

# Handbook of Sustainability Assessment

*Edited by*

**Angus Morrison-Saunders**

*Murdoch University, Australia, Research Unit for Environmental Sciences and Management, North West University, South Africa and University of Cambridge Institute for Sustainability Leadership, UK*

**Jenny Pope**

*Integral Sustainability, Australia, Research Unit for Environmental Sciences and Management, North West University, South Africa and University of Cambridge Institute for Sustainability Leadership, UK*

**Alan Bond**

*School of Environmental Science, University of East Anglia, UK and Research Unit for Environmental Sciences and Management, North West University, South Africa*

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## 15. Public participation in sustainability assessment: essential elements, practical challenges and emerging directions

*A. John Sinclair, Alan P. Diduck and Morgan Vespa*

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### 15.1 INTRODUCTION

The literature on public participation in sustainability assessment is in its formative stages, and yet still reveals important patterns, lessons and overarching themes. In this chapter we offer an integrative review (Torraco, 2005), inquiring into essential elements, practical challenges and emerging directions for participation in sustainability assessment. Our starting point is the related and larger literature on participation in environmental assessment. We have conceived of sustainability assessment as an extension of environmental assessment, and therefore view environmental assessment experiences as an excellent entry point. Throughout the chapter we use the word *public* to refer to people and groups who are directly affected by an assessment, along with others who have an interest in the common good and who have important knowledge and concerns. By *participation* we mean active involvement of the public. Reference is also made to *meaningful public participation*. This term describes processes that incorporate a wide range of what we view as the essential elements of participation. These elements are described in section 15.3, and include basic components of participation in environmental assessment and special features we think are required for sustainability assessment. Section 15.4 outlines challenges to achieving meaningful participation in sustainability assessment, and section 15.5 describes emerging directions, including promising research topics and questions. Before turning to these matters, however, the following section summarizes practical and theoretical arguments for the importance of participation in sustainability assessment.

### 15.2 WHY PUBLIC PARTICIPATION IN SUSTAINABILITY ASSESSMENT IS IMPORTANT

A manifestation of the broader deliberative turn in environmental governance seen in much of the world over the last 45 years (Dryzek, 2000) is that public participation has become recognized as a cornerstone of environmental assessment. Grounded in deliberative democracy, collaborative rationality or environmental and natural justice, arguments for participation often make the case that the basic legitimacy and fairness of an environmental assessment are questionable if the assessment and approval process did not provide for meaningful participation (e.g. Petts, 1999b, 2003; Devlin et al., 2005; Morrison-Saunders and Early, 2008; O'Faircheallaigh, 2010; Gibson, 2012; Morgan, 2012; Lawrence, 2013). Further, a robust literature exists on the potential practical

benefits of participation, which include access to local and traditional knowledge and different ethical perspectives, improved planning, assessment and impact prediction, more balanced and informed decision making, and reduced legal and political conflict (e.g. Shepard and Bowler, 1997; Petts, 1999b; Usher, 2000; National Research Council, 2008; O'Faircheallaigh, 2010). Consistent with these points, much environmental assessment legislation around the world establishes public participation, in some form, as a mandatory element of the process (Wood, 2003; Morgan, 2012; Lawrence, 2013).

Echoing the developments in environmental assessment, strong arguments have been made that public participation should be viewed as central to sustainability assessment. Meaningful participation is seen as necessary for the social learning, adaptive capacity and political legitimacy needed for responding to sustainability assessment's inherent complexity (e.g. interactions in dynamic linked social and ecological systems), uncertainty (e.g. the indeterminacy of future generations' needs) and conflict (e.g. differing values at play in trade-off decisions) (see Chapter 1; Gibson, 2006a; Bond et al., 2012). Mathur (2008 et al., p. 607) has gone so far as to suggest that, rather than participation being viewed as a desirable feature of sustainability assessment, sustainability assessment should be seen as a vehicle for facilitating meaningful participation: 'The effectiveness of the assessment then, among other things, depends on the success of the stakeholder dialogue in creating those conditions of dialogue where different opinions are respected, reflection and deliberation take place, power is shared and social learning is facilitated.' Bond et al. (2012, p. 56) also emphasized that, 'in light of the need to take a precautionary and adaptive approach to sustainability, learning is critical to the future of sustainability assessment'. They establish further the importance of public engagement and participation in follow-up provisions, such as monitoring, for enabling the learning that must be part of sustainability assessment.

In Gibson et al.'s (2005, p. 146) vision for sustainability assessment, best practices include public participation that is 'transparent and ensures open and effective involvement of local residents, potentially affected communities, and other parties with important knowledge and concerns to consider and an interest in ensuring properly rigorous assessment'. Drawing from the environmental assessment literature, Gibson et al. (2005, p. 155) presented four reasons why public participation in sustainability assessment is important. The first is that meaningful participation can protect the legitimate interests of the local citizens who would most likely be the recipients of the resulting gains and losses of the development decision being considered. And, as noted above, this is particularly important because of the extent to which sustainability assessments need to 'accept complexity, uncertainty and value-laden preferences as unavoidable aspects of the decisions to be made'. Second, public participants can bring valuable knowledge to the assessment, and, where government authorities have limited capacity and resources, local knowledge can be a primary source of information. Third, able critics bring balance and credibility to an assessment. Public participants are 'the stakeholder with the most reliably broad and powerful motivations' to challenge proponents' positions, demand a thorough assessment and encourage attention to the full set of sustainability requirements. Lastly, reiterating the points made earlier regarding social learning and reconciling conflicting values, Gibson et al. (2005) argued that participation in sustainability assessment enhances shared understanding, 'socio-ecological civility' and enriched capacity for civil deliberation.

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### 15.3 ESSENTIAL ELEMENTS OF MEANINGFUL PARTICIPATION IN SUSTAINABILITY ASSESSMENT

Given the central role and importance of participation in sustainability assessment, it is essential to have a clear understanding of the basic elements of *meaningful* participation. In this section, we try to explicate matters by drawing from earlier work on environmental assessment, adding new features we think are required because of sustainability assessment's purpose, nature and scope (Table 15.1). To begin, consistent with Gibson et al. (2005), we argue that meaningful participation in sustainability assessment needs to incorporate the basic components of participation in environmental assessment, which have been well discussed and debated in the literature over the years (Gibson, 1993; IAIA, 2002; Petts, 2003; Diduck et al., 2007; Sinclair and Diduck, 2009; Morgan, 2012; Lawrence, 2013). The core values of the International Association for Public Participation, founded in 1990, are linked to the key elements necessary for meaningful

*Table 15.1 Essential elements for meaningful public participation in sustainability assessment*

