

Sustaining Canadian Communities: Place, Space and Governance

Sara Edge: Master's Candidate, Environment and Resource Studies and

Mary Louise McAllister, PhD

Associate Professor, Department of Environment and Resource Studies (ERS), Faculty Environmental Studies (FES), University of Waterloo (UW), Waterloo, Ontario, Canada
mlmcalli@fes.uwaterloo.ca

Section: Local Government

Local governments in Canada are increasingly facing challenges related to long-term environmental sustainability. Yet, they are constrained from addressing those problems given limitations posed by institutional boundaries, a reliance on property taxes, and rapidly growing populations that place increasing pressures on environmental resources. At the same time, municipalities are facing fiscal challenges in their attempts to respond to growing demands for services with a limited tax base.

One prescriptive approach to achieving sustainability is the concept of 'place-based governance' which engages civil society in decision-making processes that promotes a local sense of place and community development. Currently, this approach is used to help achieve the mandate of biosphere reserves.

Biosphere reserves emerged over 30 years ago under the umbrella of UNESCO's Man and the Biosphere program (MAB) and were created to help protect biodiversity on a global scale. Over time, much like environmental sustainability, the approach to these reserves has deepened and extended. The concept of a biosphere reserve has evolved beyond a primary preoccupation with conservation, research and education to include broader questions. It is now recognized that if the goal is to maintain biodiversity and achieve sustainability, the quest for biophysical integrity of desired ecosystems must be coupled with a system of governance that promotes social equity and community development. In Canada, there are 13 such reserves. All these reserves face serious challenges as municipalities within them or adjacent to them struggle to promote the often competing objectives of economic, socio-political and biophysical sustainability.

This paper will consider the challenges facing municipalities in their quest to achieve sustainability and the opportunities presented by place-based governance and biosphere reserves by drawing on some Canadian examples.

Sustainability and Place-based Governance

Sustainability has been defined in a number of ways. Historically, concern was primarily focused on the physical environment. When environmental problems emerged, governments reacted to, and ‘managed’ these challenges by applying ‘end-of-pipe’ solutions looking to science and technology for the answers. (See Figure 2)

It is increasingly recognized, however, that the term ‘environment’ itself cannot be confined to biophysical considerations alone nor can environmental problems be readily resolved without recognizing the interconnected relationships of human and natural systems. Social, political and economic variables all affect the relative health of desired ecosystems.

Systems theories are attracting attention as one way of mapping out these interactions and seeing how changes in one variable may affect others. A systems approach to community politics sees local government as only one of a number of variables shaping local politics. Community sustainability requires a new way of looking at governance (as distinct from government), one which acknowledges that both actors and influential variables must be understood in terms of their dynamic interactions and effects. Systems approaches stress that influence is wielded by a multiplicity of actors through a complex network of interacting variables. Complex systems approaches suggest that actors operate at different scales in various times and places and that they do so while engaging in interdependent relationships within a complex environment. Biophysical, socio-economic, and cultural factors all play into the mix. (McAllister, 2004: 188)

Multiple interactions between influential variables will lead to positive and negative feedback loops. The key to understanding local political influence, then, is to identify which combination of variables will lead to various desirable and undesirable system responses. This analytical perspective has resulted in various prescriptions for governance such as that of bio-regionalism and watershed-based planning going beyond the socio-economic dictates of a politically-delineated territory. Biosphere reserves are a case in point. According to Francis and Whitelaw, biosphere reserves are intended to fulfill three mutually reinforcing functions; the conservation of ecosystems, fostering sustainable livelihoods, and the provision of logistical support for research and monitoring. At the same time, the objective is to strengthen the local governance arrangements and organizational capacities necessary to achieve these goals. As such, local governments are key organizational players. (2004, 1) Conversely, biosphere reserves and the emerging governance systems offer a useful approach for guiding municipalities along a more sustainable path:

Theories about the role of civil society, participatory democracy, governance issues, and ecosystem dynamics have changed considerably over the last 30 years of experience. These changes raise new questions about how best to realize biosphere reserve ideals – questions that are not unique to biosphere reserves. There are opportunities for mutual learning from similar experiences associated with parks and protected areas, watershed and other resource management areas, community economic development, adaptive management strategies that respond

to changing circumstances, and the evolution of effective collaborative governance at different geographic scales (ibid)

Emerging out of this approach has been the notion of place-based governance, which rests on ecological and political notions of space as well as social and cultural notions of place (Pollock, 2004: 28). Local governments, with their traditional institutional structures, political barriers, and top-down decisional approaches to government do not readily lend themselves to such integrated, participatory approaches. Moreover, as Pollock notes, “Established jurisdictional boundaries such as townships and municipalities do not typically align well with those associated with environmental issues whether air pollution, groundwater contamination, or habitat fragmentation – so there is a need to designate fluid boundaries based on complex ecological phenomenon” (ibid)

In contrast, this notion of place-based governance fits well within the concept of biosphere reserves and may prove to be very compatible with the goal of promoting sustainability. George Francis defines governance as “the collective results from the exercise of authority and control through multiple governmental and other organizations, each following their own decision-making processes.” (George Francis, 1996: 303) Governance extends beyond formal government institutions and includes private, third sector and other organizations. Governance recognizes the important and influential systemic and direct roles that this network of actors can play in fostering social and biophysical ecological sustainability. Biosphere reserves themselves provide the operating framework for fostering place-based governance.

Biosphere Reserves in Canada

Biosphere reserves vary tremendously in size and scope. There is no set minimal size but the total area designated should be sufficient for conserving the ecosystems deemed valuable. These areas can be very large. For example, the Mata Atlântica in Brazil covers 14 states, millions of people, and a vast swath of territory stretching down the east coast of Brazil. Biosphere reserves in Canada, on the other hand, may contain as few as a hundred permanent residents to 120,000 people (in the Niagara Escarpment Biosphere Reserve) (See Figure 1 for a list of Canadian Biosphere Reserves).

One of the main goals of the biosphere reserve is to protect the greenbelt transition areas that surround it. Volunteers and other participants are working to introduce sustainable agricultural and economic practices in the local communities residing in the region. (Canadian Biosphere Reserves Association, *Mont St. Hilaire Biosphere Reserve*, 2004).

