

**Community Collaboration in Farmland Preservation:
How Local Advisory Groups Plan**

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Abstract

Community-based environmental management, also known as collaborative environmental management, aims to shift decision-making from government officials to citizens and stakeholders. Recently, scholars and practitioners have focused a great deal of attention on such efforts, particularly in the context of watershed management planning and ecosystem management. While increased stakeholder and community participation may lead to a more empowered, committed citizenry and greater environmental protection, its policy implications are not well understood. To date, scant research has focused on understanding how participants without binding legal authority arrive at specific policy recommendations, what those recommendations contain, and what impact they have. This study aims to provide such understanding, by focusing on efforts by several different community-based advisory task forces to develop farmland preservation plans in Ohio. Analysis of plan documents, combined with task force member interviews, reveal patterns of decision-making processes and policy recommendations.

Introduction

There is a growing movement toward greater local participation in environmental management strategies, one that promises both better policy outcomes and better processes. Various terms such as community-based environmental management, grass-roots environmental management, partnering, and ecosystem management, among others, a common theme is collaboration among stakeholders. Rather than relying on government officials to solve environmental problems, this approach calls for empowering a community of stakeholders to contribute meaningfully. While such a collaborative group typically does not possess binding legal authority, the hope is that it can affect change in both environmental and social conditions.¹

Collaboration, it is argued, can lead to better environmental outcomes. While government experts and elected officials have been able to foster reduced pollution from point

¹ While collaboration has become increasingly popular over the past several years, it is not altogether new. A similar process, non-binding direct public input, has been an important part of environmental management in the U.S. for at least three decades. Legislation such as the National Environmental Policy Act (1970) and National Forest Management Act (1976) required public hearings and comment periods, giving citizens direct input into agency policy decisions. At the state and local level, citizen advisory committees (CACs) have been used for land use decisions, infrastructure planning, and regulatory standard setting (Lynn and Busenberg 1995).

sources, such as smokestacks and outfall pipes, many of the persistent environmental problems today are those arising from non-point sources. As John (1994) and others have emphasized, legal strategies such as command-and-control regulation and permitting are not well suited to problems of waste runoff, soil erosion, and other forms of natural resource degradation involving many dispersed decision makers. Instead, to coordinate among multiple decision makers conducting myriad activities across a landscape, collaboration offers the possibility of coordinated efforts for meaningful improvements in environmental quality.

Collaboration in environmental management is also expected to benefit social conditions. The growing interest in social capital and civic society calls attention to activities that may build citizens' ability to constructively engage in self-governance. Collaboration, regardless of its effects on environmental quality, may spur stakeholders' faith in government and efficacy in problem solving related to their community and polity (Cortner and Moote 1999). Moreover, it may foster improved relationships between formerly adversarial parties (Buckle and Thomas-Buckle 1986). Thus, regardless of whether environmental conditions on the ground improve, the process of civic discourse can be worthwhile in and of itself.

Much of the literature on collaboration has tended to focus on why it is needed, how it differs from traditional environmental management, and what factors are associated with its adoption. In addition, and of particular relevance to this study, is a more recent focus on evaluating the performance of collaborative efforts. Evaluators have sought to measure results, often in terms of social conditions (e.g., Smith Korfmacher 1998).

Measuring environmental outcomes has proven to be more difficult, given the complexity of interactions – often over long time periods -- involved with environmental conditions, as well as a lack of baseline data (Yaffee et al. 1996). As a proxy for environmental outcomes, researchers have examined collaborative group outputs. These may include achievements such as completion of a restoration project, adoption of a new law or regulation, or development of a management plan to guide decisions and behavior. Yaffee et al. (1996) discovered that, among a national sample of ecosystem management projects, the most common output was a management plan.

More recent studies have begun to examine the conditions under which different collaborative efforts are likely to lead to particular outputs. For example, across U.S. regions characterized by different patterns of public and private land ownership, collaborative environmental management yield different outputs (Yaffee et al. 1996, Moore and Koontz 2000). Moreover, within one state, outputs varied by breadth of representation in the collaborative group,

as groups with broader representation were more likely to have created a management plan (Koontz and Moore 2000).

From a policy perspective, it is important to know not only whether a group has created a management plan, but also what the plan contains. If collaborative processes yield plans that are “watered down” in order to reach agreement from diverse stakeholders, for example, then perhaps the group’s efforts will not lead to improved environmental conditions (see Coglianese 1999, Smith Korfmacher 1998). On the other hand, discussions among different interests in creating a management plan may lead to win-win opportunities not previously possible (Wondolleck and Yaffee 2000). It is an open question as to whether management plans from collaborative groups resemble the former or the latter. Undoubtedly, there are examples of each. The task of the analyst, then, is to search for factors affecting plan contents, to link particular characteristics of a collaborative process, or context, with different types of plan contents. Such is the purpose of this study.

This paper proceeds with a discussion of extant knowledge relevant to collaborative environmental management and citizen advisory committees. Prior research is used to develop a list of group process and contextual variables. The next section describes particulars of the study, which examines the Ohio Farmland Preservation Planning program. Subsequently, case selection and methodological approach are detailed for this ongoing comparative case study. The next section provides and discusses results from analysis of the first seven cases. Here emphasis is placed on descriptive data, but augmented by a simple causal exploration using three cases. Finally, concluding remarks, including suggested directions for continued research, are provided.

How Collaborative Groups without Binding Authority Make Policy Decisions

Two areas of scholarship are relevant to understanding how collaborative environmental management groups without binding authority make policy decisions. First, research on collaborative environmental management (CEM) provides a broad view of different types of collaborative groups, how they function, and what they accomplish. However, these studies do not generally examine how CEM groups arrive at specific policy recommendations or how they influence policy. Second, research on citizen advisory committees suggests several factors likely to affect how citizen advisory committees (CACs) dealing with environmental issues operate and what policy outputs they produce. However, unlike CEM groups, which often include a

substantial number of governmental officials, CACs are typically comprised of primarily private citizens. Nevertheless, findings from CAC studies may be applicable to collaborative environmental management groups, since both typically wield no binding authority. Taken together, these two bodies of literature provide a set of variables for further examination. These variables include both group process and contextual factors (see Table 1).

