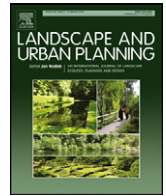




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The difficulty of integrating land trusts in land use planning

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ABSTRACT

We examine land-owning organizations' choice of strategy for steering spatial development. There are two highly visible strategies to influence land use. The first one, acquisition, is direct; it consists of either gaining outright ownership of the land, or various forms of partial title, including conservation easements. The second one, regulation, is indirect; it relies on the legal instruments of public policy, in particular land use planning, to influence the behavior of landowners. Often linking these two strategies in a coherent way is a challenge. On the one hand, local authorities are empowered by the law to plan for conservation, but they are not well equipped to do so (lack of capacity, expertise, political will). On the other hand, many small conservation NGOs are active at the micro level with little concern for supra-local considerations.

Focusing on an important private conservation effort in Southern Quebec, this article seeks to better understand land-owning organizations' position toward land use planning. It shows how conservation NGOs, which rely on property rights to influence land use, position themselves within the broader regulatory context and attempt to coordinate their action at a regional scale in order to complement their acquisition strategy.

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1. Introduction

Since the early 1980s, the number of land trusts in the United States has increased exponentially. A land trust is a non-governmental organization (NGO) which focuses primarily on acquisition, preferring a voluntary compensation-driven approach to the contentious political debates around land use law and planning (Daniels & Lapping, 2005). Many authors have highlighted how acquisition for conservation has become increasingly fragmented as a result of the expansion of land trusts (Fairfax, Gwin, King, Raymond, & Watt, 2005; Merenlender, Huntsinger, Guthey, & Fairfax, 2004; Wright, 1992). While land trusts frame their actions as environmentally motivated, this article analyzes their strategies from the standpoint of spatial development (Bengston, Fletcher, & Nelson, 2004; Stoms, Jantz, Davis, & DeAngelo, 2009). We examine land-owning conservation organizations' choice of strategies for steering spatial development.

There are two highly visible strategies for influencing land use (Doremus, 2003; Nelson, 1977). The first one, acquisition, is direct. It consists of either gaining outright ownership of the land, or various forms of partial title, including conservation and mitigation easements. The second one, regulation, is indirect. It relies on the

legal instruments of public policy, in particular land use planning, to influence the behavior of landowners. The need to make a choice between these two strategies is particularly evident in environmental conservation issues. Both strategies can be used by public as well as private conservation organizations to influence the use and management of land and natural resources.

Although they frame the issue differently, conservation organizations such as land trusts are actually reacting against what they perceive to be bad land use planning and its consequences (Byrd, Rissman, & Merenlender, 2009; Endicott, 1993; Wiebe & Meinzen-Dick, 1998). In this context, land preservation can be considered a substitute for land use regulation. Land acquiring NGOs are de facto land use planning agencies (Wright & Czerniak, 2000). Paradoxically, it appears that for the most part these organizations do not make additional efforts to protect against uncontrolled development through the use of the traditional tools of land use planning (such as zoning), for instance by influencing the design and implementation of land use plans, but instead rely almost exclusively on acquisition (Nie, 2008; Stoms et al., 2009).

The purpose of this article is to better understand the position of land owning organizations toward land use planning. Focusing on an important private conservation effort in Southern Quebec, this article shows how conservation NGOs that employ property rights based strategies position themselves within the broader regulatory context of land use planning and attempt to take coordinated action at the regional scale to complement their acquisition strategy. The main research question is about NGOs' decisions to rely on acquisition and/or regulation to achieve their conservation goals.

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In particular, we look at which strategies – acquisition or land use planning – conservation NGOs use and why. We ask, what role do conservation NGOs play in the land use planning process?

First, we discuss the interaction between property rights and regulations. In this theoretical section, we show that both are tools for controlling uses of space and that they must be considered together to draw a complete picture of spatial development. Land owning organizations are an ideal object of study for illustrating this complex relationship. Second, we present a detailed case study focusing on the effort to protect the Green Mountains in Quebec. Finally we discuss our research hypotheses in light of the empirical evidence collected in Quebec.

1.1. The land trust movement: significance in Quebec and abroad

Land trusts in the United States have been operating for more than hundred years, but it was not until the early 1980s that they began to increase significantly in number (Land Trust Alliance, 2006). There were about 400 land trusts in 1980 and there are about 1700 today (Land Trust Alliance, 2011). The dramatic growth of land trusts can be understood as a response to the roll back of the State in environmental issues: land trusts intervene at a time when the public budget for conservation and environmental agencies is being cut back (McCarthy, 2005; Raymond & Fairfax, 2002). This trend is most pronounced in the United States, although conservation easements and conservation covenants are increasingly used globally, particularly in Australia, New Zealand and Latin America (Kabii & Horwitz, 2006; Saunders, 1996). In 2000, there were 82 land trusts across Canada (Watkins & Hilts, 2001). No national statistics are available about the number at present, but four provincial associations bring together most of the country's land trusts (P. Valiquette, pers. comm. 16.06.2011): the Alberta Land Trust Alliance has 9 local or regional members (URL: www.landtrusts-alberta.ca, accessed on 20.06.2011); the Land Trust Alliance of British Columbia, 27 (URL: landtrustalliance.bc.ca, accessed on 20.06.2011); and the Ontario Land Trust Alliance, 32 (URL: www.olta.ca, accessed on 20.06.2011). The Network of Protected Natural Areas of Quebec lists 60 members, but does not indicate which are land-owning organizations (URL: rmnat.org, accessed on 20.06.2011). Three national land trusts also collaborate with the provincial alliances.

Canada primarily uses British-derived common law (British North America Act, 1867). As a result, landholders have land tenure (i.e., permission to hold land from the Crown) rather than absolute ownership. In contrast to English-speaking provinces, "Quebec property law is firmly rooted in the French civil law tradition and derives, therefore, from Roman law [.] Land in Quebec, whether once held in seigneurial tenure under the French regime or granted by the Crown (since 1763), is now in all cases held by individuals in a 'free' tenure, i.e., it is held as independently of the Crown as absolutely as possible" (The Canadian Encyclopedia Online, Headword: "Property Law", URL: www.thecanadianencyclopedia.com, accessed 01.06.2011).