Essential element of meaningful participation	Specific requirements for public participation in sustainability assessment
<i>Lessons from environmental assessment</i>	
Adequate notice	Direct notice. Use of phone, e-mail or social media. Notice about assessment, where further information is located and where comments can be directed.
Access to information	Ongoing and timely exchange of information among all parties. Access to a public registry.
Participant assistance	Need for assistance because of complex issues.
Opportunities for public comment	Cover 'need for' and 'alternatives to'. Interactive modes of participation beyond open houses and website submissions.
Public hearings	Frequent and creative use of the hearing process. Transparency, and timely written decision. Inclusive, informal venues for deliberation. Negotiation and mediation.
<i>Additional features required for sustainability assessment</i>	
Participation throughout the assessment	Extension to the follow-up stage. Value judgements when choosing trade-offs. Stakeholder involvement in many assessment choices.
Deliberative forums	Emphasis on knowledge integration. Face-to-face decision making. Open dialogue in a non-judgemental environment. Establishing sustainability as a concept and a goal. Inclusion of forms of alternative dispute resolution. Incorporation of futures methods such as visioning and scenario development.

public participation in environmental and sustainability assessment. While the environmental assessment literature continues to evolve, it is clear that the elements discussed in the following subsections are fundamental, and thus provide a good starting point for clarifying meaningful participation in sustainability assessment.

### 15.3.1 Lessons from Environmental Assessment

#### Adequate notice

Adequate notice that an assessment is being undertaken is fundamental to fair and meaningful participation (Stewart and Sinclair, 2007; National Research Council, 2008). Notice should be provided in such a way that it comes to the attention of interested persons well before deliberation begins and decisions are made. In environmental assessment, notice normally involves some form of advertisement through local print and, in some cases, broadcast media. In the case of sustainability assessment, because of its potentially broader scope, some groups and individuals will likely need to be provided with direct notice by phone, e-mail or social media.

Notice should let the public know about the upcoming assessment, where further information can be obtained and to whom they can provide their comments (Wood, 2003; Sinclair and Diduck, 2009). Gibson et al. (2013, p. 153) note further that in sustainability assessments provisions must include 'opportunities for public notice and comment'. Powell (2013, p. 19) outlines what the notice requirements should be in a model environmental and sustainability assessment law, including:

- a. Public notice of the initially defined purposes, need and alternatives for a proposed undertaking and the potential for assessment prior to any decision being made in relation to the undertaking under the Act.
- b. Additional public notice of the proposed undertaking at the commencement of each step of the environmental and sustainability assessment process.

#### Access to information

Ready access to information provided by proponents about an upcoming assessment, and to any comments offered by public participants and regulators, is essential to meaningful participation (Stewart and Sinclair, 2007; National Research Council, 2008; Sinclair and Diduck, 2009). There must be opportunities for ongoing and timely exchange of information among all parties, including prior to the formal start of the assessment. In environmental assessment, a registry or repository system is the basic means of public access to information used in most jurisdictions. Such registries are usually held in libraries and other public buildings to facilitate fair access to the information available. Many jurisdictions now provide internet access (or partial access) to their public registries (Sinclair et al., 2014). For example, in Canada most information on a particular environmental assessment case can be obtained electronically through government websites maintained by the federal, provincial and territorial governments (Sinclair and Diduck, 2009). Similarly, public electronic access and public consultation tracking are also maintained federally and in most states in Australia (Australian Government, 2014).

#### Participant assistance

Numerous authors have discussed participant assistance in environmental assessment (e.g. Gibson et al., 2013; Lawrence, 2013), and the role of government and non-governmental organizations. For instance, Gibson et al. (2013) argued that 'The dispersal of funding to support participant assistance necessitates the establishment of funding to allow full participation of the public.' Funding for participant assistance allows participants to be better informed in the assessment (e.g. Gibson et al., 2013) and used to prepare and present a critique of proponents' information. In environmental assessment, participant assistance has typically been reserved for major projects. The Generation Project in Ontario, Canada, a joint federal-provincial initiative, where funding was awarded to support participant assistance in sustainability assessment issues under consideration.

#### Opportunities for public participation

Consistent with Powell (2013), meaningful participation requires that the assessment process necessitates reasonable opportunities for the public. The need for the initiation of public participation of achieving the initiation of the assessment process on the proposal and the role of the Association for Public Participation in Assessment Processes, however, 'need to be addressed' (Morgan, 2012; Pope, 2012). Public participation is limited to responding to the assessment process by writing comments on the sustainability assessment, opportunities for public participation, and will require more houses and website support for public comment typical of a public comment proposal under consideration.

#### Public hearings

To support decision-making in environmental assessment processes, in some cases, public meetings (e.g. Diduck, 2009), and workshops are sometimes equated to public hearings.

### **Participant assistance**

Numerous authors have established the importance of participant funding in environmental assessment (e.g. Gibson, 2002; Jeffery, 2002; Wood, 2003; Sinclair and Doelle, 2010; Lawrence, 2013), and this view has long been echoed by environmental non-governmental organizations. For instance, as far back as 1988 the Canadian Environmental Network argued that 'The disproportion of resources between proponents and the public necessitates the establishment of an independent funding body to provide adequate amounts of funding to allow full and meaningful participation, at all steps, to committed members of the public.' Funding assistance can help create informed and critical dialogues by allowing participants to gather independent technical expertise related to specific issues in the assessment (e.g. Lynn and Wathern, 1991; Hayward et al., 2007). Assistance can be used to prepare and participate in scoping meetings, review draft assessment guidelines, critique proponents' impact statements and prepare and participate in public hearings. In environmental assessment, participant assistance, when it has been provided, has typically been reserved for large developments, such as the Lower Churchill Hydroelectric Generation Project in Newfoundland and Labrador, Canada. That project triggered a joint federal-provincial panel review, and just over CAD \$1 million of participant funding was awarded to 11 participant groups that had applied for assistance (Minister of Environment, 2011). As explained below, we envision a much greater need for participant assistance in sustainability assessment than in environmental assessment, since the issues under consideration are more complex and value laden.

### **Opportunities for public comment**

Consistent with Powell's (2013) position noted above regarding ongoing notice, meaningful participation requires ongoing opportunities for public comment. In particular, it necessitates reasonable opportunities for the public to comment on decisions respecting the need for the initiative being assessed, alternatives to the initiative, alternative ways of achieving the initiative, the proponent's impact statements, the government's position on the proposal and input from other participants (see, for example, International Association for Public Participation, 2007). In many environmental assessment processes, however, 'need for' and 'alternatives to' are rarely considered (Steinemann, 2001; Morgan, 2012; Pope et al., 2013), and in practice opportunities to comment are often limited to responding to information provided by proponents at open houses and submitting written comments via government websites (Sinclair and Diduck, 2009). In sustainability assessment, opportunities to comment will need to cover 'need for' and 'alternatives to', and will require making use of more deliberative modes of participation than open houses and website submissions, as we discuss below. These and other opportunities for public comment typically occur irrespective of whether there is a public hearing for the proposal under consideration.

