profit, volunteer organization.

The LPWBRF recently decided to expand their activities from a primarily environmental focus (Craig *et al.* 2003; Francis and Whitelaw 2001) to one that encompasses a broader notion of sustainability. There are many interpretations of sustainability (Gibson, *et al.* 2005; Mebratu 1998; Pezzoli 1997). For the purposes of the Long Point sustainability workshops, the World Commission on Envi-

ronment and Development's (WCED 1987:8) definition of sustainable development was used. The WCED defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This definition was used as the LPWBRF felt it was the most well known and accepted in the community. This broadening of the Foundation's scope from conservation-focused to addressing broader sustainability is consistent with all three functions of biosphere reserves.

The Foundation initiated a series of sustainability workshops designed to engage the local biosphere reserve community in identifying potential sustainable development projects that the Foundation might facilitate to improve planning and management in the Long Point area. This paper documents the workshop process, presents the results, and discusses the contributions of the workshops to social learning and the logistics activities of the Foundation.

Social Learning

The following review of the social learning literature was carried out in order to develop a definition and a framework for social learning in the Long Point environmental planning context. This review briefly tracks the history and streams of the social learning literature, leading to the application of the concept in the Long Point biosphere reserve environmental planning context.

Webler *et al.* (1995) provide an excellent overview of the origins of the concept of social learning and document the tension within the literature between psychological and sociological perspectives. The psychological or pedagogical perspective on social learning, as represented by Bandura (1971, 1986, 1991), is based on the work of social-psychologist, Kurt Lewin and revolves around the individual learning process being dependent on social interactions. The sociological perspective moves beyond individuals learning in a social context to see learning occurring on the scale of social structures such as organizations and institutions (Argyris 1993). Such a view of social learning sees it as an expression of coordinated cognitive and normative adjustments resulting in social change (Wynne 1992). Webler *et al.* (1995) provide a useful starting point for a discussion of the nature and definition of social learning. They note that, "social learning means more than merely individuals learning in a social situation ... (they) envision a community of people with diverse personal interests, but also common interests, who must come together to reach agreement on collective action to solve a mutual problem" (Webler *et al.* 1995: 445). The authors go on to define the concept of social learning as, "the process by which changes in the social condition occur – particularly changes in popular awareness and changes in how individuals see their private interests linked with the shared interests of their fellow citizens" (Webler *et al.* 1995: 445). This definition provides a useful starting point but does not speak directly to the requirements or nature of the processes which underlie social learning.

"Social learning ... is intended to help improve the quality and wisdom of the decisions we take when faced with complexity, uncertainty, conflict and paradox" (Röling and Wagemakers 1998: 54). As such, the notion has begun to be applied in a variety of complex decision-making contexts including planning and management (Tippett *et al.* 2005; Simon 2004; Pahl-Wostl and Hare 2004;

Bouwen and Taillieu 2004; Sinclair and Diduck 2001). Planning, management, and policy issues are often described as complex and highly uncertain (Kay *et al.* 1999; Funtowicz and Ravetz 1993; Ravetz 1999). From this perspective, management cannot be seen as the search for an ideal or even optimal solution to a single problem but rather as an ongoing process of adaptation, learning and negotiation (e.g. Kay *et al.* 1999 and Mitchell 2002). Fostering ongoing social learning could help overcome the limitations of existing institutions and consider multi-scale, collaborative forms of governance for groups involved in environmental planning and policy-making (Tippet *et al.* 2005).

Mezirow's transformative theory of adult learning provides a set of criteria for fostering social learning processes. Despite beginning on the psychological branch of the social learning literature, Mezirow's work has been used to describe a more sociological view of social learning in the context of environmental assessment and decision-making processes (esp. Sinclair and Diduck 2002). Mezirow (1994: 222-223), defines learning as, "the social process of constructing and appropriating a new or revised interpretation of the meaning of one's experience as a guide to action." Mezirow (1994) describes six ideal conditions for learning, these include:

1. Accurate and complete information
2. Freedom from coercion
3. Openness to alternative perspectives
4. Ability to reflect critically upon presuppositions
5. Equal opportunity to participate
6. Ability to assess arguments in a systematic manner and accept a rational consensus as valid

These conditions provide a useful basis for developing public forums that will foster learning and critical reflection. Mezirow's (1994, 1998) work highlights the need for alternative perspectives, the need for critical reflection as well as the importance of acknowledging power relations within the learning process.

