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The Paradox of Participation and the Hidden Role of Information

A Case Study

Kevin S. Hanna

This article examines the complex and often indirect role of participation and information in an integrated planning context. The case study is based in a diverse urban-rural estuarine setting where an integrated resource management program was established to help manage environmental and economic planning issues. The results of the research suggest that the use of participation by those not in government as a measure of success in achieving program objectives must be approached with caution—and research resourcefulness—in order to form an accurate image of impact and origin. The work supports the idea in planning theory that information has a transformative function that can alter perceptions and mindsets in advance of a decision phase, and affects planning systems at all stages. Dichotomies in opinion of program success and performance may be linked to information access. Consensus building among government agencies and nongovernmental organizations also requires broad access to information. The research indicates that participation by proxy can also be a significant source of influence.

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Planning practice is an increasingly diverse realm. Strong links have been forged to disparate fields in environment and resource management, many of which were not long ago treated as being quite separate. The role of planners now often focuses on the integration of social, economic, and environmental objectives into management decisions. The challenge of integration centres on accommodating the diverse values and demands that are often made apparent through public participation. Indeed, public participation is viewed as such an essential component of the planning or policy process that the degree to which it is included and its apparent influence are frequently seen as measures of success. However, participation has a relatively complex function within planning and its inclusion, or exclusion, may not always be a good measure of program efficacy.

A range of factors, such as addressing implementation obstacles, understanding baseline conditions, and providing venues for cooperative decision making, are important to the success of integrated planning. These factors are interactive, but they also present a paradox in measuring program success. Their influence may be indirect and can have the appearance of being far from participatory. When viewing the impact and role of participation, the temptation might be to search for clear demonstrations of inclusion, such as public membership on decision making committees, extensive consultation programs, or an obvious capacity building effort. But the impact of participation can be more circumspect, and planning initiatives that lack overt participation instruments can still be affected by nongovernmental stakeholders.

This article concentrates on the influence of participation and information. The objective here is to present an alternative and composite view of

the role of participation in planning by highlighting the important influence of information and peripheral participation. Information gathering plays an important role in affecting agency decisions, and information development and participation are essential aspects of an effective integrated planning process, even if such activities are oblique or hidden. A case study of integrated resource management (IRM) in Vancouver, on Canada's Pacific Coast, is used to demonstrate that planning programs centred on institutional stakeholders are influenced by information activities and secondary participation. Since the case study program is based on integration, the article begins by defining integrated resource management; a brief theoretical discussion of information and participation issues in planning follows. The case study then starts with a description of the physical and administrative setting. The different views that the program's stakeholders have of direct participation are then examined and contrasted with the peripheral, or indirect, influences also identified in the study.

Integrated Resource Management: Planning Around Information and Participation

Nelkin (1982) and Mitchell (1986) discuss integrated resource management (IRM), or integrated planning, in terms of a consultation process requiring the coordination and sharing of values—not just among agencies, but among stakeholders. In an ideal sense, integrated processes are broadly interactive and incorporate the diverse values of all stakeholders into management and planning strategies. But IRM has not emerged in the form of one model. It has acquired different interpretations, often dependent on the objectives and values of those who use it as a rationale for their activities. The efficacy of such approaches is context sensitive, and like any policy approach it is vulnerable to implementation obstacles.

A fundamental issue in integrated planning is the meaning of integration. Over time, a collection of principles and descriptions has been articulated in resource management, but even these vary among practitioners. Most descriptions centre on two themes: (1) comprehensiveness, which emphasizes consultation and participation among all stakeholders; and (2) a strategic, or tractable, approach based on a process of interagency cooperation functioning in well defined jurisdictions and physical boundaries. In practice, these two themes can also be combined. Comprehensiveness demands that a process include the sharing and coordination of the values and demands of a range of agencies, the public, and formal interests when designing and implementing policies or projects (Mitchell, 1986). On the other hand, a strategic approach is often less inclusive. It focuses on cooperation and communication among decision makers, and usually centres on developing a structured and consistent forum for policy development and implementation. In the strategic context, integration is best described as a process of increasing organization and order in a decision-making system (Walther, 1987). Improvements or changes in the collection or dissemination of information become as important to strategic integrated planning as broad participation would be to a comprehensive approach.

While there may be no universal IRM model, Child and Armour (1995) suggest that nevertheless there is an implicit consensus that if a program is to have the capacity for integration, it should reduce interagency fragmentation, engage in broad consultation, emphasize cooperation and compromise, and facilitate a bottom-up approach to decision making and implementation. In Child and Armour's (1995) discussion, participation implies a variety of forms ranging from the type of grassroots influence envisioned by Arnstein (1969) to enhanced agency-based processes. These elements highlight the potential for implementation problems, since even modest forms of integration require a change in power relationships. Thus it should not be surprising to find that the interpretation of "broad based"—who should be involved and what their participation should encompass—can vary from strategic to comprehensive processes.

