

Protected Areas and Lands for Life: Will Protection Policies be Met and Available Information Used?

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In February 1997, Ontario's Premier Michael Harris and Minister of Natural Resources Chris Hodgson announced that a new protected-areas strategy – *Nature' Best* – would be delivered through the *Lands for Life Planning* exercise over a two year period. Three regional Round Tables would undertake public consultation for the government on the public lands of the central 46% of Ontario, about 39,000,000 ha of forest landscapes.

This planning area is 83% publicly-owned, with 58% of those lands considered as production forests. The average area harvested or burned each year is 1.3% of production forests and increasing, with clear implications for sustainability. "Ontario's softwood sawtimber [harvest] has been held above sustainable levels in the past, and will have to be reduced in coming decades as inventories are depleted" (OMNR 1992). About 60,000 direct forest-product jobs flow from this harvest, a number in steady decline even as the harvest increases. The industry contributes to a balance-of-payment surplus of about \$3 billion for the province.

The planning area has about 185 parks and conservation reserves comprising 6.4% of the area. There are less than 50 roadless areas left over 10,000 ha in size, and all the roadless areas of this size comprise only about 7% of the *Lands for Life* area. The net of harvesting roads is closing more rapidly than the public realizes, and wilderness clearly faces a 'supply problem' in central Ontario. By Ontario Parks' own calculations, the provincial park system is only half completed. To complicate matters further, the legal conditions of the Timber Environmental Assessment concerning the protection of old-growth and roadless areas remain unfulfilled.

The *Partnership for Public Lands* formed quickly to address the interests of the conservation community. It is led by the *Federation of Ontario Naturalists*, *World Wildlife Fund Canada* and the *Wildlands League*. More than 30 local, provincial and national groups now support a common set of goals and objectives for the *Lands for Life* planning process that include:

- *Communities*: Healthy sustainable communities with an economic base capable of providing continuity and diversity of employment, an attractive investment climate and the same range of community services available in the rest of Ontario.
- *Land Stewardship*: Public lands outside of protected areas are managed so that planning and resource-use practices maintain the ecological integrity of the region.
- *Land Protection* : To protect Ontario's biological and geological diversity through recognition of a network of distinctive and representative protected areas.

An early goal of the *Partnership* was to be clear about its goals and concepts in presentations to the Round Tables, starting with definitions of what constitutes a protected area:

A protected area is a geographically defined area that is designated or regulated and managed to achieve specific conservation objectives. (IUCN)

It also became important very early to address issues of permitted uses and to communicate the conservation-community consensus that protected areas provide for a wide variety of compatible, multiple-uses. These include: parks and conservation reserves; remote and semi-remote tourism areas; wildlife management areas; game preserves and bird sanctuaries; First Nation homelands; fishing and hunting; recreation; and potential new designations such as wilderness and old-growth areas. The three exceptions to this were commercial logging, mining and hydro-electric development.

A simple rationale was presented, based on the federal and provincial *Statement of Commitment to Complete Canada's Networks of Protected Areas* (Canadian Council of Ministers of the Environment et al. 1992), which otherwise would not have been provided to the Round Tables as support materials. "Protected areas have scientific, educational inspirational and recreational values for humankind and contribute to sustainable development. Protected areas are essential to Canada's environmental health, biological diversity and ecological processes. The opportunities to protect Canada's natural regions and wildlife habitat are quickly being foreclosed". We backed this up with public-opinion polling in November 1997, indicating overwhelming support for wilderness protection and for setting aside at least 20% of public lands for wilderness protection. This support was as strong in the planning area and in northern Ontario as it was in the province as a whole.

The challenge facing the Round Tables, the Ontario Ministry of Natural Resources (OMNR) and the *Partnership* is to develop land-use options that:

- protect the areas that best – and adequately – represent the biological and geological diversity of our ecosystems;
- protect areas that have special conservation values of community concern, for example, wetlands, old-growth, wilderness areas, and significant wildlife habitats;
- protect areas that have important recreation uses, tourism uses, community uses, science and legacy values, and resource uses that are compatible with protected-area designations, tourist operations, wilderness, recreation, hunting, fishing, and so on; and,
- in as effective and efficient a manner as possible reflect accepted principles of conservation biology, landscape ecology and landscape-level land-use planning.

The Round Tables were directed to work within existing OMNR and government policies in their deliberations. The *Partnership* adopted this direction, but with the additional goal of introducing to the Round Tables some of the policies that we felt might not otherwise be brought to their attention. For example, for roadless-wilderness areas, old-growth areas, wetlands, wildlife areas; representative areas; and remote and semi-remote tourism areas, we feel that there is OMNR and government policy but that full OMNR buy-in is lacking as well as a

readiness to implement these policies in a credible, scientifically-defensible manner: As the planning process is already confirming, **it is only "representative" areas that OMNR is willing to discuss**, despite a policy environment that clearly embraced the other values.