Sinclair and Diduck (2001) have taken Mezirow's (1994, 1998) transformative theory of adult learning and applied it to understanding how public participation in environmental assessment processes provides opportunities for social learning. The authors use Mezirow's (1994, 1998) ideal conditions for learning as criteria for evaluating Canadian environmental assessment processes with respect to their ability to facilitate mutual learning among participants. While Mezirow's ideal conditions were developed for use at the personal level, Sinclair and Diduck note that for their purposes, the conditions were used to derive criteria for use at the policy development process-level or social-level.

Building on Sinclair and Diduck's use of Mezirow's transformative learning, this paper takes Mezirow's ideal conditions and applies them to a less formal public environmental decision-making process, the Long Point World Biosphere Reserve sustainability workshop series. Through this work we have developed a definition of social learning that reflects both the literature and our experience with the Long Point workshop series. We define social learning as an ongoing, adaptive, communicative process of knowledge creation and synthesis of a variety of knowledges, as well as multiple levels of critical reflection from the practical and pragmatic (regulatory/policy) to the abstract, philosophical or

ethical (institutional/cultural) that occurs on both the individual and structural scales and results in changes to policy and social structures. This definition speaks directly to the criteria for fostering social learning in a public engagement process (Fitzpatrick and Sinclair 2003, Fitzpatrick 2006, Michaels *et al.* 2006a, 2006b). Our definition integrates the psychological and sociological streams of social learning, allows for the integration of different perspectives (knowledges) and requires multiple levels of critical reflection. Through the Long Point Sustainability Workshop series we found some evidence of opportunities for social learning based upon Mezirow's criteria and how it has positively contributed to efforts to address issues of sustainability in the region.

Sustainability Workshop Process

The LPWBRF made the decision to host four workshops organized around four community sectors. These included business and industry, service, conservation and agriculture. Extensive efforts were made to contact representatives from each of these sectors and to invite them to participate. The workshops were held in or near the Town of Simcoe, Ontario. Attendance varied with each workshop. The business and industry workshop had 6 participants, the service sector workshop 6, the conservation workshop 25, and the agriculture workshop 19.

Each workshop consisted of three main phases.

1. An introductory presentation on biosphere reserves and the work of the LPWBRF since the reserve was established in 1986
2. A presentation by the Norfolk County Planning Department on the County's 2026 Sustainability Vision (Norfolk County 2003), developed as part of the County's latest Official Plan review process
3. A facilitated session designed to allow the participants to express their views on the topic of sustainability

The type of facilitated session used was dependent on the number of workshop attendees. The smaller workshops involved roundtable discussions. The larger sessions involved a plenary discussion where attendees identified potential discussion topics; small group discussions on topics further refined by the participants; and a final plenary discussion. A note taker and presenter were assigned within each small group. Both techniques provided valuable information on the interests of workshop participants and generated ongoing discussion as participants were able to respond to each other throughout the process.

For both the roundtable discussions and small group discussions, the following subjects were used to stimulate discussion.

1. Trends affecting the community
2. Issues currently of interest
3. Barriers to achieving sustainable livelihoods
4. Existing resources available to the community
5. Ideas for future sustainability projects that may work in the Long Point context

Graduate students from the University of Waterloo, Faculty of Environmental Studies assisted with note-taking and transcription. Furthermore, team members involved with the Biosphere Sustainability Project (BSP 2006), led by

Dr. Robert Gibson and Dr. George Francis of the Environment and Resource Studies Department in the Faculty of Environmental Studies also contributed to analysis of the workshop results.

Results of the Workshops: Trends and Themes

Trends

Both global and regional trends were identified by participants as having influence on the Long Point area. A negative trend involving globalization and the loss of agricultural markets was identified by participants in both the agriculture and conservation workshops. Negative impacts on the local economy from agricultural decline were linked to this global trend. Solutions presented by participants included: communicating, marketing and demonstrating the Long Point biosphere reserve's exemplary agricultural practices through branding; the use of the hundred mile radius marketing concept (Sampson 2005); and promotion and marketing of the Alternative Land Use Services (ALUS) Program (Delta Waterfowl 2006).

