Radioactive Waste Management
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Stakeholder Involvement in Decision Making: A Short Guide to Issues, Approaches and Resources

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NUCLEAR ENERGY AGENCY
ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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The mission of the NEA is:

- to assist its member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes;
- to provide authoritative assessments and to forge common understandings on key issues, as input to government decisions on nuclear energy policy and to broader OECD policy analyses in areas such as energy and sustainable development.

Specific areas of competence of the NEA include the safety and regulation of nuclear activities, radioactive waste management, radiological protection, nuclear science, economic and technical analyses of the nuclear fuel cycle, nuclear law and liability, and public information.

The NEA Data Bank provides nuclear data and computer program services for participating countries. In these and related tasks, the NEA works in close collaboration with the International Atomic Energy Agency in Vienna, with which it has a Co-operation Agreement, as well as with other international organisations in the nuclear field.

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Foreword

Radioactive waste management is embedded in broader societal issues such as the environment, risk management, energy, health policy and sustainability. In all these fields, there is an increasing demand for public involvement, participation and engagement. Involvement may take different forms at different phases and can include sharing information, consulting, dialoguing or deliberating on decisions with relevant stakeholders. Stakeholder involvement should be seen as a meaningful part of formulating and implementing public policy. There is no single approach for organising engagement; initiatives must respond to their context and to stakeholders' particular needs. As the number of stakeholder involvement approaches and publications describing them continues to grow, new horizons are opening up through social media.

This guide outlines the steps and issues associated with stakeholder involvement that will assist practitioners and facilitate access to useful online resources (handbooks, toolboxes and case studies). It will also provide non-specialists with an idea of what is needed to select an approach when involving stakeholders in decision making. This 2015 update of *Stakeholder Involvement Techniques: Short Guide and Annotated Bibliography* is considerably enriched with experiences and extensive references to the literature.

The Nuclear Energy Agency (NEA) Forum on Stakeholder Confidence (FSC), created under a mandate from the NEA Radioactive Waste Management Committee (RWMC) to facilitate the sharing of international experience in addressing the societal dimension of radioactive waste management, oversaw the updating of the 2004 publication.

The FSC explores means of ensuring an effective dialogue among all stakeholders and considers ways to strengthen confidence in decision-making processes. This short guide demonstrates to conveners in many fields that involvement initiatives must be sensitive to and serve the specific context and that relevant stakeholders must be associated in the co-framing of engagement issues. Because the FSC focuses on societal confidence in radioactive waste management, examples are drawn from this field. However, these are provided simply as illustrations as there is no "one-size-fits-all" approach to stakeholder engagement, and the FSC does not support one specific methodology over another presented in this guide. Information is provided for the sake of enhancing awareness about existing literature and resources. Complementing the guide is a separate annotated bibliography published online so as to facilitate regular updating (NEA, 2015).

Acknowledgements

The Core Group of the Forum on Stakeholder Confidence oversaw the update of this guide with the assistance of the Institut Symlog.

The FSC would like to thank the Group Chair, Holmfridur Bjarnadottir, from the Swedish National Council for Nuclear Waste, for leading the discussions and approval of this report at the 15th Regular Meeting of the FSC in November 2014.

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List of abbreviations and acronyms

AA1000SES	AccountAbility AA1000 Stakeholder Engagement Standard 2011
Aarhus Convention	UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters
C20	Civil Society 20
FSC	Forum on Stakeholder Confidence
G20	Group of Twenty
IRGC	International Risk Governance Council
MAP	Measures of Australia's Progress
NEA	Nuclear Energy Agency
NRC	United States Nuclear Regulatory Commission
OECD	Organisation for Economic Co-operation and Development
UNECE	United Nations Economic Commission for Europe

Executive summary

Envisioning stakeholder involvement

Stakeholder involvement: A requirement and a benefit

Radioactive waste management issues are embedded in broader societal issues such as the environment, risk management, sustainability, energy and health policy. In all these fields, there is an increasing demand for stakeholder involvement, participation and engagement.

Involvement may take different forms at different phases and could include sharing information, consulting, dialoguing or deliberating on decisions. It should always be seen as a meaningful part of formulating and implementing good public policy. Stakeholder involvement approaches should not be viewed as convenient tools for public relations, image building or winning acceptance for a decision taken behind closed doors.

In certain contexts, the times and the means for involvement are outlined by law, while in other contexts, a specific player may have to create the opportunity and the means for involving other stakeholders. Under legal frameworks, compliance with stakeholder involvement requirements becomes an important issue for those responsible for the corresponding plans, programmes or specific activities. The Aarhus Convention is increasingly used as a support for stakeholder engagement. It lays out citizens' rights to information, participation and justice. While compliance is important, it is not sufficient as a proportionate commitment is needed that will allow for the integration of stakeholder engagement in organisational governance, strategy and operations management.

Practitioners and scholars are developing, applying and evaluating various approaches for stakeholder involvement. A vast range of such approaches exists and continues to grow, as does the number of publications describing them. New horizons are also opening up as the use of social media expands.

The present guide is designed to assist practitioners by outlining the steps and issues associated with stakeholder involvement, and facilitating access to useful online resources (handbooks, toolboxes and case studies). It will also provide non-specialists with an idea of what is needed to choose an approach. An annotated bibliography of references, which was issued separately by the Forum on Stakeholder Confidence (FSC), is available on the NEA website (NEA, 2015).

Who are the stakeholders?

The term "stakeholder" may be understood as any actor – institution, group or individual – with an interest or a role to play in a societal decision-making process. When convening a stakeholder involvement initiative, it is usually necessary to more precisely identify the target population. This target population may be very broad in the early stages of decision making (at the level of policy, plans or programmes) and then become more precise as decisions come to bear upon local projects or activities. Stakeholders have both different contributions to make and different involvement needs at each stage of a decision-making process. While stakeholders may be statutory, they cannot be defined in purely administrative terms. The involvement initiative should also consider the strategic dimension and the community affected. The definition of "community" could include different criteria such as spatial or geographic, political, economic, cultural and emotional criteria.

Stakeholders may have different interests, and engagement should be adjusted to contexts which create differing needs, programme phases or formal requirements, as well as to national or local processes and cultures. When considering which stakeholders to engage, at a minimum the planner should identify institutions, groups or individual groups towards whom the organisation has legal, financial or operational responsibilities; institutions, groups or individuals who are affected by the organisation's operations; and, finally, institutions, groups or individuals who are likely to influence the organisation's performance.

Levels of stakeholder participation or involvement

Not all participation is alike. Different levels of stakeholder participation or involvement are offered through different approaches. One simple approach may be to transmit information to a passive stakeholder audience. At the other end of the scale, an approach may significantly empower stakeholders within the decision-making process. There is a clear trend towards higher levels of engagement by organisations seeking win-win outcomes with a greater diversity of stakeholders. Table 1 describes how a given level of involvement may be chosen according to the situation or to the objectives sought.

Planners should be aware that stakeholders may desire, expect or be entitled to a particular level of involvement. Preliminary discussion, contact with or observation of target stakeholder groups, as well as a review of statutory requirements, will help determine the appropriate level. How much involvement the organisation will – or wishes to – offer must be clearly defined. This should be communicated to potential stakeholders at the outset of the initiative. Explicit information must be provided about constraints likely to affect the extent of possible influences or how input from engagement will be used.

In statutory processes, such as those conducted under the Aarhus Convention, due account is an important requirement. The convener is accountable, i.e. must show how the input has influenced the decision-making process, and stakeholders have a right to verify this information.

Table 2 and Figure 1 provide guidance on matching the different levels of public involvement to the needs of the situation.

Potential effects of stakeholder involvement initiatives

Guidance to public authorities generally indicates that they must allow public participation to occur in order to carry out their responsibilities to the fullest.

Bottom-up, inclusive approaches for information gathering and deliberation are likely to enhance the credibility of the decision-making processes. This is not the only type of positive effect that may be expected from a well-run stakeholder involvement initiative. Three classes of effects may result from the application of consultation and deliberation techniques. Substantive effects include: better, more acceptable choices from the environmental, economic and technical points of view. Procedural effects include: better use of information; better conflict management; and increased legitimacy of the decision-making process. Contextual effects include: better information to stakeholders and/or the public; improvement of strategic capacity of decision makers; reinforcement of democratic practices; and increased confidence in institutional players. Table 3 lists the potential positive effects of stakeholder participation, which may also be quoted as justifications for involving stakeholders in policy decisions.

Potential drawbacks of public participation in decision making may include: conflict, delay, and/or resource demand.

Conveners should carefully consider not only the effects sought, but also the dominant rationales underlying the decision to involve stakeholders (for instance, legitimacy, effectiveness, efficiency or representation). This is a way to clarify goals and to avoid – both inside and outside the organisation – miscommunication and disappointment.

Planning

An overview of phases

Several integrated phases are involved when planning, executing and evaluating a stakeholder involvement initiative and equal importance should be given to each phase. Figure 2 depicts a cycle of effective engagement which moves through strategic thinking; analysis and planning; strengthening engagement capacities; designing the process and engaging stakeholders; and finally acting reviewing and reporting, which in turn can spark a new strategic phase.