If consultation is an integral part of integrated planning, then the issue of who is consulted arises. Participation implies many things, but the common assumption is that it is the meaningful involvement of people in decisions that affect their lives (Draper, 1975). By extension, public participation is democracy at the simplest level (Nelkin, 1982). But Grima (1985) writes that in practice there is often a dichotomy between *providing information,* which suggests a one-way process, and *dialogue,* which suggests a two-way approach. The process may not be about involvement as much as it is about information, education, public relations, or simply "getting a project through" (Grima, 1985). Forester (1989, 1993) might describe such participation elements in terms of planning rhetoric, where the role of information is not to guide or inform the process, but rather to guide and form the opinions of stakeholders—to persuade them to buy into policy. Thus planning runs the risk of becoming a reinforcing exercise for predetermined decisions, where participation serves as window dressing, lending credibility to the decisions rather than actually helping to construct them.

A participation process within any integrated framework should not simply be there to legitimize the process nor to accord perfunctory deference to public involvement. This suggests a degree of tokenism, where informing, limited consultation, and placation dominate decision making (Arnstein, 1969). The goals and objectives of participation should ultimately be to *support and enhance the process and to realize better planning*. Consensus can be difficult to achieve, and participation can help by revealing and isolating extremes or creating relative agreement among stakeholders. While many agencies may include a framework for interagency communication within their mission statement, in practice joint action may be rare and might conflict with individual bureaucratic interests. Perhaps the greatest difficulty in achieving IRM is not convincing planners of the importance of considering multiple values and objectives; rather the challenge is in achieving a shared understanding of how to implement IRM.

Planning as Communicative and Information-Based Action

Systematic patterns of communication and interaction in planning processes are affected by social, political, and economic structures. Authority and power relations not only transmit information, they also perpetuate political ideology, values, consent for actions, and trust among interacting agencies (Forester, 1989). Within an integrated context the manner in which information is collected, exchanged, or presented conveys specific messages about the state of a process and its influence on participating agencies. Distortions in information and communicative actions occur, and they can be deliberate or not. Agency relations function in subtle ways: to legitimate and perpetuate themselves while extending power; to exclude particular affected groups systematically from decision-making processes; to promote the political illusion that only science and technology can solve problems; or to restrict political argument, participation, and activity on public policy alternatives that conflict with existing patterns of power (Forester, 1989, 1993).

Innes (1998) writes that an emerging paradigm places planning within a context where information and communication become embedded within the perceptions that planners develop through participation processes, and this ultimately creates meaning. But the creation of such meaning may often be subtle, indirect, or by proxy. Herein lies the problem of participation, or perhaps more appropriately, the problem of understanding what role and form participation can play in a planning process. Participation ideally is broad, overt, and accessible. It has the capacity to encompass all affected stakeholders and ensure that their concerns are incorporated into a final decision or planning product. However, participation can also be limiting. Where formal processes or other opportunities for participation exist, the problems of who participates, what interests do they represent, and to what extent do they reflect plurality become practical issues for planners or other policy practitioners. Dichotomies also commonly form. Agency and nonagency interests may develop different expectations of participation; and dichotomies between participants' perspectives on the nature of the planning program, the definition of impacts, or even the strength or legitimacy of participation are not infrequent in planning processes (Danke et al., 1983; King et al., 1998; Kweit & Kweit, 1980).

Considering the attention in planning discourse given to participation, one might readily assume that the existence of discourse among stakeholders, whatever its form, is a measure of the quality and influence of participation. However, empowerment is not always equivalent to control. What passes as empowerment may lead to co-option: Even the most well developed participation program cannot ensure that it will significantly influence a decision. The provision or nonprovision of participation events, or dialogue, is a sparse measure of participation and the reasons for its influence (Stiftel, 1983). The relative influence of participation is more likely a product of the impact of information and the way that communicative action affects the preferences of decision makers. The impact of information can be determined by processes other than the simple availability of formal participation venues; it can be the byproduct of other aspects of planning systems and is dependent on the quality of communication, not the format.

Participation presents a paradox. It is viewed as an essential and influential part of planning success, but may not always be as significant to outcomes as hidden information systems, especially those that may be limited to institutional stakeholders. Hence, the apparent nonexistence (or weak existence) of participation does not mean that a process has failed to consider the opinions or perceptions of stakeholders, only that such influences may be circumspect and embedded in other information sources. In some settings the relevance of participation may lie in its ability to contribute to information development.

Information is most influential when it is invisible (Innes, 1998). Thus processes where data collection is a key program objective can be influenced by information gathering and the gradual building of data, even before information is "fed" into the decision-making stage. Information can change the individual by shaping the

problem, defining the choices, and providing a perspective from which options are viewed. Innes writes that research (Innes, 1988a, 1988b; Weiss & Gruber, 1984) indicates that the process of information development (collection, analysis, and discussion) produces policy change seemingly independent of the decision-making stage. The premises and the innate axioms of agency participants are formed by exposure to information. Change occurs before the formal decision. Alternatively, information can reinforce bias by strengthening the perspectives of individuals and institutions. Bias can be reinforced by selective interpretation and by controlling the dissemination of information to both institutional and external stakeholders.

The relationship between participation and information centres on the nature of participation. The critical questions are: Who is participating in the process and how? Participation helps shape information development. Its influence is synergistic. Participation not only facilitates the addition to the planning process of new information and new interpretations of existing data; it also diffuses knowledge to those who may be peripheral players in the process (agency or nonagency actors). Hence it is difficult to measure the success of participation. Preparing and analysing data, interacting with nonagency players, and presenting information to the public can be transformative actions—even though their impact may not be explicit. Information is a key component of consensus building (Habermas, 1976, 1979). The process of developing and agreeing on information is a critical part of embedding the influence of information on individual and institutional understandings (Innes, 1998).