Because of its close contact with English law, the Civil Code of Quebec of 1888 adopted the trust concept, even though the Napoleone Code, which influenced much of continental Europe, did not (Bolgár, 1953). In 1994, the new Civil Code of Quebec introduced a new instrument, the social trust, which paved the way for creating land trusts in Quebec (Civil Code, Article 1270). However, with one exception, this instrument has yet to be used in Quebec (Girard, 2009). Thus the vast majority of land-owning organizations are not technically land trusts, but rather non-profit organizations that control land through property titles (Girard, 2002). In the remainder of this article, we refer to them as "land-owning conservation organizations."

There is an on-going debate in Quebec about the applicability of the concept of "conservation easement", as it is understood

in common law countries. A conservation easement restricts the development and use of land to achieve certain conservation goals, such as the preservation of wildlife habitat, agricultural land, or open space. In Quebec, according to standard legal doctrine, the restrictions link a burdened parcel to a benefited (dominant) parcel. This condition forces conservation organizations to acquire a dominant parcel first if they intend to manage conservation easements later. However some progressive lawyers – such as the Environmental Law Center of Quebec – claim that the requirement for a dominant parcel results from an overinterpretation of the Code (J.F. Girard, interview, 06.04.2010).

In Quebec, the choice between land use planning and acquisition is a particularly relevant issue. As a civil law province, Quebec has tended to rely on public stewardship and regulatory instruments to promote conservation on private land, but its proximity to common law countries has prompted the development of a growing private conservation movement. Today the issue of hybridizing legal doctrine resonates at another scale as well: it is gaining in importance as international land trusts expand their activities.

2. Analytical framework

2.1. Property rights vs. public policy

How property rights are defined depends not only on property titles, but also on public policies. The latter restrict (or expand) the scope of the former. For instance, a policy can force a landowner to allow trespassing (e.g. public access to lake shores) or it can forbid the sale of given real assets (e.g. agricultural land to non-farmers). Consequently, the actual use right of a policy actor to a given parcel depends both on the property title he/she may hold and on the existence of policy regulations restricting or expanding the scope of authorized uses. Indeed all public policies with a spatial impact interfere somehow with underlying property rights: a landowner's freedom can be restricted (e.g. in the name of protecting natural habitats) or expanded (e.g. increasing the permitted building density).

There are two main ways to control the uses of a natural resource. Public action can attempt to influence resource users' behavior through either a change in public policies or a modification of property titles (Gerber, Knoepfel, Nahrath, & Varone, 2009). Both of these approaches can be further subdivided depending on whether or not they affect how use rights to the resource are defined (Fig. 1). Thus four strategies are available to conservation organizations: (1) promoting public policy that does not affect property titles (e.g. education, incentives); (2) promoting regulation which constrains property holders' rights (e.g. land use planning); (3) redefining property rights (e.g. acknowledging conservation easements independent of a dominant parcel, as explained above); (4) modifying the distribution of property rights (acquisition and sale of land).

To defend their interests, policy actors, such as conservation NGOs, rely on rules stemming from the legal system (Aubin, 2008). Among these four strategies, strategies 2 and 4 are particularly important for understanding the approaches conservation NGOs use on a day-to-day basis.

2.1.1. Promoting regulation to constrain property holders' rights

Property titles encompass the entire national territory. Consequently, any public policy with a spatial impact comes up against the interests of some landowners. Land use planning is the most obvious example of this type of public policy. Policies with a spatial impact – including agricultural, forest, endangered species or water management policies – reduce (or expand) the ability

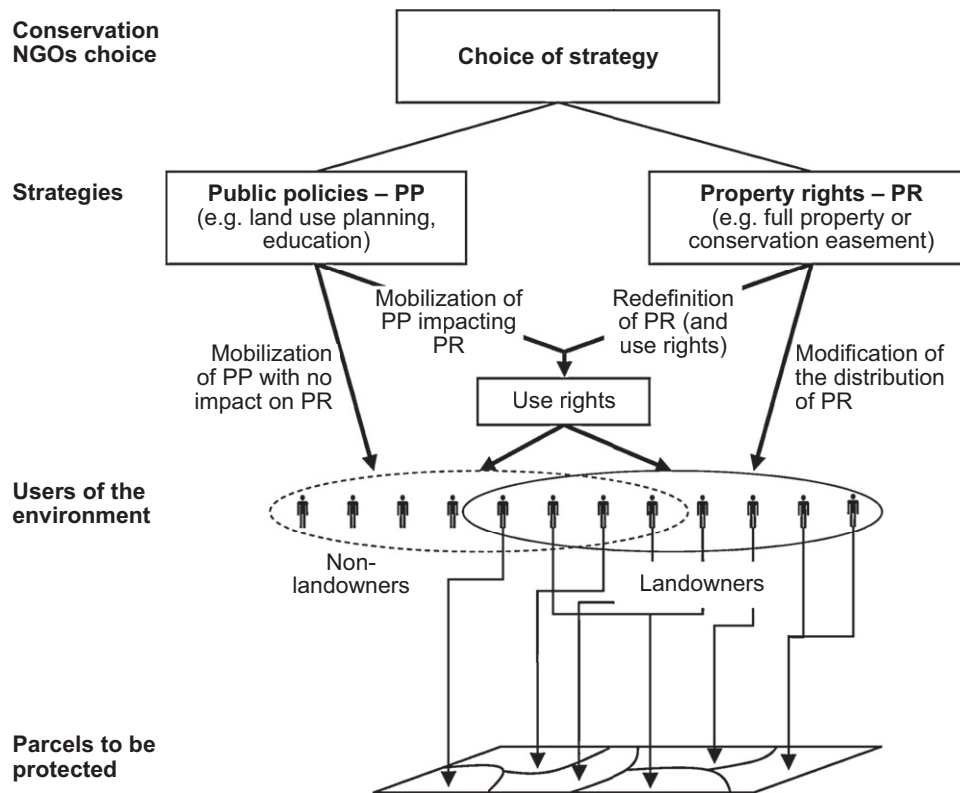


Fig. 1. Strategies for open space preservation and conservation.