A cyclical vision is consistent with the needs of decision making about long-term technological and societal endeavours. New decision points emerge over time, influenced by earlier decisions and requiring public participation in turn. Continuity in engagement contributes to the sustainability of solutions. It implies not only a palette of instrumental procedures and involvement methods, but also, strengthening stakeholder capacity to engage.

Co-framing the issues: Early involvement

International guidance and best practice publications on facility siting, societal risk management and environmental decision making often point out that stakeholders should be involved early. This does not simply entail the calendar or chronology of a specific decision. In binding treaties mandating public involvement in environmental decision making, early also means that stakeholders should be involved upstream, while options are still wide open.

Organisations can take the initiative to communicate with stakeholders and to obtain their input, even in the absence of a formal requirement. Early involvement, whether or not it entails direct participation in decision making, is a component of institutional transparency.

Early involvement also means engaging the spectrum of interested and affected parties in formulating the issues for consultation, evaluation or decision, to the extent possible in a given context. Co-operating on co-framing is of particular importance to achieve quality and legitimacy, especially in contentious situations. The first steps of a successful engagement process may include a concern assessment, which will identify relevant or significant (material) concerns held by the organisation and/or by stakeholders.

Today, even high-level intergovernmental processes are influenced by broad-based stakeholder input at an early stage. Early involvement also corresponds to preparedness and may make a vital contribution to achieving the objectives of safety and security which are of interest to governments, institutions and all of society.

Setting criteria for approach selection and assessment

The approach that will be suitable for a particular situation will depend on the stakeholders that are engaged, and the aims and objectives of the consultation. Planners of stakeholder involvement will need to consider these aspects and decide on the most appropriate approach to use. In order to achieve this, the organisation must develop selection criteria. The same criteria may serve at a later stage to evaluate the involvement initiative.

The appropriate level of involvement is a fundamental criterion, and should be carefully set and communicated to potential participants. Other types of criteria include desired effects and goals, as well as constraints. Criteria based on both desires and constraints should be listed. Since they will be quite diverse, it is unlikely that any approach will ideally suit all requirements. Therefore, a pilot group of members of the organisation that will engage the stakeholders should discuss the lists generated and rank the criteria by order of importance. Several guides and templates exist to facilitate this process. Stakeholder representatives may also be invited to co-operate in this criteria setting.

Choosing an approach

Stakeholder involvement approaches can usually be applied to a broad range of issues. No particular approach can be considered superior to another. The selection criteria developed in response to a specific context, constraints, desired

goals and effects, will certainly differ between organisations. Experience shows that the success of a particular approach will also depend on external factors, for example the phase of the decision-making process, as well as the political and cultural context. Therefore, a definitive matrix matching approaches to criteria does not exist. However, manuals do describe different approaches in terms of generic criteria (such as the level of involvement, scale of consultation – intensive vs. extensive involvement, representative character, inclusiveness or deliberative qualities).

Handbooks and online platforms can help the convener match approaches to the basic selection criteria identified by the organisation. When a set of potentially suitable approaches has been identified, more detailed sources may be consulted.

It will be of great value for the planner to contact and discuss experiences with persons who have already conducted involvement initiatives. In some cases, the planner will consult and/or retain the services of a professional to set up and conduct the initiative. In such cases, following the steps to identify the right family of approaches can prepare the organisation for a more fruitful dialogue with the professional.

Approaches available for intensive or extensive involvement

Some approaches corresponding to the higher levels of stakeholder involvement (i.e. discussing, engaging, and partnering) are listed in Box 3. These approaches have features of two-way, deliberative dialogues. It is up to the convener to ensure that the outcomes of the engagement effort do effectively influence decisions, and provide due account of that influence. Box 4 highlights related conflict resolution approaches, while Box 5 describes combination approaches (which may be particularly appropriate when the dialogue issue has both a national and a local dimension).

These lists of approaches are by no means exhaustive. In addition, the short generic descriptions may not correspond exactly to specific examples that may be familiar to each reader. This is largely because, under a single approach label, field practitioners may design slightly different implementations or adapt them to the context. Even a highly defined and structured approach needs to be adapted for application to a particular national process and local circumstances.

New information and communication technologies offer an enlarged potential to engage citizens (although it is doubtful that these media offer "higher-level involvement" opportunities). Such methods can be appropriate when the engagement issue has broad geographic impact. Digital applications for virtual meetings and crowd-sourced idea gathering may be particularly attractive to the rising generation, for whom social media is a highly familiar, everyday instrument. Box 6 presents a success story in Australia. Nonetheless, the biggest disadvantage of relying on information technologies and new media to support involvement may be the difficulty of engaging groups who do not regularly use the Internet, and even with appropriate target audiences it may be difficult to guarantee an adequately high rate of participation.

Implementation and assessment

Looking towards implementation

Implementation advice ranges from "best practice" tips to flow charts and worksheets that can be printed. Decisions implied by actual implementation are beyond the scope of this short guide, but insight is offered on preparing and publicising initiatives targeting different levels of involvement.

The organisational goal of informing or educating implies developing appropriate public information materials. Information materials will be useful only if they can be understood and interpreted by their intended audience. The Aarhus Convention recognises that this is a necessary, foreground condition, as well as a right. Today, gathering information from stakeholders is often achieved by the use of social media tools. It may also be accomplished by large-scale public consultation approaches (polls or surveys). Higher levels of involvement usually imply that participants will have the opportunity to communicate their views and judgements in detail, as well as to learn from other stakeholders. Nevertheless, the planner may find preparatory small-scale studies or consultations useful for scoping the issues or identifying target stakeholder groups.

When the dialogue issue is embedded in a complex or long-term decision-making process, public agencies or other conveners will need to support competence building in stakeholder representatives. The Aarhus Convention highlights this as an important background condition to ensure participation rights and continuity. One response to this need is the partnership model of involvement.

Conveners of stakeholder involvement in technological subjects will probably benefit from advice on communicating about risks, translating complex information into a readily accessible form and interacting with a range of stakeholders who may not have specialised training.

Finally, a planner may wish to make a broad announcement of stakeholder involvement initiatives, or publicise outcomes using mass media. Useful handbooks are cited in this short guide and in the annotated bibliography on the NEA website (NEA, 2015).

Assessment: Checking satisfaction and compliance

Post hoc assessment of stakeholder involvement initiatives is a duty to all those who have participated in good faith and a must for learning and improving the next involvement initiative. The targeted goals and outcomes should be translated into aspects that can be measured or, at least, listed and clarified so that the different participants (stakeholders and conveners alike) can judge how well these criteria were achieved.

Assessment may focus on whether compliance with statutory requirements was achieved; whether the decision-making process gained in credibility; whether information input by stakeholders was of high quality; or whether some standard of democracy was effectively achieved. Different players and participants in a single initiative may hold very different rationales and value different criteria. Therefore, the assessment should embrace a range of criteria. Both immediate

effects and later impacts should be captured by the assessment. Useful handbooks are indicated in this regard.

There may be several (and perhaps overlapping) reasons why a stakeholder involvement initiative gives unsatisfactory results. Factors could relate to the behaviours or intentions of participants. When initiatives appear to be dominated by interest-driven participation, it is useful for the process to separate phases to gather information on what is "true" (including preferences and concerns) from evaluation and management phases in which value judgements are made about what is "desirable". On the side of conveners and design process, an assessment may prove to negative overall when participation was convened as a superficial formality or without adequate support from decision makers. This configuration increases public distrust of government. Finally, structural, pragmatic and attitudinal factors may result at country level in insufficient respect for the requirements of public participation. Publications are cited that may be consulted to assist with these factors and better adjust initiatives to their context.

Conclusions and areas for future development

As the demand for stakeholder involvement in decision making continues to rise, several challenges remain. These challenges will shape the ongoing development of new approaches and guidance. Topics identified include the new media context; the need for continuity of participation and support for capacity building; the need for political commitment, innovation and advocacy for involvement; ethical dimensions; standards of accountability; simultaneous co-ordination and the independence of institutions.

1. Envisioning stakeholder involvement

This first chapter of the short guide explains that, in many cases, stakeholder involvement in complex decision making is both a statutory requirement and a clear benefit. It reviews the various ways to identify relevant stakeholders and the levels of participation to be offered. The potential effects of stakeholder involvement initiatives are listed and light is shed on the corresponding organisational rationales.

1.1. Stakeholder involvement: A requirement and a benefit

Radioactive waste management issues are embedded in broader societal issues such as environment, risk, sustainability, and energy and health policy. In all these fields there is an increasing demand for stakeholder involvement (participation or engagement). Managers in both the public and private sector find that such involvement can improve the quality and the sustainability of policy decisions. Best practice in radioactive waste management has therefore shifted from the traditional "decide, announce and defend" model, for which the focus was almost exclusively on technical content, to one of "engage, interact and co-operate", for which both technical content and quality of process are of comparable importance (Kotra, 2000). Time spent on dialoguing and bringing stakeholder input into the organisation and into the waste management programme is now understood as indispensable well-spent time.