The case study that follows highlights key themes and challenges within theoretical discussions of participation and information in planning. Participation can influence planning activities in forms other than direct events. Participation and information can be complex, and sometimes ambiguous, components of planning that exert influence indirectly. In the case study, it appears at first glance that there is only minor influence by nongovernmental organizations (NGOs). The program has little apparent capacity for incorporating the views of NGOs, and its integrated activities are centred on agencies. But the study shows that while overt participation may be lacking, NGO stakeholders may exert influence indirectly, through secondary participation venues. Integrated approaches can also assume a comprehensive or strategic approach to planning with a different emphasis on participation in either context. Information development and indirect participation form a significant part of this program's strategic approach, and have exerted a distinct, albeit sometimes unseen, influence.

A Case Study: The Fraser River Estuary Management Program

The Setting

The Fraser River Estuary region (Vancouver, British Columbia) has been one of the fastest growing urban areas in North America. Its population is now about 1.5 million and has been projected to increase to about 2.5 million by 2006.[1] The nature of urban form and patterns of expansion have been largely determined by a restrictive topography and provincial legislation limiting the conversion of agricultural land to other uses.[2] The estuary contains significant wildlife and fish habitat. Remnant wetlands provide a significant staging area for the migration of birds from Alaska and northern Canada. Dyking, filling, dredging, and drainage works have altered about 70% of the fish and wildlife habitat; only 1% of bogland still exists, and less than 1% of original wet meadow remains. Between 1967 and 1982 about 11% of natural tidal wetlands were lost (Fraser River Estuary Management Program, 1994) and about 90% of salt and brackish marsh in the river's arms disappeared, largely due to dyking and dredging (Dorecy, 1993). The most significant losses were before the mid 1980s. However, large areas of estuarine marsh still remain undisturbed. Habitat planning evolved as losses became more acute. Strategies moved beyond simple regulation to encompass formal loss and compensation policies and specific program initiatives such as research and data collection, land use inventories, and the integration of habitat conservation into local and regional planning.

Estuarine waters are the conduit for the salmon runs that are now a key element in the survival of the threatened Northeast Pacific fishery. A review of current and historical data shows that since the formation of the Fraser River Estuary Management Program (FREMP), overall water and sediment quality have improved or have been maintained, and pollutants are now within required parameters (Hanna, 1999). Presently, water quality management centres on the impacts of storm sewers, industrial inputs, and the sediment contamination legacy of past practices.

Rapid urban growth, interagency conflict, and the perception that environmental quality in the Fraser River Estuary was rapidly deteriorating led the provincial and federal governments (the senior levels) to consider a new approach to estuarine planning. Authority over environment and resource issues is divided between the two jurisdictions, and in some areas it is delegated to local government. Responsibilities overlap with respect to habitat, fisheries, land use planning, and the regulation of water quality. Comprehensive planning was

largely absent, and in the 1970s the two senior levels of government initiated the Fraser River Estuary Study (FRES). The FRES was a three-stage process undertaken to inventory environmental conditions, recommend a new management framework, and develop a strategy for implementing a preferred planning option. The FRES was the precursor of the FREMP. The study process recommended several management options. Each contained some form of integrated management, but both governments preferred the alternative that addressed jurisdictional tractability issues.[3] The FREMP was subsequently established in 1985. The program design maintains existing authority and agency responsibilities, but provides an integrated framework within which planning is coordinated and implemented. In terms of the IRM approach employed, the program is strategic, with comprehensive elements focusing on agency participation. While the primary objective has often been seen as improving environmental quality, its role in facilitating cooperative decision making and integrated planning among agencies is broader. The core mission is to accommodate economic and social uses while maintaining or improving environmental quality. The program's approach centres on an integrated framework that stresses the use of multiple-use criteria and integration of planning practices among agencies. Implementation of activities is ongoing and evolving in terms of hierarchical integration, planning methods, and responses to implementation obstacles.

Figure 1 depicts the program structure, which is based on committees that direct specific activities. Most components have either planning or research functions. The Management Committee has the predominant decision-making role and directs the program. The political level has been quite peripheral and seems to exercise little direct influence, despite its formal appearance at the top of the agency's organization. The formal organization chart also suggests a rigid flow of information and authority through the committee hierarchy and the secretariat. However, the program actually functions in a less static way. Standing committees and subcommittees interact with each other, as well as with the program secretariat, and they interact directly with the Management Committee. The Environmental Review Committee (ERC) has a strong applied planning function. It serves as an integrated approvals venue for development along the foreshore, regardless of the scale of the proposal. The ERC's formal approvals system simplified the application process for industry, and reduced the potential for interagency conflict by replacing the previous disjointed approach.[4] Composition of the committees is limited to civil servants who represent the specific program and regulatory responsibilities of their agencies.