[Insert Table 1 about here]

Group Process Variables

Group process refers to the way a CEM group is structured and the rules by which it operates. Several characteristics of group process have been identified as important determinants of what the group accomplishes. As described below, key variables are group composition, decision making rules, resources, and member expectations about their roles.

Group composition has been the focus of several studies. In the CEM literature, the breadth of representation has been associated with the types of activities a group successfully undertakes. A study by Koontz and Moore (2000) found that watershed management plans are more likely to be completed by groups with broader representation. Perhaps, then, breadth of representation also affects the contents of plans. Another study focusing on CEM associated group processes, and responses to challenges, with the type of representation among group members (i.e., representing an organization, a constituency, or a perspective) (Moseley and KenCairn 2000).

In the CAC literature, member selection has been cited as having important implications for committee success. Pierce and Doerksen (1976) argued that the method of recruitment for these groups was correlated to both their representativeness with respect to the public's policy preferences and the responsiveness of public officials to the group's policy recommendations. They differentiated between "open" (volunteer or elected at public meetings) and "closed" (appointed) selection methods. Ross and Associates (1991) linked group success to the degree to which the group adequately represented all stakeholders. Based on a review of numerous CAC guides, Lynn and Busenberg (1995) noted a heavy emphasis on procedures for selecting group members, linking selection to credibility and support. These studies suggest that group selection and composition are important factors in CEM policy outputs and recommendations.

Group decision making rules are another important factor. In studying community groups that manage common-pool natural resources, Ostrom (1990) highlighted the importance of

decision making rules to structure behavior and resource outcomes. With regard to collaborative watershed planning, Blomquist and Schlager (1999) describe the choice of decision-making arrangements as critical in understanding watershed groups. Many CEM scholars, including Wondolleck and Yaffee (2000), have stressed the importance of consensus decision rules in helping to find successful solutions and build social capital. But Coglianese (1999) argues that group decisions relying on consensus can lead to policy recommendations for the easiest solutions to agree on rather than bold, innovative, controversial ones that may be more effective.

A third group process factor is available resources. What a group is able to produce depends on its financial, human, and information resources (see Hill MacKenzie 1996). As Smith-Korfmacher (forthcoming) noted, without meaningful resources to draw on, a CEM group such as a watershed partnership is precluded from undertaking a number of activities. In a comparative case study of two CEM groups working on similar water quality issues, Steelman (1999) argued that the nature of CEM strategies, activities, and success was closely tied to their respective resources.

Finally, CEM actions are impacted by the expectations that group members have regarding how their input will be used. Several CAC studies have focused on the competing roles of citizens giving decision makers more information, on one hand, and actually developing policy, on the other. Steelman and Ascher (1997) argue that solicitation of public input without clear understanding of how that input will be measured and weighted leads to unresolved conflict and lack of legitimacy. Stewart, et al. (1984) concur; in their study of a CAC process in Denver, they attributed citizens' lack of involvement in policy setting to different expectations between planners and CAC members. Likewise, Plumlee et al. (1985) found that CAC members' perceptions of little input into policy decisions stemmed from expectations that differed from those of US EPA members in the group.

Contextual Variables

In addition to group process factors, contextual factors may be important in determining CEM accomplishments. Indeed, Yaffee, et al. (1996) noted that, among the 105 ecosystem management projects in their sample, the diversity of efforts mirrored the wide array of land uses and ecosystems. Contextual variables highlighted by CEM and CAC literature include community concern over the issue, pre-existing networks related to the issue, and existing rules.

Steelman (1999) argued that community capacity is a crucial element in determining what a CEM effort is likely to achieve. In particular, the degree of concern affects the ability of a collaborative group to mobilize needed resources, which affects how the group operates. She describes outcomes not in terms of particular policy recommendations, but as visible environmental improvements and enhanced social capital. But perhaps the level of community concern may affect the types of policy recommendations a group prescribes as well. For example, greater concern may embolden a group to recommend regulatory constraints that might ordinarily be viewed as too heavy-handed for public acceptance.

Besides community concern, the level of pre-existing networks of people dealing with natural resource issues is an important consideration. Lynn (1987) concluded that, in the case of two CACs involved in a hazardous waste controversy, the prior existence of organizations focusing on hazardous waste issues contributed to the group's ability to get citizen advice implemented. Of course, pre-existing networks do not always facilitate CEM efforts. In some instances, they might impede creation of a new collaborative effort, if there are questions about turf, or if disagreements in the past have strained relations among stakeholders (see Imperial 1999).

A third contextual factor affecting CEM efforts is the set of existing rules that constrain policy options. Collaborative efforts are faced with existing jurisdictions and institutions, which can greatly affect their activities (Blomquist and Schlager 1999). A welter of laws, such as the Federal Advisory Committee Act, anti-trust statutes, and private property laws, may affect collaborative management across jurisdictions (Cortner, et al. 1998). In particular, land use zoning ordinances are expected to affect collaborative planning related to land use, the subject of this study.

The Study

To compare contents of different plans and link them to causal factors, we address two challenges. First, some collaborative efforts simply do not lead to the creation of a management plan. This likely reflects differing goals and capacities among collaborative efforts. In order to draw meaningful conclusions, our study examines efforts where a goal is to create a management plan. Second, each plan addresses a particular geographic place, with unique social and environmental characteristics. To investigate the importance of different group process and contextual factors, we include multiple cases with variation among those characteristics. While

plans are obviously tailored to fit the local context, perhaps there are some regularities of plan contents that depend on factors related to group processes and contextual factors. Discovering such regularities is the aim of this study. As described below, analysis draws on experiences of collaborative efforts aimed at farmland preservation in Ohio.

The Ohio Farmland Preservation Planning Program

Data for this study come from local advisory groups, called task forces, participating in the Ohio Farmland Preservation Planning program. These county-level task forces recently undertook collaborative planning focusing on farmland preservation. Without binding authority, the groups engaged in planning to develop policy recommendations, presented in a final farmland preservation plan for each participating county. Given the nature of the planning program, as described below, task forces had considerable flexibility in designing their collaborative processes and creating the contents their each plan. Thus they provide a helpful “natural experiment” in natural resources collaboration without binding authority, across the state of Ohio within a given time period.