Involvement (participation or engagement) covers the full range of efforts to understand and involve stakeholders in a given organisation's activities and decisions. "Engagement can help organisations meet tactical and strategic needs ranging from gathering information and spotting trends that may impact their activities to improving transparency and building the trust of the individuals or groups whose support is critical to an organisation's long-term success, to sparking the innovation and organisational change needed to meet new challenges and opportunities" (AccountAbility, 2006: 13).

Involvement may be a moral and pragmatic imperative in far from nominal situations. For instance, when analysing the local consequences of a nuclear accident, it was found that a key role of the helping professional is to engage with the affected people to assist them in implementing actions that enhance their quality of life (NEA, 2006).

Together with openness, accountability, effectiveness and coherence, participation is recognised as one of the five principles of good governance (EC,

2001). Good governance relies on policies designed on the basis of reasonable decisions that are well communicated and discussed with the public (NEA, 2002a).

Furthermore, public information, consultation and/or participation in environmental or technological decision making – and radioactive waste management in particular – are required by a number of international texts or treaties. These include the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.[1] In Europe, the directives on environmental impact assessment[2] and strategic environmental assessment[3], as well as the United Nations Economic Commission for Europe's Espoo Convention[4] with its Kiev Protocol[5] are particularly relevant. Public involvement is considered a core element of these decisional assessment procedures, which are increasingly used as umbrella tools to address issues going beyond purely environmental matters (UNECE, 2014b).

The Aarhus Convention[6] is gaining particular attention as a support for stakeholder involvement (e.g. REC, 2013; UNECE, 2013). The convention and its accompanying guidance (UNECE, 2014a; UNECE, 2014b) lay out the conditions under which concerned publics will access their right to effective influence on environmental decision making. In decision processes, opportunities for involvement must be provided early enough so that options still remain open and the decision authority must show that due account of the input has been taken. Participation should be continuous along the chain of related decisions (rather than one-shot occurrence or confined to a small window of opportunity). Reasonable time frames for input must be provided during the different phases, supported by access to the full range of needed information as well as preparation and competence building for the stakeholder participants. Public access is guaranteed to courts of justice, empowered to review whether the spirit as well as the letter of these requirements have been respected.

When the first edition of the short guide was published in 2004, the growing trend towards integrating stakeholder involvement was typified, for example by Law n° 108-153 regarding nanotechnology research and development enacted by the US Congress in 2003. This law states that societal concerns must be identified

1. www.iaea.org/sites/default/files/infcirc546.pdf.
2. Directive 85/337/EEC on the assessment of certain public and private projects on the environment as amended (http://ec.europa.eu/environment/eia/eia-legalcontext.htm).
3. Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32001L0042).

   The word "strategic" does not appear in the directive. It is widely used however to distinguish the application at the level of plans and programmes which may give rise to localised projects for which the environmental impact assessment is applicable.
4. UNECE Convention on Environmental Impact Assessment in a Transboundary Context (www.unece.org/env/eia/welcome.html).
5. The Kiev (or Kyiv) Protocol on Strategic Environmental Assessment to the UNECE Espoo Convention adopted in 2003 (www.unece.org/env/eia/sea_protocol.html).
6. UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (www.unece.org/env/pp).

through "public input and outreach to be integrated [...] by the convening of regular and ongoing public discussions, through mechanisms such as citizens' panels, consensus conferences, and educational events, as appropriate".[7] At the time of the second edition in 2015, European directives affecting nuclear activities show that participation is a recognised norm. The Council Directive 2011/70/Euratom of 19 July 2011,[8] establishing a community framework for the responsible and safe management of spent fuel and radioactive waste, contains special articles on transparency and participation, and requires member states to effect relevant measures.

Under such legal frameworks, compliance with stakeholder involvement requirements becomes an important issue for those responsible for the corresponding plans, programmes or specific activities. While compliance is important, it is not sufficient. The first international quality standard for stakeholder engagement AA1000SES (AccountAbility, 2011) shows that a commitment is needed that will integrate stakeholder engagement with organisational governance, strategy and operations management.

Engagement initiatives may be triggered by legal requirements for participation, compliance with international conventions or agreements, pre-requisites for securing funding, etc. Legal frameworks may impart the times and the means for involvement. In contrast, in other contexts a specific player desiring to involve stakeholders takes responsibility for creating the opportunity and choosing the means.

Stakeholder involvement is an integral part of a stepwise process of decision making (NEA, 2004). At different phases, involvement may take the form of sharing information, consulting, dialoguing or deliberating on decisions. It should always be seen as a meaningful part of formulating and implementing good policy. Specific involvement initiatives may be seen as part of an ongoing relationship among the different societal partners who are concerned by issues relating to, for e.g. radioactive waste management. Stakeholder involvement approaches should not be viewed as convenient tools for public relations, stakeholder management, image building, or winning acceptance for a decision taken behind closed doors.

Practitioners and scholars are developing, applying, and evaluating various approaches for stakeholder involvement. There is a vast range of approaches, as well as a great number of publications describing them. New horizons are opened as experience with social media grows. This short guide aims to help non-specialists form an idea of what is needed to choose an approach and find their way to pertinent documents.

This publication is intended for a general readership of persons considering stakeholder involvement. It refers to these persons indifferently as organisers, planners, practitioners or conveners.

7. Section 2 (10). thomas.loc.gov/cgi-in/bdquery/z?d108:SN00189:|TOM:/bss/d108query.html.
8. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32011L0070.

Chapter 1, envisioning stakeholder involvement, shows how relevant stakeholders can be identified. Because all participation is not equivalent, insight is offered on the different levels of involvement. The positive effects that may result from stakeholder involvement arrangements are listed, and rationales for engagement are analysed.

Chapter 2, planning, provides an overview of the phases of involvement and emphasises the need for early involvement when decision options are still open. Pointers are then provided for setting criteria that will frame first the choice of approach for a given situation and then the assessment of the involvement process. A list is provided of typical approaches for engaging stakeholders in deliberation (a higher level of involvement that corresponds to fully airing issues and viewpoints and exploring options). The use of social media is considered.

Chapter 3, implementation and assessment, signals relevant documents and frameworks. Also considered are the limits of involvement (whether on the side of conveners or of participants).

Chapter 4 presents conclusions and areas for future development.

Chapter 5 lists the references cited in this publication.

Those who wish to go farther can consult the stand-alone annotated bibliography of references (NEA, 2015) which is maintained separately by the NEA Forum on Stakeholder Confidence (FSC). It is intended to help the reader choose among the wealth of handbooks and scholarly references on planning, implementing and evaluating a tailor-made involvement initiative.

1.2. Who are the stakeholders?

The FSC uses the term “stakeholder” as a label for any actor – institution, group or individual – with an interest or a role to play in the societal decision-making process around radioactive waste management. Different stakeholders may have different interests. Engagement strategies should thus be adjusted to context: differing needs, programme phases, formal requirements, as well as national process and national and local culture.

The Aarhus Convention gives participation rights in environmental decision making to the “public concerned”. The public concerned is defined as those affected or likely to be affected by, or having an interest in, the decision making, including non-governmental organisations promoting such interests and meeting national requirements. The population of stakeholders might be very broad in early stages of decision making (at the level of policy, plans or programmes) and then narrow down as decisions bear on more localised projects or activities. Long-term management issues like radioactive waste management also imply that some stakeholders are not born yet. Consequently, there must be a reflection on how to represent the interests of absent stakeholders in present-day engagement and decision making.

The International Risk Governance Council distinguishes four main stakeholder groups. These are political, business, scientific and civil society representatives (to the extent that they are socially organised). Additionally, other

groups that play a role in governance processes can be defined: the media, cultural elites and opinion leaders, and the general public, either in their role as non-organised affected public or as the non-organised observing public (IRGC, 2013; Aven and Renn, 2010).

In radioactive waste management, a list of possible stakeholders (Webster, 2000) might include: the general public; demographic groups (such as young people); nearby residents; owners of land, property and rights; concerned representatives or elected officials of local communities; national/regional government ministries/departments; regulators; national/local non-governmental or civil society organisations;[9] local pressure groups; trade unions; the media; the scientific research community; implementing organisations; the nuclear industry; contractors; waste producers; neighbouring countries; and international organisations.[10]

Stakeholders may be community, statutory or strategic (UNECE, 2014b). The European part-funded action research project Community Waste Management in Practice (CIP)[11] investigated definitions of the affected community in the case of waste management facility siting. Several overlapping factors make up a community's identity: these are spatial or geographic, political, economic, cultural and emotional. Stakeholders cannot be defined in purely administrative terms; instead, the planner with a duty towards an affected community must also look into experiential aspects bringing people together in the place where they work and live. A two-step process is proposed to assist in identifying stakeholders affected by any facility siting (Wylie, 2010).