### **Public hearings**

To support decision making and increase transparency and legitimacy, many environmental assessment processes worldwide include provisions for public hearings (or, in some cases, public meetings) (Wood, 2003; National Research Council, 2008; Sinclair and Diduck, 2009), and we feel the same is necessary for sustainability assessment. Hearings are sometimes equated with impartial decision making, because hearing tribunals



typically operate at arm's length from governments and proponents (e.g. Gibson, 2011). Interest groups and other members of the public often favour hearings for their procedural certainty, transparency and access to proponents and government authorities. In addition, public participants who take part formally in a hearing receive access to key documents of the other parties to the hearing. They also receive, in a timely way, written reasons for the decision in the case. Typically, in Canada at least, very few environmental assessments proceed to a hearing, but we feel that more frequent and creative use of hearings will need to be made when it comes to sustainability assessments, including the option of holding hearings for smaller cases. We envision the need for new models of 'hearings', including more inclusive, informal and ongoing venues for deliberation, and forms of alternative dispute resolution, such as negotiation, mediation and arbitration, as described further below.

### 15.3.2 Additional Features Required for Sustainability Assessment

In addition to the modified basic components of participation in environmental assessment canvassed above, meaningful participation in sustainability assessment has other requirements because of the extent to which sustainability assessment must wrestle with ecological and management complexity, decision making in the face of uncertainty, and differing understandings, values and aspirations (Gibson et al., 2005; Bond et al., 2012). Our view is that meaningful participation in sustainability assessment necessitates generous opportunities for participation throughout the assessment and for deliberative forums in aid of social learning, conflict resolution and future visioning.

#### Participation throughout the assessment

As in environmental assessment, early and ongoing participation is vital to, and in our view even more indispensable in, sustainability assessment. As Sala et al. (2013, p. 1667) argued, participation in sustainability assessment should be 'open and structured for allowing the participation of stakeholders along the whole assessment process (from problem framing, design of methodology, goal and indicator setting, testing of the methodology and application, to inclusion in the decision-making process)'.

As noted above, early and ongoing participation is indispensable because of the extent to which sustainability assessment is laden with complexity, uncertainty and conflict. These characteristics require, for the sake of equity, legitimacy and sound decision making, that opportunities be available for participation throughout the assessment. For example, considerations such as 'need for', which we argue should be central to sustainability assessment, and 'problem framing' obviously involve normative questions (What should be done?) that are dealt with early in planning an initiative. These questions involve value judgements about potentially conflicting social goals, and thus are often complicated and have uncertain implications. Moreover, the normative questions then frame subsequent strategic and operational considerations (What can be done? What will be done?) (Smith, 1982), such as 'alternatives to' and sustainability indicators, which will also likely involve value judgements, conflict and uncertainty. An example is the strategic choice among incommensurable benefits and costs, for example job creation from resource extraction and losses to spiritual values derived from nature (Gibson et al., 2005; Bond et al., 2012; Morrison-Saunders and Pope, 2013).

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A noteworthy point about ongoing participation is the necessity of extending it to the follow-up stage of sustainability assessment (Morrison-Saunders et al., 2014). We agree with Gibson et al. (2005) on the importance of precaution and flexibility in sustainability assessment, which implies requirements in follow-up for monitoring and other features of adaptive management. Given the potential for adaptive management to generate learning outcomes (and thereby help address uncertainty), meaningful public participation can both amplify this potential and help disseminate these outcomes. Additionally, the argument for meaningful participation on account of varying stakeholder values and goals is just as cogent with respect to follow-up as it is regarding other aspects of sustainability assessment.

In terms of approaches to incorporating participation throughout the assessment, Videira et al. (2010), in their paper on participatory modelling in integrated sustainability assessment, noted the importance of having a steering committee or broader forum of stakeholders. Scanlon and Davis's (2011) study of sustainability advisers in infrastructure projects in the rail sector in Australia also showed the value of having key stakeholders embedded in the sustainability assessment project team. Early and ongoing participation has the distinct benefit of creating opportunities for building trust in relationships among stakeholders. Solid relationships are an important feature of effective participation in sustainability assessment (Scanlon and Davis, 2011), particularly in how they provide a foundation for viable deliberative involvement mechanisms.

### **Deliberative forums**

As we and other authors in this volume have suggested, sustainability assessment appears to be within the realm of post-normal science, characterized by high decision stakes and high system uncertainties (Funtowicz and Ravetz, 1993). Thus opportunities for early and ongoing participation are necessary, but not sufficient, for meaningful participation in sustainability assessment. In our view, the opportunities also need to be for participation that is deliberative. By this we mean that they should emphasize knowledge integration, face-to-face discussions and consensus-based decision making, and that they require adept facilitation and careful management (Videira et al., 2010; Diduck et al., 2015). Similarly, Sheate and Partidário (2010) noted that participation in sustainability assessment requires resources, time and space for exchange of knowledge in an open, dialogic and non-judgemental environment. Mathur et al. (2008) also underscored the need for a dialogue-oriented approach, and Glass et al. (2013, p.264) identified the need to 'create an anonymous forum within which honest, open negotiation, dialogue and learning can take place'. Further, Kallis et al. (2009), Videira et al. (2010) and others have commented on the importance in sustainability assessment of skilled, impartial facilitation to ensure objective framing and inclusion of views.

Scanlon and Davis (2011), Bond et al. (2012), Glass et al. (2013) and others have underscored the knowledge and learning dimensions of deliberation, noting how participation in sustainability assessment can facilitate understanding of sustainability. This point is central, given how difficult and yet crucial it is to establish a workable concept of sustainability in the context of individual decisions and assessments (Bond et al., 2012). The types of sustainability-related learning outcomes that are possible can be seen in the environmental assessment literature, which have echoed outcomes reported in the broader social learning literature (e.g. Keen et al., 2005; Mostert et al., 2007).





## 15.4 CHALLENGES TO ACHIEVING MEANINGFUL PARTICIPATION IN SUSTAINABILITY ASSESSMENT

In addition to the well-researched and broadly acknowledged challenges to achieving meaningful participation in environmental assessment, participation in sustainability assessment faces its own particular hurdles (Table 15.2). These arise from the essential elements of meaningful participation established above and because of the purpose, nature, scope and methods of sustainability assessment. This section describes these challenges, and in section 15.5 we go on to consider emerging directions for participation that can help meet these challenges.

