

Public Participation in Environmental Decisions: Stakeholders, Authorities and Procedural Justice

Lynn A. Maguire* and E. Allan Lind**
Nicholas School of the Environment* and Fuqua School of Business**
Duke University
lmaguire@duke.edu, alind@duke.edu

Environmental Rule-making and Procedural Justice

Successful management of environmental quality via regulation by federal, state and local governments depends on citizen and stakeholder support. Without it, limited capabilities for enforcing compliance from unwilling citizens and legislative action to overturn unpopular regulations would doom attempts to regulate. Increasingly, public agencies responsible for formulating environmental regulations are involving citizens and stakeholders at various stages of the rule-making process; collaborative processes have become the current buzzword. In addition to satisfying legal requirements for public participation (e.g., NEPA), rule-making agencies also hope that involving those who are to be regulated in setting the rules will lead both to the development of substantively better rules and to better public support once the rules are promulgated.

Citizen and stakeholder support depends not only on the substantive impacts of regulation on their well-being, but also on their perceptions of the processes by which the regulations were developed. Procedural justice studies from social psychology, which have been performed largely in the context of judicial decision making (see Lind & Tyler 1988; Tyler & Lind 1992 for reviews), have identified some of the factors that contribute to acceptance of decisions by authorities -- voice, being treated with respect by authorities and other participants, perceived lack of bias on the part of authorities, fair treatment of all parties by authorities, decisions that are responsive to information and that are correctable in the face of new information (Tyler & Lind 1992). Some have assumed that citizens' concerns about decision processes stem from their belief that control over aspects of the process are likely to result in more favorable decisions (e.g., Leventhal 1980, Laver 1981). However, careful studies have shown that this sort of "instrumental" concern for process is only part of the story; people also have intrinsic concerns for just processes independent of how favorable the resulting decision is for them (e.g., Lind, et al. 1993; Lind et al. 1990). These results suggest that government authorities engaged in decision making for which public support is needed would do well to employ decision making processes that satisfy citizens' and stakeholders' perceptions of fairness and justice.

This paper uses the framework of procedural justice to evaluate a case of environmental rule-making: the stakeholder involvement process undertaken by the North Carolina Division of Water Quality in winter 1998-99 for the purpose of proposing regulations to decrease nutrient pollution of the Tar-Pamlico watershed. We examine the evidence for and against the features that previous studies have identified as important to perceptions of procedural justice. And, we look especially at the role of authorities, in this case mainly the Division of Water Quality, because fair, respectful and unbiased behavior by authorities has been found to be an essential component of just procedures. The purposes of our analysis are (1) to learn more about the factors that influence perceptions of procedural justice by extending the previously developed framework to the arena of environmental decision making; (2) to better understand the factors that influence acceptance of environmental policy decisions; and (3) to make recommendations for the design of processes for involving the public in environmental decisions that will enhance both the quality of environmental regulations and their acceptance by the public.

The Tar- Pamlico Rule-making Process

The Tar-Pamlico is one of several North Carolina watersheds suffering from excessive inputs of nutrients, mainly nitrogen, from both point sources, such as municipal and industrial wastewater, and nonpoint sources, such as agricultural and urban runoff. To help reduce the ill effects of excess nutrients, the state has mandated that regulations be put in place that can be expected to reduce nutrient loadings by 30% from a baseline level. The Division of Water Quality (a branch of the Department of Environment and Natural Resources) was directed by the state Environmental Management Commission to conduct a public involvement process that would help propose rules and regulations for achieving this reduction. The proposals from this process would then be presented in

public hearings, forwarded to Environmental Management Commission, and eventually ratified by state legislature (perhaps after considerable modification).

