## Governance Matters

## 3. Governance framework for individual biosphere reserves and model forests. Structures, funding, program strategies and project activities. Organizational development.

This working paper gives a descriptive summary overview of the biosphere reserve and model forest/forest community programs as they are organized on-the-ground through whatever "governance framework" has been adopted. It is based on reference documents, websites, and especially for biosphere reserves on informal participant-observation over a number of years. For ease in reading, the working paper does not have literature citations added throughout the text and is therefore best viewed as one person's main impressions about the "governance matters" it describes.

**Biosphere Reserves in Canada: Their organization and programs**.

Please see glossary below for the name of each biosphere reserve, the province it is in, and the year it was designated by UNESCO

| *Acronym* | *Name* | *Province* | *Designated* |
|---|---|---|---|
| BHBR | Beaver Hills | AB | in progress |
| BLBR | Bras d'Or Lake | NS | 2011 |
| CVBR | Charlevoix | QC | 1988 |
| CSBR | Clayoquot Sound | BC | 2000 |
| GBBR | Georgian Bay | ON | 2004 |
| FABR | Frontenac Arch | ON | 2002 |
| FBR | Fundy | NB | 2007 |
| LSPBR | Lac Saint-Pierre | QC | 2000 |
| LPBR | Long Point | ON | 1986 |
| MABR | Mount Arrowsmith | BC | 2000 |
| MSHBR | Mont Saint-Hilaire | QC | 1978 |
| MUBR | Manicouagan-Uapishka | QC | 2007 |
| NEBR | Niagara Escarpment | ON | 1990 |
| ORGBR | Oak Ridges Greenbelt | ON | in progress |
| RLBR | Redberry Lake | SK | 2000 |
| RMBR | Riding Mountain | MB | 1986 |
| SWNBR | Southwest Nova | NS | 2001 |
| WBR | Waterton | AB | 1979 |

UNESCO/MAB does not specify the kind of local convener organization required to foster the ideals of a biosphere reserve. It only expects there to be one, and it is to be

described in the nomination documentation that goes forward initially and (in more detail including its programs and results) in periodic reviews undertaken every ten years. Decisions about organization are taken by the proponents of each biosphere reserve in Canada, and depend on their judgments about what would work best under local circumstances. Most will have had some 6-8 years of experience in developing a biosphere reserve to the point they can feel confident in applying for the UNESCO designation of recognition. This experience becomes one basis for making these decisions.

Organizational structures:

There is some range of variety in the initial stages. This includes having some established agency adopt the biosphere reserve as one of its programs (e.g. NEBR), continuing an informal steering committee composed of the proponents along with other people they invited to join them (e.g. WBR) or negotiating a formal partnership among a set of organizations with broadly shared goals (e.g. BHBR). But at some point, increasingly sooner rather than later, each has become incorporated as a non-profit, without shares organization under the relevant provincial statute. Some have also applied for charitable status, but not all have received it.

*Board of Directors, Membership and Advisors:*

The founding Board is usually the 2-3 "champions" who were the entrepreneurs who had successfully created the biosphere reserve. This is especially the case if it originated entirely from "bottom-up" initiatives as all since 2000 have done. For the original six, designated between 1978 and 1990, some mix of top-down with bottom-up approaches was used, guided by a Canada/MAB national committee that existed in some form from 1974-1992.

In some cases Director positions are "allocated" to particular agencies or private organizations that then designate employees to represent them on the biosphere reserve organization and report back as necessary. In at least 3 cases, the entire Board is organized that way to represent local communities or municipal governments (CSBR, RLBR, RMBR). In at least 3 others (MABR, FABR, CVBR) and one coming forward (BHBR) some proportion of seats are allocated that way. Another 5 seem to have this

arrangement more informally (GBBR, LSPBR, FBR, SWNBR, BLBR). This approach has had a mixed experience. Designated Board members (or their Alternates if this is provided for) do not always contribute or even attend meetings, so the other Directors, if there are some, have to take up the slack. The remaining biosphere reserves appoint people who can bring an array of background experience to serve in their individual capacity, but not as representatives of their employers. Boards routinely have provisions for members to declare possible or perceived conflicts-of-interest for some items that come before it.

At least 9 biosphere reserves have established working groups that are organized either around major functions or major projects. Members of these groups may include partner organizations but the chair of such groups is a Board member of the biosphere reserve who reports to the Board on the group's activities. The LPBR, GBBR, FABR, SWNBR as well as ORGBR have listed official advisors for their organization. Expectations need to be clear for both about what this entails, especially the extent to which advisors are "kept-in-the-loop" so they can be aware of issues they might advise upon, and the channels to relay it.

*Open Membership:*

Probably most Boards consider this possibility in some form at some time, especially if they already have charitable status that allows them to issue tax receipts for charitable donations. The questions raised are what would members receive in return to keep them as members, and what time and expense would be required to provide this for them. LPBR and CVBR have membership provisions, but the former has atrophied over time. Others invite people generally to take out annual memberships (e.g. GBBR, MUBR)

The concept of Charter Members is being explored in LSPBR, CVBR, MUBR, and FBR. The Charter is a formal statement of principles, visions, and goals for the biosphere reserve. Organizations are invited to subscribe to this for a small annual fee. In return they receive a right to vote at annual general meetings and use the biosphere reserve's logo on their own website and publications. It can be attractive for those organizations wishing to demonstrate broad public support for whatever they do, while also giving the biosphere reserve group a symbolic connection with on-going programs that reflect what biosphere reserves are meant to foster. Value-added questions would also at some

point have to be addressed by both parties. In LSPBR, this approach appears to be leading to measures to certify tourism facilities and services as part of the biosphere reserve's overall vision of sustainable tourism as the central project to pursue; they do this in cooperation with the Quebec Ministry of Tourism.

Eleven biosphere reserves plus the 2 prospective ones have informal links with established research institutions based in, or working in the area of the biosphere reserves. There is the question to what extent this is a matter of convenience, often established long before the area became designated by MAB, and/or the extent to which they do undertake research and monitoring that can help the biosphere reserve carry out its main functions. While some biosphere reserves have sponsored meetings where research is discussed by those doing it, and other topics for research attention are suggested at the meetings, the follow-up process needs careful thinking through.