Source: Modified from Gerber et al. (2009).

of landowners to use their land: they make concrete change to landowners' use rights.

Conservation NGOs directly benefit from these favorable environmental policies. NGOs can try to influence how these policies are implemented so that they complement the interests of their organization. For example, a NGO can fight for a land use plan that prevents building activity along swamps and marshes.

2.1.2. Modifying the distribution of property rights without affecting their content

To implement their policies, public authorities can also alter the distribution of property rights. They can either acquire land from a willing seller or they can use their power of eminent domain. This process does not affect use rights, only the identity of the landowner is changed.

Conservation NGOs can benefit from public policies designed to acquire land in the public interest. For example, the purchase of land to increase the size of national parks or other conservation areas is an objective shared by conservation NGOs. Of course conservation NGOs can also acquire land themselves from a landowner who is willing to sell, donate, or bequeath land. Conservation NGOs take advantage of many legal mechanisms – public funding sources, incentives, tax breaks, etc. – which legitimate and support their work (Clark, 2007; McQueen & McMahon, 2003).

2.2. NGOs' assessment of conservation strategies

NGOs' conservation strategies are meant to address the environmental problems they find most pressing. They expect that the strategy they employ will have certain effects. This means that when deciding what course of action to pursue, NGOs make predictions about the benefits and costs of potential interventions. Two common criteria for evaluating the effects of a measure are its

effectiveness and its *efficiency*. Effectiveness compares an intervention's outcomes to the objectives (i.e., 'doing the right thing?'), while efficiency weighs the outcomes against the resources invested in order to achieve them (i.e., 'doing the thing right?') (Knoepfel, Larrue, Varone, & Hill, 2007, p. 227).

We developed three hypotheses to explain NGOs' decisions about which of the available tools – i.e., acquisition or regulation – to use for conservation. Despite the fact that these two strategies are complementary, many conservation NGOs do not pursue both simultaneously. In this context, our hypotheses attempt to better understand the reasons why conservation NGOs choose whether or not to get involved or not in the political process of local land use planning (Fig. 2). The two first hypotheses are based on the evaluation criteria presented above while the third one is based on the results of expert interviews pointing to cooperation as a way to improve efficiency.

H1. Effectiveness of land use planning: Conservation NGOs hesitate to get involved in land use planning because they think it has no or only moderate impacts on those whose practices put the environment at risk, i.e., it is not effective.

H2. Efficiency of involvement in land use planning: Conservation NGOs hesitate to get involved in land use planning because they think that the investment of resources (time, personnel, money) required is not proportional to the expected results or the means they have at their disposal, i.e., it is not efficient. Moreover involvement in land use planning has a political cost. Conservation NGOs hesitate to get involved in land use planning because they think it has an important political cost, namely that they would lose the confidence of those who support their work or who sell them property.

H3. Collective action: Those NGOs that cannot afford to get involved in land use planning, but see its potential, will look for

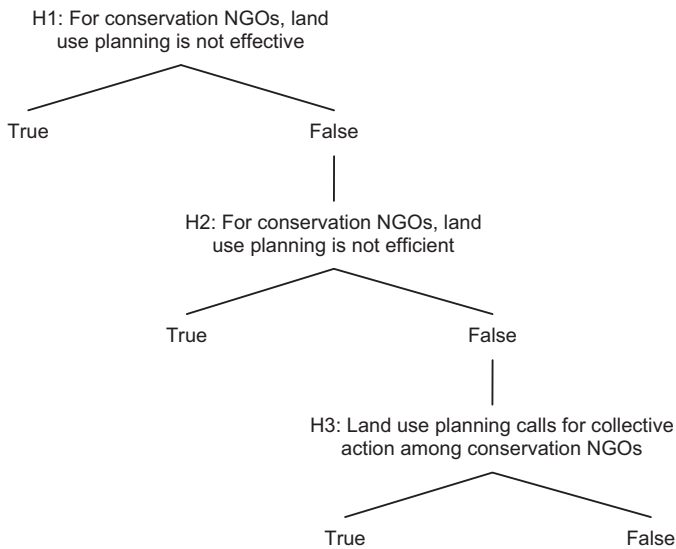


Fig. 2. Hierarchical presentation of the research hypotheses. The hypotheses attempt to understand conservation NGOs' choice of strategies. The hypotheses are presented from the standpoint of NGOs focusing on acquisition.

partners. In other words, if acquisition and land use planning complement each other, NGOs engaged in one of the two strategies will partner with NGOs that follow the other strategy.

2.3. Methods

This research focuses on the Canadian part of the Green Mountains, a segment of the Appalachian range that straddles the Canada–USA border, and an area known for having a large number of conservation organizations (Brassard et al., 2010). Within the Canadian Green Mountains, thirteen NGOs have acquired land for conservation purposes and open space preservation, and three non-landowning NGOs are active in local politics, including land use planning.

Four expert interviews were carried out with two environmental lawyers and two conservation experts from Quebec. The semi-directive interview method, which is used for gathering information in an open-ended format (Briggs, 1986), was chosen after the expert interviews. The main reason for this choice is that most of the NGOs studied are still experimenting with possible intervention strategies (trial and error). Experience is gathered on-the-job by a team that is composed mostly of volunteers. Many of these people wear multiple hats, making it difficult to isolate actual NGO strategies (e.g. people might participate in local political life without formally representing the NGO where they work part-time, but still create vital connections in the process). Semi-directive interviews seemed best suited for exploring an evolving field where strategies are not yet carved in stone. A total of 18 staff members were interviewed, representing 16 different NGOs.

Because the hypotheses about the effectiveness and efficiency of involvement in land use planning were more abstract, they were addressed indirectly by asking NGOs to give their opinion about the advantages and disadvantages of involvement in acquisition and land use planning. The more straightforward hypothesis about collaborative action was approached directly.

