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Evidence from Vermont

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**Local Environmental Groups, the Creation of Social Capital, and Environmental Policy:**

**Evidence from Vermont**

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**Abstract:** Many scholars have documented the important role of national environmental groups in affecting environmental policies in the United States. The role of local environmental groups, however, has not been thoroughly documented. Using data from a complete census of all environmental groups in two Vermont counties, we: (1) offer a set of conceptual categories for local environmental groups; (2) analyze how civic engagement in these groups is creating different forms of social capital through stewardship activities, education and communication, partnerships with other organizations, and alliances with public agencies; and (3) explore how these groups are affecting the policy process, illustrated with two case studies. We argue that the prevalence and contribution of local environmental groups, particularly local autonomous groups, has been underappreciated. We conclude that the *greening of social capital* is significantly affecting environmental outcomes in the United States.

**Keywords:** *civic engagement, social capital, environmental policy*

**JEL Codes:** Z13; Q28

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The tremendous rise of national environmental groups in the United States since 1960 has generated considerable interest by scholars (e.g., Dowie, 1995; Shaiko, 1999). The same cannot be said regarding the rise of local or grassroots environmental groups. Although there have been some recent studies of such groups (e.g., Kempton et al., 2001), Robert Putnam well summarized the state of our knowledge of such groups when he wrote, “The gentlest verdict on the claim of growing grassroots environmental activism is ‘not proved’” (Putnam, 2000, p. 161). In our previous work (Savage, Isham, and Klyza, 2004), we offered findings that corroborated those of Kempton et al. (2001)—there are large numbers of such groups and traditional methods of enumerating them (e.g., Internal Revenue Service (IRS) and Secretary of State lists of nonprofit groups, published directories) significantly and systematically undercounted them.

In this article, we build on our recent work to examine empirically three questions related to the *greening of social capital*: (1) What do these local environmental groups do? As we answer this question, we develop a typology of these groups based on their main focus and report data on member civic engagement. (2) How do these groups function? In answering this question, we examine the role of such groups in the development and maintenance of social capital. And (3), do these groups play a significant role in the policy making process and on policy outcomes? We present two case studies of different scale issues in Vermont to explore this question.

### **The Significance of Local Environmental Groups**

Few scholars have sought to systematically study local environmental groups. There have, on the other hand, been several studies of local groups utilizing a case study method. Based on these studies, scholars have focused on the importance of local environmental groups dealing with opposition to local environmental threats (e.g., NIMBY groups), environmental justice groups (e.g., Citizens Committee to End Lead Poisoning), and direct action, deep ecology groups (e.g., Earth First! type groups) (Edwards, 1995; Freudenberg and Steinsapir, 1992; Gottlieb, 1993; Kempton et al., 2001; Taylor, 1995). A recent

systematic study of local environmental groups in the Delmarva Peninsula and North Carolina by Kempton et al. found that such a threefold typology is problematic. They wrote: “more recent … research leads us to suspect that local environmental groups are more diverse and more significant than documented previously” (Kempton et al., 2001, p. 560). Their own study disclosed that 20-23 percent of the groups fit into the ‘opposition to local environmental threats’ category, 2-7 percent were direct action, deep ecology groups, and none of the groups fit into the environmental justice category (Kempton et al. 2001, pp. 572-73). They next developed a rudimentary typology that added animal interests, park or refuge support, wise use or property rights, personal consumption management, and group outings as categories. These new categories captured 30 percent of the groups in Delmarva and 44 percent in North Carolina. They concluded that “Perhaps the main lessons to be drawn are that most local environmental groups do not fit the categories claimed in the literature, and that no single activity or group type characterizes more than one-fifth of the groups. They are a diverse lot” (Kempton et al., 2001, p. 575).

A study by Brulle (2000) is the most systematic nationwide examination of local environmental groups. Through examining IRS files on tax-exempt organizations in 1994, he estimated there were approximately 10,000 environmental organizations registered with the agency, the vast majority of which were located at the local level.<sup>1</sup> Brulle did not focus on the distinction between local and national groups in his study, but he did develop a typology of groups based on discourse. These types were wildlife management, conservation, preservation, reform environmentalism, deep ecology, environmental justice, and ecofeminism. Rather than place all 10,000 groups in this typology, Brulle selected 87 national or regional groups to explore the characteristics of the different groups.

No study that we know of, however, has systematically addressed the role of local environmental groups in creating social capital, despite prominent recent studies on the dramatic changes in traditions of civic engagement and forms of social capital in the United States (Putnam, 2000; Skocpol et al., 2000). This is despite the fact that the core membership in these groups was estimated recently at between

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<sup>1</sup> Our previous work demonstrates that the IRS nonprofit list substantially undercounts local environmental groups. In the two Vermont counties that we studied, the IRS listing captured only 20 percent of the groups we documented.

265,000 to 289,000, 50 times greater than the combined staff of all U.S. national environmental organizations (Kempton et al., 2001). Our research, using quantitative and qualitative evidence, is designed to document the overall effects of this understudied form of locally based civic engagement and its relationship to social capital.

## **Research Methodology**

Vermont provides fertile soil for studying local environmental groups. In addition to being a national leader in participatory local government and nonprofit activity, Vermont is also recognized as a leader in protecting the environment. In the Institute for Southern Studies “Gold and Green” indices of economic and environmental performance, Vermont ranked first on the green scale in both 1994 and 2000 (Institute for Southern Studies, 2002). The *1991-1992 Green Index* ranked Vermont third in the nation (Lester, 1994). By studying local environmental groups in this setting, we are able to explore how this form of civic engagement relates to social capital development and environmental outcomes. If local environmental groups are as extensive as others have estimated (Brulle, 2000; Kempton et al., 2001), the experience of Vermont indicates the potential role that they may be playing nationwide.

