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The Troubling Logic of Inclusivity in Environmental Consultations

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Abstract

Inclusivity is widely considered a requirement of defensible environmental risk consultations and is often either mandated or recommended to help ensure attention to stakeholders' diverse views. Experience suggests the opposite: the emphasis on an inclusive consultation process often makes it impossible for decision makers to listen carefully to stakeholders and for citizens' views to influence the design and choice of proposed actions. This paper briefly reviews the promise of environmental risk consultations before outlining several of the more serious problems associated with an emphasis on inclusivity: long lists of undifferentiated concerns, facts tainted by stakeholders' perspectives and worldviews, little access to clarifying dialogue or tests of expertise, few opportunities to scrutinize knowledge quality, avoidance of controversial issues, and an overwhelming abundance of information. As a result, the promotion of inclusivity often serves as a convenient excuse for decision makers to silence citizens by substituting quantity for quality, breadth for depth, and an adversarial approach for dialogue and informed understanding.

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This paper examines the logic of inclusivity in environmental risk assessments and public consultations convened to examine the impacts of past, current, or proposed human actions. The usual assumption is that inclusivity in environmental consultations is always good; the associated prescription is to identify the full range of potentially affected parties and experts, learn about their concerns regarding the consequences of actions, and then determine—perhaps after the inclusion of mitigation or compensation—the overall costs and benefits of an initiative.

Reliance on inclusive consultation processes for larger development projects is common in modern democratic societies, ostensibly to ensure that the voices of potentially affected citizens are heard and can influence the choices and actions of government and industry. Robert Dahl (1989), for example, has proposed "effective participation" as one of five criteria for any democratic process, stating that " ... citizens ought to have an adequate opportunity, and an equal opportunity, for expressing their preferences ... [and] for placing questions on the agenda ... " (p. 109) This belief leads to the hiring of extra staff, consultants, or facilitators to obtain input about a proposed initiative from hundreds or thousands of potentially affected individuals and groups, resulting in a massive amount of information that is claimed as evidence of consultation success.

Following this same logic, environmental regulations in many countries require that public participation efforts for large projects have an open door, inclusive mandate. Yet for major environmental initiatives, the quantity of stakeholder input is mistakenly considered to be a proxy for consultation quality. Unless other, more detailed efforts are also undertaken, the identification of inclusivity as a fundamental objective typically ensures that stakeholders are unable to articulate their concerns, experts are unable to clarify relevant facts, and decision makers are unable to organize or understand citizens' input. The result is that society misses out on what it ostensibly seeks to achieve.

The presumed impetus for inclusivity is understandable: for the best of reasons, decision makers may want an overall picture of how citizens feel and seek to understand which individuals and groups are likely to either support or oppose proposed initiatives. Other consequences of the reliance on inclusive public processes by government and industry, however, are less benign.

When hundreds or thousands of stakeholders are asked to (a) speak before a panel for ten to fifteen minutes, (b) submit short written statements to a government body, or (c) participate as representatives of identified interests, then the invitation contains an implicit request to be either superficial or one-dimensional. Collecting all this information, again in the interest of establishing an inclusive process, leads to the "failures" identified in this paper: substituting long lists of undifferentiated concerns for concise summaries of clearly articulated values at risk, including facts tainted by stakeholders' perspectives and worldviews, permitting little access to clarifying dialogue or tests of expertise, and providing few opportunities to scrutinize knowledge quality. Important issues thus remain either undefined or ambiguous, allowing decision makers to step in and impose assessments that reflect their own values and trade-offs, articulate the overall balance between benefits and costs, and control the presentation of results. Due to capacity constraints, there is often insufficient time, money, and expertise for stakeholders to evaluate the impacts of actions on their fundamental concerns or to think about ways to reduce adverse consequences, which leaves only court proceedings as a possible (albeit very expensive) option for "buying time" to reexamine an initial analysis. Thus, the contract with citizens is false: government and industry proclaim "Speak to us," but are not able to pay attention to what stakeholders say because they are overwhelmed with what hundreds or thousands of people and groups are telling them.