Stakeholders have both different contributions to make and different involvement needs at each stage of a decision process. When considering which stakeholders to engage, at a minimum, the planner should identify people towards whom the organisation has legal, financial or operational responsibilities; people who are affected by the organisation's operations; and people who are likely to influence the organisation's performance. The AccountAbility practitioner's handbook (AccountAbility, 2006: Vol. 2) accompanies this advice with a simple downloadable dynamic template (T8) to assist in creating a stakeholder profile. This template asks realistic questions about each stakeholder group and their representatives, such as preferred level of involvement, legitimacy to engage, competence, access to funding, etc. In cases where the organisation has to make a special outreach effort to attain particular groups, this template may facilitate internal discussion and planning.

To identify stakeholders in a policy reform context, more detailed systematic approaches and guidance exist (Schmeer, 1999; World Bank, n.d.). Stakeholder

9. Civil society organisations may also be called associations and may range in scale and mandate from e.g. neighbourhood organisations to professional organisations or academic societies.

10. For example, European Union member states have information obligations to the European Commission under the Treaty establishing the European Atomic Energy Community (Article 37). http://europa.eu.int/abc/obj/treaties/en/entoc38.htm.

11. www.cowam.com.

analysis is a process of systematically gathering and analysing qualitative information to determine whose interests should be taken into account when developing and/or implementing a policy or programme. It "provides a detailed understanding of the political, economic and social impact of reform on interested groups, the hierarchy of authority and power among different groups and the actual perceptions of the reform among different groups, all of which are important for reform advocates to consider" (World Bank, n.d.).

1.3. Levels of stakeholder involvement

Participation is rarely ever alike, as each country and each situation require different methods and tools. In the first place, it can be observed that different levels of stakeholder participation or involvement are enabled by different approaches. One approach may simply transmit information to a passive stakeholder audience. At the other end of the scale, an approach may significantly empower stakeholders within the decision-making process. This section reviews guidance on selecting and communicating the right level of involvement depending on context – remembering that several other criteria will come into play as well (as explained in the following sections).

Starting with the "ladder of citizen participation" presented by Sherry Arnstein in 1969 (Arnstein, 1969), many practitioners have referred to a public involvement *continuum*. The different involvement activities seen in Table 1 may blend into each other; no strict line can be drawn between adjacent activities.

Table 1. A public involvement continuum, the level of expected outcomes, and the "promise" made by the convener

<table>
<tr><th colspan="2">Low level of public involvement or influence</th><th>Mid-level</th><th colspan="2">High level of public involvement or influence</th></tr>
<tr><th>Inform</th><th>Consult</th><th>Engage</th><th>Collaborate</th><th>Partnering</th></tr>
<tr><td>Inform, educate, share or disseminate information</td><td>Gather information, views</td><td>Promote two-way dialogue</td><td>Commit to frame issues and debate options together</td><td>Partner in selecting and implementing solutions</td></tr>
<tr><td>Increasing literacy; inducing behavioural changes</td><td colspan="2">Modifying policies in accordance with public preferences and/or reaching an informed consent</td><td colspan="2">Obtaining the self-commitment of each participant as well as contributions that may result in binding processes and decisions</td></tr>
<tr><td>"We will keep you informed"</td><td>"We will keep you informed, listen to you, and provide feedback on how your input influenced the decision"</td><td>"We will work with you to ensure your concerns are considered and reflected in the alternatives, and provide feedback on how your input influenced the decision"</td><td>"We will incorporate your advice and recommendations to the maximum extent possible"</td><td>"We will implement what we decided together"</td></tr>
</table>

Source: Adapted from IRGC, 2013; Health Canada, 2000; Abelson and Gauvin, 2006.

Progressively higher levels of stakeholder involvement have been achieved in the radioactive waste management area (NEA, 2010a). The authors of the first stakeholder engagement standard AA1000SES (AccountAbility, 2011) identified three general trends: spread of engagement from large high-profile organisations to previously invisible organisations; increase in stakeholder diversity and complexity and the range of issues they raise or champion; and increasingly sophisticated approaches to engagement by organisations seeking win-win outcomes with stakeholders. As organisations gain experience and confidence, "their approach tends to shift from one-way channels of communication designed to spread information, to interactive tools for consultation and dialogue. These may then mature into multi-stakeholder partnerships and alliances" (AccountAbility, 2006: 22).

Planners should be aware that stakeholders may desire, expect or be entitled to a particular level of involvement. Preliminary discussion, contact with or observation of target stakeholder groups, as well as review of statutory requirements, will help determine the appropriate level. How much involvement the organisation can – or wishes to – offer must be clearly defined. Explicit information must be given about constraints likely to affect the extent of influence possible or how the input from engagement will be used (National Research Council, 2008). Box 1 gives insight from the FSC experience.

Box 1. The need to clarify the level of stakeholder involvement

Reports by FSC member organisations (Vári, 2004) confirm the need to clarify the level of involvement, and the degree of two-way communication that can be expected by participants:

- It is important to be clear on the type of issues or decisions that can be influenced by a consultation process, as extensive consultation with limited opportunity for influence can result in frustration/lead to disillusion/dissatisfaction.
- The basis for the decision must be clearly understood.
- It is important to be clear about the information sought and the feedback to be provided by the decision maker.
- People want to see that they have influenced the process and have had a meaningful impact on the outcome.

Note that in statutory processes, for example those conducted under the Aarhus Convention, due account is an important requirement. The convener is accountable, i.e. must show how the input has influenced the decision process, and stakeholders have a right to verify this. The demonstration of due account may range from a general statement of the concerns and values that have been incorporated, to a record of how submissions have been answered, to a line-by-line comparison of the decision text before and after incorporating input, with a justification of each omission.

In Table 2, guidance is offered on fitting the different levels of public involvement to the needs of the situation.

Table 2. Guidance on choosing different levels of public involvement

In which cases may it be appropriate to involve the public?	In matters of health, safety and local impacts of radioactive waste management activities; development and implementation of legislation and regulations; development of policies, statutes and new programmes; preparation of business plans; issues with social, economic, cultural or ethical implications; sharing or disseminating information; resolving questions that revolve around conflicting values.
Inform/educate when:	Factual information is needed to describe a policy, programme or process; the public needs to know the results of a process/decision; there is a need to document a proposal; raising general awareness; an emergency or crisis requires immediate action; information is necessary to abate concerns or prepare for higher levels of public involvement.
Gather views and information when:	The purpose is primarily to listen and gather information; interpretation and analysis of data collected; identifying specific individuals/groups; formulating policies and preparing decisions in accordance with public preferences; and preparing for higher levels of public involvement.
Engage when:	Two-way information exchange is requested by the organiser or by relevant stakeholders; opportunity is given to discuss and propose details of policy and programme delivery; criteria for engaging are identified.
Collaborate when:	There is willingness to frame issues with stakeholders; there is commitment to identify relevant options through dialogue and to respect recommendations; time and resources are available to discuss complex issues.
Partner when:	Institutions are ready to empower stakeholders to co-develop solutions; there is a formal/informal agreement to implement solutions generated with stakeholders.

Source: Adapted from Health Canada, 2000.

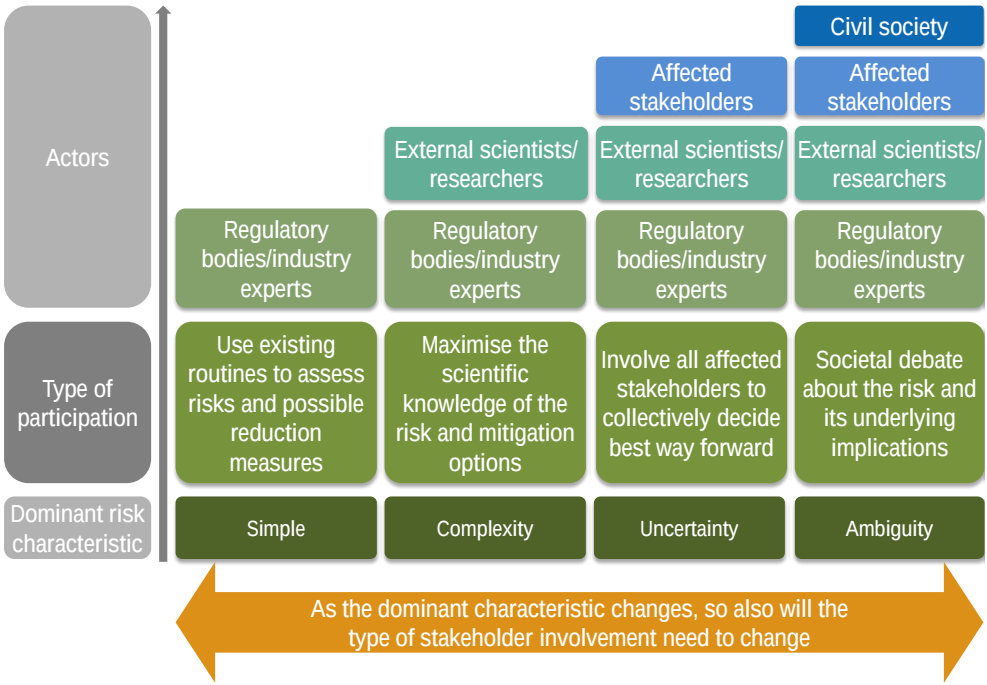
Informing and educating is an important duty and should not be neglected because it is low on the involvement scale. Fulfilling this duty is part of early involvement (Section 2.2) by organisations whose statutory role in a decision-making process comes later. Informing and educating not only transmits knowledge, it also creates relationships and helps the organisation to gradually build its own competence that will be useful when it is time to take a more active and interactive role. This was the experience of the US Nuclear Regulatory Commission early on in the framework of radioactive waste management

processes, before the regulator had a statutory service to render (NEA, 2014: 34-35). Public and private sector organisations in Europe should also be aware that the Aarhus Convention creates information access rights and judicial review may determine that the label of confidentiality will be restricted to fewer materials.