NGOs' strategies were appraised in three steps: first, general information about the organization was collected on the internet, including the achievements presented on the organization's website, references to the organization on the websites of public authorities, and articles in the press or grey literature. Second, maps and statistics about land holdings were obtained through

the Appalachian Corridor (introduced below) GIS database. Third, an was sent to the NGO's most experienced staff member raising four broad questions which were discussed later in a semi-directive interview: (1) the structure and historical development of the organization, including by-law objectives, composition of the board, and decision-making procedures; (2) the organization's acquisition strategy (including full property and easements) followed by the reasons motivating this strategy; (3) the NGO's political strategy, i.e., its involvement in local politics (including land use planning), ways of taking action, and the receptiveness of local authorities; and (4) effective collaboration with other environmental groups.

Because of the qualitative approach chosen in this research, the hypotheses will be discussed rather than tested. However, by focusing on an "extreme" case, one in which many active NGOs are also engaged in an ongoing process to coordinate their efforts, we chose a situation that has the potential to yield more information because more basic mechanisms are activated and more actors are involved. Thus, this case includes the full suite of issues that confront small land trusts when they enter the field of land use planning (Gerring, 2007).

3. Case study

3.1. Context

The study area is mainly located in the administrative region of Estrie (Fig. 3), which is crossed by the Green Mountains, a segment of the Appalachian range that straddles the Canada–US border. The Appalachian range forms an "ecoregion", defined by biophysical criteria rather than political boundaries (TNC, 2006, p. 8), which is recognized by Environment Canada, the administration in charge of environmental issues, as one of the two ecoregions most at risk in Quebec.

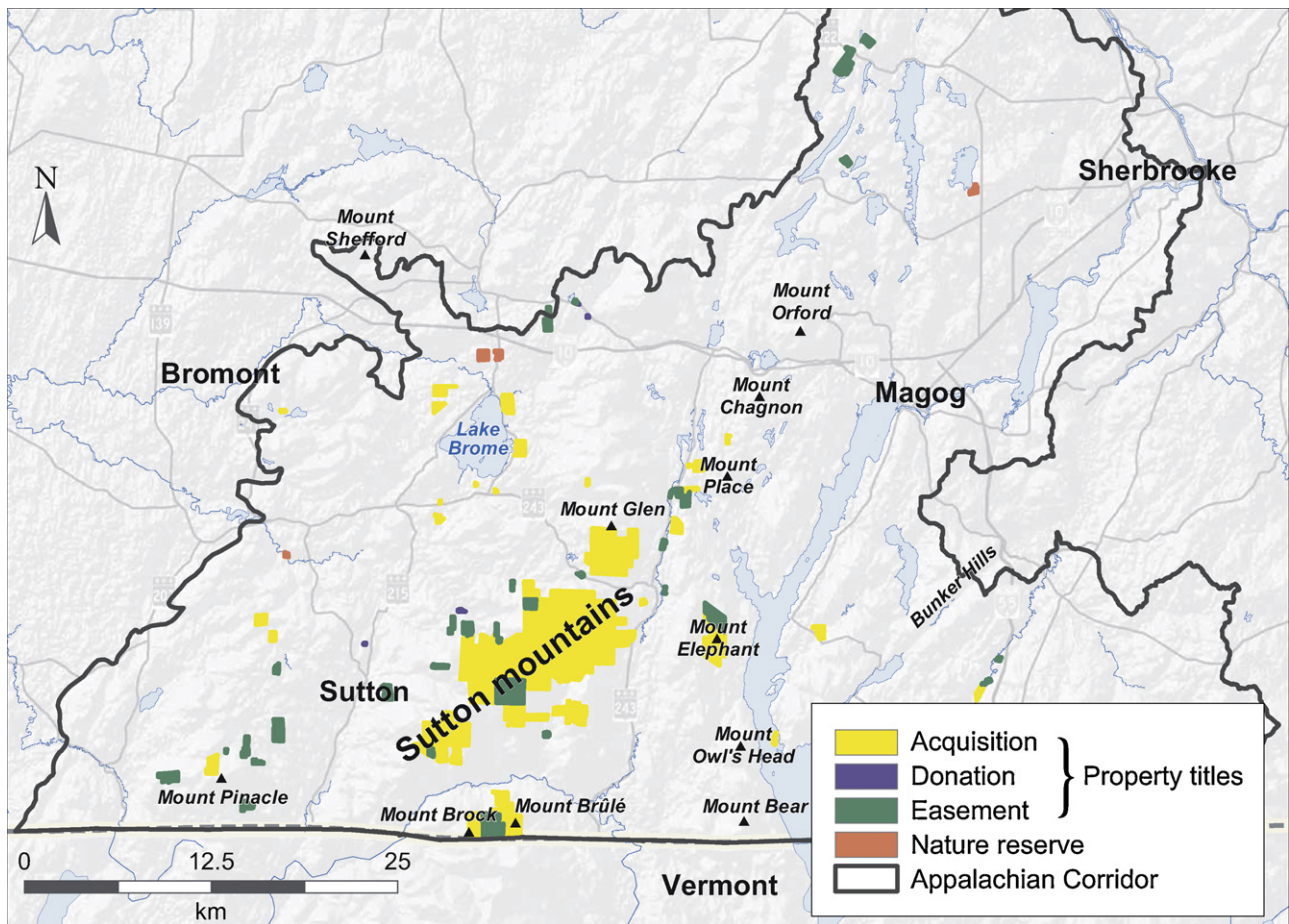
Estrie's economy is based on its natural environment. Tourism and real estate development are growing as a result of the picturesque landscapes, large open spaces and forests, and rural character of the Green Mountains. Estrie's proximity to the city of Montreal is an additional asset. People seeking to buy a second home are welcomed by rural municipalities because they boost development, increase tax revenue and help preserve jobs.

The following example illustrates the characteristics of many municipalities in the Green Mountains. Sutton is a rural municipality that covers 243 km² at the base of the Green Mountains and is located 115 km away from Montreal. Since its ski resort opened in 1961, an average of fifty new homes have been constructed in the municipality annually. Over a period of forty years, the number of residential properties increased fourfold, from 663 in 1968 to 2838 in 2008 (Lefèvre, 2010, p. 39). The majority of new homes are built in the countryside rather than within the existing town of Sutton (Lefèvre, 2010, p. 41).

This growth illustrates a trend in Quebec: the largest population growth is occurring in the small towns at the periphery of larger cities. In reaction to the threat of development, different citizen groups have emerged with the goal of preserving the natural environment. What seems to be an effort to protect natural habitats is also an attempt to prevent development or to improve the general land use pattern of the region by "securing" large tracts of lands.