In the summer of 2002 we conducted a census of all land-based groups—agricultural groups, outdoor recreational groups, and environmental groups—in Addison and Washington Counties in Vermont. We selected Addison County, which has 23 rural towns and a population of 36,000, because of our previous research in the area and its geographic proximity. We selected Washington County, which has 19 towns and a population of 58,000, because it consists of both rural regions and a more densely populated area: it includes the state capital Montpelier and the adjacent city of Barre, which together comprise the third largest urban area in the state. Addison County, which includes the central part of the Champlain Valley on the shore of Lake Champlain, has rich soils that are ideal for agriculture. Washington County, which includes the central part of the Green Mountains, has a well developed skiing and recreationally oriented tourist industry. All told, the 42 towns in these two counties give a

representative snapshot of the ecological and cultural contours of Vermont's 249 towns in 15 counties (Klyza and Trombulak, 1999).

For the information on social capital formation reported and analyzed below, in the summer of 2003 we sent a survey instrument to a group officer for the nine most significant environmental groups in Addison County. In the survey, we asked the respondent to report on all the activities that the group undertook in the last 12 months, indicating frequency and number of participants. For each of the activities that they listed, we asked respondents if the activity could be categorized as social or recreational; whether it involved education, communication, or stewardship; and what partners were involved in the activity (e.g., other environmental groups or government agencies). With some follow-up, we had a 100 percent completion rate for these surveys.

### ***Group Classifications and Definitions***

For the census, we adopted Kempton et al.'s definition of an environmental group: "a self-named, voluntary collection of people (or member organizations) who agree on some part of a view of the ethical or appropriate relationship between humans and the world around them, who communicate with each other about this topic, and who perform action in a particular venue in order to advance their view of it" (2001, p. 561; see Savage, Isham, and Klyza (2004) for other subgroup definitions).

We further distinguished between local and nonlocal groups:

- A local group, again following Kempton et al. (2001, p. 561), is based on "the social criteria of communication, direct participation, and shared venue, which typically but not necessarily imply geographical proximity of members."
- A nonlocal group is based on the political criteria of state, regional, national, or international boundaries, which typically but not necessarily imply geographical distance of members.

Our original census included all local land-based groups in Addison and Washington Counties and four kinds of nonlocal groups: state-, regional-, national-, and international-level groups. For example, Forest Watch is a state-level group based in Montpelier that is dedicated to protecting Vermont's public

lands; the ElectroMagnetic Radiation Network is an international-level group based in Marshfield that is dedicated to lowering exposure to electromagnetic radiation throughout the world.

Among local and nonlocal groups, we distinguished between autonomous groups and chapters.

- An autonomous group is a self-formed and self-governed group that, though it may be part of larger networks or coalitions, is not subject to the formal by-laws of a nonlocal group.
- A chapter is typically but not necessarily a self-formed and self-governed group that, in addition to possibly being part of larger networks or coalitions, is subject to the formal by-laws of a nonlocal group of which it is a branch.

For example, the Watershed Center, which is dedicated to increasing land conservation and improving water quality in the town of Bristol, is an autonomous local group. The Ducks Unlimited chapter of Vermont, which is headquartered in Bristol, is a state-level national chapter.

### ***The Creation of the Group Census***

In order to analyze the changing composition of land-based groups, we collected data on the history, membership, and objectives of every land-based group in these two counties (Savage, Isham, and Klyza, 2004).<sup>2</sup> As we began, we compiled all available sources at our disposal from previous research (Isham and Polubinski, 2002; Klyza and Trombulak, 1999), our classroom teaching, and our personal knowledge of these two counties. These sources included group directories (the *Vermont Environmental Directory* (VNRC, 2000) and the *Vermont Grassroots Directory* (VPJC, 2002)), local newspaper articles and weekly calendars, websites, and the local telephone book. The directories listed many nonlocal land-based groups; however they failed to include most local environmental groups.

We then conducted phone interviews with group leaders, our primary source of information, in order to verify whether the group was a land-based group, classify each group, and gather specific information about each group. This included the founding date, mission and activities, current membership numbers, current core membership numbers, operating budget, extent of political activity,

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<sup>2</sup> Our methodology was similar to those documented in Grønberg and Paarlberg (2001), Kempton et al. (2001), and Smith (2000).

and local partnerships (with other groups and institutions). To expand our group list, we asked each group leader whether he or she knew of other land-based groups in the county.

We quickly realized that we would need to adopt consistent data recording standards when group leaders gave incomplete or indefinite responses, such as a range of membership or an inexact date (see Savage, Isham, and Klyza, 2004 for standards). For membership and core membership, our recording standards always yielded an underestimate of membership numbers.

When we were satisfied that we were close to a complete census, we then compared our list to the Vermont Secretary of State's database on active and inactive registered nonprofits. The database produced a new list of possibly active groups in each county. For each of these, we determined whether the group was still active and, if so, then interviewed a group leader. This process yielded seven land-based groups that we had previously missed. Finally, we compared our revised list to all Vermont 501(3)c's listed in the Business Master Files of the IRS, which yielded ten additional land-based groups. As we completed the census, a group was removed from the list if we were unable to contact a group leader by phone after a minimum of two phone calls and we were unsure of a group's existence through other means. When we could not contact anyone in a group that we knew existed, we gave the group zero membership (following Kempton et al., 2001), another standard that led to an underestimation of membership.