*Table 15.2 Challenges to achieving meaningful public participation in sustainability assessment*

Challenge	Reasons for challenge	How to overcome challenge
Perceived inefficiencies	Time requirement for completing an assessment. Added cost of sustainability assessment. Poorly designed participation programmes.	Learn from examples of well-planned and -executed sustainability assessment participation programmes.
Encouraging broad and early participation	Lengthy timelines. Participants wishing for short-term results. No concrete project to discuss.	The use of extensive methods in tandem with intensive methods to determine the views of those not actively involved in the sustainability assessment.
Enhancing participant assistance	Many jurisdictions do not offer participant assistance. Clear definition of scope required to receive funding.	Changes to funding availability and application processes.
Addressing power imbalances	Differential access to political and administrative authorities. Unequal financial resources. Privileged knowledge claims. Variable skills and capacities.	Take special steps to ensure an inclusive approach towards those who may not be otherwise included.
Building sustainability assessment capacity	Little mention of practical applications in theoretical work. Use of non-deliberative methods that rely on proponents and not regulators.	Expand opportunities for practical experiences by ramping up the typical participatory processes used in traditional environmental assessment and testing innovative approaches.

### 15.4.1 Addressing Perceived Inefficiencies

A formidable issue is that offering opportunities for meaningful participation can extend the time required for completing an assessment and can add to its cost. In environmental assessment, arguments have thus been made that participation reduces the efficiency of

the process. As Lawrence (2013, p. 230) commented, 'Proponents, politicians and public officials have a tendency to be wary of public participation. They often see it as costly and time consuming.' Such efficiency concerns will likely be heightened in sustainability assessment. In fact, we feel that in some jurisdictions perceived inefficiencies could trigger a backlash by governments and proponents that seem to be ever focused on timeliness and cost reductions owing to the perceived time it would take to develop a common understanding of process, assess trade-offs in relation to alternatives, agree on applicable rules, and so on. This makes cost and time significant hurdles in gaining key stakeholder (i.e. government and proponents) support for meaningful participation programmes.

Overemphasis on time and cost factors might signal an under-appreciation of how participation can enhance the efficacy of an assessment (Morrison-Saunders et al., 2014). Part of overcoming the challenge of perceived inefficiencies might thus be found in increased knowledge of the actual and potential benefits of meaningful participation. In addition, actual or perceived inefficiencies can often be traced to poorly designed participation programmes rather than fundamental flaws in the nature of meaningful participation itself (Diduck, 2010b). So overcoming this challenge might be most effectively accomplished with examples of well-planned and -executed sustainability assessment participation programmes. This would require a commitment to ongoing communication and discussion, with reasonable timelines, which should be regarded as beneficial to all involved.

#### 15.4.2 Encouraging Early Participation and Breadth of Involvement

We discussed above the need for early participation in sustainability assessment so that stakeholders have an opportunity to have a say in normative and strategic considerations. We also discussed how visioning and other futures methods show promise for enabling such participation. However, early participation remains a formidable challenge because of what Heiland (2005) described as the 'paradox of participation'. Evidence suggests that, although stakeholders have a chance to participate in a process that allows for influential input, many would rather participate in a process with a tangible project to which they can react, which can often mean they have less involvement and less influence on final outcomes. Whitmarsh et al. (2009) discussed this problem as it applies to deliberative workshops in sustainability assessment and concluded that intensive methods of participation, although valuable in the co-construction of knowledge, often represent the views of only the most interested citizens and that it might be necessary to use extensive methods, such as surveys, in tandem with deliberative workshops to determine the views of the 'silent majority'.

The matter of breadth of participation has been a vexing issue in environmental assessment (Diduck and Sinclair, 2002), and so it comes as no surprise that it has also been a concern in sustainability assessment given that process's complicated and indeterminate nature. Without something tangible to support or oppose, sustainability assessment may lack a key ingredient for attracting a wide array of participants and encouraging them to become actively involved, which as we noted can be greatly time consuming. If that is the case, the visions and other outcomes of sustainability assessments risk being not fully representative of key segments of society, such as communities that are directly impacted by an initiative or marginalized stakeholders without the resources and capacities to become involved. Complicating matters is that some potential participants may view

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abstract visioning exercises and accounting for future generations, considerations we regard as central to the deliberative forums described above, as prime examples of the inefficiencies of sustainability assessment outlined earlier.

#### **15.4.3 Enhancing Participant Assistance**

As outlined above, our view is that providing resources to build capacity among public participants is central to meaningful participation. In conventional environmental assessment, such support has typically been available only when a hearing has been undertaken, and often the support is provided by the project proponent and administered by a regulatory agency (Sinclair and Diduck, 2009). Many jurisdictions do not offer this level of assistance to participants, and we view this as a serious shortcoming, because for sustainability assessment we envision the need for financial support to go well beyond formal activities held at discrete points in the assessment, such as hearings. To maximize the practical benefits of participation, we see a need for financial aid to support the early, ongoing and deliberative forums required for sustainability assessment. However, obtaining such assistance is going to be a significant challenge, particularly if there is not a proponent to support such efforts. Bohunovsky et al. (2011) noted further that the outputs of participatory research in sustainability assessment cannot be defined beforehand, but a clear definition of scope is often needed when applying to funding agencies for support.

#### **15.4.4 Addressing Power Imbalances**

Deliberative forums, and participatory resource management processes generally, are fraught with power imbalances among the participants. These imbalances can stem from, among other things, differential access to political and administrative authorities, unequal financial resources, privileged knowledge claims, and variable skills and capacities (Muro and Jeffrey, 2008; Raik et al., 2008). Given sustainability assessment's emphasis on deliberation, it is imperative when designing participation programmes to recognize, and take measures to reduce, power differentials so that learning outcomes and conflict resolution outputs are fair and balanced. One such measure was set out in Gibson et al.'s (2005, p. 146) design principles for sustainability assessment, namely taking 'special steps to ensure representation of important interests and considerations not otherwise effectively included (for example, disadvantaged populations, future generations, broader socio-ecological relations)'. Regarding participatory resource management generally, Diduck (2010b) similarly called for an inclusive approach to identifying stakeholders, and also recommended formal institutional arrangements for ensuring procedural fairness and addressing power relations early on in a participation programme. With respect to environmental assessment, Lawrence (2013) promoted collaborative approaches for participatory programmes that recognize power imbalance at the outset.

#### **15.4.5 Building Sustainability Assessment Capacity**

In many ways the literature speaks to the need to build capacity among individuals, non-governmental organizations, proponents and regulators as a first step toward achieving effective sustainability assessment governance. In fact, the context and very

purposes of this volume underscore this point by highlighting the emergent nature of sustainability assessment theory and practice. However, most of the discussion in the literature is at the theoretical level without much in the way of practical applications that would allow for the experiential learning to take place to provide a foundation for moving forward. We, therefore, see a need for ongoing sustainability assessment advocacy with the public, proponents and regulators in order to seed ideas, expand opportunities for practical experiences and build capacity to implement sustainability assessment in an effective manner. More widespread adoption of sustainability assessment and the implementation of effective sustainability assessment processes would, of course, increase the opportunities for meaningful participation.

