Collaborative Planning on State Trust Lands:

A University of Michigan Study

for the State Trust Lands Partnership Project
of the Sonoran Institute and the Lincoln Institute of Land Policy

About the Study:

Collaborative planning on state trust lands was identified for further research at the 2004 State Trust Lands Research and Policy Analysis Roundtable convened by the State Trust Lands partnership project of the Sonoran Institute and the Lincoln Institute of Land Policy. In March 2005, under the guidance of Dr. Steven L. Yaffee, a team of eight graduate students from the University of Michigan School of Natural Resources and Environment began conducting a region-wide survey and analysis of eight case studies in which state trust land agencies collaborated with stakeholders in trust land planning and management. The research team conducted 117 on-site and telephone interviews, each lasting roughly one to three hours. Through these interviews, the team answered a set of research questions concerning the benefits, challenges, costs and outcomes of collaborative planning on state trust lands. The goals of this research were to:

- Capture on-the-ground experiences of collaborative planning on state trust lands
- Analyze the advantages and disadvantages of this trust land management approach
- Distill a set of best management practices
- Provide broader recommendations for overcoming barriers to collaborative planning on state trust lands

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HOW DOES A COLLABORATIVE PLANNING PROCESS INCORPORATE SCIENTIFIC INFORMATION?

Land management decision making often requires collecting, analyzing, interpreting, and communicating complex scientific information about environmental quality, land use and wildlife populations and habitats. For seven of the eight cases of collaborative processes in this report, scientific information acted both as a major catalyst to the process and, in its absence, a major hindrance. This highlights the important role of scientific and technical information in collaborative processes and its importance to decision making.

Several points regarding the role of scientific and technical information in the collaborative processes examined in this report stand out (Table 20-1):

- The role of scientific and technical information in the process
- Ways of obtaining scientific and technical information
- The impact of scientific and technical information on the structure and function of the process
- The impact of process dynamics on the collection and use of scientific and technical information

THE ROLE OF SCIENCE IN THE PROCESS

Processes differed in the roles they assigned to scientific and technical information. For some cases, there was a clear mandate for science to be incorporated into the process, and indeed, the process was structured in such a way to maximize scientific input. In other processes, science and technical information were not explicit components at the outset, though they often became integral to the process later on.

In some processes, participants recognize science as a major tool to inform policy and decision making. This was the case in the Elliott State Forest Planning Process. Here, with the approval of the Department of State Lands, the Oregon Department of Forestry created a Steering Committee to direct the scientific and policy inquiry necessary for the Habitat Conservation Plan (HCP) process. The HCP would then ultimately inform the overarching Forest Management Plan (FMP). Working in parallel with the Steering Committee was the Core Planning Team, a "technical planning group" that was responsible for assembling the science supporting both plans.[1] Within the group, there was also formal recognition of the necessity of science. One of the "Guiding Principles" for the group was: "The plan will consider the overall biological diversity of state forest lands, including the variety of life and accompanying ecological processes."[2]

Table 20-1: Sources and Uses of Science

CASE	Source of Science	Use of Science
Castle Valley Planning Process	Group fact-finding- hydrology and GIS	Created maps to understand natural resources and features and explore development alternatives
Houghton Area Master Plan Process	Separate Committee- Technical Advisory Team (TAT)	Informed the city of Tucson on technical information regarding land development; separate from community collaborative group
Elliott State Forest Planning Process	Subcommittee- Core Planning Team	Was responsible for assembling science supporting the Forest Management Plan (FMP) and the Habitat Conservation Plan (HCP)
Emerald Mountain Planning Process	Outside expertise- Bureau of Land Management (BLM) Internal expertise- Colorado Division of Wildlife	Conducted Environmental Assessment (EA) to select a management plan for the parcel as part of a land exchange between the BLM and the Colorado State Land Board
Mesa del Sol Planning Process	NA	NA
Lake Whatcom Landscape Planning Process	Internal expertise- Department of Natural Resources (DNR) Outside expertise- Department of Health; Department of Ecology	Helped participants understand impacts of DNR forestry practices to inform the Lake Whatcom Management Plan
Southeast New Mexico Working Group	Internal expertise- GIS mapping Outside expertise- prairie chicken and sand dune lizard ecology	Helped participants understand the location of prairie chicken and sand dune lizard habitat in relation to oil and gas leases and ranches
Whitefish Neighborhood Planning Process	Task forces- wildlife habitat, floodplains and fire history Outside expertise- GIS	Helped participants understand the development and conservation potentials of land

In some cases, there was not a defined role for scientific and technical information until participants recognized that such information was necessary. For example, participants in the Southeast New Mexico Working Group did not realize the urgent need for mapping, habitat data and leasing information until they began to struggle to make decisions without this information. Once the group started discussing what lands would be off-limits to oil and gas leasing, they realized how integral adequate maps of currently leased areas and prairie chicken habitat would be.