3.1.1. Land use planning in Quebec

As Fig. 1 made clear, the supply of land available for building is not determined by landowners alone; it is greatly influenced by public authorities in charge of planning. The planning system is a form of public intervention in the development process, in which planning authorities distribute development permits to landowners. In Quebec, three levels of public authorities



© Appalachian Corridor, October 2010. Some geographical information was provided by the Ministry for Natural Resources, Fauna and Parks (MRNFP)

Fig. 3. Map of the Green Mountains. Protected parcels are shown according to the protection type.

Source: Data provided by the Appalachian Corridor

influence planning. Laws from the provincial level are incorporated by Regional County Municipalities (RCM) into their “Land use and development plans”. When RCMs decide where to direct development, they take into account the boundaries of the “green zone” enacted by the provincial Commission for the protection of agricultural land. The green zone protects agricultural land (and forests which can be converted to agriculture) from subdivision.

Local municipalities prepare their “Local land use plans” according to the broad development patterns, general allocations and average land use density levels set by the RCM in its land use and development plan. Local land use plans are implemented through bylaws. In theory, these bylaws merely provide for the implementation of the local land use plan. In practice, there are often discrepancies between the plan and the bylaws. The latter are written in a technical language that makes them difficult for non-lawyers to understand. The main reason that by-laws diverge from local land use plans is that local authorities fear court cases from landowners, who may argue that restrictive bylaws are expropriation in disguise (Lefèvre, 2010, p. 37).

3.1.2. Landownership in Quebec

Public land makes up 92% of the total territory in Quebec (Ministry of Natural Resources and Fauna, website, consulted 11.08.2009). However, the vast majority of publicly owned lands cover the huge forested areas of the North. Most private lands are in the more biologically diverse South. In the Green Mountains,

land is almost exclusively private (the main exception is the Orford National Park). In addition, local or regional authorities do not own large tracts in this region. Consequently all conservation initiatives or public trails maintenance has to be done with the consent of private landowners.

3.2. Conservation NGOs in the Green Mountains

3.2.1. NGOs’ reactions to “bad development”

Conservation objectives are closely related to the problem of uncontrolled urban growth and sprawl. Interviews with the different NGOs reveal that conservation, i.e., the preservation of large intact ecosystems, is often synonymous with preventing what are perceived to be bad development practices. In response to new developments they perceived as threatening, several conservation NGOs were created by citizens concerned with the changes taking place in the Green Mountains. Most of these NGOs (13) chose to rely primarily on acquisition.

Acquisition is an intervention into the spatial development of towns and villages but it is not presented or perceived as a political act. None of the land owning NGOs mention land use planning in their objectives, not even those that were created in response to bad planning. For instance, the Mount Pinnacle Land Trust is a reaction against a plan to develop tourism and recreation on Mount Pinnacle, which was adopted by the local authorities. Only the Reflection and Action Group on Landscape and Cultural Heritage, which does not own land, openly mentions its advocacy for better planning and smart growth.

3.2.2. Overview of the Green Mountains NGOs

While all of the NGOs of the Green Mountains are different, some general pattern can be observed (Table 1):

1. *History of involvement.* Of the 16 organizations studied, a large majority were created in the 1990s and 2000s. These dates correspond to a time when residential pressure increased. However there were five older NGOs that had very different profiles. The Nature Conservancy Canada (NCC) is a major NGO in Canada which was created in 1962 and modeled after The Nature Conservancy in the USA. It was not very active in Quebec initially, in part because conservation through acquisition was uncommon. The Ruiter Valley Land Trust, which was founded in 1987, was one of the precursors of land conservation in the Green Mountains. Memphremagog Conservation Inc. is older (1967) and also has a more general mission of environmental quality preservation (no acquisition). Finally, two NGOs were established in the late 1970s to promote the development of a trail network in the private lands of the Green Mountains.
2. *Scope of action.* The large majority of the NGOs that are active in conservation focus on a very small portion of the region. The three exceptions are the Appalachian Corridor, which coordinates the action of smaller NGOs, the Nature Conservancy Canada, and Trails of Estrie, which maintains a network of 200 km of hiking trails. The remaining organizations grew out of grassroots movements to defend the environmental interests of the inhabitants and homeowners of a particular town or watershed. They are rather small NGOs in terms of funding available and members.

The Appalachian Corridor plays a unique role in this context: as we will discuss below, its members are the individual NGOs active in the Green Mountains. Its primary objective is to provide expertise (biological and cartographic), but it appears that it also plays a political role, asserting the existence of conservation NGOs who are proponents of a particular view of regional development.

3. *Profile of executives.* Except for the largest organizations (Nature Conservancy Canada, Appalachian Corridor, both hiking organizations), the NGOs in the Green Mountains rely almost exclusively on volunteers. Their boards are made up of volunteers who have a special attachment to the region, and are often established landowners themselves. These individuals get involved in a conservation NGO because they want to contribute to the preservation of their local environment. They bring different qualifications to their work, but the experience of running an NGO is typically acquired on-the-job. People with a background in biology are very rare among the boards of the NGOs studied. Local politicians are rare too, as NGOs are usually created out of distrust of local politics. Moreover their status as charitable organizations makes it difficult for them to maintain close ties with active local politicians.

3.2.3. Toward improved coordination

Confronted by growing development pressures, conservation organizations felt a need to organize at the scale of the Green Mountains ecoregion and so they created the Appalachian Corridor project. Scientific studies, supra-local campaigns for conservation and the preparation of proposals for government funding require skills and expertise that many small conservation NGOs do not have.

The Appalachian Corridor received its charitable status in December 2003. Since its inception, the Appalachian Corridor has joined forces with Nature Conservancy Canada. This partnership rallied important financial collaborators around major acquisitions in the Sutton Mountains massif. As of 2010, thirteen NGOs are

members of the Appalachian Corridor. A multidisciplinary team of professionals offers partner organizations and landowners a host of services related to conservation. The Appalachian Corridor acts in response to the requests of its members. The Appalachian Corridor is considered a model by conservationists in Quebec (personal interviews, 2010).