In September 1998 the Environmental Management Commission (EMC) instructed the Division of Water Quality (DWQ) to carry out the public involvement process including public hearings, in time to forward proposed rules to the EMC by March 1999. On September 17, DWQ sent letters to a contact list consisting of those already on the Tar-Pamlico Nutrient Sensitive Waters team, plus other stakeholders known to be interested in water quality issues along the river, inviting them to participate in a steering committee meeting on September 29. The steering committee consisted of 7 DWQ employees, 5 employees of other state agencies and 5 stakeholders from other types of organizations. The steering committee drew up a list of topics on which rules were needed (buffers, atmospheric emissions, urban stormwater, onsite wastewater, agriculture, erosion/sedimentation, urban nutrient management and wetland restoration) and developed an invitation list of possible participants for 7 of the topics. (The steering committee decided to handle the buffer topic itself by reviewing and modifying buffer rules which had been developed recently via a stakeholder participation process for the nearby Neuse river basin.) The steering committee also drafted charters to direct the working groups. Invitations to participate in working group meetings were sent November 4 for meetings beginning November 17 for some working groups. Each of the 7 working groups met from 3 to 7 times, sometimes as frequently as 5 days apart, with most groups finishing their work by late January 1999, although the agriculture group continued until mid-February. The steering committee then reviewed the working group reports, sometimes asking for changes, before they were taken to public hearing and then forwarded to the EMC in May 1999. Thus the timeframe for the working group meetings was highly compressed, especially considering that the meetings took place during the winter holiday season.

Methods of analysis

We are using a combination of qualitative and quantitative methods to analyze this public involvement process from the perspective of procedural justice, with particular attention to the role of DWQ, the main decision making authority. We made a qualitative, text-based analysis of archival materials from the process, including letters of invitation, minutes from working group meetings (which vary in level of detail among working groups and are not verbatim records), other communications between DWQ and working groups (e.g., email messages), and draft and final reports. We are in the midst of completing a coding of these written documents which we will use to further formalize this text-based analysis. We also plan to supplement these data by interviewing the DWQ organizers and the meeting facilitators.

DWQ distributed a short questionnaire to the working group participants asking about their perceptions of the process; one of us (LAM) advised DWQ on the design of the survey from the standpoint of procedural justice issues, but we were not involved in finalizing it or implementing it. Most questions were asked using a 5-point Likert type scale ranging from strongly agree (1) to strongly disagree (5), with 3 being "neutral." We made quantitative analyses of the 32 responses received (out of about 50 to whom it was distributed), and we also made qualitative analyses of the open-ended comments respondents included with these surveys.

We are in the midst of a large-scale survey administered via telephone to 3 groups: working group members, those invited but who did not participate in working group meetings, and members of the general public in 3 counties in the Tar-Pamlico basin. Our purpose in surveying the latter two groups is to explore how secondhand knowledge of public participation processes or other, unrelated experiences with state authorities may influence public acceptance of environmental policy decisions. These surveys will be administered in two phases, one now, before the regulations proposed by the working groups have been implemented, and another in several months, after the regulations have been acted on by the state legislature. We are just now tallying results from both participant and nonparticipant surveys in the initial phase, so we will not discuss any of these data here.

Evidence For and Against Procedural Justice

We analyzed the archival materials and the brief DWQ questionnaires for evidence for and against these elements that have been shown to be important to perceptions of procedural justice: representation, use of technical information, voice, fair process, behavior of the facilitator, satisfaction with outcomes, and satisfaction with procedures.

Representation. To be considered fair, decision processes need to offer participation to those with an interest in the outcome and those who would be affected by decisions taken. In the Tar-Pamlico process, those invited to participate in the working groups were nominated by the steering committee, which, in turn, was a subset of those DWQ had invited to the initial steering committee meeting. Those names were drawn mainly from DWQ's contact lists, including holders of wastewater discharge permits, official representatives of known interest groups (e.g., League of Municipalities, NC Farm Bureau, NC Forestry Association, other federal and state agencies, county extension agents) and those who had attended previous public meetings on water quality. In some cases, other participants were invited later in process, particularly to fill gaps in representation or to provide specific information needed by the working groups.

Table 1 shows the average number of participants from each of several categories for each working group. The minutes of 6 of the 7 working groups contain complaints about lack of participation and inadequate representation of specific interest groups. Some groups then made specific efforts made to enlist additional participation. The agriculture working group had more diverse participation than most. In responses to the DWQ survey, although most respondents felt that the right interests were represented (mean of 2.4) and one respondent (from the agriculture group) commented that there was "nice participation especially later in the process," other comments illustrate some dissatisfaction: "participants dominated by one side of issue," and "Absolutely not. There were no representatives of citizen groups that attended except for 1 or 2 meetings. The results of the process are not in any way representative of stakeholders other than regulatory folks. True stakeholders (such as the affected citizens) were NOT involved."

Table 1. Average attendance at working group meetings by different types of participants. DWQ = Division of Water Quality employees; "state/federal" includes state university and extension personnel; "other" participants are not federal or state agency employees. There were 1 or 2 facilitators at each meeting, but the minutes are not complete about exactly how many.