Figure 1: Biosphere Reserves in Canada

<p><u>Mont Saint Hilaire</u> 1978</p>	<p><u>Clayoquot Sound</u> 2000 <u>Redberry Lake</u> 2000 <u>Lac Saint-Pierre</u> 2000 <u>Mount Arrowsmith</u> 2000 <u>Clayoquot Sound</u> 2000 <u>Redberry Lake</u> 2000 <u>Lac Saint-Pierre</u> 2000 <u>Mount Arrowsmith</u> 2000</p>
<p><u>Waterton</u> 1979</p>	
<p><u>Long Point</u> 1986 <u>Riding Mountain</u> 1986</p>	<p><u>South West Nova</u> 2001</p>
<p><u>Charlevoix</u> 1988</p>	<p><u>Thousand Islands - Frontenac Arch</u> 2002</p>
<p><u>Niagara Escarpment</u> 1990</p>	<p><u>Georgian Bay Littoral</u> 2004</p>

Source: Adapted from Unesco, The MAB Programme, World Network of Biosphere Reserves, <http://www.unesco.org/mab/wnbr.htm>, Accessed October 28, 2005

Local Government in Canada and the Path to Sustainability

Historically, local administration has been informed by a top-down decisional, scientific or ‘rational’, management type approach. (McAllister, 2004: 2002-2005 and B. Guy Peters, 1996) . (See Figure 2)

Given this history, and the limitations posed by their structural nature as corporations and ‘creatures of the province’, local governments are constrained from taking effective action in many ways. They rely heavily on a limited property taxation base, jurisdictional and enforcement challenges, revenue transfers from central governments and difficulties in responding to growing demands from rapidly growing urban populations. Nevertheless, notable examples of municipalities achieving more sustainable approaches to governing suggest that there is room for growth in the notion of place-based government to foster the goals of bioregional reserves.

In Canada, local governments now often recognize the political necessity of consulting a wide diversity of groups when it comes to the health of a community. Recognition of the systemic basis of environmental problems has generated some holistic approaches to decision-making. In the local context, the best known has been the Healthy Communities Project. A local movement initiated in the 1980s, Healthy Communities acknowledged the relationship between social, economic, and bio-physical health. Local governments were quick to pick up the “vision” of this movement—one that included public roundtables. That said, they have been slow to internalize the implications of this for public administration and local governance. Hindering the process have been the conventional approaches to administration and policy-making that attempt to deal with complexity by breaking up problems and reducing them to manageable pieces. Hence line departments, hierarchical reporting systems, traditional administrative approaches, and overall lack of capacity of local governments all contribute to an inability to think about and resolve problems that are not easily split apart.

Nevertheless, many cooperative examples serve as testament to attempts to overcome some the political and legal barriers to bio-regional sustainability. The City of Ottawa, for example, has initiated a Strategic Environmental Assessment along its river corridor in order to provide a framework for sustainable development. The Ottawa River Corridor Study (ORCS) offers the national capital region a model which integrates social, economic and biophysical criteria. Governments, ranging from Federal to municipal authorities, are working together in partnership with private and other non-governmental interests. Long-term initiatives include studies to assess cumulative impacts of human activities on habitats, evaluation of existing by-laws and land-use plans to ensure that they do not compromise environmentally sensitive areas, and long-term monitoring programs (City of Ottawa, 2003.)., The City of Ottawa has also engaged in urban intensification with the implementation of a Light Rail transit service.

Other notable examples of ecosystem planning include the tri-level Royal Commission on the Toronto Waterfront initiated in 1988 which was given the mandate to overcome “jurisdictional gridlock” to deal with the contaminated waterfront and related lands. Consistent with the approaches used in biosphere reserves, the commission decided that its mandate would cover the Greater Toronto Biosphere, extending from the Niagara Escarpment on the West side, the Oak Ridges Moraine on the North and East sides and Lake Ontario on the South Side. The commission engaged in an extensive public consultation exercise bringing in many non-government and public and private organizations. (Crombie, 1992,) A biosphere reserve might very well be the logical

outcome of the work initiated by a citizen's group entitled Save the Oak Ridges Moraine (STORM). Other examples include the City of Vancouver's adoption of Sustainability Principles with attempts to adopt an integrated approach dealing with social, economic and ecological impacts of decision-making. Again, extensive public consultation and public participation are considered integral keys to its long-term success. Other initiatives, using similar principles and approaches can be found throughout the country.

