

## Public engagement tools: a literature review

This review sets out to:

1. Unpack the generic nature, scope and purpose of public engagement tools
2. Review the development of influential public engagement tools and methods that are used in everyday practice signposting the individual too reviews that have been carried out.
3. Identify where and how the ecosystems approach and attending ecosystem services have been used in the refinement of this suite of tools.

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### *Public engagement tools: setting the context*

This review introduces and reviews tools that fall within the arena of public engagement. In this review, we define public engagement tools as instruments that are focused on maximising public engagement through participatory processes, both in general and in terms of people’s contributions to the design or application of other types of tools included in our tools typology (futures tools, incentive tools, regulatory tools, ecosystem service tools, and valuation tools).

Traditionally, policy-making has adopted a ‘top-down’ or ‘technocratic’ approach to decision-making, relying on the scientific knowledge of researchers at the expense of other forms of knowledge (Mickwitz and Melanen 2009; Koutsouris 2008). Scientific knowledge can provide information that is difficult to capture through local knowledge alone: for example, presenting information at complex spatial and temporal scales, using data that has been collected rigorously, scrutinised by experts, and assessed for relevance using statistical tools (Reed et al. 2006). In practice, however, scientific generalisations must be given local context to ensure that they integrate context-specific considerations and are less likely to be contested and/or ignored (Reed et al. 2011). The challenge, therefore, is to develop tools that allow consideration of local knowledge(s) alongside scientific knowledge(s) (Raymond et al. 2010; Siebert et al. 2008). Involving wider publics and organisations in decision-making processes can be a key factor in ensuring that a management plan or policy is successful, building trust, understanding and endorsement amongst the wider community (Fish et al. 2011; Richards et al. 2004).

There are significant difficulties associated with integrating different types of knowledge which span numerous scales and contexts (Glass et al. 2012; Evely et al. 2008). These include: differences in world views of project participants and external experts; differences in institutional power or control over access to and management of local resources; and changes in perception about the benefits generated by the project (Johnson 2004, in Raymond et al. 2010). The active intervention of government and/ or powerful stakeholders can also lead to manipulation or bypass of structured decision-making procedures (Scott et al. 2013; Cowell 2003; Phelps and Tewdwr-Jones 2000). Problems also arise when participants represent different backgrounds or expertise, do not have a history of good communication, or suffer from consultation fatigue or doubt about the relevance or

credibility of a participatory process (Scott et al. 2009). Opening up decision-making to a broad range of actors can also complicate and delay decision-making structures, blurring who is accountable for what, both during a decision-making process and with regard to the outputs of that process (Scott 2011). Indeed, history is littered with examples of participatory processes that failed to achieve their goals or exacerbated the problems they set out to resolve.

However, in most of these cases, there were either contextual factors outwith the control of those facilitating engagement, or problems with process design, that can explain why these processes failed to achieve their goals. Reed (2008) and Scott (2011) both extracted a number of best practice principles from published literature, and more recently de Vente et al. (under review) derived a short-list of key principles from the analysis of empirical cases. This work emphasises that public engagement tools will only work effectively and achieve their goals when part of a carefully and effectively designed process with strong leadership an essential ingredient.

#### *Nature and scope of tools for public engagement*

Fish et al (2011) classify important public engagement tools as summarised in Table 1. The three categories shown in Table 1 can also be conceptualised as: 1) opening out tools; 2) analysing tools; and 3) closing down or decision-making tools, allowing tools to be selected for the appropriate stage of process design.

**Table 1** Overview of key types of public engagement tools (adapted from Fish et al. 2011: 15-16)

Category	Examples of tools	Comments
<b>Survey based</b>	Structured Questionnaires Semi-structured Interviews Focus Groups	Gaining insight into peoples' attitudes, values, knowledge and behaviour
<b>Deliberative</b>	In-depth discussion group Citizen's juries Deliberative opinion polls	Developing reasoned assessments of an issue through group debate and learning
<b>Analytic-deliberative</b>	Participatory modelling Deliberative monetary valuation Deliberative multi-criteria analysis	Informing technical tools for decision-making through group deliberation

#### *'Opening out' tools*

A range of methods exists to identify and analyse stakeholders, interchangeably referred to as stakeholder mapping and stakeholder analysis (referred to as **Stakeholder mapping** hereafter). These include: methods for identifying stakeholders; methods for differentiating between or categorising stakeholders; and methods for analysing relationships between stakeholders (Reed et al. 2009). Stakeholders may also be involved in the mapping process, in order to provide more information about who has a stake in the issue (Reed et al. 2009). Gilmour et al (2011) suggest a number of questions that may be asked in order to identify stakeholders:

- Who will be affected?
- Will the impacts be local, national or international?
- Who has the power to influence the outcome?
- Who are the potential allies and opponents?