In June of 1998, the Ohio Department of Development’s Office of Housing and Community Partnerships (OHCP) announced a matching grant program for rural counties to prepare local farmland preservation plans. Grants of up to \$10,000 were made available to the 81 counties receiving Ohio Small Cities Community Development Block Grant funds. Funding was contingent on the counties providing a 1:1 match, in dollars or in-kind, and establishing a county farmland preservation task force including a “cross section of interests.” These funds were provided to county commissioners, who were responsible for creating the task forces. Subsequently, each task force was required to submit to the OHCP, by December 31, 1999, its farmland preservation plan. 61 of the 81 eligible counties participated in the grant program. While numerous task forces received deadline extensions for submitting their plans, many had completed them by the original deadline.

Measuring Outcomes

Collaborative outcomes have been measured in many ways. Perhaps most common among these is a comparison of achievements to pre-determined goals. The primary goal of the grant program

studied here, as described in the grant application rules, is the creation of a county-level Farmland Preservation Plan. Each task force in our study was successful in achieving this goal. Probing deeper, however, we can inquire about the plan contents. The sole requirement for plan contents was the “identification of soil types in the county via a classification system and mapping.” The degree to which plans fulfilled this minimum requirements can be evaluated.

In addition to plan requirements, the grant guidelines included a list of 16 “suggested” plan contents, with the caveat that “Each county is different, thus the local task force may choose to add or delete from” the list. Suggested contents included farmland status (farm number, type, location, and investments; trends in farmland conversion; identification of important farmland and soil productivity, county farm receipts), farm owner characteristics (age, location, and participation in agricultural districts and government programs), and land use information (current zoning; analysis of proposed rural infrastructure and rural distances from developed areas; identification of places unlikely to be developed). Since these optional contents are clearly not required, plans lacking them should not be considered deficient. However, the list does provide a means to compare contents across different plans.

In addition to comparing outputs to goals, collaborative environmental management can be evaluated in terms of recommended policy types (e.g., regulatory, voluntary, educational/informational). Here, content analysis of the recommended strategies reveals which types of policy recommendations are made by collaborative groups with non-binding authority.

Finally, an important outcome is the degree to which collaborative efforts lead to policy change or improved environmental, social, or economic conditions. A state agency working with the Farmland Preservation Plan program did have such outcomes in mind for the program. As one state official who advocated creation of the program explained, it was hoped that the program would encourage counties to incorporate farmland preservation into county comprehensive plans, and foster citizens lobbying their legislators seeking policy changes to preserve farmland. While it is too early in the life of the farmland preservation plans to determine such outcomes, we did ask task force members to predict the impacts of their plan.²

Given such multiple criteria for evaluating outcomes, for this study, measuring task force outcomes includes four primary components, listed in Table 2.

² Beyond the plan contents, success can be measured in terms of the collaborative process itself. Ellefson (1997) defined success in terms of the degree to which a group attracted and retained people involved in partnership activities. Similarly, it has been argued that an important type of success is building social capital among group members (Kenney 1999). The analysis presented here, however, does not include such outcomes.

[Insert Table 2 about here]

Data and Methods

Comparative case studies are well-suited to understanding complex phenomena in real-world settings, where many factors are potentially important (Yin 1989). For this study, we plan to investigate 15 of the 61 county task forces involved in preparing farmland preservation plans. This paper includes preliminary analysis of 7 such task forces. Case selection was based on two criteria: level of county urbanization and geographic location.

First, since the impetus for the task forces related to land use, we sought a distribution of counties with land use reflecting different levels of urbanization. Ohio Department of Development grants were available to qualifying non-urban counties, which can be characterized into four types: (a) large metropolitan fringe, (b) small metropolitan core, (c) small metropolitan fringe, and (d) non-metropolitan (Sharp and Vinland 2000). Across the 7 cases, at least one county falls into each of these four levels of urbanization.

The second criterion for case selection was geographic location. We sought to include counties located throughout the state, rather than in one or a few particular regions. Among the 7 cases examined here are counties from central Ohio, northwest Ohio, southwest Ohio, and northeast Ohio. While a considerable gap does exist in the eastern portion of the state, this is because a number of rural counties in this region did not participate in the grant program.³ Thus, our sample includes considerable variation across the geographic location of the 61 participating counties (see Table 3).

[Insert Table 3 about here]

Following case selection, we collected information about planning processes as well as plan contents. For each task force, interviews were conducted with a key informant (identified by members of the state Office of Farmland Preservation who worked closely with the task forces),

³ According to one state official, this is likely due to a combination of difficulty in fulfilling the matching requirement and the relatively low priority given to farmland preservation compared to other issues in those counties, which tend to have higher rates of poverty and unemployment and lower levels of agricultural production than the rest of the state.

and we are in the process of interviewing one or two additional members. Two graduate students conducted most of the interviews, referring to an interview guide, taking careful notes and making follow-up phone calls where appropriate to obtain accurate information. Included in this analysis are data from 8 task force member interviews across the 7 cases. Additionally, an interview was conducted with one state official who worked closely with the county task forces.

One of the authors attended a one-day conference on farmland preservation, sponsored by the Ohio Office of Farmland Preservation, in March 1999. Representatives from most of the 61 grant-receiving counties attended this conference, which included speakers from several state agencies and local government associations with land use policy responsibilities. This conference focused on the county task force plans and planning processes.

We also collected data through content analysis of the completed farmland preservation plans. Each plan was coded for the group process, contextual, and outcome variables described above. Additional documents provided by task force members included meeting attendance records and expenditure data.

The combination of interviews, conference participation, and document analysis bolstered internal validity by allowing triangulation of data sources. While it would have been advantageous to attend planning meetings to observe processes first-hand, we feel the interviews provide accurate information about the processes, as evidenced by the high level of detail provided by many interviewees and the relative recency of the planning processes at the time of our interviews. We focused data gathering on the elements relating to variables thought to affect CEM activities (Table 1) and outcome measures (Table 2).

Data analysis included within-case as well as cross-case pattern searching. As described by Miles and Huberman (1994), creating categories for data elements facilitates recognizing patterns of associated variables. Data displays combining independent and dependent variables allow identification of relationships, linking processes to outcomes.

Results

For this analysis, results are presented in two pieces. First, descriptive data are provided to characterize the values of variables of interest across all 7 cases. We describe the set of independent variables, including group process and contextual variables, as well as the set of dependent variables, outcomes. Second, exploration of causal relationships is discussed through a comparison between cases in two categories of outcome levels.