### **A Typology of Local Environmental Groups**

We present here a typology of local environmental groups based on the primary focus of their activity. The six types are conservation, municipal, environmental quality, land protection, education, and other. Although it can be difficult to make distinctions between these categories, we were able to do so with confidence. We also recognize that these categories may not be appropriate in all sections of the United States. Vermont is the most rural state in the nation, and hence more urban states might warrant a different typology. In other regions, for instance, it might be adjusted by adding new categories (e.g.,

hazardous waste or environmental justice) and folding existing categories (e.g., municipal) into the other category.

- ***Conservation:*** These groups are interested in a broad range of issues dealing with human management and relations to nature, including habitat protection, ecological restoration, water quality monitoring, and land protection. When a group was significantly involved in more than one of the typology actions (e.g., land protection and education), it was placed in the conservation category.

Example: Lewis Creek Association.

- ***Municipal:*** In Vermont, local towns have the authority to create conservation commissions, bodies of three to nine residents to advise the town select board on conservation matters. These groups are hybrids between government entities and private nonprofit groups. In many communities they have played a substantial role in conservation affairs. Example: Middlesex Conservation Commission.
- ***Environmental Quality:*** Such groups focus on environmental issues related primarily to human health concerns, such as air pollution, water pollution, hazardous waste, or pesticides. Example: Children's Environmental Health Project.
- ***Land Protection:*** These groups have a primary focus on land protection, either through direct purchase of land or through the purchase of conservation easements. Such groups could be interested in managed lands (e.g., farmland) or preserved lands (e.g., parks or reserves). Example: Irish Hill Ridgeline Conservation Project.
- ***Education:*** Groups that focus primarily on education related to the environment, from young children through adults, fit in this category. These include groups based in local schools and colleges. Example: Keewayden Environmental Center.
- ***Other:*** Groups that do not fit into the above categories. For our study, these included groups focused on energy and the environment, international issues, and green business groups. Example: Route 2 Citizen's Alliance.

**Insert Table 1 here.**

Turning to Table 1, for the two counties censused in Vermont, a total of 80 local groups were identified. Of these groups, conservation and municipal were the leading categories with 19 groups each (24 percent each), followed closely by environmental quality with 18 groups (22 percent). These categories were followed by land protection (nine, 11 percent), education (eight, 10 percent), and other (seven, 9 percent). The overwhelming majority of these groups were formed since 1985 (61, 76 percent). As we discuss more fully elsewhere, this documents the tremendous growth of local environmental groups in the last two decades (Savage, Isham, and Klyza, 2004). Among the local groups, there was no significant difference in core membership by category, with median figures ranging from six for municipal to 12 for conservation. For total members, however, there is a significant difference. The categories are essentially bimodal, with environmental quality, conservation, and land protection groups having median membership in the range from 44 to 32.5, and other, education, and municipal groups ranging from 15 to six.

The pattern of state, regional, national, and international groups based in the two counties was similar to that of the local groups (with the exception of municipal groups, which do not exist beyond the local level). Conservation (11, 27 percent) and environmental quality (nine, 22 percent) groups lead the way, followed by other (nine, 22 percent), land protection (six, 15 percent), and education (six, 15 percent). There were more nonlocal other groups, many of which had a more narrow focus that require a larger base of operation than a local group (e.g., Clean Energy Group, Institute for Sustainable Communities). As with the local groups, these nonlocal groups were relatively young—61 percent were founded since 1985 and only 15 percent existed prior to 1970. Examining membership of these nonlocal groups, it was clear that land protection groups were the largest (26 median core members, double the next largest category, and 7,000 median members, nearly 30 times larger than the next highest category). Total membership numbers suggested small groups in the categories of environmental quality, other, and education, with larger numbers for conservation and much larger membership in land protection groups.

**Insert Table 2 here.**

One major difference among the local groups is apparent in Table 2. The majority of conservation groups were chapters of state or national organizations, while for the other categories 0 percent to 22 percent of the groups were chapters. In other words, for all categories except conservation groups, the vast majority of local environmental groups were autonomous. Among all the local groups, 19 percent were chapters. Yet if we exclude the 19 conservation groups, only 8 percent of the local groups were chapters. This general pattern held for nonlocal groups as well. For conservation groups, 73 percent were chapters; for the other categories 0 percent to 33 percent were chapters. Overall, among nonlocal groups 27 percent were chapters, but among the 30 nonlocal groups outside the conservation category, only 10 percent were chapters. Through the formation of chapters, national- and state-level environmental organizations did seem to provide the institutional support for citizens with a broad interest in conservation. Citizens interested in more specific environmental goals, including education, land protection, and environmental quality, were more likely to create a new group independent of a larger organization. In other words, local concerns were crucial to autonomous local group formation.

In closing, like Kempton et al. (2001) we found little evidence of the kinds of local groups that were most mentioned in case studies—NIMBY groups, environmental justice groups, or direct action groups. Rather, the great bulk of our local groups were in the categories of conservation, environmental quality, and municipal (70 percent). For nonlocal groups, conservation and environmental quality groups were also the most common (49 percent). We found two local NIMBY group (Route 2 Citizens Alliance and United Barre Against the Dump), and no local environmental justice or direct action groups in the two counties. Brulle's (2000) typology proved slightly more helpful, but of his seven discourse-based categories, we found no local groups in three (deep ecology, environmental justice, and ecofeminism), embraced conservation, and modified his other categories to better reflect the reality that we documented empirically.