For some groups, opposing expectations for scientific and technical information caused problems in the process. In the Whitefish Neighborhood Planning Process, the Department of Natural Resources and Conservation (DNRC) resisted paying to acquire new scientific information regarding wildlife habitat, floodplains and fire history because the agency felt such detailed information was not necessary for a more general, "landscape level" neighborhood plan. Meanwhile, the group envisioned a much more specific plan and thus considered the information integral. Ultimately, the Advisory Committee collected information on its own and the DNRC's lack of cooperation fueled the community's mistrust of the agency.

SOURCES OF SCIENCE AND TECHNICAL INFORMATION

Ways that scientific and technical information were collected and assembled greatly influenced processes and decisions. In some cases, the group generated the necessary science through group fact finding and internal expertise, which promoted positive relationships and a sense of ownership for the information. In other cases, information was sought from outside experts in hope of finding unbiased information which drew on expertise the group did not have. These different methods of collecting information influenced the direction of the processes.

GROUP-GENERATED SCIENTIFIC INFORMATION

In several cases, participants organized needed information from within the collaborative group. Joint fact-finding, in which a collaborative group works together to collect and analyze data, can generate specialized information while simultaneously building understanding, trust and support. In the Castle Valley Planning Process, for example, joint fact-finding provided the necessary mapping information on environmental constraints and development potential in the area and facilitated improved group dynamics. Facilitator Marty Zeller recalled that this joint fact-finding effort helped the group overcome emotional barriers to progress and recognize what would be practical options to explore in the collaborative process. He noted:

> The biggest challenge was just getting people to sit down and interact and trust each other so they could discuss some options … I think that having people sitting down and interacting in an organized fashion, having everyone sitting at a table looking at maps together with the same information, helped build a level of trust about what was really going on with the land and what the options really were. That was probably the first key thing. The inventory and analysis of the site conditions helped both parties realize what you could do and what was probably not desirable to do.[3]

Thus, group fact-finding resulted in a shared understanding of the area and a greater understanding of possible policy decisions. Participants in the Castle Valley Planning Process consider the group fact-finding exercise a technical success as well as a factor that facilitated future productive discussion on land management.

In other cases, certain members of the collaborative group had expertise to produce necessary information. For example, in the Southeast New Mexico Working Group, the New Mexico State Land Office (SLO) produced mapping information on the location of oil and gas leases as well as prairie chicken habitat and breeding sites. Prior to this effort, the group struggled to make decisions on what lands to keep off limits to oil and gas without maps – a frustrating and fruitless effort. By coming up with the necessary data and resulting maps, the SLO was seen as a leader in the Working Group process.

Where expertise or information was unavailable, groups sometimes established task forces to gather necessary information. For the Advisory Committee in the Whitefish Neighborhood Planning Process, the group formed task forces to research wildlife habitat, floodplains and fire history after the Department of Natural Resources and Conservation resisted funding the research.

In addition to these methods for obtaining science from within the group, some collaborative processes developed formal means for collecting scientific and technical information. This type of data gathering was prominent in the Elliott State Forest Planning Process and the Lake Whatcom Landscape Planning Process in which both used state and federally structured methods for data collection and analysis. For the Elliott group, a formal means to collect and analyze data was in the form of the U.S. Fish and Wildlife Service's Habitat Conservation Plan (HCP) process in which the group required science to inform the conservation of the spotted owl and marbled murrelet. In the Lake Whatcom Landscape Planning Process, under the State Environmental Protection Act, data collection and analysis was directed by an Environmental Impact Statement.

OUTSIDE EXPERTISE

Collaborative processes often brought in outside expertise. Outside experts contribute to the process in a number of ways, including bringing in knowledge unavailable to the group, increasing legitimacy of the information at hand and adding credibility to the process. Wondolleck and Yaffee note that information from outside experts is less likely to be perceived as biased.[4]

Some groups seek third-party expertise to contribute to current group knowledge. For example, in the Whitefish Neighborhood Planning Process, the Advisory Committee sought third-party expertise to supplement information collected by its task forces. The Committee independently sought help from a Whitefish resident for geographic information system data and mapping. As a result, the group was able to gain a better understanding of the 13,000-acre Whitefish study area than they could have achieved alone.