- What coalitions might build around this issue?
- Are there people whose voices or interests in the issue may not be heard?
- Who can contribute financial or technical resources?

As a tool for public engagement, it helps to ensure that all relevant stakeholders are included, tackling power and representation issues identified earlier. In addition, stakeholder mapping may also serve instrumental ends ‘if it leads to the transformation of relationships and the development of trust and understanding between participants’ (Reed et al. 2009: 1936).

Survey-based techniques can also be employed in order to: elicit insight into peoples’ attitudes, values and behaviour regarding a particular issue; and/or explore underpinning reasons for why people think about an issue in a particular way (Fish et al. 2011). Structured questionnaires or interviews can be used to collect quantifiable information about people’s views regarding a particular topic, allowing highly comparable data to be produced. Semi-structured questionnaires or interviews offer a more ‘open-ended’ approach to eliciting qualitative information and allow the development of ideas related to a particular subject. **Focus Groups** enable a ‘group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that the subject of the research’ (Powell et al. 1996: 499). Allowing a small group (normally 6-15) to react and interact during a managed or facilitated discussion, workshop or seminar-based activity, focus groups are very flexible and can be used for a variety of purposes, including the exploration of ideas, project evaluation and triangulation. Whilst they can be used as a tool in their own right, it is recommended that they are used in conjunction with other techniques such as questionnaires, if the results are to be used to influence policy decisions (Scott 2011; McCrum et al. 2009).

Deliberative and iterative engagement tools are increasingly preferred to capture stakeholder views and ‘open out’ a meaningful dialogue. Deliberation is important for social change because the process challenges those involved to consider new insights and knowledge, rethink their assumptions, and solve problems in a communicative and collaborative manner (Blackstock and Richards 2007; Keen et al. 2005; Astleithner and Hamedinger 2003). One of the most powerful tools here is the dedicated **Training course** which uses processes of iteration and deliberation within a managed and safe learning environment where building social capital is a key goal. Significantly, this is most effective when both public and the agencies work together on problem solving issues (Scott et al., 2011).

The **Delphi approach** is a survey-based tool that facilitates higher levels of deliberation than can be achieved with a one-off interview or questionnaire. Used to facilitate a group communication process that addresses areas of limited knowledge surrounding a particular subject, Delphi traditionally involves a ‘panel’ of participants in an iterative survey, in order to generate consensus or group opinion on a particular topic or policy issue (Glass et al. 2013; Donohoe and Needham 2008).

‘Bespoke’ tools can also be used to engage people in deliberative processes. Examples include **Games**, which have been successful as outputs of a range of EC research projects, affording some attention in academic literature (e.g. Devisch 2008). Games allow stakeholders to take part in a participatory exercise, in a manner which is enjoyable and engaging, and which allows consideration

of ‘real’ issues. One example is RUFopoly, a game designed to help communicate in an accessible manner then complex concepts and relevance of spatial planning (see the **Games** review and Scott et al. 2013 for more detail). Bespoke deliberative tools can also encourage learning through reflection on management practices and projects (the **Sustainable Estates tool** provides one such example). Performance or arts-based tools can also be used to gather knowledge and insights, empowering stakeholders to get involved in the research process, potentially leading to transformative outcomes for participants (Rhydzyk et al., 2013). By bringing creative practitioners into interdisciplinary teams, it is possible to develop new ways to enable stakeholders to understand each others’ conceptions and constructions of a problem or challenge and generate new knowledge and insights that would not be possible using conventional research methods (e.g. Roberts, 2009; Ware, 2011).

#### *Analysing tools*

**Participatory mapping** is another tool that has wide application where consensus-building is sought to inform decisions. Originally used mainly in a developing world context, the method develops and analyses representations of spatial relationships among real-world structures or objects (Lynam et al. 2007). Participatory mapping can be a helpful tool for teasing out relationships across landscapes and between stakeholder groups, and to promote common understanding of different perspectives, interdependencies and of potentially more mutually-beneficial management. This focus on enabling stakeholders to assess an issue/relationship is a characteristic of participatory (rapid) appraisal, a tool that uses lots of community engagement techniques to understand community views on a particular issue (see Cornwall and Pratt 2011; Mosse 2008; Townsley 1996; Chambers 1994). Initially designed as a process that is designed and led by the community rather than an outside organisation (Pretty 1994), nearly all rapid appraisal activities are now facilitated by skilled practitioners (Brown 2006).