A second negative trend identified in all four workshops was the loss of young people from the Long Point area. There was general agreement that sustainable development projects involving ecotourism and education/interpretation might help counter this trend. A third trend identified by participants in the business and industry, service and conservation workshops involved the increasing number of people choosing the Long Point area as a retirement destination. This was identified as a positive trend and one the biosphere reserve might consider tapping into in terms of resources such as money and volunteers.

Themes

Table 1 synthesizes some of the major and minor themes raised by participants in the four workshops.

The sense of pride in the Long Point community felt by all participants is of note. Also of interest is the fact that the UNESCO biosphere reserve designation is given to areas in recognition of the progressive work being carried out; however, the community appears to have minimal knowledge of this prestigious designation. Participants believe the Long Point area is special and that the area has the potential to address the sustainability challenge by building on existing strengths. Communication, marketing and networking were identified as critical activities for the biosphere reserve. One participant in the business and industry workshop indicated that after deciding to attend the workshop, he went online to find out about biosphere reserves and specifically the LPWBR. He indicated that he found out that biosphere reserves were everything he thought they were *not* and suggested that the LPWBRF improve on its communication and marketing activities. Participants in the business and industry, service and conservation workshops indicated that there are plenty of sustainable development initiatives taking place in the Long Point area (e.g. ecotourism, farm gate sales) and that these should be inventoried and then marketed by the LPWBRF.

The theme of education was discussed extensively in three of the four workshops – business and industry, service and conservation. Participants felt education was critical to the success of the biosphere reserve and achieving

Table 1. Major and minor themes of the four Long Point Workshops

Workshop Major Themes	Conservation and Outdoors	Business	Service	Agricultural	Emergent Themes
<p>Information resources</p> <ul style="list-style-type: none"> • Of science • Of biosphere reserve <p>Ecotourism</p> <ul style="list-style-type: none"> • Too much protection at the expense of ecotourism • Access to Point – tours – certification train locals • Private/public partnerships • Cycling map • Interpretive Centre <p>Agricultural</p> <ul style="list-style-type: none"> • Ecological services • Organic farming 	<p>Ecotourism</p> <ul style="list-style-type: none"> • Guides • Boardwalk • Winter season • Interpretive Centre • Boat tours • Need a destination • Build on existing services • Bring in private sector (RFP) <p>Communication Marketing</p> <ul style="list-style-type: none"> • Film • Vision • Farmers market • Sporting opportunities • Hidden gems • Ability of professionals to work from Long Point area – wired • Agri-tourism 	<p>Communication:</p> <ul style="list-style-type: none"> • Lack of understanding of Biosphere Reserve <p>Ecotourism</p> <ul style="list-style-type: none"> • Facilities • Attracting tours • Foreign interest and investment • Organize tours/attractions <p>Education and Research</p> <ul style="list-style-type: none"> • Primary, secondary, post-secondary • Exchange students • Foreign researchers • Outdoor Education 	<p>External Influences</p> <ul style="list-style-type: none"> • Globalization • Market control • Taxation/bylaws <p>Collapse of tobacco and emergence of niche markets</p> <p>Rural poverty</p> <p>Balance of economic and environmental interests</p> <p>Food safety regulations downgraded</p> <p>Solutions</p> <ul style="list-style-type: none"> • Film • ALUS • Buy local – 100 mile radius 	<p>Communication and increased understanding of the Biosphere Reserve</p> <p>Connections to the local economy</p> <ul style="list-style-type: none"> • Utilize ecotourism including the Point • Need to provide a destination /facilities/interpretative centre for ecotourism • Agriculture ecological services <p>Education and Research</p> <ul style="list-style-type: none"> • Outdoor education • Research • Information as a resource to collect and share • Climate change • Globalization • Local demographics 	
Minor Themes	<p>Climate change</p> <ul style="list-style-type: none"> • Education • Adaptation <p>Urban Issues</p> <ul style="list-style-type: none"> • Greening <p>Wind</p> <p>Real estate values</p> <p>Partnerships</p>	<p>Trends</p> <ul style="list-style-type: none"> • Demographic changes • Real Estate Values <p>Rural character</p> <p>Cooperation</p>	Golf <p>Transportation</p>		Rural Poverty

sustainability. Extensive discussions revolved around the idea of developing an international interpretive centre in Port Rowan with new environmental recreation facilities e.g. board-walks in the marsh area of Long Point to act as an anchor for environmental education and as a tourist destination.