Opportunities for Place-based Governance in Biosphere Reserves

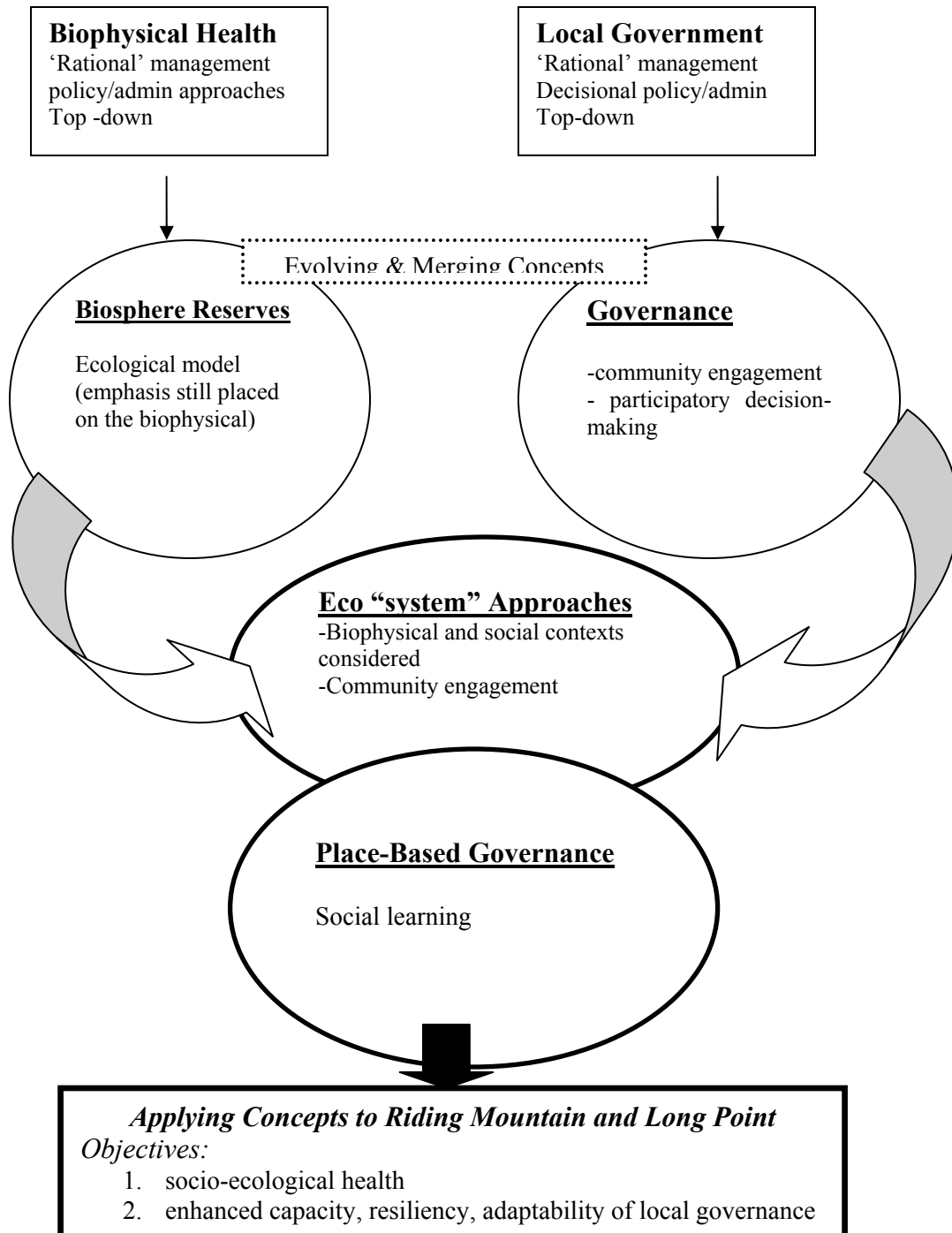
Civic organizations and social networks that flow across municipal and other jurisdictional boundaries serve as essential tools in the quest to promote local solutions to complex social and biophysical challenges. A biosphere approach offers one model that, if adopted, could nudge regions and communities towards more sustainable modes of governance, and hence a more sustainable future. Reserves located throughout the country indicate the tentative emergence of a new paradigm that recognizes local decision-making must be based on goals of social equity, economic vitality, and ecological viability.

A bioregional approach might help build a more consensus-based approach to local, sustainable governance (See Figure 2) although one should not underestimate the challenges and barriers to achieving change.. As Figure 2 suggests, policy and administrative approaches to dealing with environmental challenges and local government have historically been 'managed' in a way that does not recognize their interconnections between local decisions and long-term sustainability. Management approaches within each sphere have been very "top-down and expert driven" in nature. Under such circumstances, little regard is given to community members in assisting with determining their own priorities and strategic actions for long-term biophysical and social sustainability. An examination of the cases of Riding Mountain, Manitoba and Long Point, Ontario offers examples of such challenges as well as some emerging opportunities.

Local Government

Decisional policy/admin
Top-down

Figure 2 From Silos to Systems: Evolving Governance Approaches



Riding Mountain Governance and Regional Cooperation

Riding Mountain is worth closer examination because this biosphere reserve possesses valued ecological habitats that are surrounded by a number of local governments. Much can be learned from this case about the difficulties posed when attempting to reconcile the often competing mandates of municipalities and biosphere reserves. An examination of the players, challenges, and the political responses to those challenges suggests that it is possible to develop a form of place-based sustainable governance through inter-jurisdictional and multi-party cooperation.

The Context

Riding Mountain, located in the province of Manitoba, was designated as a Biosphere Reserve in 1986 by UNESCO. Its “core area” is the Riding Mountain National Park – a 3000 square kilometer span of mixed wood forest, eastern deciduous forest, and rough fescue prairie. The area is also rich in lakes, streams and natural habitat. It is surrounded by an additional 12,000 square kilometre “area of cooperation”, made up of 11 rural municipalities, (each with their own elected council), and four Indian Reserves. The surrounding communities range in population from less than 500 to a little over 8000 people, with the City of Dauphin being the largest comprised of approximately 8,266 people (according to the 1996 census) (Parks Canada, 2002; Francis & Stewart, 2000). The national park is regarded as traditional territory by many of the people within the Keeseekoowenin, Waywayseecappo, Rolling River, and Tootinaowaziibeeng First Nation communities. An interacting overlay of governmental jurisdictions influence, and are affected by, decisions made with respect to the Riding Mountain Biosphere Reserve (RMBR). Policies and plans are formulated in accordance with these jurisdictional authorities and are further subject to adjustments under aboriginal entitlements.

The area of cooperation or “transition zone” supports a rural agricultural economy supplemented by tourism that is mainly associated with the national park. Tourist activities include the study of flora and fauna, camping, hiking, horseriding, fishing, hunting, swimming, cross-country skiing, and cycling, etc. A relatively recent inventory identified 66 different accommodations (hotels, motels, bed and breakfasts, etc.), 30 campgrounds, and 24 tourism operators or outfitters within the region (Francis & Stewart, 2000). Trapping, fishing, logging and forestry employ relatively fewer people than tourism and agriculture, yet they still have significant impacts on the land.

The local economy continues to evolve, shaped by macro economic and technological trends and pressures. In 1986, 98% of farms were family-operated. By 1996, ‘sole proprietorships’ had dropped to about 60% of farms (Parks Canada, 2002). Changes in agricultural policy, namely the elimination of grain transportation subsidies, led to a reduction in grain production; coinciding with intensified livestock production. The region has experienced a little population decline over the past decade. There is some seasonal influx of visitors attracted to the national park, and to festive occasions within the rural towns and villages (Francis & Stewart, 2000). Subdivision of land and

development for seasonal recreational purposes, and the purchase of farmland for hunting purposes are increasing in the surrounding region. This type of development is expected to continue over the long term, subject to land use plans in adjacent municipalities (Parks Canada, 2002). It is estimated that \$50 million is generated annually for the local and regional economy from park-related tourism and related activities. All of these activities require considerable coordination and negotiation on the part of many actors in the public, private and voluntary sectors.