Descriptive Data

Group Process and Contextual Variables

While each task force shared certain characteristics, such as participation in the same grant program, in the same state, at the same level of governance (county), many other characteristics varied across the cases. Each task force was free to establish its own *group process factors*, including member selection and composition, decision making rules, and resources to allocate. In addition, expectations varied about the role of the task force in influencing farmland preservation policy. *Contextual factors* also differed among the task forces, including degree of concern over land use in the community, pre-existing organizations dealing with the issue, and existing zoning laws affecting land use in the county. Values of the group process and contextual variables for each of the seven cases are displayed in Table 4 and described below.

[Insert Table 4 about here]

Task force member selection and composition determine the participants who will be involved in the planning process. The grant did not include requirements regarding how county commissioners were to select task force members. Instead, it stipulated that the resulting task force will “ensure that a cross section of interests have input into this process.” It suggested the consideration of interests such as “Farm Bureau, Farmers’ Union, Grange, environmental organizations, developers, farmers, chamber of commerce, realtors, home builders associations, local government officials, conservation districts, local citizens, non-profit organizations, agricultural business representatives.” However, the requirements did not specify how many of these might constitute a “cross section.” Thus it is left to the analyst to compare across cases, to see how task forces interpreted this language. In every case, representatives of at least five such interests were present, with a range from five (County 7) to nine (County 1). The total number of members on each task force ranged from 9 (County 7) to 47 (County 1). Note the similar trend in these two items; larger task forces are associated with a wider range of interests represented.

In practice, the selection process was similar across the seven cases in that “closed” (appointed rather than publicly elected) methods were used. Typically, government officials invited particular individuals to join the task force. As one task force leader described, “We wanted to include stakeholders in the community, with a balance of rural/agricultural interests on

one side, and development interests on the other.” Similarly, another task force leader said, “We brainstormed a list of who the community leaders are in agricultural issues . . . and sent invitations to them to join.”

The third group process variable is decision making rules. In this analysis, data were gathered about how group decisions were made regarding what to put into the plan as it was being constructed, as well as the final version of the plan. For plan creation decisions, four task forces used consensus, while two used simple majority and one used super-majority (85%). According to the interviewees on the task forces using majority, no vote was close, and on most matters nearly everyone was in agreement. Nevertheless, it was possible for these task forces to adopt something without the 100% agreement required for consensus. Five task forces considered the final version of the plan as a whole, while two did not.⁴ Of these five, three used consensus and two used majority voting in approving the final plan.

The fourth group process variable is resources. Predominant among these is financial resources to carry out the planning process. Each county was eligible to receive up to \$10,000 matching from the state, which combined with its share yields \$20,000. However, some counties did not spend this much, and others allocated funds from additional sources to spend more than \$20,000. For the seven cases with data available, funds ranged from \$8578 to \$20,009.

Group resources include more than money. Labor hours of planning/resource professionals were also expended in developing the plans. In some counties, personnel in organizations such as Soil and Water Conservation Districts devoted time charged to their own organization to task force efforts. Such labor hours, over and above those reflected in the financial expenditures, ranged from 75 to 516 among the cases for which data are available. In addition, an important resource is active participation in group processes, measured here by the level of attendance at task force meetings, which was almost universally high across the cases (except County 3, which had low turnouts).

Finally, the fifth group process variable is member expectations about their role. In announcing the Farmland Preservation Planning program, the Lieutenant Governor’s press release stated that “Planning is an important step for a community to ensure a balance between future growth and the protection of its agricultural industry.” It did not specify how the plans would be linked to policy decisions, if at all, and planning participants had few clues about what to expect of their role. One participant in a March, 1999, statewide farmland preservation conference sparked quite a discussion when he asked, “What will become of the

recommendations from all of these task forces?” A representative from the Office of Farmland Preservation responded that the plans would be collected by the Office and the top priorities would be distilled, to inform the Office’s strategies for encouraging farmland preservation.

In practice, members of county task forces reported a wide range of expectations about the role of their planning efforts. Several indicated rather modest expectations, such as producing a farmland preservation plan that “represented a shared vision” (County 1), informing the members of task forces about land use and population changes (County 4), getting people to think about particular components of land use (County 2), or exploring possible farmland preservation strategies (County 6). Others had somewhat higher expectations, as did one member (County 3) who said, “I wanted this to be a real big deal, like newspaper coverage,” and a way to send a message to the state government about what would work in that county. Similarly, a member of another task force (County 7) expected to produce a document that “wouldn’t just go on someone’s shelf – instead, one that would feed into the county comprehensive plan” and thus actually inform policy plans. A member of the County 5 task force had perhaps the highest expectations among the seven cases: to further the goal of preserving “good, productive agricultural ground for our future farming generations ... while allowing community growth where the ground isn’t agriculturally productive.”

Moving from group process to contextual variables, we examined three items: degree of community concern over farmland preservation and land use issues, pre-existing organizations dealing with land use, and the extent of zoning restrictions in rural areas of the county.

First, community concern is indicated, in part, by rates of farmland loss and population growth in the county. That is, citizens of counties with high levels of farmland loss and population growth are likely to be more concerned about farmland preservation issues. According to the U.S. Department of Agriculture, the total number of acres in farms decreased by 33 % across the state of Ohio, between 1950 and 1997 (Ohio Agricultural Statistics Service 2000). The seven counties included in this analysis range from a loss of 6 % (County 1) to 38 % (County 4) during this time. Meanwhile, population growth rates for the period 1990 to 1998 vary from 0.4 % (County 6) to 38 % (County 4) (Ohio Department of Development no date). The combination of these two rates suggests there may be high levels of concern in County 4, which experienced substantial farmland loss coupled with a high recent population growth rate. This county is on the fringe of a large metropolitan area and has been experiencing rapid development.

⁴ In County 3, the task force expected to see the final version for consideration, but it was drafted by the county commissioners who failed to provide it task force members. In County 5, the task sections of the plan were discussed piecemeal and then compiled, without consideration of the finished draft as a whole.

A member of this county's task force corroborated this concern, indicating that there is considerable concern about losing farmland and green space.