Groups sometimes seek external review of group research to add legitimacy to such information in the group. In the Lake Whatcom Landscape Planning Process, in addition to the Environmental Impact Statement that was conducted "in house" at the Department of Natural Resources (DNR), Commissioner Doug Sutherland also solicited formal opinions from the heads of the Departments of Health and Ecology about the degree to which the DNR's forestry practices contributed to pollution in Lake Whatcom. By doing so, Sutherland broadened the scientific input that would contribute to future recommendations for the Lake Whatcom Management Plan outside of his own agency. In addition, the external conclusions that forestry practices were minimal compared to residential impacts helped reign in efforts by the Committee to further restrict logging activities.

In addition to increasing legitimacy within the group, outside expertise can increase legitimacy of information for those outside the process. For example, in the Castle Valley Planning Process, third party information helped increase legitimacy with the community. The planning group held two open houses with the community during which time Conservation Partners, Inc., a third party organization, presented a series of maps and overlay data illustrating the various land use issues in the community. Conservation Partners also presented the group's preliminary development options based on available hydrology and land use data and sought community input and reactions to the recommendations.[5]

Given the importance of the decisions made at the table, process participants sometimes felt that information from outside experts would decrease the risk of biased information and thus result in more objective information on which to base decision making. To ensure the legitimacy of information brought to the table, groups sometimes created criteria by which information would be acceptable to influence discussion. For example, in the Southeast New Mexico Working Group, participants agreed that only peer-reviewed science would provide an acceptable basis for policy decisions. This criterion was a reaction to the large amounts of anecdotal evidence regarding prairie chicken biology that many felt was infused with emotion and personal interests. Instead, the group invited prairie chicken biologists to inform the group on current research.

A lack of criteria for acceptable information can lead to problems in a collaborative process. For example, during the Lake Whatcom Landscape Planning Process, disagreements over expert review resulted in delays and mistrust between public members of the Interjurisdictional Committee and the Department of Natural Resources (DNR). While the Committee agreed to have the DNR conduct and pay for the Environmental Impact Statement (EIS), the group wanted to have a say over who would conduct peer review of the EIS in order for the scientific assessment documents to be rigorous and legitimate. While the outside peer review did not occur, outside technical review would have helped mitigate the potential for bias in the EIS, which relied heavily on DNR scientific assessments. Wondolleck and Yaffee note that outside technical reviews have become an increasing practice in collaborative processes that helps check the technical validity of science on which decisions are made.[6]

THE IMPACT OF SCIENCE ON THE PROCESS

Scientific and technical information can influence a collaborative process in several ways. As seen in the cases in this report, science can inform decisions, but it also can drain resources and delay the process due to uncertainty or the proprietary nature of some information. Information can also be used strategically, allowing some group members to take advantage of scientific uncertainty of information to stall the process.

DECISION MAKING

Most frequently, processes used science as a tool for decision making. Wondolleck and Yaffee note that science can help groups by bounding the zone of possible decisions available.[7] Science also allows for groups to have a “fair playing field” outside of values and interests on which fair choices could be made.[8] Understanding the realm of realistic available possibilities to the group as well as providing a fair principle on which to judge these possibilities can facilitate group decisions and agreement.

Groups often use scientific and technical information to illustrate the outcomes of different land management strategies. In the Elliott State Forest Planning Process, participants saw modeling as a particularly helpful tool in the planning process. Through modeling, the Steering Committee saw the results of multiple management regime scenarios to help them make decisions on the preferred management strategy for the Elliott Forest. Assistant Director for Policy and Planning at the Department of State Lands John Lilly noted, "Once you can present to a policy maker a chart that on one page they can see what the harvest levels would be under various management regimes, then you have a very powerful tool to help them make informed decisions."[9]

Technical information and mapping can also help create a shared understanding of the issues facing the group. For the Southeast New Mexico Working Group, mapping and details of prairie chicken biology were helpful for the group to gain a shared understanding of lands that could be potentially off-limits to oil and gas leasing. Previous to the maps, the group did not understand those areas could be under consideration and those that were off the table. Given this shared understanding, the group could then move forward with more specific land use policies.