#### *‘Closing-down’ tools*

Analytic-deliberative methods are more elaborate approaches to engagement that integrate discussion-based techniques with more formal technical tools for decision-making (Fish et al. 2011). These tools allow decisions to be made, for example through the allocation of resources to deliver management solutions. Techniques such as participatory modelling, deliberative multi-criteria analysis and deliberative monetary valuation provide good examples and are located within the valuation tools review. Scenarios are also relevant here, and these have been discussed in the futures review). **Participatory budgeting** (see also **Community Economic Development**) is a tool that allows participants to decide on the allocation of available public resources (Cohen 2012). This type of tool is seen as a key part of the community empowerment agenda by the UK Government and there is the aspiration to use this type of approach across all local authorities.

#### *Has the Ecosystem Approach been used to refine these tools?*

Principle 12 of the Ecosystem Approach states that ‘the ecosystem approach should involve all relevant sectors of society and scientific disciplines’ (Convention on Biological Diversity 2000), based on the rationale that most decisions are complex and contested and therefore should harness and engage the necessary expertise across relevant scales and sectors. Nonetheless, the identification and valuation of key ecosystem services is usually expert-driven, even though scientific criteria

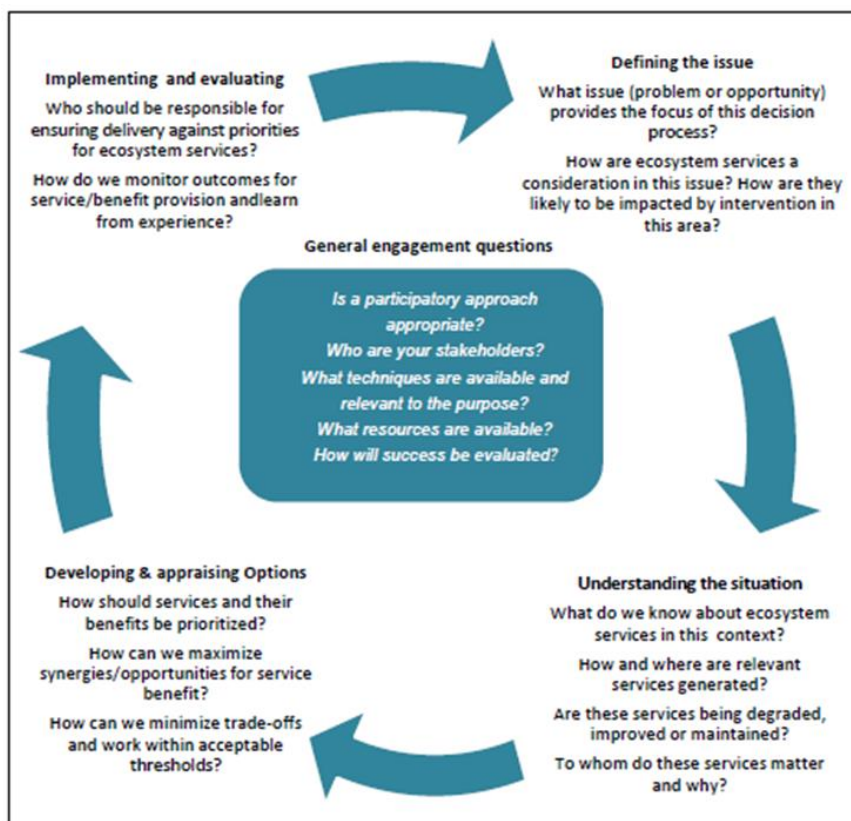
based on desktop research do not always adequately respond to the priorities of stakeholders (Kelemen and Gómez-Baggethum 2008).

Despite its origins in biodiversity conservation, an ecosystem approach is fundamentally about issues of governance. Fish et al. (2011: 9) suggest that the ecosystem approach therefore depends upon understanding people’s needs and values, and a participatory, stakeholder-informed ecosystem approach can assist in:

- structuring and refining the question or issue being addressed by the decision making process and clarifying where priorities lie;
- embedding decision processes more effectively into existing activities and stakeholders networks, as well as identifying and managing the constraining factors;
- helping to identify potential courses of action and develop the criteria against which their value and acceptability can be judged; and
- building and providing capacities for action at the implementation and monitoring stage.

Figure 1 shows an ‘ideal’ vision of decision-making in the context of applying the ecosystem approach. Of particular note is the need to consider ecosystem services at each stage of the decision-making process. At an early stage of the process, tools may be used to collect data that can further enhance understandings of ecosystem service provision, incorporating both expert and local knowledge.

Figure 1: The decision cycle and an Ecosystems Approach: indicative questions (Fish et al. 2011: 10)



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