The Appalachian Corridor quickly realized the importance of land use planning for coordinating spatial development. Today, the Appalachian Corridor enables acquisition strategies to be linked with political strategies. Land-owning NGOs mainly focus on land acquisition, behave non-confrontationally and focus on a small section of the territory of the Green Mountains. A structure like that provided by the Appalachians Corridor allows these NGOs to adopt a more regional approach by combining their efforts and to hold local authorities accountable for their environmental responsibilities.

All members of the Appalachian Corridor pay a symbolic fee of \$100 CAD per year. Nearly ninety percent of the Appalachian Corridor's activities are financed by public money. Often the Appalachian Corridor provides the expertise that local NGOs need to obtain public funds for their projects. Consequently, although the Appalachian Corridor is supposed to be at the service of its members, it is in a position of power over its members.

4. Results

4.1. H1: effectiveness of land use planning

According to hypothesis 1, conservation NGOs do not get involved in land use planning because they think it is not effective, i.e., it has no or only moderate impacts on those whose practices put the environment at risk. This hypothesis is not confirmed by evidence from the case study.

Local NGOs can take part in the land use planning decision-making process in four different ways. First, they can become members of the local committees on land use planning or the environment. Among the NGOs studied, many (≥ 9) have board members who sit in these local committees, but few (2) officially represent the NGO.

Second, they participate in public hearings. Many (≥ 9) NGOs, particularly those that do not own land, commented on the revision of local land use plans. However public input is asked for after the redaction of a draft, not before. (In Quebec the local population cannot ask for a referendum concerning the adoption of local land use plans. Only bylaws, such as the zoning bylaw, which provide for the implementation of the local land use plan, can go through a referendum procedure.)

Third, conservation NGOs can share their expertise. This is only possible for NGOs that have a team of professionals with specialized knowledge. For example, the Appalachian Corridor inventoried all swamp and marshes in the region and displayed them on a map that was used by local authorities. Local authorities are not supposed to grant building permits on parcels with sensitive wetland ecosystems, but as no mapping had ever been done, protecting swamp and marshes from being filled in had proven difficult to implement. During the revision of Sutton's land use plan, the Appalachian Corridor also tried to propose ecological corridors linking protected areas or forests, but faced strong resistance from landowners.

Fourth, conservation NGOs can try to educate the public. Two NGOs were instrumental in trying to raise the public's awareness about the implications of the revised land use plans in Sutton by preparing a "build-out map". When the population of Sutton realized the extent of development that would be permissible under the new plan, they quickly collected enough signatures to call for a referendum.

Table 1

Overview of the NGOs studied, including amount of land owned and involvement in land use planning.

	ACA member	Date of creation	Mission	Surface acquired in Quebec ^a	Involvement in local land use planning ^b
Appalachian Corridor (ACA)	–	2002	To provide local communities with the means to maintain and restore a way of life that respects the ecology of the region	–	Yes. It shares its expertise (e.g. GIS of natural habitats, inventories of swamps and marshes) with local authorities.
Nature Conservancy Canada (NCC)	Partner, but not member	1962 (1975 in Quebec)	To preserve Canadian biodiversity through acquisitions	8 011.7 ha	No, “non confrontational”
Ruiter Valley Land Trust (20 km of hiking trails)	Yes No. Involved in local committees, but no specific land use planning strategy	1987	To protect plant and wildlife habitats in the Ruiter Valley	256.8 ha	
Mount Pinnacle Land Trust	Yes	1991 (date of incorporation)	To maintain in perpetuity the ecological integrity and preserve the region's rural character	227.7 ha	No, but was created as a reaction against an important change in zoning
Alderbrooke Marsh Land Trust	Yes	1992	To protect all wetlands in the Sutton and Missisquoi river watersheds	58.5 ha	No, despite sporadic contacts with elected officials
Memphremagog Wetlands Foundation	Yes	1991	To protect in perpetuity of all the wetlands around Lake Memphremagog	30.2 ha	No, but is involved in local committees
Regional nature park of Sutton	Yes	1979	To maintain hiking trails and back country huts (originally the aim was to create a regional park)	(70 km of hiking trails)	No
Trails of Estrie	Yes	1976	To promote hiking into the larger context of the protection and enhancement of nature in the Appalachians	(200 km of hiking trails)	No active involvement in planning, but 60 km of trails were recently recognized as public infrastructure
Mount Echo Conservation Association	Yes	2004	To conserve the natural ecological heritage of the Mount Echo	131.8 ha	Yes, mainly through its former president who promotes «smart growth»
Brome Lake Land Foundation	Yes	1987	To conserve wetlands in the Brome Lake watershed	205.5 ha	No, the association stays away from politics in order to remain independent
Society for the conservation of the natural corridor of the Salmon River	Yes	2003	To conserve natural areas of high ecological value in the Salmon River watershed	154.2 ha	No, but takes a stand on particular issues
Association for the conservation of nature of South Stukely	Yes	2004	To protect the ecological heritage of South Stukely	52.3 ha	No, but the association takes stand on particular issues
Society for land conservation of Lake Montjoie	Yes	2003	To protect the natural areas in the Montjoie Lake watershed	16.8 ha	No. Another organization—the Association of Lake Montjoie—is active in local politics.
Conservation of the Serpentine valley	Yes	2006	To protect the Serpentine Brook watershed	6.7 ha	No, but tries to establishes contacts with local authorities
Memphremagog Conservation inc.	Yes (since 2010)	1967	To protect the environmental quality and natural beauty of the Memphrémagog Lake watershed	–	Yes. It takes part to the revision process of land use plans by providing information concerning precious habitats. It got involved in the campaign to preserve the integrity of Mount Orford NP.
Reflection and action group on landscape and cultural heritage	No	2005	To promote sustainable land use planning of towns and countryside	–	Yes. E.g. creation of a citizen's forum, preparation of a “build-out map” showing the extent of land open to urbanization according to the revised version of land use plan, which led to a referendum

^a Data provided by the Appalachian Corridor (stand: October 2010).^b Organizations recognized as charitable can spend no more than 10% of their total resources a year to lobbying (Canada Revenue Agency, CPS-022, www.cra-arc.gc.ca/chrts-gvng/chrts/plcy/cps/cps-022-eng.html).