In relation to achieving meaningful participation and realizing the array of benefits that this can bring, capacity building will require a significant ramping up of the basic participatory processes that are typical in project-based environmental assessment. Such processes tend to rely heavily on proponents, not regulators, and often default to non-deliberative methods, such as web portals for submitting written comments and open houses. However, the literature on practical ways to bolster conventional approaches is still in its infancy. As Sala et al. (2013, p. 1667) noted, '[a]lmost all of the reviewed papers identify the involvement of stakeholders as a critical issue in sustainability assessment methods development and application, but rarely is a proposal put forward on how to actually engage them'.

These observations underscore the importance of sustainability assessment advocacy and capacity enhancement for creating the conditions for achieving meaningful participation. Further, given the significance of deliberation to meaningful participation, sustainability assessment capacity enhancement will require testing innovative new approaches to engagement, and in some cases may necessitate no less than a total rethinking of how citizens, proponents and regulators interact. Sheate and Partidário (2010, p. 280) noted in this regard that proponents (and we would add regulators, since they often lack a supportive culture for participation) will need to 'be alerted to the advantages of knowledge input' from other stakeholders and 'will need to be actually willing to make use of other forms of knowledge'.

## 15.5 EMERGING DIRECTIONS FOR ACHIEVING MEANINGFUL PARTICIPATION IN SUSTAINABILITY ASSESSMENT

We argued earlier that meaningful participation in sustainability assessment necessitates generous opportunities for early, ongoing and deliberative involvement, and our review of the literature revealed considerable agreement with this position. The literature is evolving rapidly, but numerous studies have established that participation needs to be open (engaging a broad range of stakeholders and points of view) and supportive of deliberative dialogue and reflection (for knowledge exchange and learning). However, the methods established in the literature for achieving these agreed-upon ends and for meeting their associated challenges are not nearly as clear. There was little commonality in the approaches to participation outlined in the empirical research done on sustainability assessment that establishes a clear path forward. In this section, we draw on the

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### 15.5.1 Using

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sustainability assessment literature as well as our own experiences with environmental assessment to suggest five emerging directions regarding meaningful participation in sustainability assessment.

### 15.5.1 Using the Full Range of Methods in the Participation Toolbox

The environmental assessment literature often makes reference to the 'toolbox' of public participation methods. Petts's (1999a) two-volume collection on environmental assessment approaches is often referenced in this regard, as are the many participation guides created by regulators, proponents and practitioners (visit for example [www.iaia.org](http://www.iaia.org); [www.iap2.org](http://www.iap2.org); and see Health Council of Canada, 2006). Our review of the sustainability assessment literature revealed, not surprisingly, that many of the methods discussed or used in sustainability assessment were drawn from this same toolbox. Examples include workshops, seminars, working groups, round tables, interviews, questionnaires and focus groups (e.g. Mathur et al., 2008; Whitmarsh et al., 2009; Coelho et al., 2010; Sheate and Partidário, 2010; Bohunovsky et al., 2011; Hartz-Karp and Pope, 2011). Other intriguing examples are 'iterative hearings' (Sharifi and Murayama, 2013) and using 'sustainability advisers' (Scanlon and Davis, 2011). We expect that an important future direction in sustainability assessment participation will (and should) be continued experimentation with the full array of participation methods. And we hope that these are described fully in resultant research reports, as a problem we encountered in our literature review was that methods were often not described in enough detail to fully understand how they were implemented.

#### Deliberative forums and visioning

An important commonality we found in the literature was frequent use of workshops. We expect this pattern to continue, along with use of other tools that enable interaction, dialogue and knowledge exchange. Bohunovsky et al. (2011) provided a good example of how workshops can be used for visioning and scenario building for sustainability assessment. The authors successfully used small group scenario-building workshops of 8–11 people who had been invited through local newspaper advertisements. The research team worked with local decision makers and experts in designing the workshops, and at each session the team prepared information that formed the basis of the discussions for that event. They found this approach brought important informal knowledge to the table during the scenario-building exercise that could not be achieved through desktop research and that it created a shared long-term vision of a sustainable future among those who participated. They also identified barriers with using the approach, such as the amount of time required of participants – spare time in the case of citizen representatives – and problems with obtaining funding, since the output of the participation could not be defined beforehand. Kallis et al. (2009) also provided an instructive example of facilitated workshops used for future visioning. Their study showed that visioning is most applicable as a tool for promoting stakeholder collaboration, but may not be suitable for producing tangible actions that relate to the broader vision. Kallis (2009, p. 989) also noted the importance of context in applying visioning to sustainability assessment and that this 'makes even more central the question of who organizes, who frames and who facilitates the workshop and with what goals'.



Participatory modelling is another deliberative method that has been used to good effect in sustainability assessment. Videira et al. (2010) developed an integrated sustainability assessment framework forming a five-stage feedback and learning process involving scoping, visioning, model building, simulation/assessment and monitoring. Participants were involved in two types of modelling that involved face-to-face meetings and interviews. The first, group model building, tackled 'messy' problems and addressed problem structuring in order to create concerted action. The second, mediated modelling, involved broad stakeholder groups and was aimed at fostering consensus and collaborative team learning experiences.

### **Mixed methods approaches**

Along with an emphasis on deliberative forums and visioning, another important theme we found in the literature, and one that will likely continue, is the use of mixed methods. Sheate and Partidário (2010) outlined in one of their case studies the use of a SWOT (strengths, weaknesses, opportunities, threats) analysis to promote knowledge brokerage in sustainability assessment. In this case, multi-stakeholder processes were used involving four large citizen meetings, a citizens' survey, direct interviews with local leaders, publication of papers and online newsletters, organization of seven thematic workshops and meetings with the municipal parliament (the elected representatives) and with the business association. A website that encouraged exchange of ideas and updates was also set up and kept active for about two years. Mattarozzi and Antonini (2011) used a questionnaire template structured to enable a comparative reading with the results of an objective sustainability assessment. Their goal was 'to verify the level and quality of interviewee answers, and to verify the assessment results' potential to help define priorities within residential construction projects' (Mattarozzi and Antonini, 2011, p. 566).

Glass et al. (2013) used a Delphi questionnaire to engage participants over an 18-month period in conjunction with the establishment of an expert panel. Answers to questionnaires were used to determine areas of consensus and conflict, which were then fed back to the panel. The researchers noted in their evaluation that the 'Delphi technique may not be sufficiently participatory to encapsulate and address the diverse and contested values involved and a more transparent process may be needed. However, the Delphi technique could be used in conjunction with other methods to integrate different disciplinary perspectives and stakeholder values' (Glass et al., 2013, p. 263). We appreciate the authors' comments on this point, and we agree that future mixed methods approaches should look for a suitable balance between extensive and intensive participation methods.