Examples abound: national consultations in the United States and Canada about the pros and cons of the Keystone and Northern Gateway pipeline proposals, municipal decision processes concerning road construction or residential developments in natural areas, and state or provincial consultations about protection of threatened and endangered species. Each of these situations typically involves the well-intentioned time, energy, and commitment of thousands of citizens, hundreds of research scientists, and (generally) a small army of lawyers and non-governmental organizations (NGOs), all hoping that their views and opinions will help to shape those of decision makers. In far too many cases, however, the end result for public stakeholders, proponents, and citizens is frustration, dissatisfaction, and a feeling of not having been heard. From the standpoint of society at large, these failures of inclusive participatory processes lead to the selection of inferior actions and waste taxpayers' money, create conflicts across different groups, erode trust in elected decision makers, and generally reduce the opportunity for diverse perspectives to be presented and discussed in an orderly and constructive fashion (Stern and Fineberg 1996; US Environmental Protection Agency 2009).

Decision makers often justify citizens' dashed expectations with references to "the public interest" and the complexities of a multisided environmental choice. Stakeholders—used here as a general term to refer to individuals or groups, including Aboriginal participants or others with special constitutional rights, who may be affected by a natural resource development—often seek to explain their frustration and lack of influence as evidence of corporate greed or government dictatorship. These explanations stem from a diversity of factors and are, at times, appropriate. Yet the disappointment and marginalization of many stakeholders who become involved in environmental reviews and resource impact assessments is also the predictable result of a flawed decision-making process, one that uses the announced goal of inclusivity to substitute quantity for quality, breadth for depth, labeling for listening, and an adversarial approach for dialogue and informed understanding.

The Broken Promise of Environmental Risk Consultations

Environmental risk consultations, as undertaken in North America, share three main elements: ground rules for deciding who comes to the table and under what terms, procedures for helping participants to discuss the problem and develop an informed understanding, and rules for aggregating individual perspectives as part of an overall evaluation process (Gregory, Fischhoff, and McDaniels 2005). The specifics vary greatly across the many different decision contexts and consultation approaches, but these three elements typically form the backbone of the informal or formal contract between participants and decision makers.

The benefits of inclusive environmental (and other public) risk consultations have been discussed in numerous documents, including reports by the US National Research Council (Stern and Fineberg 1996), the Canadian Standards Association (1997), and the US Presidential/Congressional Commission on Risk (1997), as well as influential books (Renn, Webler, and Wiedemann 1995; Dietz and Stern 2008) and papers (Chess and Purcell 1999; Rowe and Frewer 2000; Beierle 2002). These publications advance inclusivity as one of several guiding principles (along with transparency, respectfulness, etc.) and share similar advice that includes involving citizens early and in ways that are meaningful, bringing in technical experts to address factual issues, presenting information in ways that everyone understands, and incorporating new learning as part of management strategies. Yet they also share a notable lack of specific suggestions as to whether

supplementary, more targeted input is needed and the terms under which dialogue will take place (e.g., who should be involved and over what period of time? Should stakeholders have a voice in selection of a consultation approach? How should objectives be defined and operationalized?) as well as a surprising reluctance to clearly define key terms (e.g., what does it mean, at a practical level, to engage in a "meaningful" or "transparent" consultation or to "incorporate" local knowledge?). As a result, there is ample room for consultants, government regulators, and facilitators to claim they are following sensible consultation practices without necessarily adhering to established standards or obtaining agreement from citizens engaged in the supposedly successful communication (Gregory, Fischhoff, and McDaniels 2005).

Informed deliberations are central to both risk consultations and democratic societies. To be successful, participants need to access and articulate their own opinions based on an accurate understanding of reality. If these conditions were always met, then the task of an analyst or facilitator leading a risk assessment process would be straightforward: create a safe environment in which people can meet and deliberate and, when necessary, provide help to access missing information. Unfortunately, these conditions are rarely met; people seldom know exactly what they think concerning complicated questions of public policy, and some portion of the available information concerning outcomes is likely to be either erroneous or conflicting. Analysts can help with these issues by assisting people to think through tough problems and by bringing in appropriate experts on factual matters about which participants may be ignorant or confused (Stern and Fineberg 1996). These topics have been discussed in numerous publications (Renn, Webler, and Wiedemann 1995; Dietz and Stern 2008) and are central to the arguments presented in the next section of this paper. Four issues are highlighted because they help set a context for the subsequent discussion of problems associated with inclusivity.

First, although regulations often require extensive hearings on alternative actions or input from inclusive public consultation sessions, little normative guidance typically is available to help in the selection of a detailed deliberative approach. As a result, it remains largely up to the decision makers to decide which stakeholders will participate, the ground rules for deliberation, whether people will be paid for their time and/or travel, and the period over which discussions are expected to occur—two days? a month? once each week for a full year? Far too often, the design of consultative processes appears to depend more on improvisation than on defensible criteria (Rossi 1997) and confuses means for ends: the assumption

appears to be that if stakeholder involvement is viewed as the way to provide decision makers with information about relevant issues, then surely more participation will only lead to more data and better informed policies (Kweit and Kweit 1987).