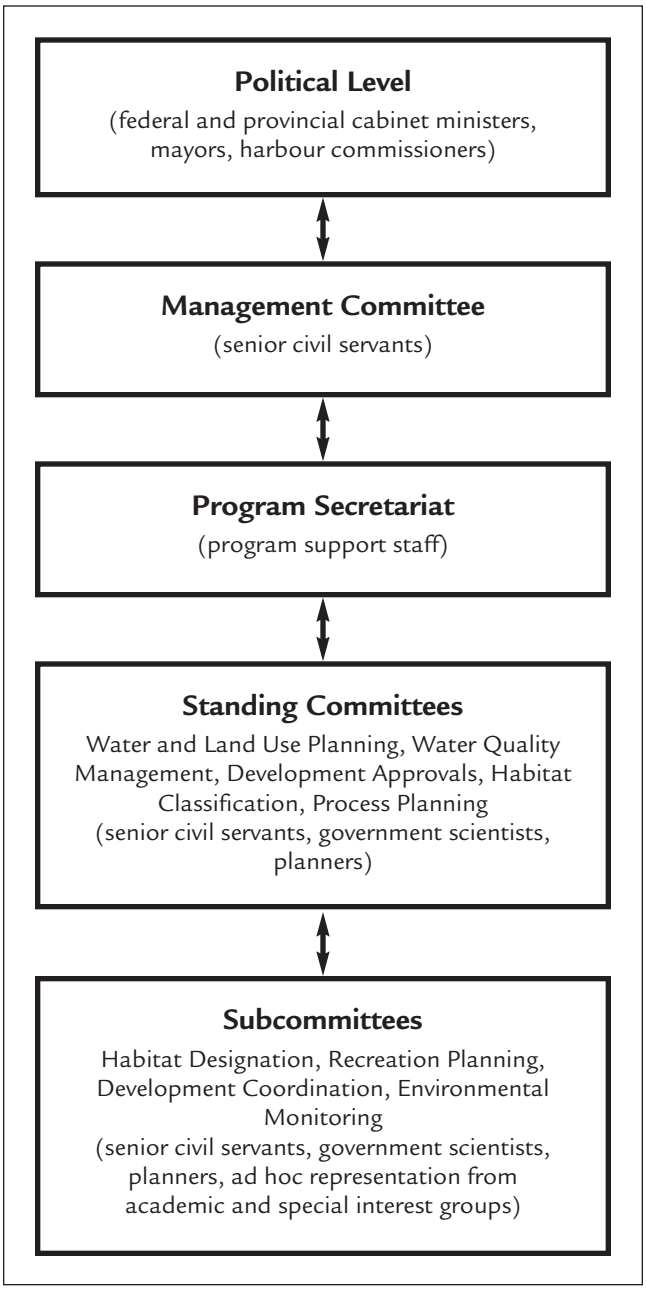

FIGURE 1. FREMP organizational structure.

Direct participation by NGOs has been infrequent. Though opportunities for public comment on ERC applications exist, the other committees have few such formal venues. Until recently, public consultation had been ad hoc and limited largely to exercises offered during the development of specific plans. A Public Advisory Committee was formed to provide advice on shoreline development, but it is a recent innovation. Overall, the pro-

gram emphasis is on agencies as the primary target for influence.

The program bureaucracy is small and provides support for the committees. Data collection, research, planning, and membership in all program components is provided by member agencies and their personnel, though many of these activities are coordinated through the program. The program facilitates integrated planning and decision making; yet despite its apparently hollow appearance, it has become a clearinghouse for information, research, conflict resolution, foreshore development approvals, and recently, for the development of planning products that integrate river and upland activities into management plans (akin to community plans).[5] Current planning components implemented through the FREMP venue include a federal no-net-loss policy for fisheries habitat, habitat coding based on ecological productivity, land use designation, and coordinated application of multijurisdictional regulations for fish and wildlife habitat.

The process of program development and implementation has the appearance of being based on a rational planning approach. Objectives and goals were first identified, data collection programs were then initiated, alternative management strategies were identified, and program and planning choices were made. The ultimate formal product of the planning process was the Management Plan for the estuary that all agencies "bought into." In reality, the program's evolution has been quite different, and not so linear. From its inception, information management and data collection have been key aspects of the FREMP. Water quality and habitat inventories dominate information development. The initial FRES process resulted in a basic understanding of baseline water and habitat conditions. But an understanding of trends in environmental quality and the physical distribution of environmental conditions was lacking, and there was no initial agreement on estuary water quality objectives, or in some instances the criteria for measuring impacts. Such issues of agreement have been largely addressed, and the program has facilitated a consensus approach to planning and management activities.

Method

A three-part study consisting of informal interviews; a formal, structured survey; and a review of environmental quality data and reporting documents (institutional records) was conducted between 1994 and 1997. I also attended meetings of the FREMP's Environmental Review Committee (ERC), and made site visits with ERC members when they considered development applications. The interviews followed a semistructured, conversational format and were used to learn about program issues not apparent in the reporting literature and to obtain information that could be used to construct a broadly applied questionnaire. The interviews were conducted with a sample of the program's stakeholders: each committee chair, randomly selected committee members, representatives of industry organizations, and a round-table discussion with representatives of environmental and conservation organizations (28 stakeholders in all). The subsequent survey asked all stakeholders for their views of changes in environmental quality, elements of program performance and influence, and changes required to improve program efficacy. The survey results reported here relate to the questionnaire sections that addressed participation. The participation variables explicitly addressed in the survey include:

- identifying ways that the public is involved and the role of participation;
- gauging support for change in the program's approach to participation; and
- measuring perceptions of constituency influence.

Participation themes also emerged from the interviews and in written comments added to the survey forms. The influence and role of information was also explicitly expressed in the interviews and written responses. Survey questions about environmental quality and policy/program implementation issues are discussed elsewhere (see Hanna, 1999).