### **15.5.2 Clarifying the Factors and Implications of Learning-centred Approaches**

Despite the fact that considerable literature identifies that learning is essential to sustainability assessment, we found few studies focused on the design of learning-centred approaches or the outcomes of involvement in such approaches. We expect an important future direction in sustainability assessment to be increased research and practice aimed at shedding light on the factors and implications of learning-oriented approaches to participation. There is a strong foundation for this in the literature on learning in and through environmental assessment. Sinclair et al. (2008, p. 416) noted that 'as early as 1995 there was the suggestion that participation in environmental assessment

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is conducive to broad-based individual and social learning that could enable the transition to sustainability' (e.g. Webler et al., 1995; Palerm, 2000; Sinclair and Diduck, 2001; Diduck and Mitchell, 2003; Fitzpatrick and Sinclair, 2003). Further, their review of research on multiple assessment cases revealed that participation has resulted in an array of learning outcomes, including better understanding of assessment law, insights into the social, political and economic interests of others, broader and deeper technical knowledge, improved relationships, and changes to organizational goals and strategies. The research also showed that such learning outcomes were most often associated with methods promoting interaction and dialogue among participants, such as workshops, simulations and charrettes (Sinclair et al., 2008).

In addition, the research into the learning dimensions of participation in environmental assessment, and natural resources and environmental management more generally, offers promising conceptual guidance. For example, in an early learning-focused evaluation of Canadian processes, Sinclair and Diduck (2001) argued how environmental assessment would benefit from being reconceptualized and redesigned using transformative theory's ideal conditions of learning. Table 15.3 summarizes these conditions, which are based on Habermas's ideal speech situation, along with operational definitions for application to environmental assessment. The applicability of the conditions to sustainability assessment is a promising line of inquiry, as the conditions are particularly well suited for the deliberative forums required in sustainability assessment. In addition, Diduck et al. (2012) offered a framework for learning-oriented decision processes in natural resources and environmental management. The framework established connections among non-formal education, public involvement, natural resources and environmental management, transformative learning processes and outcomes, and sustainability.

The research also revealed tentative insights into the congruence of learning outcomes and sustainability. For example, a study of a hog plant assessment in Manitoba, Canada found that the pro-development political context and the limited deliberative potential of the participation process yielded few sustainability-oriented outcomes (Diduck and Mitchell, 2003). Other cases have demonstrated the importance of participant funding to sustainability-related learning outcomes. Four such Canadian cases are the Sable Offshore Energy Project off the coast of Nova Scotia (Fitzpatrick and Sinclair, 2003), the Snap Lake Diamond Mine in the Northwest Territories (Fitzpatrick, 2006a; Fitzpatrick et al., 2008), the Wuskwatim Generation Project in northern Manitoba (Fitzpatrick, 2006a, 2006b), and the Red River Floodway Expansion Project in southern Manitoba (Hayward et al., 2007). Funding in these cases enabled participants – both individuals and organizations – to play an active role, study aspects of the proponent's plans and bring forward informed, critical perspectives. A noteworthy outcome of being able to participate in a more effective way was a type of relational learning, starting with the recognition by participants of the importance of social networks for facilitating participation in sustainability discussions. In the Wuskwatim case, this recognition led to the formation of coalitions of organizations interested in energy development that promised to work together to ensure the sustainability of future energy projects.

Future work on learning-centred approaches can and should also build on a small but solid base in sustainability assessment, such as the work reported by Whitmarsh et al. (2009) and Videira et al. (2010). In the first of these, the authors tested participatory methods (expert questionnaires and focus groups, and citizen questionnaires and

*Table 15.3 The ideal conditions of learning and example associated operational definitions for application in environmental assessment*

Ideal conditions of learning	Example environmental assessment operational definitions
Accurate and complete information	Is the public registry accessible? Is the website accessible and informative? Is public notice adequate? Are project documents user-friendly and in summary form?
Freedom from coercion	Is the primary legislation readily available? Is primary responsibility for public involvement delegated to the proponent?
Openness to alternative perspectives	Does the process address need, purposes and alternatives? Does public involvement occur at normative and strategic levels of planning? Is the process subjected to continuous improvement and social learning?
Ability to critically reflect upon presuppositions	Is the public shown how its input is used in the decision-making process? Do opportunities exist for interactive education not linked to a specific case?
Equal opportunity to participate	Do opportunities exist for public involvement throughout the process? Is there a participant funding programme? Is there a 'directly affected public' bias? Do opportunities exist for active rather than just passive participation? Is there more government support for the proponent than for intervenors?
Ability to assess arguments in a systematic fashion	Is there an 'impartial' decision maker? Does transparency exist in decision-making processes? Do systems exist for the integration of public submissions?

*Source:* Sinclair and Diduck (2001, p. 116).

workshops) for policy assessment and social learning. They found that the interaction between non-experts and experts allowed for the two groups to learn from each other by providing a chance to generate ideas through discussion. Videira et al. (2010) described how mediated modelling promoted consensus and a collaborative, team-learning experience. It also showed how involving participants in model construction could foster 'social learning, co-production of knowledge and development of innovative solutions'.

Another promising line of future research into learning and sustainability assessment is the potential for multi-level learning, that is, learning at and across multiple societal levels, for example individuals, groups, organizations, networks and societies (Crossan et al., 1999; Pahl-Wostl, 2009; Diduck, 2010a). The early, ongoing and deliberative participation opportunities required for sustainability assessment establish favourable conditions for scaling-up individual learning outcomes, which can help manifest far-reaching and long-lasting social change. For example, if lessons learned by individuals

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### 15.5.3 Increasing

As noted earlier required for conflict, or divergent impacts of a project of concern in fears, aspirations bargaining and based decisions allocation of benefits. Additionally, situation of collaborative conflicts. These benefits and costs (Mitchell, 2002) in environmental we expect that will (and should) benefits, including developing interests. Further, we feel development do undertake such

### 15.5.4 Collaborative

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become part of distributed and mutual cognition, social learning is evident (Röling, 2002) (say, for example, a team of sustainability assessment practitioners developing a common understanding of the efficacy of a certain predictive model). If lessons are stored in and brought forth from artefacts of organizational memory, such as routines, practices, procedures and cultures, this is evidence of organizational learning (Argyris and Schön, 1978; Levitt and March, 1988; Argyris, 1990) (e.g. a government department adopting and utilizing a new cumulative effects assessment framework). When organizational learning outcomes become distributed and mutual outcomes in a collection of organizations and network-level properties are changed, network learning has occurred (Knight and Pye, 2004, 2005) (e.g. diffusion of sustainability assessment innovations in a federal state). Finally, if lessons affect government policy or core societal institutions (e.g. revisions to assessment legislation establishing a positive contribution to the sustainability threshold), government learning or perhaps even societal learning is apparent (Woodhill, 2002; Waddell, 2005).