None of the other counties have a combination of high rates of farmland loss and high population growth, though County 2 stands out with the highest rate of farmland loss (40 % decline). A member of that county's task force explained, "People are concerned but they don't want to do anything dramatic about it. It's not a serious issue here yet." It is important to note that in County 1, which has neither extreme farmland loss nor high population growth rates, land use issues are currently in high profile due to a substantial federal land purchase proposal that many local residents oppose.

The second contextual variable is the history of any pre-existing organizations dealing with farmland and land use issues in the county. Such organizations were described for four of the seven counties. In County 1, one task force member said, "There is great agency cooperation in this county, with a track record of working together in the past. That helped us in working together on the task force." In Counties 4 and 6, the local Farm Bureaus had been active in working on farmland preservation issues. County 4 also had a history of the League of Women Voters sponsoring meetings on farmland preservation, along with a planning task force that had been created prior to the grant in response to rumors about future state funding for farmland preservation. In County 7, several years prior there had been a green space committee pursuing land preservation, which was seen at the time as too extreme by most agriculture proponents. A member of this defunct green space committee was a member of the county's farmland preservation task force.

The third contextual variable is the existence of zoning in rural portions of the county. In Ohio, adoption (and repeal) of rural zoning is on a per-township⁵ basis, requiring approval by popular vote. Across the state, approximately 54 % of the townships have zoning (OSU Extension 1998). In the seven cases, the percent of townships that are zoned in each county varies from 72 % to 100 %.

Outcome Variables

Given differences in the independent variables, group processes and contextual, it is useful to examine the dependent variables, outcomes. This analysis focuses on four: whether the plan meets the minimum grant requirement for plan contents, how many of the suggested optional plan

⁵ In Ohio, a township is a political subdivision of the state. There are typically between 10 and 20 townships within a county.

content items are included, which policy types are recommended, and what are the predicted impacts of task force efforts. Outcome variable values for each of the seven cases are displayed in Table 5.

[Insert Table 5 about here]

First, minimum grant requirements stipulated that plans must include soil type identification via classification and mapping. This requirement was met by four of the seven counties.

Second, the grant guidelines suggested 16 sixteen optional components for task forces to consider addressing in their completed plans. The number of optional components actually included across the seven cases ranged from 1 (County 3) to 9 (County 4).⁶ The page length (single space equivalent) for the entire plan ranged from 12 to 45 across the seven cases, and longer plans seem to be weakly associated with a greater number of optional components.

Third, an important outcome measure is the types of policies recommended. Each plan contains a number (ranging from 6 to 37) of specific policy recommendations related to land use and farmland preservation. These recommendations can be grouped into three broad types: regulations (coercive government authority prohibiting or limiting specified actions, e.g. requiring additional permits for land owners who build houses in certain places), voluntary programs (incentives available to those choosing to participate, such as the sale of conservation easements by willing land owners), and education/information dissemination, along with an “other” type (including calls for planning, lobbying, research, and creating new governmental structures). Across the plans, regulatory policies are the most popular (33), followed by voluntary (22) and then education/information dissemination (19) policies. The “other” type accounts for 20 policy recommendations. Another way of comparing policy recommendations is to identify the most popular type in a given case; by this measure, regulatory policies were the most popular type in four cases, voluntary policies in two cases, and education/information dissemination in one case.

The fourth and final outcome measure is the predicted impact that the planning efforts will have on land use policy. Interviewees were asked to predict how their work would impact policy. The two plans cited as having a direct, tangible impact are those in counties where the county comprehensive plan was in the process of being updated; task force members said their

⁶ Each item that matched a given grant guideline item fully was scored as 1, while each item that matched a given grant guideline item partially was scored as 0.5

work is contributing to the comprehensive plan and thus to land use policy decisions. For example, a County 1 member said,

The [task force] had an impact as a sounding board to some new land use zoning requirements in the comprehensive plan, like saying 'no' to major subdivisions outside cities, and having houses become "conditional uses" on farmland instead of zoned residential. It was a sounding board to support these changes; if we hadn't said 'yes,' perhaps they would have been different.

Less directly, one task force member was hopeful that the educational and informational gains to the people involved in planning might translate into future changes in land use policy:

What we have for the first time is a voice for farmland preservation. I think the dialogue is going to continue at the state level. The individual counties cannot do what the state will not do, but if there are a dozen people in each of 61 counties educated about this stuff, then something will happen.

In contrast, across most of the counties, task force members were not optimistic about the likelihood that their plans would lead to policy changes. Instead, policy changes were described as contingent on factors beyond the merits of a particular plan. For example, one member cited the lack of dedicated staff member dedicated to farmland preservation:

My honest opinion on what will be done with the plan? Not a thing will be done. The county commission is an obstacle. I can't say they don't care. They do care, but they have enough other stuff on their plate. They need a separate person just to work on farmland preservation. They need to give it to him and tell him to just run with it. This issue is just over the heads of the three people in charge at the county commission. They need someone who knows all the laws and all the ins and outs.

Similarly, in another county, the plans lack of predicted impact was attributed to inadequate funding for a voluntary program: “The plan won't affect the community until we get money to buy [conservation] easements.”⁷

Finally, one member indicated that county planners would be apt to follow plan recommendations only if they are closely aligned with their own preferences:

I hope that the planning and zoning people are using the plan as a reference document. I hope [the planning director] feels that he had enough input into the thing that he will use it when it comes to making decisions. But he wanted some things, like 40-acre zoning, that didn't make it into the plan.

What stands out across most of these descriptions about impact is that, no matter how well an advisory plan has been prepared, it remains just that – a plan. For policy to change, participants recognize a number of obstacles that must be overcome.

Preliminary Causal Factors

While describing the variety of group processes, contexts, and outcomes is instructive, an important question remains: how do differences in characteristics affect group outcomes? Given the limited sample size, and large number of variables, it is difficult to isolate the influence of particular factors. Nevertheless, analysis can suggest patterns for further investigation. Here we compare across the 7 cases to look for patterns suggesting which variables might be influential in determining outcomes.

To compare outcomes across plans, as a preliminary indicator, we calculate a summative score based on three items: meeting grant requirements for a soil map, number of optional components included, and predicted plan impact. Each item is scored 0 to 2, with 0 representing low, 1 medium, and 2 high. County 1 has the highest score, 6, followed by County 4 (score 5) and County 6 (score 5), then County 2 (score 3), then County 5 (score 2), then County 7 (score 1), then County 3 (score 0). For causal analysis, we group the counties into categories of “high,” “medium,” and “low,” and contrast the “high” with the “low” cases (see Table 6).