Biosphere reserves often have to decide about how they will respond to public expectations that they will actively support issues about sustainability that are subject to public disputes. Support for the ideals of biosphere reserves are a kind of "soft advocacy" but charitable status or other considerations limit direct participation in advocacy for a particular issue. The proposed ORGBR has foreseen this by distinguishing between what will be done by the biosphere reserve group and what a rejuvenated Save The Oak Ridges Moraine (STORM) Advocacy Coalition might have to take up. Similarly, the NEBR can maintain an arm's length link with the Coalition on the Niagara Escarpment (CONE) that is supportive in principle of the biosphere reserve ideal. The GBBR has informal links with the Georgian Bay Association and Georgian Bay Forever, both of which engage in advocacy and who were also champions in the creation of the biosphere reserve. In most other biosphere reserves the advocacy groups are quite fragmented by the issues they engage in.

Funding:

With the sole exception of CSBR that was provided with a $12 million endowment fund from Environment Canada when it was designated, each BR is on its own. BRs that had a national park as their core area were provided, through the park administration, with $5,000 annually to help cover expenses from working together with park authorities;

Parks Canada also provided a half-time Executive Secretary for CBRA and another $5,000 to help offset expenses for the Annual General Meeting of CBRA hosted by a different BR each year. Otherwise, it has been a matter of volunteer fund-raising through grant applications to foundations or to other government programs on a project-by-project basis. While this has been helpful, it also directs projects towards the goals of the funders. One result is that (a) it has been difficult to get beyond a succession of small short-term projects, and (b) if at any time there is no volunteer fund-raiser available there can be long periods when very little is being done. In 2008, after a long and determined effort from CBRA, and especially its Chair at the time, Environment Canada provided the equivalent of about $50,000 annually to each of the 14 BRs for a 5-year period (2008-2012) along with support of 2 FTE staff for CBRA itself. This has provided for the services of about one FTE staff person for each BR. At that point, Parks Canada cut its support for CBRA. Nevertheless, although there is a lot of variation, some BRs are raising several hundred thousand dollars a year through their various cooperative initiatives with other organizations and groups.

Development of Programs and Activities

Biosphere reserve programs are strongly influenced by (a) the issues and events that gave rise to the formation of a biosphere reserve as a means for addressing these issues, and (b) the general socio-economic and social-ecological contexts in which they are situated.

*Events leading to a biosphere reserve*:

The original champions for each biosphere reserve were responding to perceived threats and/or opportunities in the region for which the concept when realized in practice seemed like it would be helpful for dealing with these kinds of issues. In some cases, this came after prolonged local or regional disputes had reached a "tipping point' signified by major changes made in the overlying governance regime to resolve them. These changes also presented a "window of opportunity" for creating a biosphere reserve.

Examples (from west to east) include:

CSBR: [Please see WP 4 for a summary of "collibration" in the CS region].

RMBR: The Riding Mountain National Park had established a liaison committee in 1980 that included 15 rural municipalities around the park. There were (and still are) recurring issues of wildlife and cattle as well as access to resources within the park that have to be dealt with. The biosphere reserve group was envisioned as a sub-committee of this group that could address less controversial aspects of some questions the liaison committee handled.

NEBR: The biosphere reserve idea arose after passage of the Niagara Planning and Development Act (1973) and a Niagara Escarpment Plan, 1985, revised most recently in 2008. The Bruce Peninsula and Fathom Five National Parks were also established in 1987 and together with the escarpment plan area were designated a biosphere reserve in 1990.

The regional contexts in which biosphere reserves are situated lead to distinctive sets of issues and priorities they then have to address. Four broad categories can be noted.

*Urbanizing regions:* All the Ontario biosphere reserves have urbanization pressures to varying degrees. In addition, MABR on the east coast of Vancouver Island, MHBR, and LSPBR in the greater Montreal region experience strong urban regional influences as does the proposed BHBR outside of Edmonton. Urban pressures include haphazard urban sprawl that destroys or degrades farmland, remnant natural forests, wetlands and small lakes, disrupts water supplies and outdoor recreational sites, and "privatizes" access to coastal zone areas. Local organizations respond by trying to save sites and/or re-direct urbanization to areas already urbanized. Ontario is unique in having greenbelt legislation to re-enforce this in one large region. However, this has different impacts – the NEBR and planning for a proposed ORGBR are helped by this greenbelt support, but the deflected urban sprawl is placing pressures on the GBBR and LPBR.

*Rural agricultural regions*: Priorities go towards how best to maintain rural countryside and rural life styles associated with some form of "agrarian" ideals despite intensive industrialization of agriculture. Rural farms are subjected to considerable uncertainty and are vulnerable to forces over which they have no control. Besides weather and crop yields, they are also vulnerable to government and corporate policies for the agricultural

sector including regulations, subsidies, and corporate pricing policies for inputs and supplies as well as for produce. At the same time slow changes such as increases in the number or proportion of non-farm rural residents, landownership by absentee landlords, and continued out-migration of young adults, can lead to cautionary approaches to any change unless it can result in more cash flow through rural farm families. Signs of "depleted communities" (loss of infrastructure and services) may also be common.

*Boom-bust resource extraction economies*: Much of Canadian economic history consists of these cycles especially in "hinterland" regions. The drivers of them operate at scales well above those within a biosphere reserve resulting in forced transformations over which local residents have no control. If these changes occur relatively fast (say, over 1-2 decades) then some people have experienced several during their lifetime. New "boom" times usually benefit newcomers rather than older survivors of the previous cycles. This means divided communities with residual suspicions all round.

Variations on this theme generally relate to the pace, severity of changes and to strategies that may have developed over the years to lessen their impacts. For example, the Maritime Provinces seem generally to have well developed "informal economies", some or much of it outside cash flow and records, as well as institutions such as producer and consumer cooperatives, credit unions and relatively high levels of volunteerism. There are also attempts to make a transition from "extraction to attraction" to bring tourism to the area if the countryside can be made attractive and sensitive use is made of "natural assets". With access to Web 2.0 technologies, there may also be initiatives to attract "light and clean" high tech-based small businesses into the area.