Much research and development have been undertaken on involving stakeholders in decisions about risk. The risk management escalator (IRGC, 2013) shown in Figure 1 can help conveners discern the level of participation that may be required to come to closure as function of the type of issue under discussion.

Figure 1 suggests that "simple" issues may not require elaborate involvement procedures. As issues (or risks) become more complex, a different set of procedures and a larger set of actors are needed to respond. "Ambiguous" issues are situated at the highest end of the escalator and call for the most inclusive, face-to-face response. In such contexts, broader as well as higher-level involvement is justified, in order to air the competing perspectives and concerns.

Figure 1. The risk management escalator



Source: IRGC, 2013.

Ambiguity is found when different societal visions and values exist in regard to the issue, producing debate and controversy. There may also be disagreement among the stakeholders regarding the uncertainty and ambiguity. A useful short discussion of uncertainty, complexity and controversy, and a "lens" to help choose a participatory technology assessment approach in this light, are found in Laes and Meskens (2006).

High-level participation may include "legal deliberations as well as novel approaches to include stakeholders and representatives of the public at large. If value conflicts are associated with measures to mitigate or reduce the impacts of [hazards], it is not enough to demonstrate that public planners are open to public concerns and address the issues that many people wish them to take care of. The process of assigning trade-offs between each of the options needs to be open to public input and new forms of deliberation" (Wachinger and Renn, 2010).

1.4. Potential effects of stakeholder involvement initiatives and rationales for engagement

The preamble of the Aarhus Convention lays out the reasons for elevating freedom of information and public participation to the status of guaranteed rights: "In the field of the environment, improved access to information and public participation in decision making enhance the quality and the implementation of decisions, contribute to public awareness of environmental issues, give the public the opportunity to express its concerns and enable public authorities to take due account of such concerns, aiming thereby to further the accountability of and transparency in decision making and to strengthen public support for decisions on the environment" (UNECE, 2014b).

Substantial evidence indicates that public participation is more likely to improve than to undermine the quality of decisions. Studies show that public participation also tends to increase the legitimacy of decisions, which, in turn, raises the likelihood that they can be implemented effectively and efficiently. The process itself builds citizens' knowledge of technical and scientific aspects, e.g. on environmental issues, which increases their ability to engage in future decisions (National Research Council, 2008).

Three classes of effects may result from the application of bottom-up, inclusive approaches, as well as consultation and deliberation techniques. These are:

- substantive (concrete decision outcomes);
- procedural (modifications to the process of deciding);
- contextual (outcomes).

Table 3 lists the potential positive effects of stakeholder participation. These may also be quoted as justifications for involving stakeholders in policy decisions.

Table 3. Potential positive effects of participatory approaches

Category	Potential effects
Substantive effects	- More pertinent choices from the environmental point of view - More pertinent choices from the economic point of view - More pertinent choices from the technical point of view - Common understanding of issues and problems, positions and arguments - New options for action, more robust solutions, better identification of sustainable longer-term approaches - More socially acceptable choices, agreements or tolerated consensus
Procedural effects	- Improvement of the quality of the informational basis of decision processes and better use of information - Possibility to explain and justify both expert and non-expert positions - Better integration of the wider context that determines the range of choices for the decision - Increased pool of ideas and creativity - Opening up the domain of choices considered - More dynamic processes - More transparent decision making - Early identification of conflict and better management or resolution - Increased legitimacy of the decision process - Improvement of the effectiveness of the process in terms of costs and time - Empowerment and enhanced influence of less organised interests
Contextual effects	- Better information to stakeholders and/or the public - Increased public awareness and interest - Better preparation for future situations in which stakeholders may need to take particular actions - Improved strategic capacity of decision makers - Improved competence and expertise in organisations - Improved quality of technical support tools - Reinforced organisational capacity to advise and assist stakeholders - Public acceptance, ownership, support for decisions - Changes in the perception and conceptualisation of the social context - Modification in traditional power relations and conflicts - Social learning, constructive dialogue, better co-operation between the authorities and the public - Strengthened co-operation, communication and co-ordination between institutions and with stakeholders, for future actions that will necessarily affect or involve stakeholders - Reinforcement of democratic practices and citizens' involvement in public domains - Increased confidence in citizen problem-solving capacity, in institutional players and in institutional arrangements

Source: Adapted from UNECE, 2014b; Laes and Meskens, 2006; van den Hove, 2003; Renn and Schweizer, 2009; and NEA, 2010b.

Substantive, procedural and contextual levels of effects are described elsewhere as effects on decision quality, legitimacy and capacity. Best practices in public participation may improve all three levels of effect simultaneously; however, this does not imply that a standard set of guidelines will lead to achieve all three objectives in all situations. "In some situations, particular issues require special attention. For example, when the interested and affected parties to a decision seriously mistrust each other or the responsible public authority, special attention to building legitimacy may be necessary. When the relevant science is known to be in dispute, special attention to issues of scientific quality may be necessary. When certain critical parties lack sufficient scientific understanding to participate effectively, technical assistance to these parties may be essential to any desirable outcome" (National Research Council, 2008: 92). On the other hand, it must be ascertained that this is not seen as an effort to manipulate "views". Trust is needed in order to avoid this.

Conveners should carefully consider not only the effects sought, but also the dominant rationales underlying the decision to involve stakeholders. This is a way to clarify goals and to avoid – both inside and outside the organisation – miscommunication and disappointments. "What are we trying to achieve? Is this legitimacy, effectiveness, efficiency or representation? Do all relevant actors agree? Is participation necessarily the best way to realise these goals? What if actors have different purposes and resources? [...W]hile participation is considered a solution by many, the existence of separate participation rationales indicates that the problems they are trying to solve are very different" (Wesselink et al., 2011). Three major participation rationales (differing slightly from the above classification of effects) are:

- Instrumental (or functionalist): effective participation makes decisions more legitimate and improves results. It aims to restore public credibility, diffuse conflicts, justify decisions and limit future challenges to implementation by creating so-called ownership. Policy goals are not open for discussion, only the details are (to a lesser or greater extent). Instrumental participation supports incumbent interests. This is a minimalist and tactical kind of participation arrangement.

- Substantive: non-experts see problems, issues and solutions that experts miss. Participation aims to increase the breadth and depth of information and thereby improve the quality of decisions; it ignores power issues, e.g. related to problem framing. Unlike in the instrumental rationale, a substantive rationale permits the modification of policy goals.

- Normative: democratic ideals call for maximum participation. It aims to counter the power of incumbent interests and allows all who are affected by a decision to have influence.

Table 4 summarises these rationales and the consequences for designing participation.

Table 4. Participation rationales and design choices for participation

	Normative rationale	Substantive rationale	Instrumental rationale
Who should be included?	Those who have a stake	Those who have additional knowledge	Those who have blocking power and those who are needed for implementation
What should be included?	Participants' concerns and views	Policy makers' concerns; all knowledge and views	Policy makers' concerns; selected knowledge and views
When to include?	In all stages and issues	Only when it adds value substantively	Only when it ensures smooth implementation

Source: Adapted from Wesselink et al., 2011.

General and potential drawbacks of public participation in decision making are acknowledged by the guide for implementing the Aarhus Convention (UNECE, 2014b):

- the potential conflicts may cause delay in implementation;
- conflicts have to be managed and solved;
- may prolong some of the phases of decision making;
- needs, attention, and resources (time, funds, human resources and expertise).

Despite such possible impediments, the guide states that the treaty's articles requiring public participation in many plans, programmes and activities "serve as a reminder to public authorities that it is vitally important to allow public participation to do its job fully. While it may be tempting to cut corners to reach a result that might appear on the surface to be the best, there are countless cases where unexpected or hidden factors became apparent only through a public participation process, with the result that potentially costly mistakes were avoided. Furthermore, even where the original proposal is not substantially changed as a result of public participation, the successful implementation of the final decision can be promoted through the active and real participation of the public during the decision making. Conversely, public participation that is merely pro forma – i.e. that takes place when options are already closed – can injure the chances for successful implementation of a decision because of the questionable legitimacy of the process. It must be emphasized that public participation requires more than simply following a set of procedures; it involves public authorities genuinely listening to public input and being open to the possibility of being influenced by it. Ultimately, public participation should result in some increase in the correlation between the views of the participating public and the content of the decision. In other words, the public input should be capable of having a tangible influence on the actual content of the decision. When such influence can be seen in the final decision, it is evident that the public authority has taken due account of public input" (UNECE, 2014b: 115-116).