## **Local Environmental Groups, Civic Engagement, and Social Capital**

In the vast majority of instances, dealing with environmental problems and achieving environmental goals requires collective action. In this section, we examine how the civic engagement documented in our study contributes to the development of social capital, which is of crucial importance for successful collective action. We use Brint and Levy's definition of civic engagement: "the participation of individual citizens in the associations of civil and political society" (1999, p. 164). Based on this definition, all of the activities discussed below constitute civic engagement. We use Woolcock's definition of social capital: "the norms and networks that facilitate collective action" (2002, p. 22).<sup>3</sup> To classify and identify the networks within and among these groups, we focus on three forms of social capital: bonding, bridging, and linking (Putnam, 2000; Woolcock, 2002). We further categorize each of these forms of social capital into two separate subcategories that we think capture the critical and influential means by which civic engagement can create social capital that, in turn, can ultimately affect environmental policies and outcomes.

**Bonding social capital** refers to networks that are established among family members, close friends, and neighbors. Such social capital allows individuals to defend themselves against undesired economic or social change (Putnam, 2000). Among these local environmental groups, the first prominent source of bonding is *social and recreational activities*. These are planned activities that unite group members and their neighbors through social and recreational enjoyment. Secondly, *stewardship activities* are planned activities that unite group members and their neighbors through conservation activities.

**Bridging social capital** refers to networks that are established among more distant associates and colleagues who have somewhat different demographic characteristics, irrespective of how well they know one another. Bridging social capital can help different sets of individuals to coordinate their activities by

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<sup>3</sup> As in Savage, Isham, and Klyza (2004), we focus on networks in this article, not norms. Although we do not measure norms, we hypothesize that norms of individual and community reciprocity and norms of improved environmental behavior are generated as bonding, bridging, and linking networks within and among these groups grow.

lowering the costs of transactions (though pooling of diverse resources and economies of scale) and diffusing information. The first source of bridging is *education and communication*. These are ongoing and one-time campaigns to diffuse information among a variety of concerned citizens. Secondly, *partnerships* are formal and informal alliances among a variety of environmental and other groups.

**Linking social capital** refers to alliances with sympathetic individuals in positions of power. This type of social capital can help groups to access resources that are unavailable to them, their neighbors, or distant associates. The first source of bridging is *public alliances*, formal and informal alliances between environmental groups and public agencies. Secondly, *private and nonprofit alliances* are formal and informal alliances between environmental groups and private firms and nonprofit groups.

Table 3 illustrates the forms of bonding, bridging, and linking social capital that are generated by nine major local environmental groups in Addison County: the Lake Dunmore/Fern Lake Association, Spirit in Nature, the Watershed Center, Lewis Creek Association, Middlebury Area Land Trust, New Haven River Anglers Association, Vermont Family Forests, Otter Creek Audubon Society, and the Green Mountain Club (Bread Loaf Section).<sup>4</sup>

**Insert Table 3 here.**

The first three data columns in Table 3 detail founding year and group membership. All but three of these groups were founded since 1985. Consistent with the results reported in Savage, Isham, and Klyza (2004), most of the environmentally oriented civic engagement in Addison County occurred in groups that were founded in the last 20 years. Core members are group members who are “most active, who attend meetings or participate in events or activities” (Kempton et al., 2001, p. 565). Many of these are ‘keystone individuals,’ leaders of community-based conservation planning groups in Vermont who “have multiple conservation-related affiliations within their communities and within their professional lives” (Ervin, 2002, p. 109). Their membership roles, most often as board members and officers, are critical for

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<sup>4</sup> We selected these groups because they were the most influential groups in Addison County, as measured by the size of membership and influence in the county. We limited our survey to Addison County in order to concentrate the case studies in one region. Based on our previous research (Isham and Polubinski, 2002; Klyza and Trombulak, 1999; Savage, Isham, and Klyza, 2004), we are confident that the results can be generalized to Washington County and the rest of Vermont.

forming strong networks among group members, between groups, and with individuals in positions of power. In seven of these groups, core members comprised at least one-fifth of the overall membership.

We take this as a broader tendency of local environmental groups in Vermont: a relatively large number of members are very active participants in group activities. Further evidence of this tendency can be found from our full set of data on all local environmental groups in these two counties. In Addison County, there was one core group member per 67 residents; in Washington County, there was one core group member per 127 residents. Using a similar census methodology, this compares to about one core group member per 900 residents found in the two regions studied by Kempton et al. (2001).

The next three columns of Table 3 illustrate the extent and breadth of activity of these groups. Each activity represents a distinct action that was conceived and sponsored by the group in the previous year. These activities can occur annually or at multiple times throughout the year. For example, the Lake Dunmore/Fern Lake Association had six activities that comprised a total of 45 distinct meetings: an annual meeting (one meeting per year), a trustees meeting (four meetings), a summer picnic (one meeting), two different aquatic weed control programs (14 meetings per year for each program), and a boat safety program (14 meetings per year). All told, 1,254 participants were involved in these 45 activities: this figure included each of the distinct time commitments of repeat participants, e.g., each of the 14 weekend commitments of a volunteer who led the weed crews. It also included one-time commitments, e.g., a neighbor who attended the annual summer picnic.