The questionnaire was sent to the program's participant population,[6] which included government (federal, provincial, and municipal), industry and business, and environment and conservation group representatives. Some questions relating to internal administrative implementation issues appeared only on government forms. The overall response rate was 50% from a population of 180. The small number of responses limited the potential for using some multivariate methods for data analysis, but was sufficient for other parametric tools. Government respondents to the survey were also in relatively senior positions in the civil service, which is a characteristic of the government portion of the population. The quantitative data described here demonstrate equality of intervals/variance and normality. Comparisons are made between the three main types of stakeholder: government, industry, and environment/conservation groups.

The nonresponse bias was controlled by sending a second mailing to those who did not respond in the first round.[7] This approach improved the overall response rate and helped ensure a representative response profile. The profile of respondents mirrors their representation and distribution in the stakeholder population. No group or interest is under- or overrepresented.

Results and Discussion

How Do Stakeholders View Participation?

What is the role of participation? Respondents were asked how they thought stakeholders were presently involved in the process, if they would like to see the format changed, and their perception of the influence of other constituencies. The structure and strategic nature of the FREMP has achieved a degree of multisectoral blending where agencies are concerned, but the role of nongovernmental interests has been less explicit and less direct. During the presurvey interviews, public participation was mentioned as a point of contention by environment/conservation groups. Industry seemed less interested in participation issues, though there was concern that business interests were not being adequately considered by the agencies that participate in the FREMP. Some were concerned that growth objectives were being subjugated to environmental interests.

In the survey, the list of involvement opportunities included some options not presently available to NGOs. These were involvement in decision making by standing committees, formation of management plans, data collection, monitoring wastewater discharges, and deciding FREMP actions (see Table 1). While there are no opportunities for direct involvement, influence can be exerted indirectly through participating agencies. Participating agencies have constituents whose interests and positions they may champion within the management process (e.g., resource use, industry, residential development, NGOs). Generally, stakeholders had a very realistic perception of the options provided for participation, and indeed, the limitations. The question about how the public is involved centred on how participants viewed participation options, and where they believed the most prominent involvement opportunities lie. In no instance did environment or industry respondents positively identify an option more frequently than government respondents. The lowest number of positive responses ("yes") were for options that suggest direct influence in decision-making activities. These were decision making by standing committees, deciding FREMP actions, monitoring wastewater discharges, intervening in ERC deliberations, and environmental data collection (see Table 1 for an overview of this survey question).

The pattern of responses also indicates that respondents generally have a clear idea of what mechanisms the program uses. There were four options where significant differences were noted: consultation about FREMP actions, distribution of publications, participation through displays and special events, and workshops. In each of these four instances, government respondents were more likely to indicate that the public was involved through such means (see Table 1). The difference in responses to "consulted about FREMP actions" suggests that significantly more government than industry or environment respondents believe that the public is consulted about the program's actions.

Government respondents were also more likely to select the three most prevalent forms of communication or participation that the program offers. The FREMP sponsors and participates in public events where it promotes the program's initiatives; the program produces publications for general distribution. But since information dissemination has not been wide, some relative difference among responses would not be unexpected. The differences among respondents likely reflects relative awareness of the initiatives that the program has undertaken, its influence on the estuary, and a belief on the part of government respondents that the public indirectly influences the program's actions. Indeed, during interviews several senior civil servants commented that the creation of the FREMP was in large part a response to public concern about the state of the estuary, and the FRES process that led to creating the FREMP contained significant NGO representation. But among NGO respondents the view is less positive. Fourteen written comments stating that "the public is not involved in the FREMP in a meaningful way" were appended to the survey participation question (11 from NGO respondents and 3 from government).

The overall view of public participation reflects both the real opportunities available and the potentially weak nature of these opportunities. NGO respondents view the program's options for influence as limited and without real influence, while government respondents believe that NGO influence has an impact on decision making. To support this view, some government stakeholders stated that the demands/needs of client groups are brought to the FREMP table through the participation programs initiated and managed by the agencies themselves, and not so much through the events offered by the FREMP. This is participation by proxy, where the program serves as a clearinghouse for influence already exercised. There is a dichotomy in how stakeholders view participation. But even government supports change that would ideally include a more visible role for NGO interests.

Should the scope of participation change? The survey indicates that all stakeholders want a better participation process. A majority of respondents indicated that they would like to see changes made to the participation format (see the bottom of Table 1). However, there were

TABLE 1. Summary statistics and chi-square tests for public participation in the FREMP process and change in the participation approach.