The *Partnership* mapped roadless-wilderness areas from digital and hard-copy road mapping which, like other data bases, were being assembled by OMNR on a catch-up basis and were being shared with the *Partnership* through an agreement brokered by the Minister of Natural Resources. We introduced the Round Tables to the policy background for roadless-wilderness areas. "OMNR shall develop a provincial policy on roadless wilderness areas" (TEA 1994). "The Ministry is committed to involving clients and partners in discussions to...define and identify wilderness characteristics, ...and, assess the need for additional guidelines and techniques to manage for wilderness characteristics" (OMNR 1997d).

We cited examples for the Round Tables. According to the *Wilderness Act* of 1964, in the U.S., wilderness areas must be statutorily designated on all federal public lands. By 1985, 13% of all federal lands were so designated. In British Columbia (BC) park legislation provides for the identification of parks, recreation areas and "wilderness conservancies", areas "which will be managed as a roadless tract in which natural systems proceed without alteration." We welcomed a comparable departure, here, from purely-regulated protected areas.

We proposed that the Round Tables identify roadless-wilderness areas by using OMNR road data, and by identifying other areas with low road densities. Based on available crude mapping, we estimated that roadless wilderness areas of more than 5000 ha in size and more than 5 km from road systems occupy something in the order of 7-12% of the planning area. Much of this is in existing protected areas and in waterbodies. These data **provide the best definition of the "area of opportunity" for protected-areas design**. Data of this kind were first brought to the Round Tables by the *Partnership*.

With respect to old-growth areas, the *Partnership* drew the Round Tables' attention to various policies supporting appropriate protection. "OMNR has been slow to respond to this interest [in old growth]. Its apparent reluctance has left some people doubting its good faith. Old growth ecosystems are important because they are the ultimate expression of the natural processes which define and create our forest environment. They are the ultimate expression of the natural forest...a living laboratory... OMNR shall develop a policy to provide an environmentally sound conservation strategy and definitions of old growth specific to Ontario forest conditions" (TEA 1994).

We noted submissions to the Timber Environmental Assessment stated that Ontario should retain 10% of all forest ecosystems in the old-growth condition. As well the World Bank stated in October 1997 that all jurisdictions should protect a minimum of 10% of their forest ecosystems in a pristine state. Even Ontario's own policy is to "ensure that old growth forest ecosystems are maintained on the landscapes of Ontario now and in the future" (OMNR 1997b).

Again, we noted examples such as Research Natural Areas (RNAs) identified on federal public lands in the US and Western Australia's protection of its jarrah and

karri forests – their most important commercial forests – wherein 33% and 46% of these forests are reserved from cutting, respectively.

The *Partnership* has asked OMNR to map and categorize old-growth areas from Forest Resource Inventory (FRI) mapping, and has requested mapping of FRI stands by age. Apparently, however, these data will not be assembled except on a generalized FRI-block basis and, so, will not influence protected-area identification.

With respect to wetlands, the *Partnership* was informed by OMNR that Ontario has no stated policy to conserve or protect wetlands on Crown lands. Nevertheless, we noted that OMNR's Goals and Objectives included one – "To protect natural heritage and biological features of provincial significance" – that, along with the published methods on how to evaluate provincial wetlands, suggests that wetland protection should be part of the *Lands for Life* planning process. This parallels the provincial policy to protect wetlands on private lands, as a policy under the *Planning Act*. "Natural heritage features and areas will be protected from incompatible development. ...Natural heritage features and areas, such as significant wetlands...[are] important for their environmental and social values as a legacy of the natural landscapes of an area" (Ontario 1996).

Again, we noted that wetlands can also be mapped from a variety of sources including: digital or manual National Topographic Series (NTS) mapping; digital Ontario Peatland Inventory Landsat imagery, and digital Provincial Land Cover Mapping and Radarsat. We also noted that a large proportion of wetlands – marshes, open water, bogs and fens – do not support harvestable forests but do have extremely high wildlife and biodiversity values.

We also said that wildlife areas should be identified – again to meet OMNR Goals and Objectives – "to ensure the long-term health of ecosystems by protecting and conserving our valuable...wildlife resources as well as their biological foundations" (OMNR 1994). It is an accepted principle of conservation biology and landscape ecology that the habitat needs of wildlife species are a critical consideration in the determination of adequate habitat protection and optimal protected-areas boundaries. Rough – and in some instances excellent – approximations of the area and habitat needs of species are known to wildlife biologists. This is especially important for the protection of:

- featured species such as Woodland Caribou, Pine Marten, Bald Eagle, Red-shouldered Hawk, and Pileated Woodpecker;
- species of conservation concern such as neotropical-migrant birds; and,
- area-sensitive, vulnerable, threatened and endangered species.

As with wetlands on private lands, provincial policies to protect significant wildlife habitats are in place under Ontario's *Planning Act*. There are public expectations that public lands will be managed to the same standards that public agencies insist that private lands be managed. As the planning exercise develops however, it is becoming clear that, with the exception of Woodland Caribou habitat in northwestern Ontario, no data on the occurrence or habitats of wildlife species is going to be used in the identification of protected areas by OMNR gap-analysis methods.