As illustrated by the results in these three columns, our research illustrates a wide range of activities across these environmental groups, which ultimately involve a large number of Addison County residents. These nine groups sponsored 61 distinct activities with a total of 510 separate meetings, which involved 8,249 participants. Counting only the 1,628 members of these groups would drastically underestimate the number of people who are ultimately involved in activities sponsored by these groups.<sup>5</sup>

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<sup>5</sup> As discussed in Kempton et al. (2001), there is of course double counting among these 1,628 members and 8,249 participants. Even if these two figures were halved in order to allow for the possibility of multiple memberships and repeated participation, they would still represent a significant share of the local population.

The final six columns of Table 3 illustrate the nature of the social capital created by these nine local groups. The figures in each of these columns were calculated from our survey responses. We find several tendencies that we think are emblematic of the means by which environmental groups establish social capital. First, bonding through social or recreational activities was infrequent among local autonomous groups. Only one group, the Watershed Center, reported that over 50 percent of its activities involved socializing or recreational opportunities. By contrast, the two local chapters reported a very high level of social and recreational activities. Local autonomous groups, founded relatively recently, have a focus that transcends the recreational emphasis of more traditional state-level environmental groups like the Audubon Society.

It is rather through stewardship that the members of local autonomous groups form their bonding networks: five of the seven groups reported that at least 40 percent of their activities involved stewardship. Even the two local environmental quality groups in this subset, the Lake Dunmore/Fern Lake Association and the New Haven River Anglers Association, reported that one-third of their activities involved stewardship. Among the two chapters, by contrast, stewardship activities were much less common. We surmise that this difference is representative of a broader trend among autonomous local environmental groups nationwide: a dedication to stewardship that bonds many friends and neighbors, distinct from the bonds that are created through socializing and recreation alone.

These survey results also indicated the prevalence of bridging activities among these groups, particularly among the autonomous groups. Seventy-three percent of all activities among autonomous groups involved education or communication, and 50 percent involved some kind of partnership. For example, 10 times per year the Watershed Center “provides outdoor classrooms for local schools,” a program that involved students from two local colleges and two local schools. Six times per year, the group sponsored educational hikes, in partnership with a local college, the town recreation department, and the Otter Creek Audubon Society. While 54 percent of the activities of the two chapters involved education or communication, only 8 percent involved partnerships. Chapters of state and national groups were less likely to seek partnerships with other local groups or organizations.

The final notable tendency from these survey data was the prevalence of public linking among so many groups: only Spirit in Nature (which educates the local community about the nexus between religious traditions and the environment) reported that it had no activities that linked it to public officials in positions of power. Overall, 33 percent of all the activities of these nine groups entailed some public linking, as contrasted with 11 percent for private or nonpublic linking. Public officials, we have found in our research, are very supportive of the activities of these groups (Savage, Isham, and Klyza, 2004). For example, the Vermont Department of Environmental Conservation provided support for the water testing activities of the New Haven River Anglers. By contrast, the groups received a relatively small amount of support from larger, more powerful private or nonprofit organizations.<sup>6</sup>

In summary, these survey data illustrate the means by which civic engagement in local environmental organizations creates different forms of social capital. Local chapters tended to create bonding networks through their social and recreation activities, bridging networks through education and communication, and linking networks with public agencies. Local autonomous groups tended to create bonding networks through their stewardship activities, bridging networks through their education, communication, and partnerships, and linking networks with public agencies. This evidence suggests that local autonomous groups are generating social capital that is connecting private citizens to each other and to public officials.

### **Local Environmental Groups and Policy Outcomes**

The rapid increase in local environmental groups in the last 20 years raises two important, related questions: how are these groups contributing to the generation of social capital, and what influence do they have on policy formation and environmental protection. The previous section addresses the first question by indicating how local environmental groups build different forms of social capital while

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<sup>6</sup> As chapters, the Otter Creek Audubon Society and the Bread Loaf Section of the Green Mountain Club did receive support from their parent organizations. However, we see this less as an example of social capital formation and more as an illustration of the hierarchical nature of these organizations.

pursuing their environmental mission. The following two case studies document how local environmental groups carry out their mission by shaping policy and achieving environmental protection.

### ***Sugarbush Snowmaking Expansion***

In 1990 Vermont lacked a policy or standards for dealing with conflicting interests over the use of the state's rivers. It was in this context that one of Vermont's most heated recent environmental battles was fought. The Sugarbush Ski Resort's proposal to draw water from the nearby Mad River in order to increase its snowmaking capacity met fierce opposition by a coalition of environmental and recreational groups that asserted the water withdrawals would harm fish and aquatic habitat. The groups not only succeeded in forging a compromise with the resort, securing the protection of the river's aquatic habitat, but also they generated momentum for a statewide policy passed by the Vermont Legislature in 1995 and subsequently adopted by the Agency of Natural Resources (ANR) in 1996 that regulates all future water withdrawal proposals. This conflict between a prominent ski resort and several environmental organizations documents the significant effect that both state-level and local environmental groups can have on the policy process.

In the late 1980s and early 1990s, the Sugarbush Ski Resort in Vermont's Mad River Valley planned a massive expansion of its skiing trails and facilities, which included increasing its snowmaking capacity. In the summer of 1991 and winter of 1992 the resort won the state's approval for building a 43 million gallon water storage pond and to withdraw an average of 380 million gallons of water yearly from the Mad River. This would allow the resort to increase its snowmaking coverage from 70 to 250 acres (Associated Press, 1992; Ellis, 1991). The District 5 Environmental Commission gave Sugarbush the Act 250 (Vermont's land use development law) permit it needed for expansion after certification by the Vermont Department of Environmental Conservation (Ellis, 1991).