⁷ A statewide referendum on the ballot November 7, if passed, would provide a \$200 million bond issue to purchase green space, provide more hiking and biking trails, and preserve farmland.

[Insert Table 6 about here]

For pattern searching analysis, the fundamental question is, What do the “high” outcome cases have in common with each other that is different from the “low” outcome cases? In other words, what group process or context variables are Counties 1, 4, and 6 similar on that are different from those variables in Counties 3 and 7? For most of the independent variables, analysis of the seven cases does not reveal associations with outcomes. But three independent variables do seem to be substantially associated.

First, most group process variables do not seem to be associated with outcome trends. Cross section of interests represented in the “high” category are 9, 8, and 7, versus “low” category values of 8 and 5, which are not distinctly different. Also, the overall group size values for the “high” category are 47, 16, and 13, compared with the “low” category values of 28 and 9; again, no distinct trend is evident. Member selection process was “closed” in each case. Decision rules do not differ predictably either, with both categories having a mix of consensus and majority. Financial resources data are not available for all of the cases at this time. Finally, active participation in meetings does not vary by outcome; in fact, there is little variance on this variable (Case 3 is the only one with low turnout).

The only group process variable that appears to track the outcome values is member role expectations. Counties in the “high” category are described as having rather modest expectations about how their work might affect land use and farmland preservation. In contrast, counties in the “low” category tend to have more ambitious expectations.

Second, two contextual variables do seem to be linked to outcomes. The perceived level of community concern about farmland preservation and land use is described as substantial in two of the cases categorized as “high” (Counties 1 and 4), but only low to moderate in the cases categorized as “low.” (Interestingly, no such link is evident in the two more “objective” indicators of community concern, population growth and farmland loss over time). An even closer association is evident between outcomes and pre-existing organizations. All three of the “high” cases exhibit recent pre-existing networks or organizations active in farmland preservation and land use issues, while neither of the two “low” cases do.

The final contextual variable, extent of rural zoning, does not track with the outcome variable. It is worth noting that the majority of townships are zoned in every case. However, our broader study of 15 cases will include several counties with little or no rural zoning. Perhaps patterns will emerge in considering the full range of possible zoning levels.

Overall, then, preliminary causal analysis suggests three independent variables as substantially associated with what kind of plan the advisory groups create, and what will be the perceived impact of their efforts. More modest (some might say “realistic”) expectations, higher levels of community concern about the issue at hand, and existing networks of people focusing on the issue are linked to more “successful” collaborative planning, if success is measured in terms of how well the plan meets grant requirements, provides a full range of informational components, and is perceived to have substantial policy impact.

Conclusion

Collaborative environmental management (CEM) is increasingly called for by both practitioners and academics. An important CEM process is resource planning, yet planning processes and outcomes are not well understood. This paper describes preliminary work focusing on how group processes and contextual variables differ across CEM groups, and how such variability yields different outcomes.

Results from cross-case analysis of seven task forces in Ohio indicate that groups created independently from each other choose different paths to collaborative planning. For example, group size ranged from 9 to 47 members. Groups used a variety of decision rules, including majority, super-majority, and consensus. Financial resources dedicated to task force work varied from well below the matching grant \$20,000 amount to well above. Finally, without clear direction about the role these task forces would have in actually influencing land use policy, members’ expectations varied widely.

Some characteristics were surprisingly similar among the task forces. For example, they each used “closed” processes for member selection, and meeting participation was quite high in nearly every case. Also, despite high variability in group size, the number of interests represented did not vary much (between 5 and 9 of the 14 listed in the grant guidelines).

In addition to group process characteristics, this research describes several contextual variables. For example, changes in farmland quantity and population over time varied across the counties, as did perceived level of community concern about land use. In some counties, networks and organizations had recently been focusing on land use issues, while in others the task forces were starting without such a foundation. Finally, the level of existing rural zoning varied, between 72 and 100 % of townships in a given county, though in no case was it less than a majority of the townships.

The results of planning process can be examined in terms of plan contents as well as predicted policy impacts. Across the seven cases, there was a wide range of plan comprehensiveness (ranging from 12 to 45 pages, from 1 to 9 indicated components, and from 6 to 37 specific policy recommendations). A variety of policy recommendations were put forth, largely of the regulatory type, but also a number of voluntary, educational, and other types. Predicted plan impacts varied from substantial (through incorporation into county comprehensive plans or indirectly through task force member education) to none.

Comparing across cases allows investigation into causal factors affecting planning outcomes. Here, pattern analysis suggests three independent variables that are important determinants of outcomes. With outcomes defined as plan contents (comprehensiveness and meeting the minimum grant requirement) as well as predicted impact, it seems that modest expectations combined with prior organizations and high community concern are associated with more successful collaborative planning.

Future Research

The results presented here represent preliminary analysis from a subset of cases. Continued work on this project will involve cross-case analysis of all 15 cases, to more fully understand collaborative decision making processes and recommendations. Patterns identified from the seven cases will be checked against additional data. Moreover, additional interviews in each case will be used to corroborate the interview data described here.

Beyond this study, further research is needed to elucidate the connection between plan recommendations and subsequent policy choices by those in authority. Ideally, one could argue, the sustained efforts of collaborative groups in determining recommendations would feed directly into land use policy. Of course, many factors affect bureaucrats' and elected officials' policy making, so recommendations from a collaborative group are not expected to be the sole policy determinant.

The impact of Ohio farmland planning efforts on land use policy remains to be seen -- and empirically examined. A future study could examine this impact, keeping in mind that it may be indirect as well as direct. An example of a direct impact is a citizen advisory committee in Illinois, which developed legislative proposals on soil erosion that were subsequently passed by the state Legislature (Nelson 1990). In contrast, it has been noted that the biggest successes from collaborative processes can include increased information base among participants, stronger organizational capacity among stakeholder groups, and group members representing other

organizations who returned to those organizations with a different perspective on their work (Howell et al. 1987, Smith-Korfmacher 1998). While indirect, these successes are nevertheless important contributions to sustainable natural resources and communities. In fact, given the reality of multiple influences on policy making, the best outcome measure may be a comparison of the quantity and quality of citizen land use efforts before and after collaboration. As one task force member suggested, despite the involvement of only a small fraction of the community in collaboration, “if there are a dozen people in each of 61 counties [across the state] educated about this stuff, then something will happen.”