	Facilitator	DWQ	State/Federal	Other	Total
Agriculture	?	1	12	12	25
Atmosphere	?	2	6	5	13
Erosion/Sed.	?	2	3	3	8
Wastewater	?	1	5	3	9
Stormwater	1?	4	1	4	10
Urban Nutrient	1?	2	2	2	8
Restoration	2	2	1	1	6

The logistics of the meetings (e.g., timing, location, frequency of meetings) certainly affected participation, and hence representation. The meetings were held during workdays, generally lasted half a day or more, and were sometimes only 5 days apart. Quantitative results from DWQ surveys showed that respondents agreed (mean 2.3) that meeting notification was adequate; and were neutral (mean 2.8) on adequacy of the geographical location of meetings. However, there were some heartfelt comments on these issues: "Mostly government employees attended. Partly because they were the only stakeholders who were paid to attend. Partly because of location," and "the public and industry don't have resources to participate." In addition, the timing of the meetings during the holiday season was disadvantageous to participation: "November, December, January not a good time to meet."

Use of technical information. In addition to limitations on representation imposed by meeting schedule, there was a good deal of concern that the rushed nature and short total duration of the stakeholder process inhibited a careful consideration of the complex issues at hand. This can diminish participants' confidence that the process is responsive to the technical information that should inform their deliberations, one of the desired features of just processes. Minutes from 3 of the 7 working groups give evidence of the frustration participants experienced. The DWQ survey responses also show concern that the rushed schedule diminished the effectiveness of deliberations. Participants agreed slightly (mean 2.6) that there was "ample time to understand the issues." They disagreed slightly (mean 3.3) with the statement "Time allotted for stakeholder process was adequate," but more than 1/3 of respondents strongly disagreed. They disagreed (mean 3.9) with the statement that "Amount of time between

meetings was adequate.” Their qualitative comments on the surveys show their concerns with the impact of meeting schedules on their ability to thoughtfully process technical information: “Not nearly enough time to address [the] complexity of Ag[riculture] NPS [nonpoint source] N[itrogen] and P[hosphorus],” “There was no processing time for gathering data and assessing possible strategies for protection of the Tar-Pamlico basin between meetings,” and “What was originally envisioned here needs 1 to 1.5 years to be done properly.”

Voice. Voice refers to participants’ perceptions that they can express themselves freely in meetings. Respondents to the DWQ survey agreed (mean 1.8) that everyone had an equal opportunity to participate, but one commented that “Participants [were] dominated by one side of the issue,” and another said, “some groups always dominated.”

Fairness of the process. Respondents to the DWQ survey were more or less neutral (mean 2.8) on whether the process was fair. One commented that “The process was fair. The principles involved in decision making were unclear.”

Behavior of facilitator. The presence of a facilitator who is perceived to be unbiased and to treat all participants fairly and with respect is often essential to participants’ judgement of a process as just and to their acceptance of eventual outcomes. DWQ recognized the necessity of using neutral facilitators for the working group meetings and obtained the services of trained facilitators from North Carolina State University, particularly from the Natural Resources Leadership Institute. Respondents to the DWQ survey mostly agreed that facilitator was helpful (mean 2.03), with one comment that the facilitator “kept things moving and on track.” One respondent commented, “The facilitator was conscientious. But it would have been helpful if he had some technical understanding of the problem.” Another commented that “. . . it was clear that the facilitator was pushing the Dept. [of Environment and Natural Resources] position in goal.”

Satisfaction with outcome. The working groups were charged with proposing language for rules and regulations or, if they felt unable to do so saying why. Four of the 7 groups (atmosphere, erosion/sedimentation, wastewater and wetlands restoration) were unwilling to propose rules and regulations for water quality management, but instead formulated their report as resolutions on which rules and regulations might later be based, often referring the process to some other branch of state government. The meeting minutes show the frustration experienced by some groups. Erosion/sedimentation did not propose rules because “(1) timeframe too short for such a broad topic; (2) rules would fall under different state commissions, who were not represented; (3) lack of information; (4) existing rules are in flux, don’t know how they apply; (5) sediment rules just changed a year ago, hasn’t been time to evaluate their effectiveness; (6) current rules not being enforced; (7) lack of proper participation and representation in working group.”