In the winter of 1992, three state-level environmental groups, the Vermont Natural Resources Council (VNRC), the Vermont chapter of the Sierra Club, and the Vermont chapter of Trout Unlimited, spoke out against the proposal and appealed the permit to the Vermont Water Resources Board. The groups maintained that the amount of water permitted for withdrawal would result in ecological damage

to the river and thus violated the state's water law (Kilian and Clark, 1992). In July 1992, the Vermont Federation of Sportsmen's Clubs, an organization that bridged 35 local fish and game clubs from across the state, joined the appeal of the resort's permit (Hoffman, 1992). These groups brought in contractors to conduct scientific studies and collect stream flow data to counter the scientific evidence Sugarbush presented. Years of concern by environmentalists and recreationalists over snowmaking withdrawals coalesced on this issue.

These appeals and attempts to alter Sugarbush's proposed water withdrawal plans generated a hailstorm of anger in the resort's home, the Mad River Valley, and across the state. Many saw the environmental coalition's actions as antidevelopment, and Governor Howard Dean, among others, criticized their use of the appeals process (Pfeifer, 1993a). Despite the opposition, the groups insisted on their support for snowmaking and for the ski resort, but demanded "responsible use of the water" and a permit based on sound science, rather than one influenced by politics (Pfeifer, 1993b).

In the middle of the debate was the Friends of the Mad River, a local autonomous conservation group formed in 1990 in response to Sugarbush's expansion plans. The group played a critical role in bonding and bridging concerned residents of the Sugarbush region. Because of the diverse interests among the local population and within the organization, it remained neutral throughout the debate. Founder and former director Kinny Connell asserted that, "the fact that we were around and asking questions did have an effect... it let people know we cared and were paying attention to the process" (Connell, 2003). The group's "philosophy was to look out for the river," but it also attempted to balance economic, environmental, and social concerns in the Mad River Valley (Czaplinski, 2003).

By contrast, the Mad Dog Chapter of Trout Unlimited was outspoken against the resort's snowmaking plans. Like many of the other groups involved, this local chapter of Trout Unlimited was concerned that science was being sidelined for politics because Sugarbush was such an important local business. The group tried to influence the debate by "going to hearings, contacting our representatives, writing letters, passing formal resolutions," and linking with sympathetic state officials in the Water Quality Division and the Fish and Wildlife Department by seeking their advice and support (Allard, 2003).

While the state chapter of Trout Unlimited used litigation to influence the debate, the Mad Dog Chapter added diversity to the effort by building on its own network of members and supporters in order to provide local grassroots opposition.

Despite this effort by the environmental coalition, on February 8, 1993 the state Water Resources Board rejected their appeal of the two snowmaking permits. The coalition appealed to the Washington Superior Court on March 30, which helped bring the two parties to the negotiating table in spring 1993 (Dillon, 1993). During negotiations, the parent company of the resort, Claneil Enterprises Inc., claimed it would “close the resort at the end of the season without a quick settlement” (Sneyd, 1993). On May 19, after almost two months of federally mediated discussions, the environmental organizations and the resort struck a compromise. “Sugarbush has met its needs, and the environmental groups have met every single one of their needs,” said Ned Farquhar, executive director of VNRC after the deal (Liley and Bazilchuk, 1993). The settlement permitted Sugarbush to use water from the Mad River, but only to the February median flow, and allowed the resort to increase its water withdrawal from the Clay Brook and to build a larger snowmaking storage pond to offset the lost water volume.

This controversy illustrated to all parties that a clear snowmaking policy was needed. In 1993 the ANR, two environmental organizations, and the Vermont Ski Areas Association began to draft a water withdrawal policy. Two years later, the Vermont Legislature passed H. 509 in 1995, a “Policy on Water Withdrawal for Snowmaking.” The law required that the ANR create a policy that “assured the protection... necessary to sustain aquatic communities and stream functions” with mutual concern for “the viability of Vermont’s ski industry.” Environmental groups played a critical role in drafting policy proposals and testifying for the new bill. In 1996 the agency adopted the environmental protection rules for snowmaking, ending the bitter battle.

The litigation, scientific research, debate, and policy work by the staff and members of the VNRC, the Federation of Sportsman’s Clubs, the Vermont chapter of the Sierra Club, the Vermont chapter of Trout Unlimited, the Friends of the Mad River, and the Mad Dog Chapter of Trout Unlimited successfully prevented Sugarbush from drawing the Mad River below the February median flow. As a result of this

debate, the Vermont government finally adopted a clear policy to regulate one of the state's most important public resources. This policy would prove critical for environmental protection in the state's very near future. In August 1995, in addition to Sugarbush "at least six other Vermont ski areas [were] planning more than \$40 million in new snowmaking" and other resort improvements (Sutkoski, 1995).

Local environmental groups, as this case illustrates, played a critical role in this policy process. The issue was of statewide importance, but it most significantly affected citizens of the Mad River Valley. An environmental coalition formed solely of state-level groups could have been far less effective in fighting an issue with local businesses and jobs at stake. However, the Mad Dog Chapter and Friends of the Mad River, as local groups, provided a level of credibility to an issue that was central to the future of their particular watershed. By building overlapping networks of neighbors, distant associates, and sympathetic individuals in power, Mad Dog provided local and direct opposition to the permits, while the Friends of the Mad River ensured that citizens of the valley, whether for or against the plans, had a voice in the process. Both groups and their members ensured citizen participation vital to a statewide environmental debate, a debate that ultimately produced an important change in the regulation of Vermont's ski resorts and water resources.