Whatever process is followed, an important concern is the relative weight placed on input from different individuals or groups. The procedure commonly used in large-scale inclusive consultations and quasi-judicial review panels is for evidence to be collected, organized, and weighed by the decision makers and their chosen staff; a good example is the 2013-2014 hearings into the proposed Northern Gateway bitumen pipeline in Canada, which ended with citizens waiting for months while 209 recommendations were assembled behind closed doors. This procedure encouraged the perception, if not the actuality, of bias in that a less-than-transparent process was used to perform the key tasks of grading information as higher or lower in quality and as more or less relevant. In contrast, the best of environmental consultations allow participants themselves to weight their expressed concerns and to revise their stated values in light of others' views (Gregory et al. 2012; Pidgeon et al. 2014).

Second, many current consultation processes encourage, rather than discourage, adversarial interactions among participants. This is particularly true whenever individuals or groups are permitted only ten to fifteen minutes as part of an inclusive risk consultation process to speak before a panel or one to two pages to summarize their concerns. In such cases, a rational response is to focus on a single identifying interest: a local small business owner will speak to regional economic impacts or a sports fisherman will speak to fisheries impacts. However, this transforms a multidimensional individual or group into a single-dimensional perspective—in addition to other concerns, anglers care about jobs and business people also care about the environment—and encourages an emphasis on differences among participants rather than similarities. As a result, consultations become needlessly adversarial, leading to polarization rather than an understanding of different perspectives (Sunstein 2000). And because people are speaking to interests rather than impacts, what gets lost is the important distinction between significant changes associated with the action(s) under consideration and general concerns that, for the actions under review, will be affected only slightly or not at all. As a result, time and resources can be wasted on irrelevant concerns that, for the specific initiative under consideration, do not merit attention.

Third, the meaning of an ''informed dialogue'' with stakeholders remains controversial (Fischhoff 1991). A rationalist perspective, such as

that outlined by practitioners of cost–benefit analysis (Freeman 2003) and other monetary-based approaches, emphasizes the role of experts in identifying key values at risk and translating these impacts into a single metric, with separate accounts reserved for a variety of "intangible" considerations. A behavioral perspective, such as that followed by practitioners of structured decision-making (Gregory et al. 2012) and other methods that build on findings from psychology and negotiations, emphasizes the need for adopting multiple metrics and the importance of incorporating both fast (intuitive and automatic) and slow (cognitive and deliberative) thinking, along the lines outlined by Kahneman (2011) and other researchers. Differences in these approaches extend not only to how values are identified and the starting point for discussions among participants but also to their scope, in terms of the diverse expressions of economic, environmental, health, social, or cultural impacts of the actions under consideration that merit inclusion as part of deliberations and analyses (Turner et al. 2008).

Where one is positioned with reference to an informed dialogue says a great deal about the preferred type of environmental risk assessment process. If the assumption is that everyone is fully informed and rational and knows their own preferences, then resource development decisions could be made using a simple voting process (assuming that high rates of voter turnout would be ensured). Yet many inclusive environmental consultations are characterized by information asymmetries, where some parties—often intentionally—have access to better information than others (Akerlof 1970). If people are missing key facts or if some of the questions asked of them are neither cognitively nor emotionally tractable, then a conventional large-scale survey or voting procedure will produce meaningless results (Fischhoff 2005; Gregory, Satterfield, and Hasell 2016).

A final issue concerns the choice of information sources and the treatment of uncertainty. Any case that involves the prediction of impacts over time will include substantial uncertainty about the anticipated future economic, environmental, and social effects. As a result, one of the tasks facing analysts and facilitators is to help participants recognize accurate, as opposed to biased, sources of information. Although lively debates typically ensue with reference to the definition and selection of experts and the relevance of different types of expertise (Burgman et al. 2011), rarely are procedures outlined in advance for dealing with their inevitable disagreements or for deciding how disputes will be examined and reported. Only in rare cases are expert disagreements correctly viewed as either (a) a diagnostic that the questions being posed remain vague and ambiguous, in which case diverse answers are to be expected (Poulton 1977) or (b) a

source of important insights that should further be explored, for example, using techniques such as expert judgment elicitations (Morgan 2014). And even if the selected experts generally agree, it is important that they clearly articulate both what they know (in terms understood by participants) and what they don't know, thereby characterizing their level of confidence in the expressed factual evidence (Morgan and Henrion 1990).