2. Planning

This chapter clarifies the phases of engagement and points out the need for early involvement of stakeholders in co-framing the issues. It reviews how to set criteria that will serve in both selecting appropriate engagement approaches and, later, evaluating the initiative. Finally, this chapter explains how to match an approach to a context and provides an extensive listing of commonly used approaches.

2.1. An overview of phases

Planning, executing and evaluating a stakeholder involvement initiative imply several integrated phases. These are portrayed in Figure 2 below by the authors of the first international stakeholder engagement standard AA1000SES (AccountAbility, 2011). The approach gives equal importance to all phases. Engagement is not an isolated action that simply fulfils a requirement. Instead, stakeholder engagement stems from strategic thinking by the organisation. It should address material concerns which are significant to both the organisation and the stakeholders (see Section 2.2).

Analysis and planning help align strategic goals and future actions (as discussed in Section 1.4). Both the strategic and the planning phases emphasise that identifying stakeholders, their concerns and issues are at the heart of engagement (Section 1.2). For engagement to be effective, the organisational capacity to listen and respond must be strengthened.

Designing the actual engagement process includes specifying the intensity (Section 1.3) and the form of engagement (Section 2.3). Outputs from the involvement initiative should then feed both action and reflection, which, in turn, will lead to new strategic assessments.

This cyclical vision is consistent with the needs of the long-term technological and societal endeavour of radioactive waste management. New decision points emerge over time, influenced by earlier decisions and requiring public participation in their turn. Stepwise decision making is needed in this context, incorporating flexibility and the possibility to reverse decisions if necessary (NEA, 2002b). The Aarhus Convention also highlights that public involvement in environmental decision making should be regularly revisited. Continuity in engagement contributes to the sustainability of environmental solutions. It implies not only a palette of instrumental procedures and involvement methods, but also, strengthening stakeholder capacity to engage (see Chapter 4).

Figure 2. Five-stage stakeholder engagement framework

Source: Adapted from AccountAbility, 2006.

2.2. Co-framing the issues: Early involvement

International guidance and best practice publications on facility siting, societal risk management and environmental decision making often point out that stakeholders should be involved early.

Early involvement does not only refer to the calendar or chronology of a specific decision. In binding treaties mandating public involvement in environmental decision making, early involvement also means that stakeholders should be involved upstream, while options are still wide open. According to the

so-called Strategic Environmental Assessment Directive, the Espoo Convention, the Kiev Strategic Protocol and the Aarhus Convention (see Section 1.1), the public should be enabled to participate in setting higher-order principles, priorities and goals before such policy or concepts are enacted in specific projects.[1]

Organisations can take the initiative to communicate with stakeholders, and to get their input, in the absence of formal requirement. Early involvement, whether or not it entails direct participation in decision making, is a component of institutional transparency (NEA, 2012a). Involvement initiatives may be focused on any suitable dialogue issue ranging, in the case of radioactive waste management, from overall policy and/or its connections to related energy or infrastructure policy, to any of the specific decisions, options, steps, or issues (ethical, economic, etc.) that make up part of radioactive waste management.

According to the US National Academy of Sciences, early involvement also means "engaging the spectrum of interested and affected parties in formulating the problem for assessment or decision to the extent" possible in a given context. Co-operation in framing the issues, as an early step in engagement, is seen to be "of particular importance in achieving quality and legitimacy" (see also the discussion of co-framing in EC [2004b]). Especially in contentious situations, "potential participants should be identified and brought into the planning process as early as possible [...] as a mismatch between the scope of the problem as defined by the agency and the scope as defined by participants can be a source of serious problems. Participants should co-design the formats and decision rules (process design) to ensure that the process is effective and trusted. Participation specialists can make recommendations and advise all parties on what is likely to work best in the given context, but the final decision [on process] should be made in a collaborative effort with the main parties involved" (National Research Council, 2008: 231).

The International Risk Governance Council (IRGC, 2013) has outlined a risk governance process framework that includes a concern assessment step. This is suggested when a given threat is highly controversial (characterised by high ambiguity; see Section 1.3). For this assessment, engagement with stakeholders should elicit as widely as possible the concerns, perspectives, and preferred options held by the relevant social groups on the basis of their specific knowledge and information. The Council mentions that it may be necessary to conduct face-to-face inquiries among different groups and representatives of the wider public.

The stakeholder engagement standard AA1000SES (AccountAbility, 2011) highlights that the first steps of a successful process will identify relevant or significant (material) concerns held by the organisation and/or by stakeholders. A dynamic downloadable template (T3) allows the planner to create a matrix of objectives, issues and stakeholders. Priority issues will be identified by crossing organisational concerns and the degree of awareness and concern shown by stakeholders in regard to the same issues.

1. See REC (2013) for a discussion of these requirements and the application of the Aarhus Convention in the radioactive waste management field.

Today, even high-level intergovernmental processes are influenced by broad-based stakeholder input at an early stage. The Aarhus Convention Article 3.7 foresees a mechanism for citizen input into policy making. For the United Nations, citizen engagement is the "interaction between governments and citizens in order to share information and power in policy processes, [...] more specifically in defining the issues that affect them, identifying possible solutions, and developing priorities for action, often jointly with the government and other governance actors" (UN, 2013). Box 2 indicates how the Civil Society 20 (C20)[2] gathered upstream input from interested citizens through an inclusive, Internet-based process.

Box 2. "How we are shaping the agenda" by the C20

Through our public online consultation, we reached out to international civil society to choose the focus areas for our advocacy: inclusive growth and employment, infrastructure, climate and sustainability and governance.

Between February and May 2014, an online crowdsourcing website – C20 Conversations – allowed everyone to help shape our recommendations around these key themes.

In June 2014, the C20 Summit in Melbourne discussed and confirmed these key recommendations.

From the C20 Summit to the Leaders Summit in November 2014, we advocated our recommendations for inclusive economic reform to the leaders of the G20 nations.

Early involvement also corresponds to preparedness, and may make a vital contribution to achieving the objectives of safety and security which interest governments, institutions and all of society. For instance, the NEA Committee on Radiation Protection and Public Health (CRPPH) pointed out that "the active participation of stakeholders is necessary not only in the implementation of post-emergency strategies, but also before any radiological emergency, during the preparation and planning phase" (NEA, 2007). Early involvement here improves plans, enables concerned stakeholders to prepare themselves to a post-emergency situation, and reinforces the potential for co-operation, communication and co-ordination in actual crisis or during recovery (NEA, 2010b).

2. Civil Society 20 (C20) is a platform for dialogue between the political leaders of the Group of Twenty (G20) countries and representatives of civil society organisations. This independent organisation affirms that "to deliver strong, sustainable and balanced growth, it is important that G20 deliberations are informed by the expertise and knowledge of civil society. The C20 leads engagement with the G20 on behalf of international civil society" (during the Australian presidency of the G20, 2014). www.C20.org.au.

2.3. Setting criteria for approach selection and assessment

The decision to involve stakeholders may reflect different needs or goals, as discussed in Section 1.3. Different types of consultation or deliberation processes hold the potential to give different effects (Section 1.4). Finally, each organisation (as well as each target set of stakeholders) has specific constraints. For these reasons, it is important to match the stakeholder involvement approach to needs and constraints, desired effects and goals. To achieve this, the organisation must develop selection criteria. The same criteria can be used later to evaluate the involvement initiative and to assess whether the needs and goals have been well served (Section 3.2).

A fundamental criterion is the appropriate level of involvement (Tables 1 and 2) that can be offered to stakeholders. It should be carefully set and communicated to potential participants (Box 1).

Some handbooks may be particularly helpful in setting criteria. "Participation works!" (NEF, 1998: 7-8) suggests that a list of desired effects and goals should be made (Table 3 of our short guide provides an extensive sample.) These will all form basic criteria for choosing an approach. The AccountAbility practitioners' handbook (AccountAbility, 2006: Vol. 2)[3] also places an accent on the relationships that the convener already has or wants to form with stakeholders. Flüeler et al. (2005a; 2005b) provide criteria based on "Input – what is needed at start?; process – how does/should it happen?; and output – what comes out of it?".

If the organisation seeks to develop or restore social trust through engaging with stakeholders, members might wish to discuss in particular the material provided by the E7, an international organisation representing leading electricity companies from the G7 countries (now called the Global Sustainable Electricity Partnership). You may find implementation suggestions in Section B of "Social Trust and the Electricity Industry: An E7 Contribution" (E7 Network, 2000).