Respondents to the DWQ survey were generally neutral about the outcome of the process (mean 3.1). One respondent suggested a follow-up in 6 months, since he anticipated that once the proposed rules left the hands of the working group, they might be changed in ways inconsistent with the understanding the group had reached.

Satisfaction with process. Respondents to the DWQ survey agreed slightly (mean 2.4) that the process was productive, but with some significant dissenting comments: “This was a flawed process but I don’t have suggestions for how to do it any better,” and “Once I was told that the issues I felt were important could not be addressed, while others could be, I was disillusioned by the process.” Respondents were somewhat willing to participate in future stakeholder meetings (mean 2.4), but again with some heated dissenters: “Not if you do it like this one,” and “Will work to avoid a repeat of this as a model.”

The Role of Authorities

Now we will focus on the role of decision making authorities, in this case mainly DWQ, in the Tar-Pamlico rule-making process. Previous studies of procedural justice have shown that the behavior of authorities has an important influence on perceptions of fairness and acceptance of outcomes. Perceptions of authorities as unbiased and as treating participants fairly and with respect are essential components of just procedures. We are also interested in DWQ’s role in this process because it was so clearly a dominant one.

Sometimes DWQ's dominance in meetings was simply a result of numbers. DWQ employees accounted for 7 out of 17 members of the steering committee. And, in some working group meetings, DWQ employees and facilitators outnumbered other participants (Table 1).

DWQ also dominated in the sense of playing many roles in the process. DWQ convened the whole process, drew up the list of people who were invited to the initial meeting of the steering committee, and played a significant role in the steering committee (which, in turn, selected the topics for the working groups, suggested who should be invited to participate in each group, and drew up the charters directing their work). Once the working groups began meeting, DWQ convened those meetings, drafted and circulated minutes, provided technical information, and provided liaison to technical experts and to other levels of the decision making process (e.g., EMC). Table 2 summarizes the number of times various categories of participants presented technical information in a working group meeting. Instances tallied under "other" include subcommittees that included at least one member who was not a federal or state agency employee. In all the working groups except agriculture, DWQ took the lead in proposing draft language for rules and regulations based on the working group discussions; solicited comments on drafts and synthesized changes suggested by other participants. DWQ lawyers checked the language of the draft rules. DWQ presented the results of working group discussions in public hearings and solicited comments from the public. DWQ produced the final report document and presented it to the steering committee and then to the Environmental Management Commission. Only in the agriculture working group, which was both the largest and the most diverse, with the most participation by stakeholders other than state and federal agencies, was the workload more evenly distributed.

Table 2. Tally of those who provided technical information in working group meetings, from the minutes of those meetings. DWQ = Division of Water Quality employees; "state/federal" includes state university and extension employees; "other" includes any subcommittee where at least one subcommittee member was not a federal or state agency employee.

Who Provided Information			
	DWQ	State/Federal	Other
Agriculture	7	1	6
Atmosphere		4	
Erosion/Sed.	5	3	
Wastewater	3		
Stormwater	3		
Urban Nutrient	1		
Restoration	3	2	1
TOTAL	22	10	7

For a lead agency to play multiple roles in a process like this is a common, but somewhat perilous, position. Some of these roles (convenor, drafter of minutes and reports, solicitor of technical advice) are best played by a truly neutral party (someone with no vested interest in the substance of the outcome), clearly not the case for DWQ, which has mandated responsibilities for water quality. In terms of providing information, DWQ not only solicited technical advice from others, but often was the provider of technical information – again a common situation for a lead agency, but subject to abuse and criticism, since it is easy for the values of experts to become intertwined with the technical advice they are giving.

Despite the perils DWQ courted by playing such a dominant part and by acting in multiple roles, it is probably fair to say that, with such a constrained timeframe for the whole process, if DWQ had not taken such a strong role, much less would have been accomplished. DWQ personnel clearly did many things right, and respondents to the DWQ questionnaire recognized and appreciated their efforts:

“Excellent use of email by Christie [Perrin, DWQ]. She had to assemble minutes from a pile of bones but did a good job. Thanks. She should be commended.”

“Matt [Lauffer, DWQ] did an excellent job of clarifying our roles.”

“The DWQ person responsible, Matt Lauffer, did an excellent job within the time limitations he was given to develop the process.”