In light of these concerns about the theory and conduct of environmental consultations, many decision makers tasked with overseeing large-scale environmental impact assessments take what might be seen as the ''easy'' route and opt for regulations and procedures that promise an inclusive procedure—spending months or years on the topic, getting input from hundreds or thousands of people who might be affected, inviting numerous experts to be involved and amassing a daunting amount of information, and finally releasing a report of hundreds or thousands of pages (with further access keyed to numerous background documents). Despite its initial appeal, an ''inclusive'' approach is rarely what the name suggests; instead, it typically denies both access and relevant information to citizens and permits decision makers to hold all the power, overwhelming the common sense, resources, and energies of their constituents.

The Trouble with Inclusivity

Based on theory as well as practice, inclusivity—seemingly such a good and common sense prescription for environmental risk consultations—is a contributing explanation for the repeated occurrence of a variety of undesirable results. Of course, consultations that emphasize principles other than inclusiveness also can go awry, for a variety of reasons that include a mismatch between the personalities of decision makers or analysts and key stakeholders. And inclusivity is typically a matter of degree, with many consultations being multilayered processes that exhibit some combination of town hall, Internet, small or large group, survey, and one-on-one opportunities for participation (Pidgeon et al. 2014). With these reminders as caveats, this section identifies and discusses six of the more serious problems that, to a large degree, derive from a misplaced focus on inclusivity as a fundamental goal of environmental risk consultations.

Failure to Identify the Fundamental Values at Risk

One of the principal tasks facing any assessment of environmental effects is to identify the associated benefits, costs, and risks in relation to

stakeholders' values or concerns. The problem with a desire to be inclusive—which then guides attempts to evaluate concerns as part of a risk consultation process—is that the expressed impact set quickly grows to be very large, composed of tens or hundreds of items. As one example, the fracking study Pathways to Dialogue (Krupnick, Gordon, and Olmstead 2013) came up with 264 different risks to examine; this suggests the existence of problems but fails to provide guidance as to the structure or sequence of next steps in the risk-assessment or risk-management process. Inclusivity can even become a source of pride, so that those in charge of the environmental review proudly request extra time on the basis of having (literally) rooms or warehouses full of information. A successful environmental consultation, in contrast, will collect and organize and structure information so that it leads to a better understanding of the nature and likelihood of those changes most significant to stakeholders and, in turn, to the generation of better risk mitigation alternatives. Having so much information that it becomes overwhelming is a sign of poor organization, not thorough analysis: an excess of information represents a misalignment of resources and purpose.

The cure is twofold. First, people should be helped to think through and clearly articulate their fundamental concerns. In situations where the problem context involves novel risks or unfamiliar decision processes, then peoples' values are unlikely to be fully formed and their choices will reflect the various cues that are provided along with their understanding of what is being asked of them. This finding reflects the well-known concept of constructed preferences (Lichtenstein and Slovic 2006), which suggests that the context within which risk policy choices are (intentionally or unintentionally) framed can strongly influence peoples' responses.

An important related task is to distinguish between values that are means, such as better nutrition, and ends, such as better health (Keeney 1992). Clarifying the relationship among different values-based components can help ensure that similar information resides together and can readily be compared or integrated; this organizing function collects all concerns relating to a general category of objectives (e.g., environmental, economic, social) in one place and searches for redundancies or double counting. Figure 1 presents an illustrative example of organizing social concerns using a values hierarchy: the left-hand column presents concerns as articulated by participants, with columns to the right showing how analysts helped to organize these into a smaller number of headings and then into fundamental objectives. Guiding questions would include whether (as inputs to family) "food" and "nutrition" have the same meaning, or (as