Ecotourism was also a focus of discussion in the business and industry, service and conservation workshops. Surprisingly, many participants indicated that the Long Point core, currently off limits to people, should have limited, controlled and managed access to promote ecotourism. Other ideas included the development and promotion of the Long Point area as an ecotourism cycling destination. Many existing activities and services in the Long Point area were also identified including boating, hiking and birding. The idea of inventorying and better coordinating and marketing these ecotourism activities was suggested.

Rural poverty and associated depression was identified as an important issue in need of further attention in the service and agriculture workshops. This rural issue was directly linked to the decline of tobacco and other constraints on agriculture resulting from globalization. Urban issues were also raised in the business and industry workshop. The focus was on the need to address urban homelessness and urban renewal.

In general, the participants in the workshops raised a broad and rich mix of trends and themes in relation to the sustainability of the Long Point community. Trends from the local to the global including youth emigration and the impacts of economic globalization on the agricultural community were highlighted by the workshop participants. The complexity of the notion of sustainability was reflected in themes raised by the attendees. Themes as varied and multifaceted as rural poverty, community pride, education, ecotourism and the need for a strong biosphere reserve communications strategy spoke to a well-informed and reflective group of workshop participants.

Discussion:

Social Learning and Biosphere Reserve Logistics Activities

Social Learning

The four workshops provided a number of community members with access to useful information about the biosphere reserve and its role in the sustainability of the Long Point community. It also provided workshop participants, facilitators and LPWBRF board members with an opportunity to communicate and reflect, in an open and comfortable atmosphere, upon the complex and contentious issues around sustainability in the Long Point community.

Throughout the workshop series, an effort was made to provide an atmosphere conducive to collective or social learning. Above, reference was made to Mezirow's (1994; Sinclair and Diduck 2001) six ideal conditions for learning. This paper has retrospectively applied these ideal conditions to the workshop series in order to highlight positive contributions of the series as well as to provide constructive recommendations for fostering social learning through Biosphere Reserve activities. Mezirow's conditions are a set of criteria for an ideal process for fostering social learning in a public involvement process. Despite this, some of the criteria were evident through the process and critique of the workshop

series. Using these criteria provides some constructive recommendations for future biosphere reserve initiatives.

An effort was made to provide participants with a measure of accurate and complete information. Each workshop began with a description of the role of the Long Point Biosphere Reserve and the Foundation's interest in engaging the community to help broaden its mandate from a solely environmental conservation focus to embrace the more comprehensive notion of sustainability. During each session community members were asked specifically to raise the major trends, issues, resources and barriers to sustainability as well as to make suggestions to the Foundation for sustainability-focused projects. The sessions were designed to provide community members with as accurate and broad-based information as possible about the issues impacting their community's sustainability potential in an open and self-directed atmosphere. Of course, no process is ideal and workshop facilitators and LPWBRF board members were disappointed to know that some of the participants, before hearing about and attending this meeting did not even know there was a UNESCO World Biosphere Reserve in their community. And for the participants that did know about the biosphere reserve, many had differing understandings of the role and purpose of the biosphere reserve. More public outreach, such as the November 2006 "Building a Sustainable Norfolk Community" conference will provide some much needed public understanding of how the biosphere reserve can and is contributing to sustainability in the area.

In an effort to create a positive workshop environment, with reference to Mezirow's second ideal condition for social learning, the LPWBRF board decided to have separate workshops for the various stakeholder groups. The board's decision was based on first-hand experience with members of the conservation, agricultural, business and service sectors in their area. It was felt that individual farmers, for instance, would be more comfortable and open talking to other farmers. Of course, this also had the effect of preventing potentially fruitful cross-sectoral discussions. However, the board did explicitly indicate that the results of these sessions would be synthesized and the groups brought together in a follow-up forum, the "Building a Sustainable Norfolk Community" conference.