The Players

Prior to the actual formation of the Biosphere Reserve, Parks Canada (now Heritage Canada-National Parks) established the Riding Mountain Regional Liaison Committee (RMRLC) in 1980 to discuss recurring problems and issues arising from having a national park situated amidst a major agricultural region. At the time, the Federal government was also seeking regional integration of its national parks with their neighbouring economies. Voluntary participation was solicited from adjacent municipalities and from provincial government agencies. Six years later, Riding Mountain became a Biosphere Reserve after the municipal councils, the Province of Manitoba, and the Riding Mountain National Park made an application to UNESCO. The preexistence of the liaison committee was viewed favourably at the time of the application, as it was seen as a ready-made framework for developing communication and cooperation linkages between the core Park area and the surrounding zones of transition (Francis & Stewart, 2000). To this day the RMRLC continues to function, drawing its membership from adjacent municipalities, along with *ex officio* membership from representatives of two provincial government agencies (the Departments of Agriculture and Conservation), in addition to a representative from the national park (BRMC, 2002). That is, the federal and provincial level representatives are non-voting members. The municipal representatives are appointed annually by their associated councils, and can serve a maximum of four years on the RMRLC. The committee functions as a forum for addressing a variety of political issues including the juxtaposition of wildlife preservation with farming, or examining national park values within the context of the local agricultural economy. The committee has actively lobbied senior levels of government, and has been consulted on a variety of issues including hunting regulations and revisions to the National Park's management plan.

The RMRLC also created a sub-committee called the Biosphere Reserve Management Committee (BRMC) which consists of nine municipal representatives appointed by the RMRLC, along with the same *ex officio* representatives that are on the liaison committee (Francis, 2004). The BRMC was formed to help fulfill the functions of the biosphere reserve (i.e. facilitating conservation of ecosystems, sustainable agriculture, and research and monitoring activities). It strives to differentiate its role from that of the RMRLC by focusing on information and education activities that are guided by these themes. It also serves as an important forum for communication between local people through their municipal councils, and strives to monitor the "pulse" of local communities while providing constructive feedback to Park officials. The BRMC's major funding source is a \$5000 annual grant from Parks Canada. Municipalities have contributed notable in-kind support through council member participation and by providing meeting rooms and

covering other expenses related to committee work (BRMC, 2002). All other funds, currently in the order of \$50,000 annually, come from different sources for particular projects (Francis & Stewart, 2000).

In summary, a variety of governance players participate at multiple jurisdictional levels of government. The Federal government is involved through its jurisdiction over Riding Mountain National Park; the Province of Manitoba has control over the lands, forests, water and wildlife within the transition area/zone of cooperation; while Municipal governments exert influence through their involvement with the Riding Mountain Regional Liaison Committee, and the Biosphere Reserve Management Committee. From both an ecological and social standpoint, concerted efforts are being made to effectively integrate Riding Mountain National Park with its surrounding landscape. The Park is one component of a complex mix of private and public land in Southwestern Manitoba, amidst Municipal, Provincial, First Nation and Federal governments overseeing a multitude of land uses.

The Challenges

Due to the divided jurisdiction and extent of private ownership within the biosphere reserve, no predominant land use philosophy or overall management plan extends across the entire region of the Biosphere Reserve. Priorities for land use range from generating maximum agricultural production, and enhancing socioeconomic benefits outside of the Park, to maintaining ecological integrity throughout the entire region. Within the boundaries of the National Park itself, the *National Parks Act* designates that the maintenance or restoration of ecological integrity as the first priority for management.

Because the park is small (approximately 3000 km²) relative to broader ecosystem processes (like the movement of water and wildlife), however, it cannot achieve ecological integrity without support from the surrounding landscape and the people within it (Parks Canada, 2002). Beyond Park boundaries many other areas are managed at least in part to protect biodiversity including private land, Provincial Crown Land, ecological reserves, Wildlife Management Areas, community pastures and Provincial Parks. Collectively these areas increase the amount of available wildlife habitat, and enhance wildlife corridors.

Yet, this situation can pose a variety of challenges to private landowners including wildlife depredation of crops, transmission of disease between domestic and wild animals, and the flooding of lands and roads by beavers, all of which threaten the economic viability of agriculture within the Region (Parks Canada, 2002). In addition, the viability of many farms is dependent upon the intensification of production practices (due to global economic trends largely beyond the realm of localized control) which can come into direct conflict with protectionist land use policies.

On the other hand, ecological integrity is threatened by the introduction of non-native species, fragmentation of habitat due to infrastructure development, and arising pollutants from chemicals, nutrients, and wastes. Also, wildlife venturing beyond Park boundaries is susceptible to hunting and trapping. Resolving such issues requires continuous cooperation amongst government officials, land managers, private land owners, and

citizens in order to create social and economic benefits while sustaining ecosystem health. The RMRLC and/or the BRMC provide a means for addressing such issues, and facilitate community understanding of the inherent values of maintaining both sustainable ecosystems and livelihoods. They serve as diplomatic supporters of “park values”, while maintaining the interests of surrounding farming communities due to the influence that local electoral processes have upon their organizational composition.

Recent years have seen outbreaks of bovine Tuberculosis (TB) in cattle herds within the biosphere reserve which has threatened livelihoods and posed great challenges for collaborative governance efforts. Five wild elk were also found to harbour TB – one in 1992, two in 1999 and two in 2000 (Whitaker, 2001) raising concerns over disease transmission between wild and domesticated animals (BRMC, 2002). Consequently a wildlife disease testing program based on hunter kills around Riding Mountain National Park was introduced along with a multi-faceted elk research program. Park Managers contracted with the BRMC to communicate with local farmers and municipalities on the TB study, and to map the location of cattle herds in the municipalities bordering the Park using geographical information systems (GIS). While the Park has its own Data Manager, it was suggested that the Biosphere Reserve take on the same role for the “area of cooperation”, and also act as a data warehouse for information on regional resources (BRMC, 2002). The BRMC has helped municipalities gather and present data (using GIS maps) on areas where possible contact between livestock and elk has occurred. The BRMC has also stated that a continued objective within this inter-agency initiative is to reduce the accessibility of agricultural food sources for elk populations through communication with local farmers (BRMC, 2002). Population surveys are also being conducted for elk and moose, and used as a basis for administering provincial hunting regulations.

Responses

While the BRMC itself has no official management authority, it does assist by providing an information and education service to local residents and decision-makers (Francis & Stewart, 2000). In addition to the above mentioned initiatives, the biosphere reserve has been instrumental in monitoring and documenting the incidence of other non-native diseases, and has organized conferences or demonstration events on topics of interest to rural communities. Examples of topics include “the challenges for land management in balancing farming and wildlife”, “climate change and farmers”, “farm chemicals and sustainable agriculture”, “hunting, farming and national parks”, and “resolving beaver disturbances”. The committee also carries out a student water quality monitoring program at a local school, and has provided some financial support to graduate students doing theses on topics of interest. This is in addition to ongoing discussions with municipal councils regarding biosphere reserve activities (BRMC, 2002; Francis & Stewart, 2000).