Some of the collaborative processes in this report suffered significant delays while awaiting the development of needed science and technical information before moving forward. For example, in the Elliott State Forest Planning Process, the time it took to aggregate the sheer volume of information for land surveys and watershed analysis slowed the progress of the Steering Committee, adding several years before the group could move forward.

Since some collaborative planning processes work in conjunction with other processes, delay in these concurrent processes can contribute to the collaborative process delay as well. This was the case in the Emerald Mountain Planning Process that currently awaits approval of a Bureau of Land Management (BLM) land exchange. The land exchange, in return, continues to await the results of appraisals of BLM and Emerald Mountain land as well as an Environmental Assessment (EA) before the agencies may move forward with the land exchange process. The Emerald Mountain Partnership developed a management plan for the Emerald Mountain parcel and submitted it to the BLM as one of four alternatives under consideration in the EA.

For some processes, confusion can arise and delay the process when it is unclear how information gathered outside of the collaborative process will affect data collection directed through the collaborative process. In the Lake Whatcom Landscape Planning Process, there was uncertainty over how a scientific process required under the Clean Water Act would affect the collaborative process already underway for Department of Natural Resources (DNR) state forest lands in the watershed. When the Committee and DNR learned that the Department of Ecology would be conducting a Total Maximum Daily Load study for the lake, there were questions about whether the Committee should wait until the study was completed before completing its plan. This uncertainty was one of the factors that resulted in the DNR missing its June 2001 deadline to complete the Lake Whatcom Landscape Plan.

Finally, in some processes, the delay caused by obtaining science and technical information was a strategic move on the part of one or more of the parties. For example, in the Lake Whatcom Planning Process case, certain members of the Interjurisdictional Committee felt that the Department of Natural Resource's (DNR) decision to conduct an Environmental Impact Statement (EIS) was a stalling tactic used to delay the Committee's progress and resist their influence in the process. Interjurisdictional Committee members felt the decision to conduct an EIS was a strategy for shifting the power balance in the planning process away from the

Committee. Committee member and long-time advocate controlling DNR logging practices in the watershed, Linda Marrom commented, "[The DNR] decided to do an EIS. That threw everything off. They were running the whole process. It was so political."[10] In this case, a Committee member perceived science as serving a strategic purpose, increasing distrust of the DNR and further straining relationships.

SCIENTIFIC UNCERTAINTY AND PROPRIETARY INFORMATION

While science and technical information can be powerful in informing decisions, it can also complicate decision making due to uncertainty or restricted information. Uncertainty often is connected to the perceived legitimacy of the information involved. In the Elliott State Forest Planning Process, the Steering Committee had significant concerns regarding the validity of the scientific information presented by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Oregon Department of Forestry Southern Oregon Area Director Dan Shults noted, "You'd think good science is something everyone agrees on, but there's a very fine line between what is scientifically proven and what scientific opinion is."[11] In the Elliott case, this distinction was especially relevant given that the research on spotted owls, marbled murrelets, and salmon only goes back about fifteen years.

Scientific uncertainty can also make information vulnerable to criticism and contribute to further process delays. For example, in the Southeast New Mexico Working Group scientific uncertainty was problematic because it left the door open to criticism of information that was unpopular with different members of the group. Despite the fact that the Working Group had previously agreed on peer-review as a criterion for legitimacy, when such science threatened oil and gas leases, the oil and gas industry criticized it. As a result, the process was delayed by further discussion of additional science needed to inform the process.

Proprietary information can also provide an obstacle in utilizing scientific and technical information in collaborative processes. In the cases examined in this report, proprietary information could be quite rich and therefore valuable to processes but was also restricted in its use by its very nature. For example, proprietary information regarding oil and gas and grazing leases played a key role in the Southeast New Mexico Working Group by stalling the process and later facilitating its progress. When the group realized it needed to see where land was currently in use as compared to where ideal prairie chicken and sand dune lizard habitat existed in order to make a decision on future leasing policies, it became clear that all of this information was proprietary to the Bureau of Land Management and the State Land Office (SLO). As a result, the agencies were reluctant to release any of this information to a single party. Finally, the SLO took on the mapping role and the issue of propriety was solved by prohibiting dissemination of mapping materials beyond Working Group members and by only allowing members to view the information during meetings.