*Governance constellations*: A biosphere reserve organization is but one entity in what may be a somewhat crowded field of government agencies (three layers at least in federalism), private sector commodity and service chains extending out to other parts of the continent or world, and many smaller "civil society" non-governmental organizations and community groups. The challenge for any biosphere reserve is to discover effective working relationships with this much larger "governance regime" with the hope that effective groupings or networks of them can be encouraged. This can be time-consuming especially if cultural differences are present (e.g. considerable First Nations

or other multi-cultural diaspora populations are present), as well as class and power differentials evident in corporate sectors headquartered overseas but dominant in the local economy.

Program Development Strategies

Four general approaches seem to be used. They are not mutually exclusive nor do they always progress from the easier to the more challenging initiatives. Much depends on the Board members and resources available at any given time. There is a district ebb and flow pattern evident over the years in the more long-established biosphere reserves.

*The big issue(s) that started it all*:

In some situations an overarching set of concerns that motivated formation of the biosphere reserve continued to guide what the group did next through some mix of initiatives and activities. Examples include:

CSBR: It was established following bitter disputes and therefore was implicitly expected to play a positive, although not intrusive healing role by fostering constructive dialogue and cooperation on projects among various local stakeholder groups and communities;

WBR: It addressed as their number one priority various issues threatening ranching communities, wildlife habitats, and the highly publicized viewscapes ("from the prairies to the Rockies") in lands immediately east of Waterton Lakes National Park. Some 20 years later the biosphere reserve group had successfully stimulated different initiatives whereby these lands had been secured and a Southern Alberta Land Trust Society was created to continue similar work elsewhere along the Rocky Mountain front range lands in southern Alberta extending from Montana to Kananaskis Country west of Calgary;

RLBR: It continues to seek effective ways to reduce or reverse a slow decline in the economic basis and infrastructures of local farming communities;

RMBR: It continues to address recurring issues of the Park's relations with surrounding rural areas;

GBBR: The main challenge was seen as how to reconcile divergent interests and values among four distinct constituencies in the region, two of them seasonal residents and two others permanent residents. Yet it was thought that they all had a strong sense of place in the larger region of the biosphere reserve, and that shared set of values should be nurtured;

LSPBR: It had a master plan for sustainable tourism prepared in 2002 to help revitalize the local economy, and this is its central project as a biosphere reserve;

MUBR: It decided to create and show-case itself as a regional model for sustainable development.

*Success by association:*

Recognition of various on-going collaborative programs sponsored by other organizations that exemplify the general ideals of a biosphere reserve can be used to publicize the new biosphere reserve group and indicate its willingness to recognize and support other organizations. In the process it might discover ways in which some substantive help can also be provided as well. This approach was recommended to MABR in a periodic review in 2010 for a reorganization it was going through at the time. BHBR has already built a number of collaborative programs under a Beaver Hills Initiative over the past decade. This approach seems to be an established practice at CVBR, while FBR is just getting a similar one underway. Other biosphere reserves also do this from time-to-time as they slowly build up their contacts with other groups in the area.

*Early wins:*

Some biosphere reserve groups start with small scale, quite local, non-controversial projects that most Board members feel comfortable taking on because they know how to do it and not too much volunteer time will be required during any given year. Examples include preparing materials for a display booth and arranging to take this to a variety of local fairs and exhibitions, and preparing short talks to give to local groups at their club meetings. Tree-planting weekends, roadside & trail clean-ups, and bird counts are also easy wins that indicate to others the intention of becoming helpful partners in the larger community. Most biosphere reserves have some of these kinds of projects in their

"portfolios". At some point however, projects are not seen so much as ends in themselves, but as a means for broader goals such as capacity-building and network formation for larger and longer-term endeavors.

*Strategic thinking*:

At some point, at least some members of a BR Board, especially ones who can be categorized as entrepreneurs and/or reflective practitioners, may be encouraged to take the time to assess gaps and opportunities from a comprehensive. multi-sector (complex systems) perspective. This is to identify major gaps or contradictions among all the programs and initiatives underway among various organizations in the biosphere reserve as a basis for developing a significant and distinctive role for the biosphere reserve organization in trying to rectify this. Some foundations or other funding bodies require this planning as a pre-requisite for providing support to applicants.

It becomes a matter of "connecting the dots" by first finding them, and then figuring out how to "untie the knots" including re-framing the issues that seem so far to have prevented effective collaboration in different domains. This also implies a willingness to develop the role of broker and facilitator that is devoted to network building and capacity development. To some extent this approach can be discerned in those cases where the biosphere reserve group has adopted the big issue as its guiding star. In other cases, notably FABR ("Networks R Us"), this role is taken up opportunistically with a mix of community organizations in which new small networks become larger and more diversified, and entire networks within other networks evolve over time with no particular larger end goal in mind. One result has been that many of the different networks that are, or have been supported by the FABR extend over a region about twice the size of the biosphere reserve.

## (How) Do Biosphere Reserves Develop as Organizations?

The concept of a biosphere reserve has evolved over the past 40 years and will probably continue to do so. UNESCO's declarations about the roles and potentials for biosphere reserves are heroic. The "Madrid Declaration (8 February 2008) called for the required mobilization of support "…through cooperation among all governmental levels, private sector, mass media, civil society organizations, indigenous and local communities,

research, monitoring and education centres, and other such institutions for the implementation of the Madrid Action Plan for Biosphere Reserves (2008-2013)".

In Canada, by circumstances and/or choice, biosphere reserves have not followed the conventional expected development paths whereby they would seek to become ever larger and more influential forces in their communities by taking on multiple local and regional programs to advance sustainability. The more common practice is to "spin off" projects they initiate to other groups or organizations willing to take them on. This "catalytic" role is consistent with initiatives to foster networks and collaborative relationships among people and/or organizations. Yet this role becomes difficult if the biosphere reserve group itself has to rely only upon project-by-project funding that is directed towards other tasks by funding bodies. At some point, they may begin to explore how they might generate reliable funding and other support for continuing the catalytic role. Some examples (from west to east) are:

CSBR: The endowment fund managed by the Clayoquot Biosphere Trust requires that some earnings of the fund be used to support projects and activities of local organizations. Some projects are jointly funded with other organizations to enhance the catalytic function, e.g. with Ecotrust Canada devoted to developing a viable "conservation economy" as the strategy for "reliable prosperity", the Tofino Botanical Gardens Foundation which hosts the Clayoquot Field Station that, in 2009, launched an initiative to establish a "Clayoquot Consortium… to engage institutions from around the world in considering and responding to the challenges and opportunities presented by the UNESCO Clayoquot Sound Biosphere Reserve", and the Tsawalk partnership of West Coast Aquatic in 2009 to develop collaborative marine and coastal zone plans.