Constraints and pragmatic limits should also be listed. "Participation works!" highlights a variety of issues that were important for local authorities in a community context: "Method chosen should be adapted for use by a variety of stakeholders; adapted for use by different sized groups; be easily recorded; fit within a limited time slot of an evening or half a day; break through traditional opposition of arguments in order to develop a picture that reflects the diversity of a community […]" (NEF, 1998). AccountAbility (2006: Vol. 2) mentions important constraints on stakeholders' ability to participate, related for instance to their costs for travel or family care, and lost time at work. This business-oriented manual also focuses on financial and human resource limits that may constrain the organisation's ability to engage.

The criteria based on both desires and constraints will be very diverse. It is unlikely that any approach will ideally suit all requirements. Therefore, a pilot group of members of the organisation that will engage the stakeholders should

3. See especially the discussion of "Stage 4 – Design the process and engage".

discuss the lists generated and rank the criteria by order of importance. Stakeholder representatives may also be invited to co-operate in this criteria setting.

2.4. Choosing an approach

Whichever approaches are chosen they will give best results, for participants and for the institutions that organise dialogue, if they support a logical step in well-defined phased process of management or of decision making (Section 2.1). This overall process with its particular goals justifies the use of a specific instrument at a given time, in order to obtain a needed output (review goals, justifications and potential effects in Section 1.4). Within this process, different issues or problems take centre stage at different times. They will frame the choice of approaches, in order to elucidate, for example: national or local considerations, or predominantly societal or technical choices.

Any given stakeholder involvement approach can usually be applied to a broad range of issues. No particular approach is superior to another: "Various public participation formats have been successful in achieving the goals of high quality and widely acceptable assessments and decisions, and each format has also failed at times in achieving these goals. There is no single best format or set of procedures for achieving good outcomes in all situations" (National Research Council, 2008). This finding makes sense because the criteria developed in response to a specific context, constraints, desired goals and effects, will certainly differ between organisations. Experience shows that the success of a particular approach will also depend on external factors such as the phase of the decision-making process, as well as the political and cultural context.

Therefore, a definitive matrix matching approaches to criteria does not exist. However, different approaches can be described according to generic criteria, such as: level of involvement, intensive (National Research Council, 2008; IRGC, 2013) versus extensive consultation, representative character, inclusiveness, deliberative qualities, etc.

When the organisation's own ranked list of criteria is settled (or when a preliminary list has been developed), the planner should review existing approaches to form an idea of which might fit best. Attractive guides offering a rapid review of involvement approaches include the UK Environment Agency (2000), the OECD (2001) and ECR (2002). Flüeler et al. (2005b and 2005b) provide a matrix, while Laes and Meskens (2006) start from the social learning goals and key characteristics of the topic under discussion to zero in on a likely approach for a given combination.

Online platforms can help match approaches to basic criteria. The *Implementing Public Participation Approaches – Participation Tool Box* (IPPA, n.d.) supports comparisons based on convener profile, governance level, phase of decision making, numbers and types of stakeholders involved and frequency of meetings; the Participation Compass (Involve, n.d.) supports queries on type of change targeted, cost, number of participants, their recruitment and representativeness, and face-to-face versus online processes.

When a set of potentially suitable approaches has been identified, more detailed sources may be consulted. Handbooks and toolboxes often point the reader to detailed methodological descriptions and case studies. One way of weighing approaches is to consult useful advisory texts reviewing their actual implementation. Many guides providing such advice are mentioned in the stand-alone annotated bibliography (NEA, 2015) maintained by the Forum on Stakeholder Confidence (FSC).

The design of the process should maximise the incentives to participate and minimise disincentives and obstacles (National Research Council, 2008).

It will be of great value for the planner to contact and discuss experience with persons who have conducted involvement initiatives. Such conversations could take place at different points as the planner moves through the steps suggested above. As the desired approach comes into focus, planners should try to exchange with persons who have used that particular one. In some cases, the convener will consult and/or retain the services of a professional to set up and conduct the initiative. In this case, following the steps to identify the right family of approaches can prepare the organisation to dialogue more fruitfully with the professional.

2.5. Approaches available for intensive or extensive involvement

"Different processes provide different roles for the participants – for example, as users of a service, as self-interested individuals, as citizens within a collective, as interactive group members, or as individuals with fixed views or people who can debate and develop views. Most of the new consultation processes are more deliberative, enabling participants to develop positions and consider issues in relation to the common good rather than individual interests, and thus act as citizens" (Nirex, 2002).

Box 3 lists approaches corresponding to the higher levels of stakeholder involvement seen in Section 1.3 (i.e. discussing, engaging, partnering; the list roughly respects this increasing intensiveness of involvement). These approaches have features of two-way, deliberative dialogues. They are in harmony with suggestions in favour of decision-making models that integrate both analytic and deliberative processes.[4] It is up to the convener to ensure that the outcomes of the engagement effort do effectively influence decisions, and to provide due account of

4. The "analytic-deliberative" model was presented by the National Research Council of the US National Academy of Sciences. The components are defined as follows: "Analysis uses rigorous, replicable methods, evaluated under the agreed protocols of expert community such as those of disciplines in the natural, social, or decision sciences, as well as mathematics, logic, and law to arrive at answers to factual questions. Deliberation is any formal or informal process for communication and collective consideration of issues" (National Research Council, 1996: 3-4). In this model, analysis and deliberation are not only complementary, but also strongly interrelated: "Deliberation frames analysis and analysis informs deliberation. Thus, risk characterization and decision making more generally is the output of a recursive process, not a linear one" (National Research Council, 1996: 20).

that influence. Box 4 highlights related conflict resolution approaches, while Box 5 describes combination approaches.

The lists of approaches in this chapter are by no means exhaustive. In addition, the short generic descriptions may not correspond exactly to specific examples familiar to each reader: this is because, under a single approach label, field practitioners may design slightly different implementations or adapt them to the context. Even a highly defined and structured approach needs to be adapted for application in a particular national process and local circumstances.

Box 3. Commonly cited approaches for informing deliberation through stakeholder involvement

Public hearings: Regulated, formal arrangements for times and places at which members of the general public and other types of stakeholders can give evidence or question public authorities about decisions under consideration.

Deliberative polling: Similar to opinion polling, but collects views after persons have been introduced to the issue and have thought about it. Meant to give an indication of what people would think if they had the time and information to consider the issue (instead of reacting "cold"). Includes a feedback session, sometimes with a high media profile (e.g. broadcast by television along with documentary inserts).

Focus groups: Small groups of invited or recruited persons discuss a theme or proposal; provide insight on their reactions, values, concerns and perspectives, and an indication of how group dynamics influence opinions.

Nominal group process: A structured group interaction approach designed to generate a prioritised list of high-quality ideas within two hours or less. It is particularly helpful for setting goals, defining obstacles, and gathering creative responses to a particular question.

Delphi process: Persons with different expertise or interests relevant to a problem participate in a staged series of planned and facilitated discussions (either face-to-face or by correspondence). It is used to develop fact-based decisions and strategies reflecting expert opinion on well-defined issues. When input is anonymous, more equal consideration may be given to the diverse views.

Charrette: From 20 to 60 persons work co-operatively to find solutions to a given problem within a set time period (usually one day). An experienced facilitator is needed. This approach is of interest when assembling practical ideas and viewpoints at the beginning of a decision process, and when addressing difficult matters involving many different interests.

Citizen advisory groups: Small groups of persons who represent various interests or expertise (e.g. community leaders) meet on a regular or ad hoc basis to discuss concerns and provide informed input.

Consultative groups: Forums that call together key representatives of civil society (non-governmental organisations and civil society organisations), economic and political spheres, to make policy recommendations and to improve the ongoing dialogue between these actors.

Box 3. Commonly cited approaches for informing deliberation through stakeholder involvement *(cont'd)*

Multi-actor policy workshops: Small groups mixing key stakeholders and technical experts, aimed at collecting a range of viewpoints on what are the important questions raised by the dialogue issue. These may allow an innovative view of the problem to emerge, along with new approaches to its solution.

Round tables: Representatives of different views or interests come together to discuss and/or make decisions on an equal footing. May last for several days or meet on a repeat basis. Some authors claim these are most valuable when used at the beginning of a process to set broad policy orientations.

Citizen task forces: Persons with special knowledge or representing some interest of the community may be appointed to a temporary task force, organised to consider in depth an issue on which a decision is required. The group meets a number of times, often in the company of organising entity representatives, to consider information and formulate recommendations.

Study circles: Five to 20 people agree to meet together three to five times to discuss a specific topic (or, meetings are scheduled on a weekly or monthly basis for more complex sets of topics). Information materials are provided over time. It emphasises co-operative and integrated learning and mutual respect. Useful to monitor or document the evolution of a group's thinking in regard to a particular issue and generate recommendations based on a shared body of knowledge. A variation may call on different modes of participation (e.g. electronic) from a wider group of participants, and does not track change over time in regard to new information and learning.

Co-research groups: Co-opted stakeholders at national and/or regional level and institutional representatives agree to participate in facilitated seminars held several times. The objective is to define together areas in which more knowledge and understanding is needed in order to take a viable decision, and to discuss variations applied in the nuclear and radioactive waste management field have included ongoing pluralistic thematic working groups.