### ***Middlebury Area Land Trust and the Preservation of Eddy Farm***

The Sugarbush snowmaking expansion conflict documents the important role state and local environmental groups play in affecting policy. Local environmental groups also succeed in achieving other forms of significant environmental outcomes. With groups scattered throughout the state, most environmental issues receive at least some consideration by a local group. These groups are also essential for alerting larger state groups of local problems. In addition, local groups are critical for identifying the specific environmental protection needs of their communities and then working towards realizing grassroots change.

The Middlebury Area Land Trust (MALT), a local land protection group, began protecting open space in the town of Middlebury in 1987. Over time, the organization broadened its focus to include the

surrounding communities. By developing a network of like-minded local residents, the organization has successfully protected over 600 acres of land from development in the Middlebury area.

In 1991, the owner of the Eddy Farm, a horse farm south of the village of Middlebury, contacted MALT looking to sell its land development rights. The land was assessed as a “scenic high priority” for MALT because of its views of the Green Mountains to the east and Adirondack Mountains to the west (Kuss, 2003). The views, the existing open space, and the fact that the farm could have been subdivided into eight separate building lots made the development potential of the land extremely high (Flowers, 2000). In addition to losing open agricultural land and a working farm, members of the land trust were concerned about development causing spring run-off, septic waste pollution, and other effects on the water quality of Otter Creek, which flows along the property’s eastern border. Development likely would have also harmed the large riparian area along the nearby creek (Kuss, 2003).

MALT leaders decided to apply for funding assistance from the Vermont Housing and Conservation Board (VHCB), a state funded agency that provides grants for the conservation of agricultural and natural areas as well as the creation of affordable housing. The VHCB initially declined to fund the project, but when VHCB revised its application process several years later, MALT felt its proposal for the farm could fit the VHCB’s “projects of local significance” application criteria (Kuss, 2003). In 1999 MALT reapplied for funding and received \$125,000 in VHCB funds for the purchase of the easement. This grant still left MALT \$90,500 short of the needed \$215,500 to purchase the development rights. MALT requested that the Middlebury Select Board approve using \$75,000 from the Middlebury Land Use Trust (created to support local land conservation efforts) for the easement purchase (Flowers, 2000). In a six-to-one decision in January 2000, the select board voted to authorize MALT’s use of up to \$75,000 from the fund. MALT raised the remaining \$15,500 from the community (Kuss, 2003).

In addition to VHCB and the town government, MALT also worked with the Vermont Land Trust (VLT), a state-level land protection organization, throughout most of the land acquisition process. When applying for the VHCB grant, MALT chose the VLT to be the “acting steward” for the easement

“because they have a well endowed stewardship monitoring program and VHCB often prefers” that larger trusts assume the stewardship responsibilities over “smaller land trusts that are not as well funded” (Kuss, 2003).

MALT’s successful acquisition of the conservation easement for the Eddy Farm provides an example of how a local group achieves its goal of environmental protection. The commitment by this local land protection group fostered the cooperation of a state level organization and financial support from public sources at the local and state levels. The protection of Eddy Farm shows how local groups, building on their local and extended networks, are in a position to both identify the particular needs of the community and work within and beyond the community to see that its environmental mission is met. Perhaps most importantly, this case demonstrates how a local environmental group can successfully achieve policy outcomes that are often below the radar screen of state and national groups.

## **Conclusion**

In this article we have analyzed empirical evidence of local environmental groups in two Vermont counties. First, we developed a typology of local environmental groups. We found five basic types of groups—conservation, education, environmental quality, land protection, and municipal. These categories do not match with those most discussed in case studies of local environmental groups, namely direct action groups, environmental justice groups, or NIMBY groups. Furthermore, these groups have grown dramatically recently—over three-quarters were founded since 1985.

Second, the major groups in Addison County are engaged in significant civic engagement and social capital development through bonding, bridging, and linking. The prevalence and contribution of local environmental groups has been understudied and underappreciated, particularly local autonomous groups that are creating social capital through stewardship activities, education and communication, partnerships with other organizations, and alliances with public officials. Hence, they indicate a countertrend to Putnam’s (2000) widely reported thesis on the decline of social capital in the United States—the *greening of social capital*.

Our two case studies show the distinctive importance of local, community-based environmental organizations. The Sugarbush snowmaking controversy documents how local groups are essential for acting as community leaders for larger statewide environmental issues. Although the bigger state groups will often play a more visible role, local groups provide familiar human faces to contentious debates. Secondly, the Eddy Farm conservation project suggests how local groups are also essential for identifying issues that would be too small to attract the attention of the larger environmental organizations.

Several facts suggest that our case studies are just two cases of many that indicate how local environmental groups have a significant effect on a broad range of environmental outcomes. As of December 2001, the Vermont Land Trust, with the help of local land trusts throughout Vermont, has conserved more than 400,000 acres of land throughout the state (Vermont Land Trust, 2002). The Green Mountain Club, a state-level organization focused on protecting a 265 mile hiking trail, has protected 22,000 acres of land along the trail working with its local chapters (Green Mountain Club, 2001). On a smaller scale, local Keeping Track organizations conduct wildlife tracking throughout the state and their results are often incorporated into town and regional plans. Other groups like the Route 2 Citizens Alliance and United Barre Against the Dump stand ready to oppose controversial development projects.