In the context of the small group discussions, each community member was encouraged to reflect critically on the trends, issues, resources and barriers to sustainability previously raised. Participants were then encouraged to collectively discuss these and to move toward a consensus on possible projects that could foster sustainability in the Long Point area. In this atmosphere community members were able to openly share and reflect upon the various perspectives of the group and collectively learn from each other. Due to the decision to hold separate workshops for the different sectoral groups, the opportunity to ensure an openness to alternative perspectives was diminished. However, the board felt that some perspectives might not be heard if a single workshop, with all four groups, was held due to the contentious nature of some sustainability-related issues such as the tension between environmental protection and opportunities for ecotourism. As with any public meeting, it became evident that there were many unrepresented groups, such as the increasing rural and urban poor, retirees that are moving to the area, and members of the academic community

that have conducted research in the Long Point area. Future biosphere reserve outreach activities should target these groups and identify other missing voices.

Through this process it became evident that many of the community members already possessed an understanding of the trends, issues, resources and barriers to sustainability in the Long Point area. This may have resulted from social learning initiated through previous sustainability-related community engagement processes such as the recent County of Norfolk Official Plan Review process, the Norfolk Tobacco Community Action Plan process and the Alternative Land Use Services program. By raising issues such as rural poverty, the influx of retirees, youth emigration and describing the influence of trends such as the collapse of the tobacco growing industry and the impacts of globalization, community members demonstrated a level of reflection and understanding of some of the issues impacting their livelihoods.

When asked about the trends, issues, resources, and barriers to sustainability in their area community members did not simply cite regulatory or policy-related issues or even issues related to the policy-making process itself. Instead, much of the discussion focused on much broader institutional perspectives. In the context of generating potential sustainable development-focused projects and policies, this broad level of reflection is necessary to address such complex, interrelated and controversial issues as the collapse of the tobacco industry, rural poverty and the impacts of economic globalization on the agricultural sector. Workshop participants raised issues around how best to communicate and market the Long Point Biosphere Reserve and how to improve the education and agri- and eco-tourism programs in the Long Point Area. They also posed more normative questions around the issues of youth emigration from the area and rural poverty, noting that existing programs and policies were inadequate and postulated what else could be done to address these complex issues. Finally, issues around the collapse of the tobacco industry and the impacts of globalization of agricultural markets were raised several times in the context of this workshop series. Expressions of powerlessness due to lack of market control and questions around the ethics of global agricultural market standards demonstrated some reflection on the broad, international processes impacting their livelihoods.

The workshops were deliberately structured to ensure that participants had equal opportunity to discuss issues that concerned them the most. The open-spaces forum allows participants to identify topics and 'vote with their feet' on what topic they choose to discuss. Of course, as previously mentioned, due to the fact that some of the participants did not even know they had a biosphere reserve in their area, many individuals and groups may not have been aware of the workshops or, in the case of the rural poor or the elderly, may not have been able to attend.

The open-spaces approach is structured to ensure that participants assess arguments made in small groups and then synthesize and evaluate them in a facilitated plenary discussion. There was an effort to achieve some measure of consensus on the trends, issues, barriers, resources and ideas for future projects; however, the broad intent of this workshop series was to provide a comprehensive overview of sustainability-related issues in the Long Point area.

This overview would then be used to help structure the “Building a Sustainable Norfolk Community” conference.

Mezirow’s ideal conditions provide a useful set of criteria for fostering social learning in environmental decision-making processes. These criteria could be used to evaluate or design future biosphere reserve public engagement processes. It was clear through the open participation of many community members that they appreciated and benefited from this and other such social learning opportunities in their area. A number of workshop participants expressed gratitude to the LPWBRF for providing them an opportunity to learn about the Biosphere Reserve and to discuss sustainability-related issues as they impact their community.

Biosphere Reserve Logistics Activities

The results of the workshop series as well as a follow-up round table discussion with researchers at the University of Waterloo (BSP 2006) have provided the LPWBRF Board with a diverse number of opportunities to pursue sustainability activities in partnership with various individuals and organizations including many who attended the workshops. The idea of inventorying local sustainable activities was raised by a number of workshop participants. Tracking the “big picture” of who is doing what in the biosphere reserve has been raised before as a major role of any biosphere reserve administration (Francis 2004). This activity should precede all activities associated with communication/marketing, education, ecotourism and human well being. With a clear understanding of the current situation, the Foundation will be in a better situation to address the various activities suggested by workshop participants. For example, one “big picture” gathering activity would involve identifying all farm gate enterprises and then using the information to market these operations to locals and visitors. Similarly, other agricultural products associated with the Long Point area might be inventoried. These could then be marketed through branding, working with local chefs and their restaurants, creating a Long Point agricultural gift box, or targeting customers within a 100 mile radius of the biosphere. Along similar lines, prior to exploring the idea of developing an international interpretive centre in Port Rowan or developing additional educational and ecotourism facilities in the Long Point Marsh and on the Point itself, an inventory of existing interpretive centres and an exploration of the possibilities of linking and marketing these should occur.