### 15.5.3 Increased Attention to ADR

As noted earlier, we view ADR as an essential ingredient of the deliberative forums required for meaningful participation. To elaborate, ADR can help resolve cognitive conflict, or divergent understandings, concerning valued system components, the potential impacts of a proposed initiative (Mitchell, 2002; Dorsey, 2010) and other factual matters of concern in sustainability assessment. By emphasizing interests (i.e. needs, desires, fears, aspirations), ADR methods are conducive to overcoming entrenched positional bargaining and thereby illuminating acceptable trade-offs, compromises and consensus-based decisions. Such outcomes are vital to reconciling disagreements over the equitable allocation of benefits and costs of a proposed initiative (Mitchell, 2002; Dorsey, 2010). Additionally, since ADR methods facilitate the building of trust and they aim for the creation of collaborative solutions, they are beneficial for sorting out normative and value conflicts. These disagreements arise from fundamental differences over what constitutes benefits and costs and what visions or goals are appropriate for a society or a community (Mitchell, 2002; Dorsey, 2010). However, ADR methods have not been taken up widely in environmental assessment, let alone in sustainability assessment. For these reasons, we expect that an important future direction in sustainability assessment participation will (and should) involve examining the hurdles to ADR and highlighting its numerous benefits, including serving as a replacement for public hearings and as a method for developing interim solutions to policy gaps identified during a sustainability assessment. Further, we feel that the ten principles for effective consensus building for sustainable development developed by Cormick et al. (1996) offer a proven foundation from which to undertake such mediation (see also Doelle and Sinclair, 2010).

### 15.5.4 Collaborative and Community-based Approaches

Much of the literature on sustainability assessment underscores the need for high levels of collaboration among individuals, non-government organizations, proponents and government institutions (Thabrew et al., 2009; Glass et al., 2013). Likewise, most of the literature encourages collaboration to ensure more meaningful participation. In fact,

collaboration can be viewed as an underlying theme throughout much of the discussion in this chapter. We agree with Lawrence's (2013, p. 295) comment about collaboration in environmental assessment and think it is just as applicable to sustainability assessment: 'Collaboration can build on a base of, but is more than the sum of effective consultation, mutual education and negotiations. Effective collaboration transcends the other elements of environmental assessment participation.' Regarding sustainability planning methods, Thabrew et al. (2009, p. 69) declared that, 'in addition to integrating sustainability aspects, making methods useful for multi-stakeholder collaboration and cross-sectoral integration in joint projects is a crucial aspect in sustainability planning'. We, therefore, view collaboration methods and models as an important emerging direction in sustainability assessment participation.

The literature on collaboration in environmental assessment is growing, and offers guidance for developing research topics and practical applications in sustainability assessment. For example, echoing our earlier discussions, Lawrence (2013) listed several collaboration concepts that could be, or have been, explored in the context of environmental assessment and sustainability assessment, such as group problem solving, active mediation, cooperative modelling and shared visions planning. He also addressed characteristics of collaboration in relation to sustainability assessment in particular, providing a general direction for practice, for example seeking stories of interested parties as a means of engagement, linking perceptions, history and values, formally and informally engaging the wider community in developing a broader vision, and using integrated, participatory and transdisciplinary methods.

A particularly promising form of collaborative environmental assessment that deserves attention in sustainability assessment research and practice is the emerging model of community-based environmental assessment. This model merges aspects of conventional environmental assessment with aspects of participatory local appraisal (Chambers, 1994) to form an innovative methodology for assessing small, community-based projects that utilize natural resources for basic livelihood needs (Neefjes, 2000; Spaling, 2003; Canadian International Development Agency, 2005; Sinclair et al., 2009). Typical projects include boreholes, gravity water systems, small reservoirs, agro-forestry, fishponds, latrines, clinics, schools and small bridges. Application of environmental assessment to these projects is emerging as a way to facilitate management of local resources and ensure continued project benefits (Sinclair et al., 2009; Spaling et al., 2011).

Community-based environmental assessment is a highly participatory approach in which local communities are directly involved in conducting environmental assessments. Herein lies the potential for community-based sustainability assessment, especially since practitioners are already using deliberative approaches, such as participatory local appraisal. In fact, local residents do much of the assessment themselves with the help of facilitators and environmental practitioners – such hands-on participation is clearly highly collaborative and is compatible with sustainability assessment principles. The approach also uses tools found to be effective in sustainability assessment, such as interviews, workshops and transect walks. Recent studies in Kenya and Costa Rica also show the utility of the approach from the community's perspective, including individual and social learning outcomes, greater social cohesion, and better decision making (Sinclair et al., 2009; Spaling et al., 2011; Sims, 2012). While the context for community-based environmental assessment has generally been in countries with emerging economies,

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many of the reasons for using it are applicable to small projects in other settings. These reasons include the desire to ensure projects are assessed, to do so cost effectively and efficiently, and to build local capacity for participation in other governance domains. Furthermore, in the right setting in the global North – involving a localized project with broad support in a small community – it is reasonable to expect to see some of the same types of benefits witnessed in other parts of the world.

#### **15.5.5 Advocacy for Sustainability Assessment by Public Interest Interveners in Environmental Assessment Proceedings**

In recent years, in Canada at least, we have seen increased advocacy for sustainability assessment by public interest intervenors in environmental assessment proceedings. We expect this trend to continue, despite the formidable hurdles to the adoption of sustainability assessment discussed elsewhere in this book and the challenges to achieving meaningful participation discussed in this chapter. Our reasoning results from the way environmental assessment decisions often pay lip service to but rarely actualize sustainability principles and criteria. In addition, in environmental assessment cases in which intervenors argued for sustainability assessment or, at the very least, for the application of a sustainability decision threshold, the arguments made important contributions to the proceedings.

A prominent example is the Voisey's Bay Nickel Mine and Mill in the Canadian province of Newfoundland and Labrador. A joint federal–provincial hearing panel reviewed the project, which was ultimately approved, and public interventions helped convince the panel to adopt an explicit sustainability test in their environmental impact statement guidelines (Gibson, 2006b). The panel considered 'the extent to which the Undertaking may make a positive overall contribution towards the attainment of ecological and community sustainability, both at the local and regional levels' (Voisey's Bay Mine and Mill Environmental Assessment Joint Review Panel, 1997, s.3.3). A similar case is the Whites Point Quarry and Marine Terminal environmental assessment in the province of Nova Scotia. The project, which was ultimately not approved, was reviewed by a joint federal–provincial panel. Here, again, the panel adopted a positive contribution to sustainability test that had been advocated by a community-based organization, the Clean Annapolis River Project (Whites Point Quarry and Marine Terminal Joint Review Panel, 2007). Other examples like this include the Kemess North Copper–Gold Mine, Mackenzie Gas Project, Lower Churchill Hydroelectric Generation Project, Deep Geologic Repository, and Site C Clean Energy Project (Deep Geologic Repository, 2011; Gibson, 2012; Site C Clean Energy Project, 2013). In an Ontario Energy Board review of the province's integrated power plan, the community-based Green Energy Coalition submitted a sustainability-based framework and analysis. The analysis had an influence on the government's decision to order the Ontario Power Authority to re-work its plan with more emphasis on conservation and renewables, and the hearings were suspended (never to resume) (Green Energy Coalition, 2006; Winfield et al., 2010).