Careful attention to how collaborative groups make decisions about policy recommendations, what those recommendations are, and their policy impacts is crucial before we rush to applaud or criticize collaborative environmental management. Important questions remain regarding whether these are worthwhile and legitimate endeavors, or a waste of citizen energy and improper basis for policy making. It is likely that closer examination will reveal some of each. It is our hope that empirical analysis can inform decision makers about the situations in which collaborative efforts are more or less appropriate for natural resource management.

REFERENCES

- Arnstein, Sherry R. 1969. "A Ladder of Citizen Participation." *American Institute of Planners Journal* 35:216-224.
- Balnoschan, Carla. 1998. "1997 Market Value per Acre – Land on CAUV Program" (map). Ohio Department of Taxation. February 4.
- Blomquist, William, and Edella Schlager. 1999. "Political Pitfalls of Integrated Watershed Management." Prepared for delivery at the Western Political Science Association annual meeting. March 24-26, San Jose, CA.
- Buckle, Leonard, and Suzanne Thomas-Buckle. 1986. "Placing Environmental Mediation in Context: Lessons from 'Failed' Mediations." *Environmental Impact Assessment Review* 6(1):55-70.
- Coglianesi, Cary. 1999. "The Limits of Consensus: The Environmental Protection System in Transition: Toward a More Desirable Future." *Environment* 41(3):1-6.
- Cortner, Hanna J., Mary Wallace, Sabrina Burke, and Margaret Moote. 1998. "Institutions Matter: The Need to Address Institutional Challenges of Ecosystem Management." *Landscape and Urban Planning* 40:159-166.
- Creighton, J. *Guidelines for Establishing Citizen's Advisory Groups*. Department of Energy: Washington, DC.
- Duane, Timothy P. 1997. "Community Participation in Ecosystem Management." *Ecology Law Quarterly* 24(4):771-797.
- Hill MacKenzie, Susan. 1996. *Integrated Resource Planning and Management*. Washington, DC: Island Press.
- Howell, R., M. Olsen, and D. Olsen. 1987. *Designing a Citizen Involvement Program: A Guidebook for Involving Citizens in the Resolution of Environmental Issues*. Pullman, WA: Western Rural Development Center.
- Imperial, Mark. 1999. "Institutional Analysis and Ecosystem-Based Management: The Institutional Analysis and Development Framework." *Environmental Management* 24(4):449-465.
- Imperial, Mark, and Timothy Hennessey. 2000. "Improving Watershed Governance: Collaboration, Public Value, and Accountability." Paper presented at the American Political Science Association annual meeting. Washington, DC, August 31 - Sept 3.
- John, DeWitt. 1994. *Civic Environmentalism: Alternatives to Regulation in States and Communities*. Washington, D.C.: CQ Press.
- Johnson, B.R. & Campbell, R. 1999. Ecology and Participation in Landscape-based Planning Within the Pacific Northwest. *Policy Studies Journal*. 27(3): 502-529.
- Kenney, Douglas S. 1999. "Are Community-based Watershed Groups Really Effective? Confronting the Thorny Issue of Measuring Success." *Chronicle of Community* 3 (2):33-37.
- Koontz, Tomas M., and Elizabeth Moore. 2000. "Collaborative Environmental Management: Fitting Stakeholders to Objectives." International Symposium on Society and Natural Resource Management, Bellingham, Washington, June 2000.
- Libby, Larry, and Greg Jeffers. 1999. "Current Agricultural Use Value Assessment in Ohio." Ohio State University Fact Sheet CDFS-1267-99. Land Use Team. <http://ohioline.ag.ohio-state.edu/cd-fact/1267.html> (visited 9/8/00).
- Miles, Matthew and A. Michael Huberman. 1994. *Qualitative Data Analysis*. Thousand Oaks, CA: Sage Publications.
- Moseley, Cassandra, and Brett KenCairn. 2000. "Institutional Problem Solving or Social Change: The Applegate and Grand Canyon Forest Partnerships." Paper presented at Steps Toward Stewardship: Ponderosa Pine Ecosystem Restoration and Conservation, Northern Arizona University, Flagstaff, April 24-26.

- Nelson, K. 1990. "Common Ground Consensus Project." In J. Crowfoot and J. Wondolleck (eds.). *Environmental Disputes: Community Involvement in Conflict Resolution*. Washington, DC: Island Press.
- Ohio Agricultural Statistics Service. 2000. "U.S. Department of Agriculture 1950, 1957 Census of Agriculture." Columbus. March 14.
- Ohio Department of Development. no date. "Ohio County Profiles." Office of Strategic Research. Columbus.
- Ostrom Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.
- OSU Extension (The Ohio State University Extension). No date. "Rural Zoning Purpose and Definition." Ohio State University Fact Sheet CDFS-300. Land Use Team. <http://ohioline.ag.ohio-state.edu/cd-fact/0300.html> (visited 9/8/00).
- OSU Extension (The Ohio State University Extension). 1998. "Ohio Rural Zoning" (map). The Ohio State University Extension. October.
- Pierce, J. and H. Doerkson. 1976. "Citizen Advisory Committees: the Impact of Recruitment on Representation and Responsiveness." In J. Pierce and H. Doerksen (eds.) *Water Politics and Public Involvement*. Science Publishers: Ann Arbor.
- Praxis, 1988. *Public Involvement*. Praxis: Calgary, Alberta.
- Rosenbaum, Walter. 1978. "Public Involvement as Reform and Ritual: The Development of Federal Participation Programs." In S. Langton (ed.), *Citizen Participation in America*. Lexington: Lexington Books.
- Ross and Associates. 1991. *Lessons Learned: The Pacific Northwest Hazardous Waste Council's Approach to Regional Coordination and Policy Development*.
- Sewell, W. and J.T. Coppock (eds.). 1977. *Public Participation in Planning*. New York: John Wiley & Sons.
- Sharp, Jeff S. and Valerie Winland. 2000. "Rural and Nonmetropolitan Population Change in Ohio, 1950 to 1998." Ohio Rural-Urban Interface Series: RU-1. The Data Center, Ohio State University, Department of Human and Community Resource Development. www.ag.ohio-state.edu/~dataunit/ru-1/ru1_8.html (visited 9/7/00).
- Smith-Korfmacher, Katrina. 1998. "Invisible Successes, Visible Failures: Paradoxes of Ecosystem Management in the Albermarle-Pamlico Estuarine Study." *Coastal Zone Management*.
- Smith-Korfmacher, Katrina. forthcoming. "What's the point of Partnering? A Case Study of Ecosystem Management in the Darby Creek Watershed." *American Behavioral Scientist*.
- Stelman, Toddi. 1999. "Community Based Environmental Management: Agency- and Community- Driven Efforts." Paper presented at the Annual Research Conference of the Association for Public Policy Analysis and Management. Washington, DC: November 4-6.
- Yaffee, S.L. et al. 1996. *Ecosystem Management in the United States: An Assessment of Current Experience*. Washington, D.C.: Island Press.
- Yin, R. K. 1989. *Case Study Research: Design and Methods (2nd edition)*. Newbury Park, CA: Sage.