Nevertheless, the structural flaws imposed by the short timeframe and dominance by DWQ, as well as other state agencies, represent at least a potential threat to participants’ perceptions of the process as just and their acceptance of the resulting regulations. For example, an opinion rendered by the NC Attorney General’s office on what a working group could and couldn’t cover in its draft rules was viewed by at least one participant as too heavy-handed and rendering pointless efforts of that working group. Comments by respondents to the DWQ questionnaires give evidence of some mistrust of the state agenda:

“The process was much too rushed by DWQ administration.”

“It appears that EMC has jury rigged the process. If the EMC has made the decision that it wants “Neuse type” rules for the Tar Pamlico then this process is somewhat of a farce.”

“The majority opinion was always being set aside for some preconceived body of rules that DENR [Department of Environment and Natural Resources] wanted.”

The jury is still out on whether these disquieting perceptions mean that the Tar-Pamlico rule-making process will be considered unfair generally and that acceptance of the resulting regulations will be jeopardized. Assessing these possibilities is one of the motivations for our large-scale surveys and for the “before and after” design, where we will ask about acceptance of the regulations once they have been approved by the state legislature, as well as prior to that stage of approval. Of course, as the working group participants recognized themselves, by the time their draft wording winds its way through public hearings, the Rules Commission of the state legislature, and the legislature itself, the final rules may look very different from what came out of the working groups. In that case, lack of acceptance may stem from dissatisfaction with the later stages of deliberation rather than with the structure and function of the working group process. Our survey is designed to distinguish between these sources of dissatisfaction.

Implications for Design of Public Participation Processes

In terms of the elements of procedural justice that we examined, the limited quantitative data from the DWQ questionnaire suggest that the Tar-Pamlico process was acceptable for providing voice and for behavior of the facilitators; a little better than neutral for representation, consideration of technical information, fairness and satisfaction with the process; and about neutral with respect to location of meetings and satisfaction with the outcome. For each of these characteristics, however, at least some participants made distinctly negative qualitative comments. It is no doubt the case that those who were happy with the process were less likely to elaborate on their quantitative responses than those who had strong negative feelings. Nevertheless, these negative comments are disquieting, particularly those that allege bias on the part of authorities and lack of confidence in the process and its results. In addition, there is clear evidence from both the questionnaire responses and from the minutes of working group meetings that the logistics of the process, particularly the very compressed time frame, negatively affected both representation and consideration of technical information, two important aspects of just processes.

The dominant role of the primary authority involved in this process, the Division of Water Quality, had both pluses and minuses. On the positive side, individual DWQ employees were praised highly for their diligence in pressing the process toward completion within the short time allotted. On the negative side, this heavy hand by DWQ led to some complaints about the process being biased in favor of a pre-existing state agency agenda, thus undermining confidence in the effectiveness of citizen participation. It remains to be seen whether this uneasiness will lead to dissatisfaction with the water quality regulations that emerge eventually from the state legislature. Our large-scale survey should help to answer this question.

One result of our analysis of the Tar-Pamlico process may be to give state agencies like DWQ some justification for refusing requests from higher levels of state government to carry out public participation processes

in unrealistically short time frames. We have solid evidence that rushing a process too fast compromises important aspects of just procedure and risks undermining public confidence in the resulting regulations. Armed with these results, DWQ and other state agencies should be in a better position to insist that, for a public participation process to be worth doing, the elements of fair process must be observed.

References Cited

Laver, M. (1981). *The politics of private desires*. New York: Penguin.

Leventhal, G. S. 1980. What should be done with equity theory? In R. Gergen, M. Greenberg, and R. Weiss (Eds.), *Social exchange theory: Advances in theory and research*, pp. 27-55. New York: Plenum Press.

Lind, E. A., MacCoun, R. J., Ebener, P. E., Felstiner, W. L. F., Hensler, D.R., Resnik, J., and Tyler, T. R. 1990. In the eye of the beholder: Tort litigants' evaluations of their experiences in the civil justice system. *Law & Society Review*, 24, 953-996.

Lind, E. A., Kulik, C., Ambrose, M., and Park, M. 1993. Individual and corporate dispute resolution: Using procedural fairness as a decision heuristic. *Administrative Science Quarterly*, 38, 224-251.

Lind, E. A., and Tyler, T. R. 1988. *The social psychology of procedural justice*. New York: Plenum Press.

Tyler, T. R., and Lind, E. A. 1992. A relational model of authority in groups. In M. Zanna (Ed.), *Advances in experimental social psychology*, Vol. 25 (pp. 115-192). New York: Academic Press.