THE COST OF SCIENTIFIC INFORMATION

Regardless of the benefits of scientific and technical information in informing decision making, gathering and using scientific information also requires significant resources from the group including time, money, and staff hours. For the Elliott State Forest Planning Process, these costs were compounded by the fact that the multiple different pieces involved in getting a federal permit as well as completing the Habitat Conservation Plan (HCP) had to be done in a specific sequence. John Lilly noted:

> We've always said that if the price of the HCP is too high, we won't get one. How do you know if it's too high, until you walk that road with the scoping, the draft [Environmental Impact Statement], the plan to present on the HCP to find out whether or not it's going to be something that is acceptable to [U.S. Fish and Wildlife Service] and [the National Marine Fisheries Service] and we can decided to go back to the board and say, "Board, we think this is worth the effort."[12]

STRUCTURE

As groups began to collect and process science, the structure of the process often was changed to accommodate this need. Many groups charged a science or technical committee with assessing the validity and application of available and relevant science as well as advising the policy arm of the collaborative process. This sort of division of labor may facilitate the progress of both the technical group and the main working group by eliminating the burden of processing technical information for the main working group while allowing the technical subgroup to concentrate solely on such tasks.

For some processes, separate groups created to handle technical information were not offshoots of the citizen group but rather informed the final decision maker. For example, in the Houghton Area Master Plan Process, the Technical Advisory Team (TAT) addressed technical aspects of providing services for any future development in the area covered by the Plan.[13] The TAT, as the name suggests, was more technical in nature and did not contain the citizen element of the Citizens Review Committee (CRC). While the TAT and CRC had intermittent communication, they did not meet together. The TAT was considered by many in the Houghton Area Master Plan Process to be integral to the process overall but they were peripheral to the interactions of the CRC.

IMPACT OF THE PROCESS ON SCIENCE

While science clearly affected collaborative processes in a variety of ways, processes in turn can affect the science. Such impact may be through the type of information collected or how that information is collected. Often, scientific and technical information are affected by the politics of a collaborative process. For example, in the Lake Whatcom Planning Process, strained relationships and mistrust between the Interjurisdictional Committee and the Department of Natural Resources (DNR) influenced how the Environmental Impact Statement would be conducted. Because the Committee wished for peer review, the DNR decided to conduct a Preliminary Draft EIS to allow the public to comment on the scientific assessments that had been prepared by DNR staff.[14] Thus, the relationships and dynamics of the group process impacted scientific inquiry.

Endnotes

[1] Dan Shults (Southern Oregon Area Director, Southern Oregon Area, Oregon Department of Forestry), interview by Eirin Krane and Drew Vankat, August 24, 2005, ODF, Roseburg, OR.

[2] "Purpose, Planning and History: Executive Summary," *Draft Elliott State Forest Management Plan*, August 2005, Oregon Department of Forestry, available at http://www.oregon.gov/ODF/index.shtml.

[3] Marty Zeller (Planner, Conservation Partners), telephone interview by Stephanie Bertaina and Eirin Krane, September 28, 2005.

[4] Julia M. Wondolleck and Steven L. Yaffee, *Making Collaboration Work: Lessons from Innovation in Natural Resource Management* (Washington, D.C.: Island Press, 2000), 135

[5] Dave Erley (Southeastern Field Agent, Utah Open Lands), personal communication [email] with Stephanie Bertaina, January 2, 2006.

[6] Wondolleck and Yaffee, *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*, 135.

[7] Ibid., 134.

[8] Ibid.

[9] John Lilly (Assistant Director for Policy and Planning, Department of State Lands), interview with Eirin Krane and Drew Vankat, August 22, 2005, DSL, Salem, OR.

[10] Alan Soicher (Citizen, city of Bellingham), telephone interview by Alden Boetsch and Matt Stout, August 29, 2005.

[11] Dan Shults (Southern Oregon Area Director, Southern Oregon Area, Oregon Department of Forestry), interview by Eirin Krane and Drew Vankat, August 24, 2005, ODF, Roseburg, OR.

[12] John Lilly (Assistant Director for Policy and Planning, Department of State Lands), interview with Eirin Krane and Drew Vankat, August 22, 2005, DSL, Salem, OR.

[13] *Houghton Area Master Plan*, city of Tucson Department of Urban Planning and Design, http://www.tucsonaz.gov/planning/plans/all/hamp.pdf, 3.

[14] William Wallace (Northwest Regional Manager, Washington State Department of Natural Resources), interview by Alden Boetsch and Matt Stout, August 9, 2005, DNR, Sedro-Woolley, WA.