Table 1: Factors Likely to Affect CEM Policy Recommendations

Group Process Factors

1. Group composition
 - a. Who is represented
 - b. How selection occurred
2. Decision making rules
3. Resources
4. Members' expectations about their role

Contextual Factors

1. Degree of concern over the issue in the community
2. Pre-existing organizations dealing with the issue
3. Set of existing rules / laws / regulations

Table 2: Outcome Variables

1. Degree to which plan met minimum grant requirement to identify soil types in the county via classification system and mapping
2. Degree to which plan contents included suggested components
3. Types of policy recommendations
4. Predicted impact of plan on policy

Table 3: Urbanization and Location of the 7 Cases

<i>County</i>	<i>Level of Urbanization^a</i>	<i>Geographic Location</i>
1	large metro fringe	C
2	small metro core	NE
3	small metro fringe	NW
4	large metro fringe	C
5	non-metro	NW
6	non-metro	NW
7	small metro fringe	SW

^a in 1998; source: Sharp and Vinland (2000).

Table 4: Group Process and Context Variables

	<i>County 1</i>	<i>County 2</i>	<i>County 3</i>	<i>County 4</i>	<i>County 5</i>	<i>County 6</i>	<i>County 7</i>
Cross section of interests	9	8	8	8	8	7	5
No. of members	47	30	28	16	13	13	9
Selection process	closed	closed	closed	closed	closed	closed	closed
Decision rules, plan creation	super-majority (85%)	consensus	majority	majority	consensus	consensus	consensus
Decision rules, final plan	super-majority (85%)	majority	none; didn't consider final plan	consensus	none; didn't consider final plan	consensus	consensus
Resources, funds	\$20,009 + 516 labor hours	\$18,000 + 75 labor hours	missing data	missing data	\$8578 + 415.5 labor hours	Over \$10,000 + "a lot" of labor hrs	missing data
Resources, active participants	high turnout (typically 30 of 47)	"most people participated"	low turnout (typically 4 of 28)	"generally good"	"good"	"good"	high turnout (typically 8 of 9)
Member role expectations	"produce a FPP that representd a shared vision"	"look at farmland preservatn alone without it being part of some other process; Get people to think about redevelop brown-fields"	"send our ideas to Columbus about what we thought would work for our county; I wanted this to be a real big deal, like newspaper coverage"	"to inform a dozen people or so [in the county] about land-use, pop. changes in the county, as well as farmland preservatn programs"	"preserve good, productive ag. ground for our future farming generatns ... while allowing commnuty growth where the ground isn't ag. productive"	"FPP to be 'illuminatn tool' for possi-bilities on how to approach farmland preservatn; have everyone participate ; put something useable down; keep improving on the process."	"come up with some direction for the county; have a document that wouldn't just go on someone's shelf – feed into the county comp plan"
Change in farmland acres (1950 to 1997)	-6%	-40%	-12%	-38%	-20%	-17%	-18%

Change in county populatn (1990 to 1998)	12%	1%	6%	38%	2%	0.4%	5%
Perceived level of concern (from interviews)	High for land use issues	Some concern about losing farmland	Not much concern about losing farmland	Considerable concern about losing farmland and green space	Some concern about losing orchard lands	Not much concern about losing farmland	Moderate
Pre-existing organizations	history of good agency cooperation on such issues	none	none	League of Women Voters & Farm Bureau were active; our task force was created before the grant	none	Farm Bureau was active	Nothing recently, though a green space group focused on preservation 8 yrs ago (too extreme for farmers)
Portion of townships with rural zoning	93	72	100	100	75	75	100

Table 5: Outcome Variables

	County 1	County 2	County 3	County 4	County 5	County 6	County 7
Required soil data	Yes	Yes	No	Yes	No	Yes	No
No. of Optional items	7.5	5	1	9	7	5	5.5
Page length	45	25	12	39	31	37	40
No. of recommendations							
-overall	<u>8</u>	<u>10</u>	<u>6</u>	<u>14</u>	<u>6</u>	<u>37</u>	<u>13</u>
-reg.	5	6	4	5	1	6	6
-voluntry	1	1	1	6	4	7	2
-educate	0	1	0	1	1	15	1
-other	2	2	1	2	0	9	4
Predicted impact of plan	important for revising county comp plan	none yet	unlikely without adding a dedicated farmland preserv. person	unlikely without adding a dedicated farmland preserv. person, but perhaps indirectly	unlikely without money to buy conserv. easemnts	important for revising county comp plan; maybe impact when develop pressure increases	depends on if it's in line with what the county planners want

Table 6: Comparing High to Low Performers

<i>Variable</i>	<i>High Performers (C1, C4, C6)</i>	<i>Low Performers (C3, C7)</i>
Interests represented	9, 8, 7	8, 5
Task force size	47, 16, 13	28, 9
Selection process	closed, closed, closed	closed, closed
Decision rules	super-majority, majority, consensus	majority, consensus
Resources, financial	missing data	missing data
Resources, active meeting participation	high, high, high	low, high
Expectations	modest	ambitious
Perceived level of concern	high, high, low	low, moderate
Recent prior organizations	yes, yes, yes	no, no
Existing zoning	high	high

Note: performance level is based on equal weighting of three criteria:

1. fulfilling the grant requirements for a soil map
2. number of optional components included
3. predicted plan impact