A more complex discussion is taking place with regard to the identification of representative areas upon which OMNR will be basing its protected-area site selection. Parks and protected areas occupy about 7% of the planning area and these include many areas considered to be "representative" natural areas. The new OMNR gap-analysis methods focus on "representative" areas which OMNR has indicated to be less than 50% complete. Only 16 of 67 site districts are moderately or fully represented (OMNR 1997a).

There are many different approaches to gap-analysis and we have encouraged a full discussion at the Round Tables and with OMNR of different approaches. For example, OMNR, *Partnership*, university and out-of-province specialists in gap-analysis work might try to reach agreement on methods through a "Protected Areas Science Workshop" at the University of Toronto Faculty of Forestry (1997).

At least four varying gap-analysis methods are being applied in the planning area. OMNR's own documents speak to the shortcomings: "The geological and terrestrial science methodologies used to identify and measure adequacy of representation need to be updated to incorporate the best available science and to ensure that they can be consistently applied across the province" (OMNR 1997a). OMNR's approach does "not address the question of adequacy of representation" (OMNR 1997a).

In Ontario, the goal is to provide "core minimum representation" (University of Toronto Faculty of Forestry 1997). Methods specify "minimum adequacy rules" that appear to limit the identification of areas to a 5-7% representation solution. This is the areal extent that we have seen identified to date by OMNR gap-analysis studies. Because of this, there appears to be two choices. Additional lands, such as wetlands, old-growth, wildlife areas, and tourism areas, could be deliberately added/nested/fitted geographically to these core minimum areas, to address the need for larger protected areas that better meet the need for ecologically adequate representation. An alternative is to instruct OMNR to bring forward the "best representative 15-20% of an area", thus encouraging OMNR to address the question of the adequacy of representative areas being selected.

To this end, we have discussed with the Round Tables the **identification of an adequate protected-areas system**. We have noted for them the differences with the BC experience where a percentage figure was used to set the degree of representation that would be achieved. "British Columbia is committed to developing and expanding a protected areas system that will protect 12% of the province by the year 2000" (British Columbia 1993). To provide comparisons, we noted that Nova Scotia by 1995 had more than 19% of all its public lands as part of the province's system of protected areas.

We reminded the Round Tables of the province's commitment which stated that: "The complete range of natural heritage values is considered and assessed in order to determine which areas will most efficiently represent natural diversity" (OMNR 1997a). *Nature's Best* also indicated that the criteria for designing a protected-areas system included not only representation, but also diversity, uniqueness, quality, sensitivity, rarity, natural linkages and corridors, larger landscape processes and disturbance regimes, and the sustainability of areas (OMNR 1997a, 9).

Based on the OMNR Natural Heritage Training Manual (OMNR 1997c), we have noted for the Round Tables some of the recommended assembly rules of protected-area systems:

- The full range of habitat-landform types that occur in an area are protected.
- Large patches are generally more valuable than small patches.
- Avoid fragmenting natural areas.
- Connected patches are usually better than unconnected patches.
- Patches that contain a high diversity of plant and animal species are generally more valuable than lower-diversity patches.
- Waterbodies, wetlands and other [wet] areas should be protected wherever possible.

The *Partnership* is undertaking a kind of GIS-based "scoping" exercise around how to integrate these resource values – or landscape components – effectively and this is the subject of a poster presentation summarized elsewhere in these proceedings.

The goal of our independent work was to identify in each ecological district, candidate protected areas in remote natural states that would contribute to the protection of Ontario's biological and geological diversity; its wilderness, old-growth, wetland and wildlife values; and the many recreational, resource and social uses that are compatible with protected areas. Our initial estimate, based on scientific studies elsewhere and in the planning area (e.g. Geomatics International's study of site district 4E-3), is that about 15% to 20% of the planning area's public lands and waters may be identified as a result of this work.

To date, however, it appears that the *Lands for Life* Round Tables will not be provided with data and mapping, other than that from the *Partnership*, on values such as old-growth, wildlife, wetlands and roadless-wilderness areas. Neither does it appear that they will consider the overall landscape-ecology concerns central to modern conservation biology.

Because they are not digital, many other data will also not be considered. International Biological Program candidate protected areas will not be discussed by OMNR. Nor will past, neo-classical park-reserve surveys or inventories that were based on actual field studies. A remote gap-analysis project, based on a framework of "diversity" restricted to FRI or Landsat classifications only, will be done on computers in Winnipeg, without field assessment. These may become the basis of the deliberations of the Round Tables.

As well, data on historical sites, archaeological sites, First Nation values, high-tourism-potential areas, and other values, will not be organized and presented to the Round Tables unless independent groups can introduce them. This is highly unlikely. With *Lands for Life*, a new modern mantra comes to mind: "If it isn't digital, it isn't real." And because so few data bases are digital at this point, a blitzkrieg planning process like *Lands for Life* may well end up without any basis in science, and without any of its methods or biases peer-reviewed.

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