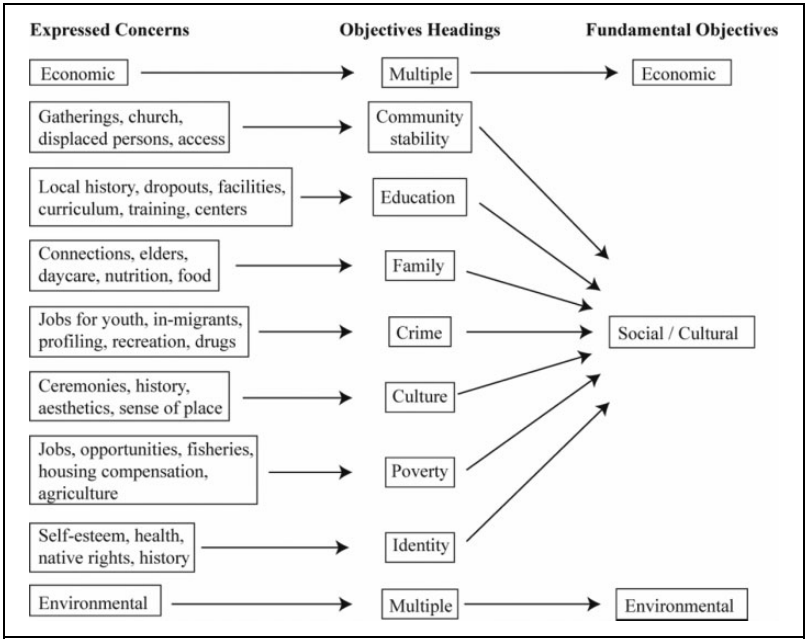

Figure 1. Illustrative (partial) values hierarchy.

inputs to education) whether "facilities" and "centers" are synonymous. Without this clarifying discussion, it is impossible to determine the degree to which concerns are shared among stakeholders or to track changes in impact levels over time, both important goals of an impacts assessment.

As Figure 1 demonstrates, the problem is not inclusivity per se; rather, it is being content with the initial results of a listening- or concerns-articulation process and not further organizing the information so that it becomes more accessible to decision makers. As part of preparing for a multistakeholder environmental impact assessment (EIA), for example, Gregory and Keeney (1994, 1,039) describe first asking each participant to "take 5–10 minutes to write down everything he or she believed to be important for consideration" but then continuing on to " . . . a probing discussion of the reasons why an objective appeared on someone's list." This further structuring—distinguishing means and ends objectives, highlighting redundancies, eliminating irrelevant concerns—reorganized the initial list of over 100 considerations into five major headings that included three common objectives (economic, social, environmental) and two others

(political, international prestige) particularly important for the problem context. Elected officials and participants reported that this "binning" was helpful because it replaced the confusion of an all-inclusive mix of concerns with the clarity provided by focusing discussions on a much smaller number of fundamental considerations.

A second point is that simple weighting and prioritization techniques can permit stakeholders to help set management and action priorities among their stated concerns rather than passing this essential task off to decision makers. Professional staff has an important role to play in determining the more significant impacts, in collecting and assessing relevant data, and in allocating resources across a variety of competing evaluation tasks. Yet so do the expert or public participants, using a range of techniques—largely drawn from negotiation analysis and the decision sciences (Raiffa 2002; Clemen and Reilly 2004)—that include value hierarchies, influence diagrams, and swing weights (von Winterfeldt and Edwards 1986). Otherwise, it is inevitable that important considerations will be overlooked: the desire to be inclusive places so much on the table that ad hoc or closed-door processes cannot help but obscure important items and bury highly significant considerations alongside others that are either of minor significance or completely irrelevant to the problem at hand. As noted by Rossi (1997, 216), as a result " ... the task of sifting bad from good information may be burdensome or, far worse, bad information may drive out the good."

Knowing stakeholders' priorities guarantees neither a smooth deliberative process nor a consensus outcome. Because these are values-based choices, often reflecting differences in risk tolerance, decision makers, and stakeholders may well disagree about the focus of impact assessment and mitigation efforts. However, in such cases, a comparison of stated priorities should provide the basis for further dialogue and insight. Clarifying stakeholder priorities also can function as a constraint on outside political pressures (Gregory, McDaniels, and Fields 2001); few decision makers will want to override the priority recommendations of an articulate and well-informed advisory committee of stakeholders.

Failure to Disentangle Facts from Values

The general lack of structure that accompanies a desire to be inclusive can result in the presentation of supposedly objective factual information that, in actuality, is suspect due to the intentions of its source. As one example, many resource development projects are introduced with great fanfare and promise because of the large number of future jobs said to be provided; a

case in point is incentives being provided to the liquefied natural gas (LNG) industry in British Columbia, Canada, where in July 2013 the provincial premier promised "100,000 new jobs in the province over 30 years from all the [LNG] projects" if swift approvals were forthcoming. Based on these proclamations, many citizens assumed that a boost in provincial employment would be one of the beneficial effects of accelerated natural resource development. Yet to cite "jobs" (whether 100,000 or, as now appears more likely, less than 1,000) as an important value is meaningless, or (worse) intentionally misleading, unless information also is provided about assumptions underlying the calculation (e.g., future energy prices and generation alternatives) along with the type and number of jobs (seasonal or full-time?), a description of who the new workers will be (local residents or in-migrants?), the expected longevity of the positions (six months or twenty years?), and whether other jobs might be lost in order to provide for these new opportunities (i.e., distinguishing "net" from "gross" impacts).