UNESCO has been encouraging Biosphere Reserve committees to develop “Cooperation Plans” in order to increase their effectiveness. Such plans are particularly relevant in Canada, where Biosphere Reserves have no legal authority over land use, and therefore their activities are dependent upon cooperative efforts. The BRMC began devising a plan directed towards facilitating partnerships between local residents, businesses,

governments and other organizations within the biosphere reserve. This was instigated by the BRMC facilitating a visioning workshop for municipal councils, residents and other potential partners. The results from the workshop were then circulated to municipal councils for reaction and additions. These actions resulted in the conclusion that the BRMC would direct most of its attention towards education, information and communication projects surrounding local challenges, needs and desires for the purposes of encouraging a sustainable regional economy with high biodiversity and landscape values (BRMC, 2002).

Despite being a relatively small, volunteer-based group with few resources, the BRMC has made significant contributions to collaborative management efforts that transcend conventional government jurisdictions. It has made informal linkages with local communities through the provision of information and education materials. It has also established important structural linkages due to the committee being comprised of elected municipal officials, in addition to representatives from the National Park and provincial government. As a result, Biosphere Reserve activities are closely connected with issues of concern to surrounding municipal councils, and that their actions effectively inform local decision-making. In addition, members of the BRMC have participated in other informal networks or organizations that are involved with work consistent with Biosphere Reserve ideals. Examples include the Manitoba Clean Environment Commission; The Manitoba Habitat Heritage Corporation; The Lake Dauphin Advisory Committee, and the Mixed Wood Forest Research and Advisory Council, etc. (Francis & Stewart, 2000). Government agencies continue to hold primary regulatory authority. Nevertheless, the biosphere reserve has been instrumental to enhancing governance capacity through outreach, communication, and advocacy efforts that have helped to forge alliances and identify collective interests.

The BRMC's close connection with municipal governments has also assisted in enhancing the legitimacy, visibility, and capacity of the biosphere reserve itself. For example, municipal councilors and offices have been very effective in providing local contacts and sites for research, pilot project activities, and partnerships. Their connection to the local media has enhanced public awareness about reserve activities, and some municipalities have also provided "in-kind" supports through donating office space, and other useful materials and resources (BRMC, 2002).

Summary

Clearly, the large number of governments, management agencies and private landowners within the Riding Mountain Region continues to pose great challenges to effective communication and partnerships. Despite increasing collaborative efforts, one remaining problem is the need to further change the regional governance structure to enhance its decision-making capacity, and to make it more inclusive and democratic (BRMC, 2002). Currently, municipal council appointment is the only way an individual can formally participate in the management of the Biosphere Reserve. To be sure, it is desirable to maintain a structure that has strong ties to municipal government, (and the interests represented within it). Yet, it is just as essential to ensure that other interests are being addressed, including those of marginalized members of society and First Nations communities, in order to advance a comprehensive set of sustainability objectives.

Broadening the base of support for the Biosphere Reserve is an on-going, strategic, and reflective process. One possible method for broadening the membership base of the BRMC is to transform the biosphere reserve association into a charitable organization. While this could result in giving the BRMC greater autonomy to pursue its own program and priorities, it can also result in a preoccupation with fundraising activities, at the expense of other priorities (Francis, 2004; Francis & Stewart, 2000). The BRMC continues to examine ways in which it could broaden and strengthen its presence within this new collaborative context.

Long Point Governance and Regional Cooperation

Long Point, renowned as a home to many endangered and diverse species of birds and waterfowl, similar to Riding Mountain, is also heavily pressured by development and population growth. It is situated in the most heavily populated region of the country—southwestern Ontario. As such, it offers an excellent example of the numerous challenges to achieving sustainable, place-based governance.

Context

In 1986, UNESCO designated the Long Point as a biosphere reserve (LPBR). Long Point is a 32 km sand spit located on the north shore of Lake Erie, in Norfolk County, Ontario. It encompasses one of the largest and most spectacular of the erosion deposit sand spit formations in the Laurentian Great Lakes, as well as some of the largest remaining forest tracts in “Carolinian Canada”. The point itself has a diverse range of land and water habitats, including long beaches, undisturbed sand dunes, grassy ridges, wet meadows, woodlands, marshes and ponds, supportive of extensive biodiversity. The Inner Bay between the point and the mainland is a productive aquatic ecosystem for the sports fishery, a migration staging area of continental significance for waterfowl, renowned for birding activities, and home to the largest number of endangered, threatened, or species of concern in Canada (Francis & Whitelaw, 2001).

The “core area” of the Biosphere Reserve consists of a 3250 ha Long Point National Wildlife Area, administered by the Canadian Wildlife Services. Access is prohibited in this area, and there are no permanent residents. However, Bird Studies Canada does grant “special access” to a handful of people on a seasonal basis to conduct bird banding and migration monitoring studies. Along the Lake Erie Shoreline, is the “buffer zone”, which is intended to promote activities compatible with conservation objectives. It extends from the outer tip of Turkey Point to the western edge of Hahn Marsh. No human residents inhabit this area on a permanent basis. A large number of visitors, however, have controlled access for seasonal recreational purposes including fishing and waterfowl hunting. The boundaries of the “zone of cooperation” or “transition zone” remain largely undefined. Nearby, the Long Point Beach cottage area has experienced intensive cottage and marina development along most of its shoreline. It is home to about 500 permanent residents, and at least 3,000 seasonal ones, along with many visitors. The Inner Bay is open to the public, but subject to fishing and boating regulations. There is some concern over “incompatibilities” amongst water-based recreational activities, and conservation objectives, especially during peak seasonal periods. Agriculturally-based

communities of Norfolk County can be found further inland. The county produces a number of diverse crops ranging from tobacco to some specialty products such as ginseng, peanuts, medicinal herbs and mushrooms. Other economic activities include fresh-water fisheries, forestry and wood harvesting, tourism and retirement settlements. In 2001, the population of Norfolk County was 60,850 people, with approximately 49% of them living in relatively urbanized areas (Norfolk County, 2003).