	Yes (%)				No (%)			
Survey questions[a]	Gov.[b]	Ind.	Env.	Total	Gov.	Ind.	Env.	Total
Public participation In which of the following ways do you think the public is presently represented?								
Involved in decision-making by standing committees. $X^2 = 0.60$, Sig = 0.73	4 (9)	3 (15)	2 (9)	9 (10)	41 (91)	17 (85)	20 (91)	78 (90)
Involved in the formation of management plans. $X^2 = 5.33$, Sig = 0.06	14 (31)	1(5)	5 (23)	20 (23)	31 (69)	19 (95)	17 (77)	67 (77)
Involved in environmental data collection. $X^2 = 1.20$, Sig = 0.54	8 (18)	2 (10)	5 (23)	20 (23)	37 (82)	18 (90)	17 (77)	72 (83)
Involved in habitat restoration. $X^2 = 4.57$, Sig = 0.10	28 (62)	7 (35)	10 (45)	45 (52)	17 (38)	13 (65)	12 (55)	42 (48)
Involved in monitoring wastewater discharges. $X^2 = 1.07$, Sig = 0.58	6 (13)	1 (5)	3 (14)	10 (11)	39 (87)	19 (95)	19 (86)	77 (89)
As interveners in the Environmental Review Committee process. $X^2 = 2.90$, Sig = 0.23	9 (20)	4 (20)	1 (5)	14 (16)	36 (80)	16 (80)	21 (95)	73 (84)
Consulted about FREMP actions. $X^2 = 8.88$, Sig = 0.01	18 (40)	2 (10)	3 (13)	23 (26)	27 (60)	18 (90)	19 (86)	64 (74)
Involved in deciding FREMP actions. $X^2 = 0.37$, Sig = 0.82	5 (11)	30 (15)	2 (9)	10 (11)	40 (89)	17 (85)	20 (91)	77 (89)
Through the distribution of publications. $X^2 = 15.29$, Sig = 0.00	39 (87)	9 (45)	11 (50)	59 (68)	6 (13)	11 (55)	11 (50)	28 (32)
By attending FREMP displays and events at community festivals. $X^2 = 20.12$, Sig = 0.00	40 (89)	7 (35)	13 (59)	60 (69)	5 (11)	13 (65)	9 (40)	27 (31)
Through workshops (such as the Water Quality Management Workshop). $X^2 = 12.52$, Sig = 0.00	34 (76)	8 (40)	8 (36)	50 (58)	11 (24)	12 (60)	14 (64)	7 (42)
Change in participation approach Are there any ways that you would like to see public involvement in the FREMP change? $X^2 = 2.32$, Sig = 0.30	26 (62)	7(50)	13 (77)	46 (63)	16 (38)	7 (50)	4 (24)	27 (37)

Notes:

a. X^2 is used here to determine if there is a relationship between response to the question (yes or no) and the respondent's affiliation (the type of respondent).

b. Gov. = government; Ind. = industry and business; Env. = environment and conservation groups

no significant differences. Written comments show that the two most common themes are "nongovernment representation on decision making committees" and "improving reporting[8] and accountability" (there were 28 comments in total on these two themes, 14 for each type of comment, and 8 for each from government respondents). The majority of comments from environmental groups focussed on NGO representation, accountability, and reporting. Industry responses centred on two themes: a questioning of the "utility of public involvement" and a call for more "industry input." At first glance, these motifs seem to be contradictory, but a review of the comments suggests that industry responses are variations on a similar theme. Those questioning the utility of public input believed that participation processes can be dominated or hijacked by environmental groups with narrow agendas. Those seeking more industry input tended to feel that the industry perspective was not being represented within the FREMP, and that the planning and approvals process all too often acquiesced to environmental interests.

The written comments provided by government respondents were evenly split among four themes: encouraging volunteer support, adding nongovernmental representation to standing and ad hoc committees, improving reporting and accountability, and improving public education. All of the comments about public education were made by government respondents. Adding NGO representation to committees was a common theme mentioned by federal employees during the presurvey interviews. The need to improve reporting and accountability was expressed largely in terms of making the public and those agencies not directly involved in the process more aware of the state of the river and the results of program initiatives.

How influential do stakeholders think others are? All respondents were asked to rate their impression of support for the FREMP by its various constituency groups. This question describes how stakeholders think other groups view the program and illustrates instances where one group believes another may have undue influence. There were several areas of significant difference (see Table 2). Industry respondents believed that government agencies gave the program a relatively high degree of support, but environment and conservation group respondents saw government support as being significantly lower. The general view of all respondents was that commercial fishing, forestry/manufacturing, and other industries demonstrated a relatively low level of support for the program. Environment and conservation group respondents believed that the fishing industry's level of support is significantly lower than their industry counterparts believed it to be. Politicians were perceived to be supportive of the program—an interesting perception given the very peripheral role of the political level. The support of environmental groups was perceived to be significantly lower by environmental groups than industry or government respondents thought it was. The last area of significance is the rating of general public support for the program. Environmental respondents thought the public had a lower opinion of the program than they themselves did. The general impression is that stakeholders tend to think agencies have a high level of support for the program, and the survey suggests they do.

Three participation themes are immediately evident from the survey. First, the quantitative questions and elements of the written comments show a dichotomy in participation between government and NGOs. Government sees participation opportunities as being more meaningful and more inclusive than NGO stakeholders do. Second, despite the dichotomy, all stakeholders want a change in participation—a more meaningful approach to NGO involvement. Third, most stakeholders have the perception that other constituencies are more supportive of the program, are more likely to benefit from the program, and are more influential.[9] When these themes are considered together, the role and impact of NGO participation appears weak, even nonexistent, and the case study would seem to indicate that NGO stakeholders have little meaningful involvement in the FREMP. However, as the next section shows, the image of participation is more complex. The interviews and other portions of the survey suggest that participation is not wholly absent, nor is it without influence. In this context, the process of information development or gathering also emerges as being as or more significant, perhaps, than direct stakeholder participation.