BHBR: The Beaver Hill Initiative created formal inter-organizational agreements with five-year work plans updated annually, and in 2006 this was formalized among the growing number of partners (35 as of 2010). Funding is being managed through different partners depending on its source and purpose.

NEBR: The biosphere reserve group had experienced a reduced level of activities from what had been the case when it was created in 1990 only to be followed a few years later by major budget cuts to organizations it was dependent upon. While a Bruce

Peninsula Biosphere Association was incorporated in 2001 to become the first community-based organization taking on biosphere reserve-related projects, it has not been followed up by other similar kinds of organizations becoming established along other major sections of the 725 km escarpment formation in southern Ontario as was anticipated at one time. In 2009, a Niagara Escarpment Biosphere Trust Foundation was established explicitly to rejuvenate biosphere reserve programs and expand them beyond the earlier concentration on conservation and resource stewardship initiatives.

FABR: In 2010, the first phase of a three-phased commitment was launched to build and operate a "Frontenac Arch Biosphere Sustainability Centre" located on a "brown-field" site in Gananoque overlooking the confluence of the Saint Lawrence and Gananoque Rivers. It is to be a visitors and education centre as well as having facilities for small start-up companies in the "green technologies" sector that are expected eventually to provide new employment enterprises in the region.

MSHBR: This biosphere reserve experienced a major funding crisis in the late 1980s that resulted in closure of its Nature Centre and its school programs and raised the possibility of closure of its research station facilities as well. In 1995, the Centre was able to recruit an experienced social entrepreneur with media and communication skills who immediately saw a number of unrealized opportunities. As of 2010, the Nature Centre has about 4,200 members, it attracts some 170,000 visitors annually, employs 12 FTE staff as well as about 20 seasonal staff, all supplemented by about 700 volunteers from nearby communities. Its annual budget of about $1 million comes from its parking lot and other program service fees for the public. This also helps off-set some of expenses associated with the research facilities maintained by McGill University.

Other biosphere reserves have considered the formation of centres that undertake research and education functions often in cooperation with other organizations. This could be viewed as a more indirect strategy for promoting similar results in terms of the capacity of the biosphere reserve for continuing in a catalytic role. Examples include:

CSBR: After much discussion, in 2011 the Clayoquot Biosphere Trust decided to create a Biosphere Centre to serve as a new permanent administrative home and community centre for visitors and local residents working on biosphere reserve-related activities.

MABR: At one point in the mid-2000s, a few members of the biosphere reserve group put considerable effort into exploring the prospects for creating a "Vancouver Island Biosphere Centre". It got as far as a pre-feasibility study for the concept (2004) but was unable to follow-up because of difficulties in obtaining a suitable site location for a centre. This was necessary before proceeding to a design phase and capital fund-raising campaign.

RLBR: A Research and Education Centre located in the Redberry Regional Park on the shores of the lake was refurbished. This was done to foster local meetings for various community groups, some of which might lead to new community projects.

ORGBR: The Oak Ridges Institute for Applied Sustainability (ORIAS) was incorporated in 2008. It hosts a newly formed biosphere committee and serves as a virtual institute (in Web 2.0 cyberspace). It is also developing the logistics role for the biosphere region through the formation of a research coalition, and a possible education coalition featuring a number of different agencies and organizations in the area.

LSPBR: Early discussions about creating a biosphere centre to promote sustainable tourism and associated activities have led to steps towards creating networks of cooperation among several key organizations that already perform some of the necessary functions.

SWNBR: The Mersey-Tobeatic Research Institute was created with the donation of a former forestry field station in Kempt, Queens County, NS. The Institute, organized as a Cooperative, now has 120 members and 25 partners, including the Nova Forest Alliance, and in 2010 raised funds for extending and re-designing the facilities up to a LEEDS certified standard. A number of conservation-oriented research and monitoring activities by various groups in the Kejimikijuk-Tobeatic region have been brought together and expanded under the Institute. Workshops, public talks and other events are also offered. LEEDS certification will enlarge the agenda to include "green technologies".

Towards an Evolving Polycentric Governance – Waterton as a Case Example

It can be enlightening to trace how this catalytic approach fostered by a BR unfolds as horizontal connections at the same scale in the larger region to evolve a kind of informal polycentric grassroots governance. The Waterton BR provides an interesting example, looking back over some 30 years of its modest existence.

The Waterton BR got started in the early 1980s. It began as informal cooperation between the Park Superintendent and senior park warden of Waterton Lakes National Park and about a dozen ranchers owning lands immediately adjacent on the east side of the Park, the "front range" of the Rocky Mountains at that location. The park staff and the ranchers formed a small group and called themselves the Waterton Biosphere Association. The issue was how to discourage wildlife coming onto ranches (and cattle going into the park). But it also raised questions of what effects wildlife might have, especially elk on the cattle when the elk come out on the ranches to feed with the cattle. Over several years this led to cooperative studies conducted by the Canadian Wildlife Service (CWS) with help from the Animal Disease Research Institute (Canadian Food Inspection Agency) in Lethbridge that confirmed the elk were healthy and not really competing with cattle on the range. It also led to negotiated changes in hunting regulations whereby the Alberta government opened the fall hunting season on elk first to ranchers before opening it to the larger public. All of this gradually strengthened social trust that could be built on for other purposes. The Association remained an informal one, meeting monthly in the evening around the kitchen table of a host rancher.