Despite its geographical proximity to a huge consumer market (that includes urban areas such as Buffalo, Boston, New York, Pittsburg, Chicago, Detroit, Montreal and Toronto), the agricultural base on which community livelihoods depend upon, has become strained over recent decades. The tobacco industry has been particularly hard hit, as governments discourage tobacco consumption, triggering widespread socioeconomic impacts across the county. Many food processing plants have also left the area forcing an increasing number of people – in particular youth, and young families – to move to urban centres outside of Norfolk County. Norfolk's population is expected to continue to age considerably placing great strains on municipally funded or community-based services (Gowan, 2004). New development projects are needed to create viable employment opportunities for county residents and to enhance municipal corporate fiscal sustainability. Finally, it is worth noting that the Long Point Provincial Park has one of the highest visitor usages of any provincial park in Ontario, in the order of 130,000 visitors annually, who generate approximately \$600,000 in gross revenue. In addition, visiting birdwatchers and other tourists taking in various nature-based activities are estimated to contribute another \$1.5 million to the local economy (Francis & Whitelaw, 2001). Therefore, it is important to note that preserving the ecological integrity of the region is also of socioeconomic importance. Hence, communities are encouraged to promote sustainable resource management and socio-economic practices compatible with Biosphere Reserve ideals (Parker et al, 2003; Francis & Whitelaw, 2001).

Players

The Biosphere Reserve is administered by the Long Point World Biosphere Reserve Foundation (LPWBRF), a charitable, not for profit, volunteer organization open for public membership. Membership is in the order of approximately 200+ people, indicating extensive local support and involvement (Francis & Whitelaw, 2001). The Foundation is run by a 15-person Executive Committee, elected for a one-time renewable three year term. Five of the members are elected (or re-elected) at each annual meeting of the association. Over 50 people (most of whom are still active in the local community), have served terms on the Executive Committee. They represent a cross-section of citizens including local business people, farmers, foresters, biologists, engineers, teachers, writers, and civil servants from federal, provincial and local levels of jurisdiction (acting in their own capacity). This initiative has encouraged informal cooperation amongst government agencies, and non-governmental groups as individuals cross-affiliated with these types of organizations have been elected to the Executive Committee over the years. The diversity of expertise has helped to connect the LPBR with larger community networks and organizational affiliations, which has enhanced the acceptance and visibility of the Biosphere Reserve within the local community and by government officials (Francis & Whitelaw, 2001). One of the most important roles of the

LPWBRF is to nurture the informal cooperation that results from these horizontal networks.

Over the years, the LPWBRF has received numerous financial grants and donations from government agencies and private sponsors, to assist in the development and implementation of sustainable use projects and monitoring programs for the reserve (Parker et al, 2003). The Biosphere Reserve does not interfere with existing legal mandates, management frameworks or private property rights. In contrast, the goal is to work with the various stakeholders to promote ecologically sustainable land uses and implement key biosphere reserve functions. Akin to Riding Mountain Biosphere Reserve, the Long Point Region is also comprised of a significant overlay of interacting governance players at various levels of jurisdictional influence. The Government of Canada is involved through its affiliation with the Long Point and Big Creek National Wildlife Areas; the Province through its ties with the Long Point Provincial Park, and the Crown Marsh on the Inner Bay; and finally Norfolk County at the municipal level has jurisdiction over the zone of cooperation. Most management policies and plans are administered through these various government agencies, often in cooperation with private landowners, and not by the LPBR itself. Research, monitoring, education and training programs within the biosphere reserve are generally carried out by other bodies, however the LPBR assists with these projects through providing informal communication and cooperation amongst various players (Francis & Whitelaw, 2001). They have also played a lead role in forest biodiversity monitoring projects, and land use and climate change studies sponsored by the Canadian Biosphere Reserves Association.

In addition to the large number of government agencies involved in managing the Long Point Region, there are also a significant number of non-governmental organizations (NGOs) that influence decision-making processes. Some examples include the Norfolk Field Naturalist Club, Ducks Unlimited, Friends of Backus Woods, Long Point Company, Flight Club, Long Point Area Fish and Game Club, Coalition Advocating Responsible Development, The Nature Conservancy, and the Long Point Foundation for Conservation, to name a few (Parker et al, 2003).

Challenges

Global and regional socio-economic trends have had great impacts on the Long Point area. For example, globalization has contributed to a loss of agricultural markets due to greater competition, leading to agricultural decline in the area. The above mentioned decline in tobacco consumption has also eroded the agricultural base, leading to rural poverty and associated depression (LPWBRF, 2006). Some of the more urban centres in the region are in dire need of renewal, as infrastructure continues to age.

The provincial “Smart Growth” movement stresses the importance of carefully considering the impacts that infrastructure investments have upon the local economy, land use, and the environment. Proponents stress the need for maximizing the efficient use of existing infrastructure (Ministry of Public Infrastructure Renewal, 2005). While Norfolk County shares in these ideals, it has indicated that implementing such policy objectives is very challenging, particularly due to Norfolk’s history of sporadic, imbalanced growth, and changing economic foundation (especially within the agricultural

sector) (Norfolk County, 2003). Expanding the tourism sector has been identified as one potential solution. However, the County must balance the Region's desire for conservation, while securing viable livelihood opportunities within a shifting socio-economic climate. In addition, it must counter the trend of out-migration, through offering development opportunities that are attractive to youth. All of this must be accomplished while still preserving identified community values such as the rural character of the region, small town attributes, natural features, and sense of community (Norfolk County, 2003).

The County is also faced with the responsibility of having to increase available services to its aging population placing additional pressures on municipal budgets. In an effort to generate further revenue, some interest has been expressed in allowing for the conversion of seasonal to permanent residences. However, this would significantly increase demand for water, and individual sewage disposal systems, as well as increase the risk of groundwater and surface water contamination. These potential ecological consequences would be in addition to a pre-existing range of human-induced impacts including channel dredging to maintain boat access, pollution from water-based recreational vehicles, crowding in public campgrounds, soil erosion, and contamination from agricultural run-off. As mentioned previously, the natural features of the County are a major tourist draw; much of the economic viability of the region relies on the protection of the ecological base. It will be difficult to resolve this conundrum.