The superficiality of inclusive processes encourages a reliance on the emotional content of a benefits category such as "jobs"—a system 1 automatic or emotional response—rather than also bringing in system 2's more deliberative and thoughtful response (Kahneman 2011). Because it provides neither time nor resources to encourage informed deliberation, an inclusive process also makes it more difficult for either stakeholders or decision makers to make sense of sharp differences in opinion with regard to the interpretation of facts. In the case of large fossil-fuel developments such as LNG plants, for example, what one person sees as the source of an "economic benefit" another may view as "undesirable growth." These differences in perspective are typically not amenable to scientific input and, in many cases, should not be: science can help get the facts right but ultimately whether a suite of impacts is considered, on balance, either "good" or "bad" is a question of values—a proper topic for dialogue, but one about which science is moot (von Winterfeldt 2013).

Failure to Agree on Expertise

Technical experts are part of any environmental review or impact assessment process, whether as authors of background studies and reports, as consultants, or (in the case of review panels and litigation) as expert witnesses. In most cases, experts are viewed as having substantive and specialized knowledge of the facts relevant to the decision context (Burgman 2016). This is generally sensible, although several characteristics of

inclusive processes mean that invited experts often contribute only limited insights or clarification.

A first concern is that the different participants in an inclusive process are likely to advocate on behalf of their own trusted experts. As a result, a consultation process seeking to be inclusive can involve testimonies from hundreds of so-called experts, each selected by a different stakeholder and each with their own credentials, training, and perspective. In contrast to more structured decision processes, which encourage experts to signal and examine their areas of agreement and disagreement, most inclusive processes provide little opportunity to resolve disputes because there is no official forum for deliberation among the different experts. For example, few inclusive processes take advantage of approaches such as expert judgment elicitations (Morgan 2014), which provide opportunities for experts with different perspectives on a problem to compare the assumptions and reasoning behind their assessments and then to make revisions based on new information and learning.

A second concern is that the expertise of many so-called experts may be highly questionable, at least in the decision context in which it is being provided (Burgman et al. 2011). The purpose of an individual's testimony is to provide an informed opinion, often involving predictions or forecasts; this requires that the expert be knowledgeable about the specific issue under consideration and assess accurately their confidence in the information they provide. Yet not every expert is either this thoughtful or this humble, and not every expert will be comfortable explaining their thinking and examining their assumptions in front of others. Providing useful judgments requires a distinct set of skills: someone who knows how to bake a cake may not be the right person to help predict the number of cakes that will be baked over the next fifteen years in a specified metropolitan area. Establishing criteria for experts' involvement can be done but the more inclusive the consultation process, the lower the bar that is likely to be set and the greater the opportunity for conflicting or irrelevant advice (as many Internet users—a famously inclusive consultation site—will testify).

Lack of Criteria for Assessing Knowledge Quality

A process that is inclusive will assemble large amounts of data perceived as factual, based on the literature or testimonies from concerned parties. With many groups and individuals participating (thousands, in some cases), too little attention typically is given to the source of the information, its quality, or the basis for its appeal. For example, information from a scientist may be

closely listened to by some participants and ignored by others; similarly, information from local knowledge holders or resource users (e.g., farmers or hunters) may be considered reliable by some and ignored by others. Consider the testimony of two experts with respect to the long-term ecological effects of a proposed mining development: one is a widely published academic from a university in another country and the other is an elder from a nearby native community. Without criteria to assess knowledge relevance or quality, the reception given to the testimony of either individual will largely reflect the experience, personality, and biases of the listener.

Yet for most public risk problems, there are legitimately many different ways of knowing and a range of so-called experts. Only if criteria are in place can the desire for a level playing field mean that all knowledge sources are subjected to the same level of scrutiny by asking questions such as: what are the individual's qualifications for this task? Are there reasons (e.g., employment history) to anticipate motivational or other biases? Over what time period and with what degree of accuracy have the observations been made? (Failing, Gregory, and Harstone 2007). The implementation of such knowledge quality criteria violates the goal of inclusivity but can help to exclude biased experts and reduce inaccurate information, resulting in better data for the assessment and a more streamlined, efficient consultation process.