But as things went on, the ranchers were faced with greater threats from developers wanting to buy ranch lands for tourism purposes or expensive homes with a view of the mountains. Month after month groups of ranchers made representations to rural municipal councils to oppose the latest zoning changes the councils were being urged to make. Once that kind of development started, the land prices would soon put ranchers at a severe disadvantage. The rural councils held firm, but the process became tedious and tiring. At some point, a few of the ranchers in the Waterton Biosphere Association looked into conservation easements as a way of protecting the ranchlands for continued ranching. Several placed their own properties under easements and used that example

to urge others to do the same. Before long, conservationists heard of this, and the Alberta office of the Nature Conservancy of Canada (NCC) raised funds to help ranchers, but with no immediate publicity for the NCC. By about 2004, and with funding from Albertan sources as well, the Waterton Park Front (as it was called) had secured 14,164 ha of ranchlands that effectively foreclosed other options. Ranching also protected valuable wildlife habitats at a critical narrow juncture of the Rocky Mountains at that location.

Meanwhile, some of the ranchers who led the easement program had formed the Southern Alberta Land Trust Society (SALTS) in 1998 to be a rancher-to-rancher organization that promoted easements as a protection for other ranchlands along the eastern slopes in Alberta. Today there are a series of at least four landowner associations (Chinook, Livingston & South Porcupine, Chief Mountain, and Pekisko) that protect their surface lands and rivers flowing from snow pack on the mountains. In Alberta, sub-surface rights are separated and most are owned by the oil & gas industry. The SALTS has acquired over 4,600 ha of conservation easements in several of these areas. Legally, easements now come under the Alberta Land Stewardship Act, 2009. Some people in the landowner groups have also become concerned about forest management practices, especially the effects of large-scale clear cutting in the Crowsnest Forest Section of Forest Management Unit C5 under a plan approved by Alberta in 2010.

The Senior Park Warden in Waterton, who had also been an informal member of the Waterton Biosphere Association, activated a long-standing cooperation agreement that had been established with Glacier National Park in Montana. Both parks had been declared an International Peace Park in 1932, given that they are a contiguous mountainous landform with the international boundary carved across the middle of it. Both also subscribed to the "Crown of the Continent" concept that originated in the early 20$^{th}$ century during events that led to the creation of Glacier National Park in Montana. The term is now used to describe a 72,000 km$^2$ section of the Rocky Mountains between southern Montana and the Kananaskis country region east of Calgary. In 2001, the two Parks formed the Crown of the Continent Managers Partnership and hosted the first Crown Managers Conference to discuss resource issues of common concern. These

became an annual event with a different theme each year, and they are hosted alternatively in the US and Canada.

Technical and administrative support for the Park partnership has been provided by "The Miistakis Institute of the Rockies", formed in 1995. Since 2001, Miistakis has been affiliated with the University of Calgary and has informal associations with the University of Montana and other organizations on subjects of mutual interest. The Partnership consists of about 20 federal (Canada & US), provincial/state, and First Nations/Tribal representatives. The number of participants in the forums grew in number and were affiliated with both government agencies including municipal bodies and a range of non-governmental organizations or groups in both countries. Some 170+ "partners" including the Waterton Biosphere Association are currently recognized because of their participation in these meetings.

In 2006, the Crown Managers Partnership reviewed their work and created a strategic plan to guide the next five years. Their stated vision of an ecologically healthy Crown of the Continent Ecosystem (CCE) was to be fulfilled by their mission to build understanding and awareness of this ecosystem, align their own agency mandates with it, and build enduring relationships and collaboration across mandates and borders. A formal steering committee guides the work to be done to keep the partnership going. This also includes shared projects and workshops such as those to develop indicators of ecological health, describe the current state of the CCE, and explore the possible impacts of climate change on the CCE.

A seemingly never-ending set of issues relate to the lands between Waterton Lakes NP and the Crowsnest Pass area of Highway 3 (in Alberta). This area of about 1,035 $km^2$ is generally known as the Castle-Crown region, or as the Castle Wilderness. In 1986, a Castle River Sub-regional Integrated Resource Plan was approved by Alberta, but it was subjected to *ad hoc* changes to meet particular interests from time to time. The general area came to be known as the "Castle Special Place" under a new provincial "Special Places Program" in 2000 and debates continued about how this special place should be effectively protected. In 2007, the government requested submissions of locally-driven citizens' initiatives concerning special places. In 2009, a Castle Special Place Working Group tabled a detailed proposal. The working group was composed of a variety of

people and organizations, including the Chinook Land Owners' Association in Pincher Creek that had been founded by a long-time informal member of the Waterton Biosphere Association. Their report has been favourably received in local communities.

There were similar kinds of issues being addressed locally in the British Columbia portions of the Rockies. The network links among these are not known. In 1996, after much discussion, the BC government created the Akamina-Kishinena Class "A" (Wilderness) Provincial Park, a 10,921 ha area immediately contiguous with Waterton Lakes National Park, and thereby extending a core area for the biosphere reserve. In 2003, a Southern Rocky Mountain Management Plan (SRMMP) was released by the BC government. It is a comprehensive provincial Crown land plan (excludes federal and private lands and protected areas) and extends over a 362,819 ha area north from the Montana boundary to the Heights of the Rockies Provincial Park including portions of four major watersheds, one being the Canadian section of the Flathead River. There have been intermittent controversies over resource extraction proposals in the BC portion of the Flathead River because of their downstream impacts in Montana. This threat was also deemed to undermine the integrity of the Waterton-Glacier International Peace Park World Heritage designation (received in 1995).

A "monitoring mission" on behalf of the World Heritage Convention visited in 2009. It recommended that the SRMMP be amended to prohibit mining and energy development in the Flathead basin, that disruptions of habitats be minimized to conserve the distinctive biodiversity in the Flathead valley, and should a resource extraction proposal come forward, that it be submitted to the International Joint Commission (IJC) under Article IX of the Boundary Waters Treaty of 1909 (since a similar Reference in 1984-5 resulted in a coal mining proposal in BC being withdrawn). Following a MOU signed between BC and Montana in February 2010, BC introduced a proposed Flathead Watershed Area Conservation Act in 2011 that would cover some 160,000 ha and restrict resource extraction activities in the area. In February 2011, the Nature Conservancy of Canada and The (US) Nature Conservancy together committed $9,4 million for BC to help offset costs and to enhance conservation standards for this area.