Information Activities and Participation by Proxy

The influence of information. Until recently, the FREMP was most prolific in the realm of information development, especially for water quality and waste management. Management plans for foreshore and water-based activities were developed after 1990, and recreation planning is ongoing. But changes in management practice for habitat, water, and development approvals had already begun well in advance of the emergence of the overall *Estuary Management Plan* (Fraser River Estuary Management Program, 1994). The agencies participating in the program were not responding to plans; they were reacting to information. The initial interviews revealed several ways that information development had

TABLE 2. Summary statistics and analysis of variance for stakeholders' impressions of support for the FREMP from other constituencies.

Survey question	Mean[a] (No. of responses) Gov.[b]	Ind.	Env.	Total	ANOVA F value P value	Significant differences between groups[c]
Support for the FREMP What is your impression of support for the FREMP from this group?						
Government agencies	2.69 (43)	1.94 (17)	3.52 (21)	2.75 (81)	5.62 0.01	Env. respondents differ from Ind.
Commercial fishing industry	4.10 (40)	4.07 (14)	5.22 (18)	4.37 (72)	4.25 0.02	Env. respondents differ from Ind.
Forestry, manufacturing, and other industries	4.26 (41)	4.05 (18)	4.16 (18)	4.19 (77)	0.10 0.89	No significant differences
Environment and conservation groups	3.30 (42)	2.05 (17)	4.95 (21)	3.47 (80)	15.38 0.00	Ind. respondents differ from Env. and Gov. and Env. differ from Ind. and Gov.
General public	4.09 (42)	3.37 (16)	5.42 (21)	4.30 (79)	11.57 0.00	Env. respondents differ from Gov. and Ind.
Politicians	3.47 (42)	2.53 (15)	3.38 (21)	3.26 (78)	2.28 0.10	No significant differences

Notes:
a. Scale for group mean = very high 1 2 3 4 5 6 7 very low
b. Gov. = government; Ind. = industry and business; Env. = environment and conservation groups
c. Where the ANOVA indicates a significant difference, a Scheffe test was used to identify which groups differed significantly; the confidence level was 0.05.

affected the way agency participants viewed the state of the river (see Table 3). When they were asked about program impacts and outcomes, there were two common response themes: "information and data"(first and second items), and "integrated decision making"(third and fourth items). Specifically, agency stakeholders stated that for the first time data collection was being conducted in an integrated and consistent manner and in a way that made trends more readily observable. They also suggested that ongoing information allowed them to adjust operating practices and tune implementation approaches to address emerging problems. In this context, ongoing planning and resource management activities reacted to information.

Interviews with agencies indicated that the program's information function does affect change among government participants (see Table 3). Though the process is not binding on agencies, the communicative action embodied in discussion, agreeing on common problem interpretations, and developing common responses to new information affected the policy result. As uncertainty declined about the state of water quality, agency actions gradually began to focus on those areas requiring attention—especially water quality and habitat conservation. Interview comments were particularly clear about such influences.

The penultimate *Estuary Management Plan* (Fraser River Estuary Management Program, 1994) contains examples where the program response to issues is explained by ongoing measures or activities already initiated (for example, water and waste management, recreation planning, and links to municipal plans). But NGO stakeholders did not identify these as areas of program success or initiative. Instead they wanted to see regulations and clear demonstrations of environmental improvement. And, as the results discussed above show, there is a dichotomy (between government and industry, and environment/conservation groups) in how stakeholders view the program and its impact with respect to participation. The dichotomy is also observed

TABLE 3. Content analysis of themes in interviews relating to information and participation.

Theme	No. of respondents mentioning theme (N=28)
The program has improved data collection (water quality and habitat).	26
The program has improved information sharing between agencies.	23
The FREMP has improved integrated planning/decision making.	23
The FREMP has improved consensus building among agencies.	22
Information/data gathered through the FREMP affects the way my agency acts.	17
The FREMP has made agencies more aware of multiple-use demands.	17
The public has influenced the program through planning workshops and consultation on individual issues.	15
My interaction in the FREMP is affected by the participation the programs developed by the agency I work for.	14
The FREMP has enhanced public participation in estuary management.	7

in how stakeholders rate program impacts and environmental quality (Hanna, 1999). This is a problem for the FREMP and the model it represents. Until 1997 there was no standing committee that incorporated public representation, and though data was readily available to NGO interests, it was usually presented in a technical form with little interpretation. The transfer of information from the agency realm to the public realm was sporadic, and the form of communication was not wholly accessible. The interviews and the survey showed that NGO stakeholders believe that public reporting is inadequate, and that, indeed, this is one of the program's key weaknesses.

During interviews, NGO representatives said that there should be a "state of the estuary report" that clearly indicates what the status of water quality and habitat is and what trends are being observed. The FREMP (1996) subsequently provided a comprehensive report that includes nontechnical components summarizing environmental quality.[10] However, a question in any reporting process is "What is the purpose of the report?" If the objective is to inform stakeholders about program activities, environmental quality, or emerging issues, then participation might be enhanced by giving participants a better knowledge base for critique. But if the objective is primarily to persuade stakeholders about the management approach, then the agency may be providing only a token response to participation, and might be attempting to co-opt nonagency interests.