Failure to Address Contentious Issues

If a primary goal of an assessment and consultation process is to be inclusive, then it is likely that the process will fail to address many of the more fundamental concerns raised by stakeholders. The reason is simple: in order for the process to involve and satisfy a broad spectrum of people, who likely differ in their definitions of a problem's scope and in their favored information sources, it will be necessary to avoid many of the more contentious, emotional, or controversial aspects of the decision: oil pipeline consultations are told to ignore climate change, and nuclear plant sitings are instructed to ignore waste storage issues. In the usual case, troublesome topics will be set aside and considered at a later date, either as part of a subsequent process or a different forum. Even if an attempt is made to address some of the more contentious issues, their purported "resolution" typically will be at a high enough level that different stakeholders are able to see what they want to see in the suggested solution. This is the typical usage, for example, of terms such as "sustainable actions" or strategies "in the public interest"—it's easy for disparate stakeholders to agree that

outcomes should be sustainable and serve the public, but it's likely to be difficult for these same stakeholders to agree on exactly what these vague descriptors really mean.

If a decision maker receives only the information that all members of an advisory committee support a high-level criteria—for example, that more sustainability or transparency is preferred to less—then he or she still has the unenviable task of crafting an action that supposedly embodies this concern. In contrast, if the deliberative process is able to pass on detailed information about how each alternative is rated in terms of the more contentious concerns—a level of detail that typically is impossible as part of a more inclusive process—then the decision maker has gained access to knowledge that allows for proposing a specific action with foreknowledge of how it will be received by different parties or how to modify it to enhance (if positive) or reduce (if negative) the expected reactions of stakeholders. The point is not that agreement on principles is unimportant, since it is often a necessary starting point for risk assessments and negotiations. Rather, a statement of principles is only a start and it is ultimately up to the stakeholders, and not the decision makers alone, to either agree to or reject a specific action that is supposed to be in line with more general principles.

Avoidance of contentious issues often occurs when there are emotional reactions to a proposed action or when moral and ethical concerns arise in the context of social, cultural, or health considerations associated with a predicted change (Roeser, Sabine, and Pesch 2016). Nearly every environmental assessment refers to these more "intangible" values as being important, but they are often excluded from summary analyses because of presumed measurement difficulties or, in other cases, confined to a separate document (e.g., focusing on community health or traditional resource uses), which often results in their omission from the overall project analysis (Turner et al. 2008). A focus on inclusivity contributes to their omission because methods for eliciting and incorporating changes to social and cultural values depend on in-depth and interactive discussions (e.g., between analysts and community members) that require both time and trust (Gregory et al. 2012; Satterfield et al. 2013).

A focus on inclusivity and breadth also means there will be fewer opportunities to develop trusting relationships between leaders of the consultative process and potentially affected stakeholders or community members, which in turn can increase participants' reluctance to articulate impact concerns thought to be of questionable legitimacy. In the context of decisions at a managed river, for example, community members were at first reluctant to raise concerns stemming from flow-related changes in the

"smell and sound" of the river. Only after multiple discussions was this important concern brought into the formal comparison of management alternatives (Failing, Gregory, and Harstone 2007). Other types of frequently hidden concerns involve anticipated changes in lifestyles (e.g., due to new employment opportunities), changes to political relationships within a community (e.g., actions favoring one family group over another), or threats to the continuation of traditional harvesting practices (because locations often are kept confidential). In the absence of a trusting relationship, these contentious issues are less likely to be shared with analysts or other group members and, as a result, less likely to help shape analyses and decisions.

Lack of Capacity for Full Participation

At some point, each of the potentially affected participants (e.g., community residents, industry, Tribes or Indian bands, federal government agencies) is tasked with reviewing all the information and recommendations gathered as part of the risk assessment process and making sense of impacts in terms of its own values and priorities. If the materials are intended to be "inclusive," resulting in a large volume of studies and typically without (as noted in previous sections) clear distinctions being made among the estimated impacts, then the task of reviewing everything—generally within a relatively short time period—from the standpoint of a community's own practices and values can be daunting. As a result, significant impacts may be overlooked or misunderstood due to capacity considerations related to a lack of qualified individuals with sufficient time to undertake the necessary review of large quantities of verbal, visual, qualitative, and quantitative information.

Capacity constraints apply especially in the case of larger or megaprojects—including oil pipelines, large wind farms or transmission lines, and hydroelectric dams—which require careful reviews of reports from multiple agencies and consultants. For smaller groups and communities, or for NGOs and other parties who may lack some of the required skills, this often means a nonstop uphill run at completion of a seemingly never-ending sequence of incoming environmental assessments. It takes time and a combination of factual and values-based knowledge to first review proposed actions in depth and then to suggest ways that positive impacts can be expanded and negative effects curtailed or avoided through mitigation. To the extent that marginalized communities are disproportionately impacted and appropriate resources within these communities already are

claimed by other pressing tasks, then environmental justice considerations suggest that proposed projects are unlikely to be scrutinized sufficiently to identify all possible damages or to incorporate all possible mitigation opportunities (English 2004).