Our interviews with organization leaders indicated that these environmental groups were politically active. When we asked group leaders whether their group was politically involved, over 50 percent affirmed it was. Based on this self-reporting, conservation groups were the most politically active at nearly 60 percent. These numbers do not suggest the extent of activity and whether or not politically active groups are having an influence on policy. Many environmental groups, though active in a political fashion, do not consider themselves political because of their 501(3)c status, which prohibits direct lobbying. We found many registered 501(3)c environmental groups did in fact organize letter-writing campaigns to government officials, issue position statements, and conduct awareness campaigns. Groups also became involved politically through means suggested in the two case studies—active participation in environmental issues or playing a leadership role concerning a local environmental issue.

Given the increasing prevalence of local autonomous groups in Vermont (Savage, Isham, and Klyza 2004), we see this as a significant evolution of the nature of social capital in Vermont and, by extension, in rural areas in the United States. Overall, we believe that this multi-faceted set of outcomes implies that active local environmental groups are major sources of social capital generation in this part of the United States. We speculate that compared to other land-based groups—agricultural and outdoor recreational—and to all types of groups—e.g., Putnam’s bowling leagues—that local environmental groups generate a broader range of networks, particularly along the bridging and linking dimensions. For example, agricultural groups do not place as high a premium on bridging—education and communication as well as partnerships—because they support a narrower special interest. Outdoor recreational groups are not as likely to turn to alliances with sympathetic individuals in positions of power, as they are less likely to find strategic allies in agencies, firms, and nonprofits. The validity of this speculation will be tested with future census-based research on all types of groups in the history of these two counties.

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**Table 1. The Composition of Environmental Groups in Census Area**

	LOCAL	Founding Year				Membership		
		Pre-1970	1970-1985	Post-1985	Total Core Members	Median Core Members	Total Members	Median Members
		Total	80	6	13	61	995	10
<i>Conservation</i>	19	2	4	13	269	12	2222	37
	19	2	0	17	115	6	115	6
	18	1	5	12	309	10	2558	44
	9	1	1	7	189	10	735	32.5
	8	0	2	6	53	6.5	290	10
	7	0	1	6	60	8	90	15
<i>Municipal</i>	41	6	10	25	534	12	59467	18
	11	4	3	4	143	13	14335	250
	0	0	0	0	-	-	-	-
	9	0	2	7	88	7	21942	19
	6	2	2	2	132	26	22932	7000
	6	0	1	5	79	7	166	7
	9	0	2	7	92	12	92	12

  

NONLOCAL		Founding Year				Membership		
		Pre-1970	1970-1985	Post-1985	Total	Median Core Members	Total Members	Median Members
<i>Environmental Quality</i>	9	0	2	7	88	7	21942	19
	6	2	2	2	132	26	22932	7000
	6	0	1	5	79	7	166	7
	9	0	2	7	92	12	92	12

Note: See text for definitions of classifications. No founding date available for two local groups and two nonlocal groups.

**Table 2. Distribution of Environmental Groups**

	Total	Autonomous	Chapter
	<b>80</b>	<b>65</b>	<b>15</b>
<i>Conservation</i>	19	9	10
<i>Municipal</i>	19	17	2
<i>Environmental Quality</i>	18	17	1
<i>Land Protection</i>	9	7	2
<i>Education</i>	8	8	0
<i>Other</i>	7	7	0
	<b>41</b>	<b>30</b>	<b>11</b>
<i>Conservation</i>	11	3	8
<i>Municipal</i>	0	0	0
<i>Environmental Quality</i>	9	9	0
<i>Land Protection</i>	6	4	2
<i>Education</i>	6	5	1
<i>Other</i>	9	9	0

Note: See text for definitions of classifications.

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**Table 3. Local Environmental Groups and Social Capital**

Group Classification	Founding Year and Group Membership			Characteristics of Group Activities									
	Date Created	Core Members	Members	Number of Activities	Number of Meetings	Number of Participants	BONDING Social or Recreational	Stewardship	BRIDGING Education/Communication	Partnerships	LINKING Public	Private or Nonprofit	
<b>Autonomous Groups</b>													
Lake Dunmore/Fern Lake	Environmental Quality	1994	100	365	6	48	1254	17%	33%	100%	17%	83%	0%
Spirit in Nature	Education	1998	30	260	10	52	2789	20%	50%	90%	70%	0%	10%
Watershed Center	Conservation	1995	20	200	8	25	631	63%	50%	50%	50%	38%	13%
Lewis Creek Association	Conservation	1990	20	180	5	132	690	20%	40%	60%	100%	100%	20%
Middlebury Area Land Trust	Land Protection	1987	30	164	7	142	693	14%	57%	43%	14%	14%	0%
New Haven River Anglers	Environmental Quality	1981	12	70	3	20	236	33%	33%	67%	67%	67%	0%
Vermont Family Forests	Conservation	1996	6	31	9	19	240	11%	67%	89%	44%	11%	22%
<b>All Autonomous Groups</b>										25%	50%	73%	50%
Otter Creek Audubon	Conservation	1971	15	208	4	10	932	100%	25%	100%	25%	50%	25%
Green Mountain Club: Bread Loaf Section	Land Protection	1975	75	150	9	62	784	89%	22%	33%	0%	11%	11%
<b>All Groups</b>				<b>All Chapters</b>	92%	23%	54%	8%	23%	15%			
		308	1628	61	510	8249	39%	44%	69%	41%	33%	11%	