The Long Point area is renowned for exemplary land stewardship activities, due to the many non-governmental organizations and government agencies engaged in preserving, conserving and restoring the unique flora and fauna, and aquatic and terrestrial ecosystems of the Carolinian forest zone. The Norfolk Land Stewardship Committee, in cooperation with Haldimand County and Oxford County Land Stewardship Committees completed a “Catalogue of Land Stewardship Demonstrations” which can now be accessed on-line (Stewardship Canada 2006). Constraints in capacity have prevented updating this catalogue since its inception (Reid 2006). The LPWBRF could partner with relevant organizations to update the catalogue. With such information, the biosphere reserve could then be marketed as the preeminent area that links stewardship activities to sustainable livelihoods in Ontario. Such recognition might lead to further

investment in stewardship and recognition of the Long Point area.

Based on the discussion above, the LPWBRF should develop an ongoing tracking system focused on the topics raised by the workshop participants (agriculture, tourism, education, social issues, etc.). This activity would fit into recent activities of the Foundation to design and implement a monitoring program for the biosphere reserve (Jongerden *et al.* 2004). A starting point for this tracking activity might be updating the extensive work completed through the Long Point Folio project in 1994 (HRC 2006).

The LPWBRF should also continue to carry out community engagement activities that foster ongoing and long term social learning. The positive outcomes of the four workshops demonstrate that similar workshops should be held on a regular basis, perhaps every five years. Such fora should be designed to include and integrate as many perspectives as possible including the rural and urban poor, area retirees and academics conducting work in the area. The 2006 Long Point Sustainability Conference should include forums where updates on such issues as the "Tobacco Community Action Plan" (Gowan 2004) and ecotourism efforts can be presented and built upon through subsequent biosphere reserve activities. This would contribute to tracking the "big picture" described above and provide an excellent forum for continuous social learning for those community members involved with the biosphere reserve.

Conclusions

The Long Point sustainability workshops have had a number of positive outcomes. The LPWBRF Board, through the workshops, has begun to change the perception by local community members of the LPWBRF from simply an environmental organization, to one also delivering on sustainability. Additional community members were engaged in thinking about the future of the Long Point area and this led to the generation of ideas that may lead to sustainability projects that benefit the community in the future. In three of the four workshops – business and industry, service and agriculture – participants were individuals who had never had contact with the biosphere reserve before. This resulted in the emergence of new champions for the biosphere reserve. These positive outcomes appear to have resulted in large part from public engagement processes that the LPWBRF initiated or tapped into.

When the LPWBRF Board decided to broaden its mandate from environmental conservation to a broader notion of sustainability it explicitly recognized the complexity of the issues involved and the importance of involving the local community. While promoting social learning through the sustainability workshops may not have been an a priori objective of the Foundation, the workshop series demonstrated evidence of some of Mezirow's criteria for fostering social learning. Ensuring an inclusive, open process and providing opportunities for increased public understanding of the purpose and role of the biosphere reserve would contribute greatly to social learning in the Long Point area. Acknowledging the contribution of this workshop series and that of other, related public processes can help focus attention on the importance of social learning in developing policy to address sustainability.

Social learning speaks to a process of knowledge creation and critical

reflection on individual as well as group or organizational levels that foster a broad understanding of complex and politically contentious issues. For the purposes of the LPWBRF and their goal of engaging the local community in considering the complex and contentious issue of sustainability of the Long Point area, this notion of social learning for policy-making appears to be highly relevant. Through this series of sectoral-based workshops the Foundation engaged in an iterative, collaborative process that laid the foundation for social learning that may be fostered through the "Building a Sustainable Norfolk Community" conference and other sustainability-focused projects in the Long Point area. As the result of opportunities to promote social learning such as this and previous public processes, future biosphere reserve projects may not only address policy-level issues but also broader institutional level issues such as the impacts of economic globalization on the agricultural industry.

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