In 2009, with assistance from a person who had been involved with the informal Waterton Biosphere Association since the mid-1980s, the Waterton Biosphere Reserve

Association WBRA) was incorporated as a non-profit organization. It is based in Pincher Creek, AB, and has a new Board and a part-time staff person. The WBRA is in close contact with the Chinook Land Owners' Association and informally with some of the other landowner associations along the front-range in the Rockies. One of the first projects was to contract the Miistakis Institute to do a survey of ranchers about livestock predation by carnivores (grizzlies, cougars, and wolves) and a review of livestock compensation programs. The WBRA also participates in the Southwestern Alberta Cooperative Weed Management Area. It is now embarking on the development of a cooperation plan in consultation with other groups and has as a theme "the integration of conservation values with traditional livelihoods". Its scope will include the C5 forest management area as well as agricultural lands. WBRA will host the CBRA AGM in 2012.

There is always the question about whether these or similar events would have unfolded anyway if the original WBA had not been formed. Perhaps - alternative "what if" histories can always be posed as plausible scenarios. The question remains open.

**Model Forests and the Forest Communities Program in Canada: Their organization and programs.**

Please see glossary below for the name of each model forest (MF) and/or forest community project (FC), the province it is in and the year it was designated by the CFS.

| Acronym | Name | Province | Designated |
|---|---|---|---|
| BSLMF | Bas-Saint-Laurent | QC | 1992 (terminated 2007 |
| CSFC | Clayoquot Sound | BC | 2007 |
| EOMF & FC | Eastern Ontario | ON | 1992 |
| FRMF | Foothills Research | AB | 1992 |
| FMF & FC | Fundy | NB | 1992 |
| LBMF | Long Beach | BC | 1995-2002 (terminated) |
| LSJMF | Lac Saint Jean | QC | 2007 |
| LAMF | Lake Abitibi | ON | 1992 |
| LBFC | Le Bourdon | QC | 2007 |
| MMF & FC | Manitoba | MN | 1992 |
| MGMF | McGregor | BC | 1992 (now RNAFPC) |
| NESFC | Northeast Superior | ON | 2007 |
| NFAMF & FC | Nova Forest Alliance | NS | 2002 |
| PAMF & FC | Prince Albert | SK | 1992 |
| RNAFC | Resources North | BC | 2007 |
| WCMF | Waswanipi Cree | QC | 2007 (terminated) |
| WFCP | Weberville | AB | 2007 |
| WNMF & FP | Western Nfld | NL | 1992 |

Organizational Structures and Funding:

It is useful to distinguish two distinct organizational periods over the past 20 years. The first 15 years was the “original” Model Forest program that functioned over three five-year periods from 1992-1996; 1997-2001; and 2002-2006. In 2007 the first five-year period of the Forest Communities program was undertaken (details about follow-up to the FC were not available at this time of writing).

The model forests were established and funded by the Canadian Forest Service (CFS) to demonstrate how collaborative partnerships and consensus decision-making approaches among all forest users can lead to sustainable forest management. The original 10 MFs were chosen from among about 50 submissions received in a competition held by CFS in 1991-92. For Phase I (1992-1996) successful applicants were awarded $1.5 million for each of five years with an assigned goal during this period to get the MF up and running with collaborative networks of partners. They first hired a

general manager, an administrative assistant and secured office space with access to GIS technologies. They then convened a number of community meetings to which anyone interested in forestry issues was invited and from these, identified as partners anyone who came forth wanting to become involved. From among these attendees a management board was appointed with the proviso that partners-with-authority were to be key members. This "inner circle" comprised representatives of corporations holding forest management tenures (MFs had to include one or more of these, and some MF were defined by a dominant tenure) as well as an official from the provincial ministry responsible for forest tenure policies and regulations; and a regional CFS official representing the primary funding agency.

*Memberships*:

The Management Board usually appointed a small executive committee (or fulfilled that role itself) and also appointed working groups and/or sub-committees. These were organized either by functions of management (e.g. finance/accounting, communications, partnership growth) or by major collaborative projects (e.g. research, education and training, capacity building among partners). Some MFs distinguished between full partners (ones from agencies that provided in-kind or financial contributions to major projects) and Associate Members who contributed in more modest ways.

Program Development Strategies & Activities

Once a model forest application was accepted, the CFS then guided program development by requiring annual work plans, annual progress reports, and individual project reports. Towards the end of each five-year period Natural Resources Canada had an independent evaluation done of the progress and accomplishments of each MF; this was a pre-requisite for further funding. Only one MF was terminated from these reviews, but others received strong suggestions for improvements during the following funding period. In 2002, the CMFN adopted the CFS "Results-Based Management and Accountability Framework" to organize their planning and reporting requirements.

A five-year detailed strategic plan was required for approval prior to each of the next phases of the program. Phase 2 came with slightly less funding (partners were expected to make up any difference) and a requirement from the CFS to address "strategic

initiatives". All were expected to develop local criteria and indicators (C&I) for sustainability forestry by adapting the Canadian Council of Forest Ministers (CCFM) national set of C&I developed though international consultations, and where applicable, they were also to enhance Aboriginal involvement in sustainable forestry and/or develop programs for private landowners with small woodlots. The last applied especially to Eastern Ontario through Quebec to the Atlantic Provinces. The C&I encountered difficulties from the lack of data available at the scale of a MF, especially in the socio-economic sectors. A number of MFs offered training opportunities for local people and especially for Aboriginal youth, and the woodlot program pioneered by the EOMF was adapted for use elsewhere in eastern Canada.

Phase 3 provided $500,000 a year to each MF with a requirement that they each secure at least $250,000 a year from partner organizations. The general direction from CFS was to extend the influence of whatever was being done in the MF to a larger region around them. Most seemed to interpret this to mean starting projects elsewhere in the province, sometimes far removed from the original MF, and/or become more intensively involved with MFs in the international network. The latter had grown quite rapidly under the IMFN Secretariat who often solicited and funded people in Canadian MFs to undertake assignments in the overseas ones.

In addition to funds allocated to the MFs, the program itself had a budget of about $2 million annually for program coordination, support for "strategic initiatives", and joint activities between MFs and "special project areas" chosen by the CFS.

*The big issues that started it all*

While the forest industry was the main focus for the first three phases of the model forest program, there had long been growing criticisms of what they were doing from organizations not part of the industry but very concerned about forest issues. The negative publicity had become the basis for political pressures to modify or completely change policies, practices and the governance regimes within which industry operated, and by implication it also questioned the legitimacy of the forestry profession who supported and rationalized the existing system. As has been noted, the solution was judged to lay in the concept of the model forest where all stakeholder interests would

cooperate to decide by consensus how practical sustainable forest management practices could be developed that addressed the full range of forest values for each MF.