Local land use plans are only one aspect of land use planning. The delineation of the “green zone” which protects agricultural and forest land from subdivision is considered a powerful tool by several of the NGOs interviewed because it is enacted by the provincial Commission for the Protection of Agricultural Land which is not subject to the same kind of political pressures as local authorities. Conservation NGOs do not have much leeway to influence this kind of zoning. However, there are other tools available to them. The most important are nature reserves. A nature reserve is a private natural area that is legally recognized by the Ministry of Sustainable Development, Environment and Parks in order to ensure its preservation. Its main advantage for the landowner is that recognized nature reserves are exempt from all municipal or school property taxes. For example, the Ruiters Valley land trust owns the servitude of the officially recognized Green Mountains “Nature Reserve”.

National parks are another major public intervention in the spatial development of a region over which local NGOs have little influence. However, in 2004, an attempt by the provincial government to sell 459 ha of land located in the Mount Orford National Park to promoters, while simultaneously doubling the surface area through other purchases, caused much agitation. Among the many NGOs that resisted this law, Memphremagog Conservation Inc. played a special role. The NGO collected 86000 signatures and gathered 12000 people to demonstrate in Montreal (MCI, interview, 08.07.2010). Ultimately, the government did not proceed with the sale, but the interviews reveal that this episode caused long-lasting mistrust among conservation actors. This example also shows that conservation NGOs were able to win an important battle against the provincial government.

The fact that acquisition is not always effective can also be an argument in favor of land use planning. Land owning NGOs know that they can only preserve the environment against bad planning practices through acquisition if parcels are available for purchase. Because parcels with conservation value are rarely offered for sale or as a donation, the main constraint on acquisition is the availability of land to buy.

Consequently, contrary to our expectations, the interviews reveal that many NGOs think that land use planning offers a large array of tools which, if implemented, can improve conservation (5 NGOs expressed it directly). All organizations maintain – or intend to develop – some contact with local authorities about planning issues. However only a very few have regular exchanges with public actors in charge of land use planning. If conservation NGOs are represented on local committees, it is usually indirectly through a boardmember who sits on the committee in a private capacity. Only two land owning organizations asserted that land use planning is not effective at all and refuse to get involved in local politics surrounding conservation. These particular organizations strive to promote private conservation as it takes place in common law countries because of their fundamental distrust of overreliance on public authorities.

Even though the potential of land use planning is widely recognized, NGOs had three reasons to explain their low levels of participation in this political process. First they are concerned about the long-term security of land protected through regulation. Because local land use plans are regularly revised, most conservation NGOs fear that an area protected through planning regulations will lose its protected status as political majorities change. In that respect, the attempt of the provincial government to sell part of Mount Orford National Park caused a deep distrust among conservationists. Several (≥ 3) small NGOs question their own long-term survival: if no volunteers can be found to run their NGO, they plan to transfer their parcels to a larger NGO. Second, conservation NGOs denounce the lack of political will to constrain landowners. Because strong zoning has an impact on the value of parcels, landowners can threaten to take public authorities to go to court because of

disguised expropriation. Consequently, local authorities tend to defer to the interests of landowners. Finally, the NGOs are concerned that zoning is insufficient for achieving habitat restoration. While zoning may prevent change by keeping development under control, on its own it cannot guarantee the restoration of degraded habitats.

4.2. H2: efficiency of involvement in land use planning

The second hypothesis H2 asserts that conservation NGOs do not get involved in land use planning because they think it is not efficient, i.e., the investment in resources (time, personnel, or money) that they would have to make is not proportional to the expected results and to their available means. NGOs choose to rely on acquisition not because they think planning does not work (see H1), but because they expect that acquisition can produce the greatest impact with limited resources. H2 is mostly confirmed: in comparison with acquisition, most small NGOs find planning is not efficient for conservation purposes. In addition, large NGOs do not get involved in the politics of land use planning because of their desire to act in a non-confrontational manner. Middle-sized NGOs that are active regionally, such as the Appalachian Corridor, seem better suited to take advantage of land use planning.

Although only three NGOs expressed it directly, interviews reveal that the greatest barrier to land-owning NGOs’ active participation in land use planning is that it takes an extensive involvement that exceeds their means. Continuous political involvement requires more time and energy than volunteers are ready or able to invest. Additionally, successful participation in local political life necessitates a deep knowledge of the issue, particularly if the objective is to be proactive and propose new approaches. NGOs are aware that they lack both the resources and the knowledge about the available conservation tools and the way to implement them (including acquisition procedures) to effectively participate in land use planning. These limitations are the main reason they joined the Appalachian Corridor in the first place.

Because most funding granted to conservation NGOs is project-based, operating costs are very rarely covered, which makes it difficult for NGOs to finance their participation in land use planning. Four sources of revenue allow NGOs to implement their conservation strategies. First, there are membership fees, which provide a regular income, but the amounts collected are usually rather small (some NGOs have no membership or only a few members). Membership fees are small but important because they finance the NGOs’ operating costs that are not provided for by most other sources of revenues. Non-landowning NGOs and hiking NGOs are more dependent on membership fees because they are not usually the recipient of gifts from wealthy donors.

Second, in-kind donation is the most important source of new land among local conservation NGOs. Consequently, they spend a lot of time trying to convince landowners to donate full titles or conservation easements. Many active members of NGOs have donated conservation easements to their own organization. The tax relief that can be obtained if an easement is donated also helps to convince landowners.

Third, there are several public programs which can provide grants for acquisition. However, applying to these programs requires specialized knowledge and expertise that many smaller NGOs lack. They often look to a larger NGO, such as the Appalachian Corridor, for help. Local authorities do not usually contribute financially; however some reimburse property taxes to conservation NGOs.

Fourth, government consulting contracts are another possible source of income for the larger NGOs.

These results reveal some of the limits of volunteer-based work. Both an acquisition strategy and a land use planning strategy

require specialized capabilities. Most land owning organizations cannot afford to become specialists in land use planning when mastering the art of making land deals is already a challenge. Conversely, NGOs that specialize in political activities at the local level do not acquire land. There appears to be a division of labor among NGOs.