The surrounding governance structure has changed a great deal since the 1986 biosphere designation. The Townships of Norfolk and Delhi; the Towns of Simcoe and Delhi; the City of Nanticoke; Port Rowan and Port Dover amalgamated into a single-tier municipality (Norfolk County), as of January, 2001. This restructuring, coupled with severe reductions in budgets and staff at all levels of governmental jurisdiction from federal to municipal, has resulted in a declining role of governmental conservation and resource management agencies, out-of-date management plans, and a lack of guidance for land use decision-making. Fortunately, this period has also experienced a significant increase in the number of NGOs involved in conservation and wildlife; hunting, fishing and other outdoor recreation; local land use and development; environmental protection; and local cultural heritage and tourism activities (Francis & Whitelaw, 2001). Numerous LPBR activities have been carried out in cooperation with these various groups to enhance the overall capacity of local governance.

Responses

In response to this governmental restructuring, the newly amalgamated Norfolk County set out on a two year process to create its new County Official Plan in February, 2003. This Plan replaced the previous five individual Official plans and is to be used as a guide for land use decision-making over the next twenty years. The process began with extensive community consultation and visioning exercises so that residents could express what they liked about the County, their priority concerns, and issues to be addressed. This was also to ensure that governance processes be transparent, and that municipal resources remain aligned with community priorities. It was agreed upon that good governance requires strong partnerships, alliances, enhanced local capacity, in addition to municipal

fiscal stability (Norfolk County, 2003). Both governmental and non-governmental agents communicated the importance of facilitating continued open dialogue for the purposes of exploring collaborative opportunities to maximize community resources.

The consultation processes resulted in the creation of a Strategic Plan which details community values and objectives. As a result, the County is striving for a more diversified economy (including stronger industrial, tourist, and retail sectors, as well as a more diverse agricultural sector) in order to enhance livelihood opportunities and support municipal fiscal sustainability. Supporting development in these areas requires significant upgrading and expansion of crucial infrastructure. However, although residents are seeking economic prosperity, they also want to minimize the impact on the natural environment, as well as heritage features and the rural small town character that defines the County. The County is now seeking to protect the natural and cultural environment, enhance wildlife corridors, and ensure that the LPBR remains a highly recognized international feature (Norfolk County, 2003).

Norfolk County instigated another extensive consultation process in June, 2003 with funding assistance from the federal government in order to develop a Tobacco Community Action Plan. This plan is to assist Norfolk in diversifying its economy to effectively deal with the impact of the declining tobacco industry, and to support families in their transition to other farming or non-farming enterprises and careers. An advisory team was formed with community representatives to direct the program and report to stakeholders. The resulting observations and recommendations were very similar to those which arose out of consultations surrounding the creation of the County Official Plan. The need for economic diversification was identified, as well as investment in infrastructure and educational facilities to enable growth. This must be achieved while protecting the environment and sustaining natural resources. Both plans emphasized the need for expanding eco-tourism, and agri-tourism opportunities through private and public partnerships, and through ensuring that there is flexibility in municipal land use policy to accompany these changes. It was explicitly suggested that the Biosphere Reserve adopt an important role in assisting in the development of an ecotourism product development strategy to bolster the marketing of outdoor travel experiences in the County (Gowan, 2004).

The Team Advising on the Crisis in Tobacco also recognized that while Norfolk County will need to budget for increased spending on supportive transitional services, the private sector, and other non-governmental agencies (including the LPBR) will also have to share in the provision of resources to enable alternative forms of development (Gowan, 2004). The planning process for the County Official Plan also recognized the need for non-governmental players to assist in filling in “capacity gaps”. Many desired County objectives were flagged as being beyond the realm of the mandate of a Plan that is specific to land use planning. For example, an effective branding program, a “buy local” marketing campaign, the promotion of nature-based educational programs, stewardship projects, biodiversity monitoring etc. were all identified as elements that could not be formally addressed within the land use plan (Norfolk County, 2003). Nonetheless, many of these activities could be facilitated by - and are closely related to – the numerous

research/monitoring, and educational/outreach initiatives that are already underway, or being developed by the LPBR and other NGOs (see Francis & Whitelaw, 2001).

One of the more recent projects carried out by the LPWBRF is of particular interest here. Recently the Foundation has renewed its commitment to addressing sustainable development and livelihood opportunities as a complement to its conservation activities. To push this work forward, it decided to host four community sustainability workshops, in order to gather ideas on how the LPBR could proceed with improving planning and management of the Long Point area. Four sector specific workshops were held with representatives from business and industry, service groups, conservation, and agriculture (LPWBR, 2006). Each workshop was comprised of:

1. An introductory presentation on the work of the LPWBRF since 1986,
2. A presentation by the Norfolk County Planning Department on the County's 2026 Sustainability Vision, developed as part of the latest Official Plan review process, and
3. A facilitated session designed to allow participants to express their views on the topic of sustainability (LPWBRF, 2006).

Participants discussed trends affecting the community, issues of interest, barriers to achieving sustainable livelihoods, existing resources available to the community, and ideas for future sustainability projects. The same issues outlined above were once again highlighted; including the need for economic diversification, the problem of out-migration, socioeconomic depression and instability, etc. Community members were given the opportunity to brainstorm tangible projects that could help to address these issues. For example, participants concluded that ecotourism could be enhanced if the Long Point core area (currently off-limits to people) could be opened to controlled and managed access. It could, for example, include a trail system to promote hiking and cycling. It was also mentioned that many existing ecotourism activities and services in the Long Point area (including boating, hiking, and birding) should be inventoried, and better coordinated and marketed to both locals and visitors (LPWBRF, 2006). Similarly, it was suggested that other agricultural products associated with the Long Point area might be inventoried highlighting the exemplary agricultural practices within the LPBR. 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 miles radius of the biosphere reserve. It was noted that the LPWBRF work should promote the introduction of the Alternative Land Use Services (ALUS) Program as a pilot project in the area. Finally, it was observed that an increasing number of people are choosing the Long Point area as a retirement destination and that the biosphere reserve might consider tapping into this demographic in terms of both financial and volunteering resources (LPWBRF, 2006).

The sustainability sessions provided community members with accurate and broad-based information about the issues affecting their community's sustainability potential, in addition to providing a forum to tap into the extensive knowledge that many community members already possessed. This forum granted participants an opportunity to

collectively discuss and move towards a consensus on possible projects or solutions that would address issues of concern.