Besides the challenge of reaching decisions by consensus, the regional socio-economic contexts in which each MF operated posed distinctive sets of issues and priorities. Four broad categories can be noted.

*Boreal forests on provincial crown lands*: This was the general context for MFs in western Canada through to northern Ontario. There were variations in the configuration of land ownership under federal government (e.g. national parks), and provincial governments (e.g. Crown lands under forest tenures, or wildlife management districts), and First Nations communities. At the outset, each had a viable and often extensive industrial holder of the forest land tenure(s) that also operated pulp and sawmills that were critical for the economy of local communities. By the end of the 15-year period of the MF program many of these mills were idled or permanently closed.

*Agro-forestry regions*: While there were elements of agro-forestry interspersed in the boreal forests in western Canada, in eastern Canada from the EOMF through Quebec to the Atlantic provinces, the mix was predominantly farming with woodlands part of the landscape mosaic and owned by farmers for supplemental use, or by urbanites for amenity values. Historically, these were once forested lands that had been cleared for settlement and otherwise cut over many times over periods going back two or three centuries. The challenge for MFs was to find ways to encourage large number of people who owned these remnants to take an interest in good woodlot management, and find ways they might be grouped to collectively supply existing mills. Many were more interested in other values, including conservation of remnant forests. By the end of the 15-year period of the MF program many or most of the pulp and saw mills had been closed.

*Boom-bust resource extraction economies*: The “staples” perspective on the political economy documents the history of how Canada has long being used as a boom-bust provider of raw materials to the hegemonic world; the industrial forestry and other sectors still aspire to that role. MFs in western Canada, notably in BC and AB, are subjected to these phenomena over periods of one or two decades or less depending on

the resource sector(s) in play. In the Atlantic region these phenomena are now very subdued to the point MFs are used in effect to help social policies for providing subsistence options to alleviate rural poverty.

*Governance constellations*: Although confined to just one economic sector, and with funding to bring to the table for partnerships, MFs still had the challenge of how to create effective working relationships with the much larger governance regime. Consensus decision-making was mainly a goal or ideal given the different power relationships among partners, and "consensus by attrition" (non-attendance at meetings) was apparently noted on a number of occasions.

The *Le Bourdon FC* seems to be confronting this situation head-on as an "inhabited forest". In an area of some 1,068 million ha, based largely on a large FMU/URF # 064-51, there is a complicated overlay of timber supply and forest management agreements, a number of them held by the 8 members of the Association of Forest Stakeholders of Hautes-Laurentides. There are also about 30 outfitting business of which 19 have exclusive rights to the fish and game resources, and an estimated 600 leases for resort purposes. The Antoine-Labelle RCM has municipal responsibilities for the entire area, and two First Nations have unresolved land claims to the area. There are four large rivers in the area, several large reservoirs, and an estimated 4,800 small lakes. The FCP is to try to come up with a management plan that recognizes the decline in the forest industries throughout the region and the increased seasonal demand for outdoor recreation and tourism coming mainly from the Greater Montreal Area (a 2-hour drive away).

Fortunately, the MFs & FCs have yet to face directly the predicament that flared up in the *Manitoba model forest* area in 2009-2010. The key industrial partner, Tembec Industries, had purchased the paper mill in Pine Falls in 1994, and held the Forest Management License # 1 for some 900,000 ha of Crown land on the east side of Lake Winnipeg; in addition it imported wood from three provincial parks in Manitoba and from sources in western Ontario through arrangements with independent operators. The pulp mill was idled in mid-2009 and after a prolonged dispute with the union over working conditions for mill workers, Tembec locked out the unionized staff. It then closed the mill permanently in 2010 and about 250 people lost their jobs. In 2011, Tembec sold the mill

and associated site facilities to NRI Global Inc., a private investment firm in Buffalo, New York that specializes in dismantling industrial sites and selling their assets (The Canadian Press, October 7, 2011). Had all this occurred during the MF period when Tembec and the union were key players in the MF, it would likely have been difficult to carry on with a gentle consensus approach to deciding on sustainable forestry in eastern Manitoba. But by that time the Manitoba MF was a FC and pre-occupied with other projects.

Generally, the predicaments of the industrial forest sector have posed a challenge, especially given the shifting pattern of ownerships and control over the forest corporations. While ownership patterns are not always transparent nor easily discovered when they involve financial institutions and/or offshore controlling interests, these market structures can be expected to have no commitment whatever to the goals of the MF program. The impression is that the CFS and the CMFN have deliberately overlooked such issues.

Program Development Strategies

*Success by association:*

With the amount of funding they had in hand, especially in Phase 1, each MF seemed able to partner relatively easily with other organizations that exemplified elements of the MF ideal. In some cases at least, the over-all thrust of the work of the MF was determined by the kinds of research challenges and/or and management issues that were already of interest to key people in the area. Examples include:

FHMF: This MF was located in the north slopes of the Rockies region (Hinton-Jasper) that already had extensive research underway on practical issues facing the forest industry. By using MF funding, this research capacity was expanded to include more partners (such as Jasper National Park) and it was able to complete its MF signature "Highway 40 North Demonstration Project". Based on considerable prior and on-going research in the region, patterns of natural disturbances in forested landscapes (mainly by fires) and their effects on biodiversity had been documented.

An interagency planning group was able to use this information to prepare a 10-year (2005-2015) integrated natural disturbances emulation plan for a 70,000 ha area of older

growth forests surrounding the highway in three forest management units and one wilderness park. The operational plan adopted an ecosystem-based management approach and included a full suite of what were seen as large, well-placed, and well designed disturbances across a range of event sizes that mimic natural patterns, but could be done deliberately in ways that avoided unwanted other effects. This was thought to be a first in Canada at the time. There has subsequently been a considerable amount of thinning (under a FireSmart strategy) of lodge-pole pine killed by mountain pine beetles in the region, but it is not clear whether the rest of the plan is being carried out.