Landowning organizations' strategy to remain outside of the land use planning process also results from the fact that some prefer to adopt a non-confrontational stance. A large NGO, such as Nature Conservancy Canada, fears that becoming involved in politics would limit what it can do (and make some landowners hesitate to sell their land) if it is too closely associated with a particular political position. However this is less the case at the local level, where politics usually do not follow party-lines. At the local level, a low-key, non-political strategy allows NGOs to retain the confidence of large land- or home-owners, who might be motivated to contribute to environmental quality, but who also see the sale of conservation easements around their property, especially if public access is not allowed, as a way to protect themselves against new development. The (≥ 2) NGOs which (partly) follow this strategy, where conservation also has of the effect of legitimizing the privatization the environment, have no interest in being in the spotlight.

4.3. H3: collective action

The third hypothesis asserts that the NGOs that cannot afford to get involved in land use planning, but recognize its potential, will partner with other NGOs that do participate in land use planning. This hypothesis is partly confirmed: through their association in the Appalachian Corridor, NGOs are discovering that engaging in land use planning through a partnership can support the conservation goals of individual organizations. However, collaboration on common projects takes place bilaterally between a member NGO and the Appalachian Corridor, not among member NGOs. New political strategies are developed by the Appalachian Corridor, largely independently of its members.

The Appalachian Corridor was not created to pursue a land use planning strategy; it started by focusing on ecological expertise and evolved into a group that represents the other NGOs in the political arena. However, it has become more and more involved in land use related issues, either through mapping of endangered habitats or direct involvement as an expert, as its role in the revision of land use plan of Sutton shows. Interviews reveal that there is an issue of scale for NGOs interested in becoming involved in land use planning. Small NGOs often consider land use planning to be inefficient at the scale at which they operate, i.e., with limited money, personnel and skills (see H2). However, an NGO like the Appalachian Corridor seems to be active at the right level to deal with land use planning issues. It is supra-local enough to have a broad overview of the situation and to be able to prioritize habitat protection across the region, but it is also close enough to local issues to collaborate closely with local authorities. Unlike the Nature Conservancy Canada, the Appalachian Corridor does not hesitate to take a political position when the issues at stake relate to its core mission. However it does not get involved in lobbying or other direct attempts to influence political games.

At least once a month, the Appalachian Corridor staff is invited by other NGOs to present its work (ACA, interview 09.04.2010). Many conservation actors throughout Quebec seem to think that land use planning could play an important role in conservation at the scale at which the Appalachian Corridor is active (e.g. defense of corridors across protected areas, overview of special habitats such as wetlands or non-fragmented forests, coherent planning across local authorities' boundaries, buffer zones, smart growth). The Appalachian Corridor has become a platform for defending

the land investments of smaller NGOs before political authorities because of its expertise.

5. Discussion

This research shows that for conservation NGOs both acquisition and public policy instruments play a role in environmental conservation. Yet linking these two strategies in a coherent way remains a challenge. The empirical evidence suggests that four factors can help land-owning conservation organizations to better participate in the land use planning process despite limited resources.

5.1. Take action at the right scale

Small organizations recognize the importance of land-use planning processes, but have a hard time engaging in the planning process, due to limited resources and the limited geographic scope of their work. Province-wide or national organizations are also not well-suited to provide constructive inputs to the land use planning processes because of their goal of being non-partisan. Consequently, participation in land use planning requires an organization that is active at the same scale as land use planning processes. The government faces a similar challenge: both local authorities and regional county municipalities are empowered by the law to plan for conservation, but neither are well equipped to do so (lack of capacity, expertise, political will).

In this context, an organization like the Appalachian Corridor plays an important role. With its core capabilities (precise knowledge of habitats, ability to elaborate a coherent conservation strategy at the regional level), it is able to fill a gap: it creates political meaning out of the uncoordinated action of local land-owning organizations. The Appalachian Corridor was not created with that objective in mind – it is a recent development – but, today, it looks as if small NGOs have delegated the task of participating in land use planning to the Appalachian Corridor, because they are not willing or able to carry out themselves. Consolidating in this way enables small NGOs to take advantage of economies of scale to improve effectiveness (*Hypothesis #1*) as well as efficiency (*Hypothesis #2*).

5.2. Use broad frameworks to prioritize local actions

Scale is a major issue, but empirical evidence suggests that purpose is also a consideration. If many small conservation NGOs are active at the micro level with little concern for the supra-local, it is because acquisition is an effort to preserve very specific parcels from development for conservation purposes, but also to some extent to prevent changes that might impact established communities' quality of life. Some of the homeowners in these established communities also sit on the boards of the small NGOs. Acquisition is both a tool to preserve habitats and to steer micro-development. However, unlike land use planning, the decisions are made privately within the acquiring organizations.

One way for small NGOs to convince the public that they do not acquire land for self-serving purposes is to show that acquisition lies within a broader framework for prioritizing local action, such as the conservation plans developed by the Appalachian Corridor in Sutton, by Nature Conservancy Canada in Estrie or by Environment Canada in Quebec. Core parcels can be acquired while buffer zones, corridors or low-density development could be protected through land use planning. Conservation action within broader scale conservation plans legitimates acquisition, as well as participation in local planning.

5.3. Provide resources for participation

Small NGOs are not well prepared to participate in the local political process for creating stricter land use plans, because their involvement is difficult to fund. Participation in democratic procedures has a cost that many local organizations cannot sustain. The available funding sources cover the implementation of given projects, but not operating costs resulting, for example, from participation in local politics. In addition to the traditional sources of NGO funding (philanthropy, membership fees, consulting contracts), it is worth raising the question whether public funding should not better cover NGOs' operating costs.

5.4. Educate conservation NGOs

Implementing a conservation strategy requires specialized knowledge that small NGOs still need to acquire. So far three larger actors, the Nature Conservancy Canada, the Appalachian Corridor and Environmental Law Center of Quebec, provide new NGOs with the knowledge necessary to undertake land deals. However, information about effective involvement in land use planning remains scarce. There is clearly a need to educate conservation NGOs about land use planning.

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