It is true that large review processes can create new capacity with the help of added funding from either industry or government. For example, the establishment of environmental review processes in both North America and Europe clearly has resulted in additional employment opportunities for some community residents as well as outside individuals trained in resource planning, ecology and biology, or environmental economics. Yet the increased volume of resource-based applications also has shifted the emphasis within many government agencies and local communities away from self-generation to a more reactive mode, whereby decisions about future stewardship and development options are framed in reference to opportunities generated by outsiders (referred to by Turner et al. 2013, 563, as "blundering intruders").

Discussion and Recommendations

The understanding of what it means to conduct a successful environmental risk consultation has shifted greatly over recent decades, with increased emphasis now placed by regulators and their contractors on the importance of direct citizen participation and stakeholders' access to documentation submitted by the various participants. This shift has been assisted by the increased use of computer-generated information, which permits tens of thousands of people access to thousands of reports stored on the websites of individuals, government agencies, NGOs, and industry. Yet neither higher numbers of participants nor greater volumes of information will ensure better or more informed decision-making processes. Instead, a defensible risk consultation process needs to meet other important yet typically neglected criteria: providing the necessary structure and resources to help citizens identify and articulate their fundamental values at risk, to become better informed about relevant facts by asking questions of qualified experts, and through both introspection and deliberation to decide which impacts and trade-offs are most important.

This paper argues that making inclusivity a primary focus of public participation efforts undertaken by environmental management agencies comes at a high price: once advanced as a goal of the process then other objectives, explicitly or implicitly, will become less important. And because resources are constrained, there will always exist a tension between

depth and breadth, described nearly two decades ago as " ... a trade-off between participation and deliberation: increased participation comes only at the cost of diminished deliberation" (Rossi 1997, 179).

Thankfully, there are multiple options for conducting environmental risk consultations, ones that could over time shift the focus of regulatory requirements and practices to more in-depth deliberative processes based on principles such as being responsive to stakeholders' key concerns, ensuring that information is both cognitively and emotionally tractable, providing a basis for dialogue and learning among participants, and establishing effective ways to communicate participants' concerns to decision makers (Fishkin and Luskin 2005; Dietz 2013). By shifting the emphasis away from inclusivity, scarce time and resources could be freed to promote deliberations that seek to clarify key stakeholder priorities and identify relevant factual information, with the intent of replacing an adversarial process with one that promotes understanding, dialogue, and (possibly) agreement (Pidgeon et al. 2014). A short list of approaches for successfully conducting environmental risk consultations includes the following efforts, all well described (along with case study specifics) in existing literature and reports:

- Small groups (ten to twenty-five people), consisting of representatives of the different stakeholder perspectives, who meet together six to ten times and use carefully articulated objectives, measures, and value trade-offs to generate and compare management alternatives in terms of their predicted consequences. One example is the multifacility water use plan process in British Columbia, Canada (Failing, Horn, and Higgins 2004; Gregory et al. 2012), organized through a government—industry initiative.
- Multiple groups (e.g., citizen, technical, and special interests), with overall coordination through a centralized management committee that administers and oversees funds based on a consistent program-wide evaluation of actions. The Lake Champlain Basin Program, which coordinates watershed management activities for Lake Champlain in Vermont, New York, and the Province of Quebec, provides a good example (Lake Champlain Steering Committee 2010).
- Interviews and small-group discussions, subsequently informed by results from large-scale surveys. The climate change and national energy system deliberations undertaken in the UK (Corner et al. 2013; Pidgeon et al. 2014) used this multimethod approach to provide guidance to the national government regarding public views toward a preferred future mix of energy generation alternatives.

Our concern is that the emphasis on inclusivity as part of environmental risk consultation guidelines or regulatory requirements will remain an excuse for not really hearing what stakeholders have to say and will continue to permit decision makers to pick and choose those portions of an overall assessment that support their point of view. By including everyone, and by emphasizing breadth of coverage rather than depth of understanding, transparency and control are taken away from citizens and given over to whomever is in charge of the consultation process. Decision makers thus break the promise they have made: put out the effort to tell us what you have to say and we will put in the effort to listen. But they don't, and can't, because by inviting everyone decision makers are able to listen carefully to no one.

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