By 2007, the MF had been incorporated as the "Foothills Research Institute: Research Growing Into Practice" (and changed more recently into "Foothills Research Partnership Ltd.")? This entity currently has some 100 partners including the forest and oil & gas industries, three levels of government, First Nations, and universities. Partners are grouped under four different categories of involvement, the entity has an annual budget of about $4 million, and about a dozen or so major applied research themes are underway at any given time.

PAMF: This MF covers some 367,000 ha that spans the transition zone between the northern limits of the prairie aspen parkland and the southern limits of the boreal forest. The MF works with various communities within about a 120 km radius of the City of Prince Albert on topics of mutual interest. Most of the boreal forest component for the MF is within Prince Albert National Park to the north, and only a relatively small amount of it is included within the very much larger FMA held by Weyerhauser Corporation to the north and east of the NP; Weyerhauser also owned the pulp mill and major saw mill in Prince Albert itself. The main research interest was to assess and track the possible impacts of climate change on these landscapes; it was expected there would be a slow shift of this transitional ecozone northwards that would be related to climate warming. The national park was a desirable major component because other than its all-purpose recreational town site (Waskesiu) the management strategy for the park is to minimize human disturbances as a pre-requisite to maintaining "ecological integrity", a management goal for all national parks in Canada. Compilation of available information and field data has strongly suggested that these climate effects are present in the MF.

The challenge is how to factor this into the wide range of community projects that the MF shares with a large number of partners.

EOMF: This covers about 1.5 million ha including the National Capitol Region (Ottawa). Over-all, forestry is quite secondary to the regional economy based on urban areas, transportation corridors, recreational lands and waters, and agriculture. The EOMF formed a partnership with the Mohawk Council of Akwasasne and adopted a decision-making process based on a number of features drawn from their Haudenosaunee Iroquoian traditions such as using a seven generation planning framework, adopting a "naturalized knowledge system" and pursuing a "zeal to deal" in which cooperation is seen to be essential for survival. As a result, the MF has a strong set of networked partnerships based on a wide range of values associated with forests, and considerable experience in making this cooperative approach work well.

*The Forest Community Program*

Towards the end of phase 3, the CFS re-organized the program and renamed it the FCP. This was also a re-framing of the issues whereby the emphasis was placed on forest dependent communities that have been impacted by closures in the industrial forest sector. Nevertheless, this was to be done by focusing on other possibilities for developing forest products and markets (the NTFP sector). For the FCP, the requirement for awarding privileged roles for tenure holders and managers was dropped, but their participation was to be welcomed because of the experience they could bring. The FCP was also launched by a competition for proposals, and while all MFs apparently submitted one, only some were approved.

Their initial funding, at $400,000 annually for 5 years for each FCP, was less than before. As a new CMFN, it was incorporated as such. There was a similar organization for partnerships but with some operational changes. The sub-committees were put in charge of General Managers of each FCP who volunteered to head them up and they have become very interactive among one another; this is bringing more coherence to their mutual endeavours than had occurred previously.

(How) Do MFs Develop as Organizations?

So far, they have been able to keep their own identities and maintain support for a suite of projects associated with partner organizations. Nevertheless there have been some variations.

MGMF & RNFC: The MF merged with other resource development interests that had come together as an Integrated Resources Management Partnership of Northern BC to create "Resources North – A Northern British Columbia Partnership of Communities and Industries" in 2007. RN is incorporated as a non-profit corporation with about 60 members and offices & staff located in Prince George, BC. The goal is to create community-based integrated resource management as the way of doing business. Given the geographic scale of this initiative -- a land area of over 25 million ha with a number of small scattered communities including 25+ First Nations settlements that are dependent on some mix of mining & minerals, oil & gas, tourism & outfitting, forestry & agro-forestry, and hydro-power -- the organization has grouped itself around three major project regions: South Peace (including Prince George where the MGMF is/was located); MacKenzie; and Vanderhoof-Fort Saint James in the north-east. The priorities are to compile information into an integrated land and resources management plan, conduct workshops with communities to engage them in the process, forge working relationships with municipal councils, and with provincial agencies such as the new BC Ministry of Natural Resource Operations (MNRO).

NFAMF & FC: Phase 3 of the MF program was interpreted by the NFAMF as an invitation to become involved in projects anywhere in the province. It had a rather lengthy portfolio of items including sponsoring or co-sponsoring events and providing small amounts of funding for small-scale, short-term projects such as helping students with field work for a Masters degree. Under the FCP, the NFA has focused on four geographic areas for this kind of work: south-western NS (some of it conjunction with the SWNBR), St Mary's River in eastern NS, cooperation with the Unama'ki Natural Resources Institute based at Eskasoni First Nations in Cape Breton (in the BLBR), and cooperation with groups in PEI. This kind of diffused help for small projects can contribute to community-based resource management, especially where opportunities for larger initiatives are limited.

FMF & FC: Under the theme “Towards Resilience” (2007-2011) links have been established or strengthened with community (economic) development organizations in New Brunswick. This includes soliciting literature reviews from the Rural and Small Town Program at Mount Allison University on how forest-dependent communities might transition away from decline into a more viable socio-economic future, and co-sponsoring workshops and the production of instructional materials with the Falls Brook Centre, a sustainable community and training centre about 130 km northwest of Fredericton. In 2010, some personnel from the model forest became part of the University of New Brunswick’s Community-University Research Alliance (CURA) for Sustainable Forests.

A Few General Impressions from this Overview

The main impression from what is known about BRs in Canada is that their governing frameworks have all practiced “governing through networks” using some mix of strong ties supplemented by weaker bridging links to other quite different groups. Their approach or paths for transitions towards sustainability seem to be “reformist” and their approach to “steering towards sustainability” can best be described as providing a guiding vision with statements of goals in order to guide self-organization to attain these.

The main impression from what is known about MF/FC in Canada is similar in many ways to that of BRs, but at a much larger scale locally. Given the much greater funding at their disposal, the MFs could relatively quickly enter into agreements with other partners and develop larger and longer lasting project initiatives. Given the ideal of consensus decision-making, their approach or paths for transitions towards sustainability also seemed to be “reformist” and their approach to “steering towards sustainability” was partly a matter of providing a guiding vision with statements of goals, objectives, and outcomes (required in the five-year strategic plans and in annual work plans). But they could also commit considerable time and resources towards fulfilling them.