The "state of the estuary report" synthesizes a collection of technical narratives. The tone is largely matter-of-fact, and few links are made between environmental change and the specific activities of agencies. On one level the report's format and style suggest that the intent is to ease concerns about environmental quality by summarizing data showing a decline or stabilization in selected contaminants. In this context the approach has the appearance of persuasion. However, the report also provides access to a collection of material that was previously inaccessible, not because the documents were not distributed outside government, but because they often lacked the interpretation and synthesis needed to make them accessible to a broad audience. Though such reporting can enhance the influence of program-generated information, it remains to be seen if better access to information will change nongovernmental stakeholders' attitudes about how the estuary should be managed and how uses should be accommodated. These elements can be affected by information, but in order for that to happen the program may require a stronger participatory emphasis, one that goes beyond enhanced reporting.

Participation by proxy. Measuring the impact of secondary participation is difficult. The influence is indirect and participants may not initially recognize its influence and potential for affecting the decision-making process. Influence may be exercised through indirect venues that in turn influence, or are used by, agency stakeholders. Though stakeholders see opportunities for direct participation in the FREMP as being quite limited, there is also a perception that indirect participation venues influence the program. Government and NGO stakeholders identified participation by proxy as a source of influence. In interviews, agency respondents noted that the participation programs operated by their organization affected the way that they acted through the FREMP (see Table 3, 8th item). Though in interviews NGO participants criticized the FREMP's approach to participation, they commented that they took part in participation programs organized by the agencies.

The role of indirect participation was also reinforced in the survey responses. There were 27 written comments on the importance and influence of non-FREMP participation programs (19 comments by agency stakeholders and 8 by NGOs; the majority of these comments [20] were appended to questions about participation opportunities). The image of information transfer is also embedded within these comments. Seven government respondents noted that not only was the water quality and habitat information developed in the FREMP process being used in their planning activities, it was also being used to "inform" their participation programs. Environmental data gathering facilitated through the FREMP was used by agencies to explain why specific actions were being taken. New applications of knowledge, such as habitat coding, became the identifying characteristics of some aspects of the planning process, not only for agency stakeholders but also for NGOs. Indeed, in the interviews all NGO participants mentioned the habitat coding system used to guide development, and their knowledge of its development and application was derived not so much from interaction with the FREMP as it was from interaction with other agency fora.

The interviews and survey also suggest that while the role of government participation may be conspicuous, the influence of NGO stakeholders is more complex, and in this context NGO influence often seems to be exercised by proxy. But there are real limitations to participation by proxy. Such influence may be filtered by agencies (distorted purposively and/or altered by the process of transfer). The FREMP's participation approach is far from perfect, but the influence of participation is not wholly absent. Agency representatives are exposed to the views and needs of NGOs though alternate venues, and NGOs interested in the FREMP's activities are accessing these venues.

Conclusions: Implications for Research and Practice

The measurement of policy success often centres on clear indicators such as the physical effect of a capital project, the very explicit integration of NGOs into a process, or obvious cause-effect criteria. But the influence of participation and information in planning is more problematic. Each element has the capacity to affect change in the way policy actors function within a process, and often this change begins before the final decision, or the final plan, is announced. Measuring the influence of participation by proxy is difficult, but it is an important concept in the planning community and requires more research. The measurement of planning influence requires attention to the subtle role of information and the less direct ways that participation influences not only the process, but how it influences participants. In practice, the axiom presented here is that despite a program's success in achieving its specific goals and objectives, dialogue is essential to communicating efficiently and for ensuring that NGO stakeholders understand in an explicit way how their concerns affect the process.

In planning practice, the role and influence of information and indirect participation cannot be undervalued. Consensus building among agencies and NGOs also requires broad access to information. In this case study, the role of NGO stakeholders is less direct; though there is evidence that the views and demands of NGOs have been transferred by proxy to the process—not a form that is readily obvious nor necessarily preferred. Until the impacts of the program are better communicated to NGO stakeholders, support for the integrated approach taken by the FREMP will remain strongest among government agencies. The work supports the idea in planning theory that information has a transformative function that can affect perceptions in advance of a decision and impacts planning systems at all levels and stages. Dichotomies in opinions of program success and performance may also be linked to information access, and participation by proxy can be an important source of influence in planning processes.

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NOTES

1. This depends on the growth scenario. Some predictions are more conservative and see the region's population remaining below 2 million. Given the recent dramatic decline in British Columbia's economy, the commonly accepted high-growth scenario should be reconsidered.
2. A provincial growth strategy has been initiated, but its implementation is at a relatively early stage and may not demonstrate a notable impact on the estuary region's growth rate or form for some time. See Hanna (1997) for a critique and description of British Columbia's Agricultural Land Reserve.
3. The options suggested included the creation of a super agency, a committee approach based on consensus in decision making, and a lead agency framework where specific agencies lead decision making depending on the issue. The FREMP combines elements of the last two options.

4. This was emphasized in presurvey interviews.
5. Expressed in interviews with government agency stakeholders.
6. The participant population is composed of those who actively participate in the program.
7. The survey forms were tracked by type of job, agency, organization, and interests to create a profile of those who had responded. Based on this profile, a second mailing was sent only to the nonrespondents. A second mailing is a tool used frequently in surveys to help address nonresponse bias and increase a response rate (Burt & Barber, 1996).
8. Reporting in this context refers to the dissemination of data and environmental quality measures to NGO venues.
9. The view by stakeholder groups that others have more influence, or too much influence, is sometimes interpreted as evidence of appropriate agency action (for example, see Culhane, 1981).
10. Released after the survey was conducted.

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