Recently, in our home province of Manitoba, we were involved, in varying capacities, with a team of technical experts retained by the Consumers' Association of Canada (Manitoba) to support an intervention in the environmental assessment of the 695 megawatt Keeyask Generating Station. Dr Robert Gibson, author of the Epilogue in



this volume, was a member of the team, and he, along with Dr Kyrke Gaudreau, submitted a sustainability assessment-based analysis during the hearings convened by the review panel (Gibson, 2013; Manitoba Clean Environment Commission, 2013). The Keeyask project was approved and work began in July 2014, but it is apparent that the sustainability assessment advocacy in the case had at least three types of benefits. First, it required the review panel, project proponents, regulatory authorities and other stakeholders to think about sustainability assessment analysis generally and respond to sustainability assessment issues specific to the project. Second, it might have contributed to the government ordering the proponent to conduct a regional cumulative effects assessment on the affected river system, to address past, current and future impacts of hydro development. Third, it informed a critical discussion of a report commissioned by the proponents pursuant to the International Hydropower Association's sustainability assessment protocol (IHA, 2013), encompassing issues such as lack of broad consultation and absence of a subjective scoring process for considering trade-offs (International Rivers, 2008).

In our view, the trend of increased advocacy for sustainability assessment is a positive one. In each of the cases outlined above, the stakeholders were exposed to key sustainability assessment considerations, such as scenario development and analysis, visioning exercises and the assessment of trade-offs. Such exposure helps to build the knowledge and experience that is critical to any further implementation of sustainability assessment. It also provides an opportunity for questioning current assessment practices, learning about sustainability-oriented approaches, and experimenting with new methods. Specific to public interest intervenors, exposure to sustainability assessment thinking and its potential benefits may prompt demands for new and higher standards of assessment, even if a project does not completely adopt a full sustainability assessment approach.

## 15.6 CONCLUDING THOUGHTS

The decades since the formal adoption of environmental assessment in some 190 jurisdictions around the world have been transformative (Sinclair and Doelle, 2010; Morgan, 2012; Lawrence, 2013). The challenges inherent in transitioning to sustainability assessment, and adopting meaningful participation in sustainability assessment, are reflective of the often difficult evolution of environmental assessment, an evolution that has tested the capacity, resolve and abilities of practitioners, researchers, regulators, participants and proponents. Our inquiry into the essential elements, practical challenges and emerging directions of meaningful public participation in sustainability assessment reveals that there are many vexing issues that must be confronted by all of these parties in finding creative paths forward. As we establish above, public participation in sustainability assessment is particularly troublesome, and three key linked issues stand out: the inherent complexity, uncertainty and conflict that characterize sustainability assessment; the general lack of support for meaningful public participation due to perceived inefficiencies; and the consequential lack of experience that could provide concrete direction.

In confronting these issues it is important to remember that the basic elements of good participation are quite well known and fairly well tested globally, as we have outlined above. These basic elements, such as adequate notice, information exchange and participant funding, provide the tested foundation from which to build a meaningful process.

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There is also considerable experience with many of the involvement techniques we have suggested as needed additions to the essential elements list, such as incorporating normative questions, utilizing deliberative forums that promote learning, and utilizing dispute resolution techniques. Some of this experience has even been gained as a result of sustainability assessment participation activities. In combination, these experiences provide a very solid entry point from which to approach the emerging directions we have outlined for sustainability assessment participation.

In fact, the first of our five suggested emerging directions for meaningful participation in sustainability assessment builds on this conclusion in suggesting that there is a need to more creatively utilize the established 'toolbox' of techniques of participation. Many of the more deliberative techniques that have been tested in the environmental assessment context that we outline have been and are still used in some jurisdictions, such as workshops, working groups, seminars and round tables. Many of these collaborative approaches also build on highly participatory models of assessment, such as community-based environmental assessment, discussed above. Further, authors like Lawrence (2013) help to catalogue and ground many of these collaborative approaches in practice. We are also encouraged by the fact that many of these techniques are already being applied in the context of sustainability assessment, for example the use of workshops for visioning and scenario building.

Taken together, the emerging directions for public participation in sustainability assessment are not mutually exclusive; it is likely that meaningful participation will require borrowing and testing the techniques that seem to best suit a situation and then proceeding through trial and error. Each of the emerging directions does, however, require some level of commitment to dialogue and sharing of power among stakeholders that may not be common in other assessment settings. Techniques for achieving this, such as interactive hearings, visioning workshops and alternative forms of ADR, will need to be presented in a non-threatening way to decision makers to ensure opportunities for meaningful engagement and learning are forthcoming. Decision makers will also have to be guided in terms of the time implications of meaningful participation in sustainability assessment (the time needed to make decisions that incorporate the voices heard, the time required by participants to share their visions and consider trade-offs, and so on), all underscoring the need for further research into the design of participation programmes to ensure they are run as efficiently as possible.

Taking full advantage of the practical implications of the emerging directions, and thereby striving for meaningful participation, is going to require significant political will. There is a considerable amount of capacity and good resources related to participatory approaches in environmental assessment, ranging from guides to dedicated associations and consultancies, yet much participation in environmental assessment is left wanting. Many of the basic tools are well known and tested, but we often do not have the supporting political will necessary to use them. A key issue is that meaningful participation can often open political decisions to public scrutiny in a way that makes some politicians very uncomfortable. This opening of the decision-making process is especially problematic when the projects involved may provide much-needed jobs, taxes and other economic spin-offs. Status quo thinking or, worse, thinking that undermines the basic foundations of sustainability assessment will not move us to the next generation of assessment or to sustainability and resilience.

Lastly, and despite the many challenges we have outlined, the sorts of research and practice outlined in this volume should encourage us all, because when implemented they will provide critical learning opportunities from which to move forward with the most efficient, effective and fair sustainability assessment processes possible. We are personally inspired by the significant individual and social sustainability-oriented learning opportunities that sustainability assessment could embody. Collectively, we have devoted a considerable amount of research effort to identifying and demonstrating the important roles of learning both about and through environmental assessment by making use of meaningful approaches to participation and the critical individual and social learning outcomes that can result. In fact, we have identified sustainability as the end goal of some of the frameworks we have developed. We think the opportunities for, and potential of, learning about and through sustainability assessment with the approaches to participation reviewed above will result in the sorts of learning outcomes required to make important progress on the sustainability project globally.

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