Summary

Sustainability workshops, in conjunction with previous community engagement processes such as the Norfolk County Official Plan Review process, and the Norfolk Tobacco Community Action Plan process, have assisted in enhancing overall local governance capacity by mobilizing citizens and enhancing opportunities for social and institutional learning. The LPWBRF is now equipped with a diverse number of ideas to pursue sustainability activities in a community-based, collaborative manner, in partnership with various individuals and organizations, including many whom attended the workshops. Without these types of facilitated governance processes that engage citizens, these promising partnerships and alliances may never have materialized.

Conclusion

Local governments and biosphere reserves have both seen their mandates change notably over the past several decades. Decision-makers and participants in both arenas realize that sustainability requires complex solutions that cannot be readily addressed by reactive responses taken by actors operating within narrow conceptual and jurisdictional boundaries. As Francis and Whitelaw note, “Theories about the role of civil society, participatory democracy, governance issues, and ecosystem dynamics have changed considerably over the last 30 years of experience. These changes raise new questions about how best to realize biosphere reserve ideals – questions that are not unique to biosphere reserves” (2001: 1).

Place-based governance offers one approach to decision-making that helps to break down some of those boundaries. As biosphere reserves expand and mature throughout Canada, useful approaches are being discovered and shared about how to achieve inter-jurisdictional cooperation. Riding Mountain and Long Point biosphere reserves offer two examples about how cooperative approaches can overcome some of the structural straightjackets that localities find themselves in as they attempt to find a sustainable way forward.

The examples of place-based governance now in place, in or near, existing biosphere reserves can be broadened to include not only communities located adjacent to reserves but can be extended to other environmental challenges. Local governments are facing complex demands to plan for sustainability, provide services and include public participation in a meaningful way. These demands do not stop at municipal political boundaries. Place-based governance is one promising approach that might help address these conundrums as local governments continue their quest for economic viability and healthy communities.

Notes:

BRMC (Biosphere Reserve Management Committee). April, 2002. *A Cooperation Plan for the Riding Mountain Biosphere Reserve*. Manitoba.

Canadian Biosphere Reserves Association, *Mont St. Hilaire Biosphere Reserve*, 2004 Home page, http://www.biosphere-canada.ca/reserves/mont_saint-hilaire/default.asp, Updated July 3, 2004, Accessed, October 28, 2005.

City of Ottawa, National Capital Commission, 2003 Region Council of the Economic Development of l'Outaouais, and Société de Diversification économique de l'Outaouais, *Towards a Common Vision for the Ottawa River: Ottawa River Corridor Study Concept, Strategic Actions, and Implementation: Public Information Sessions, May 13 and May 15, 2003, Strategic Environmental Assessment River Corridor Study: Executive Summary*)

Crombie, David. 1992, *Regeneration: Toronto's Waterfront and the Sustainable City*, Royal Commission on the Toronto Waterfront, Final Report, Toronto: Minister of Supply and Services.

Dempster, B. 2005 "Canadian Biosphere Reserves: Idealization and Realizations" *Environments* 32:3, 95-101.

Francis, George. 2004. "Biosphere Reserves in Canada: Ideals and some experience". *Environments*. 32:3, 3-26.

Francis, Georg. & Whitelaw, Graham. 2004. "Biosphere Reserves in Canada". *Environments*. 32:3, 1-2.

Francis, George & Whitelaw, Graham. 2001. *Long Point Biosphere Reserve Periodic Review Report*. Canadian Biosphere Reserves Association. Reviewers on Behalf of the Canadian Commission for UNESCO and Canada/MAB.

Francis, George. & Stewart, Craig. 2000. *Riding Mountain Biosphere Reserve Periodic Review Report*. Canadian Biosphere Reserves Association, Reviewers on Behalf of the Canadian Commission for UNESCO and Canada/MAB.

Francis, George. 1996, "Exploring Selected Issues of Governance in the Grand River Watershed," *Canadian Water Resources Journal* 21, no. 3

Gowan, Ross. March, 2004. *Norfolk at the Crossroads: Directions for a Prosperous Future in Norfolk County (Tobacco Community Action Plan)*. Prepared by the Team Advising on the Crisis in Tobacco, Phase I Final Report.

ICLEI, May 2002 "Orienting Urban Planning to Sustainability in Curitiba, Brazil, <http://www3.iclei.org/localstrategies/summary/curitiba2.html>, Accessed October 30, 2005..

LPWBRF (Long Point World Biosphere Reserve Foundation). Jan, 2006. *Exploring Sustainable Development Activities for the Long Point World Biosphere Reserve*. Prepared by Graham Whitelaw & Dan McCarthy with Contributions from the Biosphere Sustainability Project, University of Waterloo (Department of Environment & Resource Studies).

Ministry of Public Infrastructure Renewal. 2005. *Places to grow. Better choices, brighter future: proposed growth plan for the Greater Golden Horseshoe*. [online]. Available at: http://www.pir.gov.on.ca/userfiles/HTML/cma_4_40948_1.html. (Retrieved April, 2006).

Norfolk County. Dec, 2003. *Norfolk County Strategic Plan 2003: As it Relates to the County Official Plan*. Norfolk County: Official Plan Steering Committee.

Parker, Brent., Craig, Brian., Griffin, Trevor, & Porter-Gibson, Jennifer. 2003. *Long Point World Biosphere Reserve Monitoring Program Site Report*. Long Point World Biosphere Reserve.

Parks Canada, 2002. Ecological Integrity Statement, Riding Mountain National Park of Canada. Wasagaming, Manitoba

Peters, B. Guy *The Future of Governing: Four Emerging Models* (Lawrence, KS: University Press of Kansas, 1996. 1996).

McAllister, Mary Louise, 2004 *Governing Ourselves? The Politics of Canadian Communities*, (Vancouver, UBC Press).

Organic Consumers Association, 2005, April 25 "Local Food Fights Hunger in Brazil" <http://www.organicconsumers.org/BTC/brazil042505.cfm>. Accessed October 20, 2005.

Pollock, 2004: "Place-based Governance for Biosphere Reserves" *Environments*, 32: 3, 27-42.

UNESCO, The MAB Program: Biospher Reserve Information: Mata Atlântica - Including Sao Paulo Green Belt, <http://www2.unesco.org/mab/br/brdir/directory/biores.asp?code=BRA+01&mode=all>) Last updated: 3/14/2005, Accessed October 22, 2005.

Whitaker, John. March, 2001. "Animal Health in Riding Mountain Biosphere Reserve". *UNESCO/MAB Biosphere Reserves in Canada Newsletter*. No. 13.