Scenario workshop: A local meeting where scenarios are used to stimulate vision making and dialogue between policy makers, experts, business and concerned citizens. It is an approach of technology assessment in which the workshop participants carry out the assessments and develop visions and proposals for technological needs and possibilities. It allows the exploration of different possible future technological strategies and at the same time facilitates actual co-operation in the direction of the strategy chosen.

Referendum: For reasons of cost efficiency, the only very large-scale public decision format is the popular vote. All normally registered voters (or all persons meeting a stated criterion) can express their opinion. While this approach enjoys a high level of perceived legitimacy, complex decisions must be reduced to their simplest binary form to be proposed to the ballot. Setting up such a procedure can be an efficient way of attracting citizens' attention to the issue at hand and allowing citizens to collect information about the different positions taken by public figures.

Box 3. Commonly cited approaches for informing deliberation through stakeholder involvement *(cont'd)*

Consensus conferences: These are organised at a national level, usually by a "neutral" organisation. A small group of volunteer citizens is chosen to be representative of the public at large, or, to represent a spectrum of viewpoints. They meet for several weekends to learn about the dialogue issue and to question relevant experts. The citizen participants then produce a report with their conclusions and recommendations, to be delivered to public decision makers.

Citizens' juries: Participants are recruited by lottery to serve their community by taking part in deliberations on a planning decision that will affect a geographically situated population: e.g. to designate a precise site for a (conventional) waste management installation. The organising institution, or delegated staff, proposes a number of decisional options among which the jury must choose. These options could be developed beforehand by the institution alone or with the input of other consultative approaches.

Citizens' panels: Citizens' panels are similar to juries, except that they also develop a range of options before deciding upon one.

Local monitoring, oversight and information committees: Instated at the time of site (pre-)selection, or created when a risk-producing installation is built, such committees are a mechanism for ongoing involvement and dialogue among stakeholders and with the general public. In some countries these committees are required by law; in other contexts, they may be created to improve relationships between the community and institutional personnel and contribute to better risk management. Different levels of empowerment are provided to these committees: in some contexts, they take major decisions (e.g. they can require installation closure if certain safety requirements are not met); at the other end of the scale, they serve primarily as a forum for exchange and dissemination of information. They typically include representatives from elected bodies and from civil society organisations (chambers of commerce, environmentalist groups, etc.) and they may be of small or very large size (6 to 90 persons, depending on the definition given to "affected public" and the system of representation that is chosen). The management of the industrial installation, or of the organisation responsible for the risk-producing site, as well as safety authorities and other national stakeholders, may be represented on the oversight committee as members, or they may be permanent or occasional interlocutors.

Partnership arrangements for participatory site selection: Committees grouping citizen representatives and various types of technical experts work together over a significant period of months or years to develop solutions acceptable from both a technical and societal point of view. Auxiliary approaches may be used to inform or consult the larger community (e.g. information campaigns, and referendum) and the committee may extend its lifetime to monitoring the installation.

Source: Drawn and adapted from Health Canada, 2000; National Research Council, 1996; van den Hove, 2001; and Ney, 2000.

Clearly, not every approach on the list can be used by every type of organisation, nor be applied to every type of policy issue or every decision stage. The stand-alone annotated bibliography (NEA, 2015) maintained by the FSC points to handbooks that list more approaches and advise on matching them to specific needs and goals.

Box 4 mentions related approaches labelled in the literature as appropriate for "alternative dispute resolution" (i.e. they offer an alternative to going to court or make it less likely that the parties will need to go to court later).

Box 4. Alternative dispute resolution

Policy dialogues: A small ad hoc group is created to facilitate informal but structured dialogue between a range of stakeholder representatives and policy actors, often in the aim of generating useful upstream suggestions or options for consideration by political decision makers.

Regulatory negotiation or negotiated rule making: Representatives of interested and affected parties work together with regulating government agency personnel to draft proposed rules. Participants are mandated by the group they represent, or are chosen because of some recognised expertise. Participants need to have or to develop negotiation skills. The function of such negotiation is to fine-tune regulation before its application, so as to avoid legal or other challenge, and to improve its responsiveness to the needs of affected parties.

Combinations of approaches may be used in an overall involvement initiative to obtain and integrate different stakeholders' input into decisions (Box 5). This is particularly appropriate when the dialogue issue has both a national and a local dimension.

Large-scale national dialogue processes may also need to rely on a combination of approaches. They may be combined and adapted by initial plan or, moreover, to respond to the consultation context. As an example, in France a national public debate is required for all infrastructure projects beyond a certain cost, and, traditionally, it consists principally of live public meetings. Another appreciated means for participation is to submit a four-page stakeholder statement which is formatted, distributed and permanently archived by the national commission. In 2013, these approaches were complemented in one case with a consensus conference, and also by arranging nine thematic webcasts. While these did not correspond to "higher-level" involvement, they illustrate complementary means of reaching out to an extensive population in the context of more intensive deliberative methods. Moderated by a journalist, each of these webcasts lined up a panel of specialists to query the project promoter, relying in part on questions submitted in real time via Internet by persons viewing the proceedings. Four hundred questions were submitted online and more than 9 000 persons accessed the webcasts (live or archived); consequently, this Internet-based approach enabled a much larger population to participate in the debate than would have attended physical meetings (CNDP, 2014).

Box 5. Combination approaches

Deliberative mapping: A set of universities in the United Kingdom proposes this approach for judging how well different courses of action perform according to economic, social, ethical and scientific criteria generated by participants. The aim is to provide an information basis for more robust, democratic and accountable decision making that better reflects public values. Deliberative mapping combines assessments by individual specialists and members of the public. A software-supported multi-criteria mapping approach and citizens' panels are each used. This approach is described in briefs available at Involve (n.d.).

Three-step procedure: Renn et al. (1993) developed a three-step procedure for stakeholder input into public policy decisions. Interest groups each generate a value-tree analysis to identify and weight their preferences and concerns in regard to the dialogue issue. Experts then participate in a modified Delphi process in which they judge how each policy option will affect the outcomes of concern to the interest groups. Finally, a panel of randomly selected citizens deliberates on the Delphi results, expert presentations, further fact finding, and panel members' own views, to deliver a report and action recommendations to public decision makers.

Tiered approach: Combining different levels and forms of engagement may be undertaken to resolve the tension between broad democratic participation and practicability. In an example from risk governance, input is gathered progressively from epistemic institutions (scientific advisory bodies, research institutes and networks, think tanks), stakeholder deliberation groups, and general public participation (using any available methods). Another example is seen in the strategy of the European Commission to involve civil society in the European Union policy on genetically modified organisms, combining permanent advisory bodies composed of selected civil society organisations, written consultations resulting from statutory reporting obligations, and ad hoc open meetings to exchange views directly. The actual application of such an approach is reviewed by Dabrowska (2006).

Finally, new information and communication technologies offer an enlarged potential to engage citizens (although it is doubtful that these media offer higher-level involvement opportunities). A key OECD study published in the early 2000s investigated how governments could use these technologies to improve outreach to populations, obtain their input and provide feedback (OECD, 2001a, 2001b). These methods can be appropriate when the engagement issue has broad geographic impact. Digital applications for virtual meetings and crowd-sourced idea gathering may be particularly attractive to the rising generation, for whom the social media are a highly familiar everyday instrument. The United Nations High-level Panel on Global Sustainability recommends that the voice of non-conventional networks and youth communities can be incorporated through Internet forums and blogs (UNESCO, 2012). Nonetheless, the biggest disadvantage of relying on information technologies and new media to support involvement may be the difficulty of engaging groups who do not regularly use the Internet (National Research Council, 2008), and even with appropriate target audiences it is difficult to guarantee a high rate of participation.

The C20 (see Box 2) provides an example of adjustment that may be needed when engagement is not face-to-face: "We are extending the deadline for

contributions to our discussion topics ... to allow you more time to have your say. We were hoping to introduce a 'voting phase' where users could show their support for individual recommendations; however, there is currently not a sufficiently large enough community of users on our crowd sourcing platform to rank recommendations in this way. Instead we invite you to share your thoughts on the ongoing discussions our co-chairs and discussion leaders will publish draft position papers for your feedback. We have also extended the time you can comment on these draft position papers" (e-mail sent to persons registered on the C20 digital consultation platform in April 2014).

Box 6 presents a success story in creating a "multilogue" combining multiple digital methods for engagement.

Box 6. Citizen engagement in developing well-being statistics: An example of good practice

"*What role can technology play in improving citizen engagement with well-being and progress statistics*?"

The Wikiprogress.org community consists of organisations (including the OECD), initiatives and individuals interested in measuring progress using many indicators, such as the traditional measure of gross domestic product (GDP), but also including alternative measures such as health, freedom, happiness, education, access to clean water, and so on.

A sample initiative is "Measures of Australia's Progress" (MAP). In 2011-2012, the MAP team consulted widely about what aspects of progress matter most to Australians with the aim of refreshing the MAP framework.

"[They] used multiple modes to contact their audiences, for example social media (which captured a younger cohort), online, paper, face-to-face, and interactive media. Many of these processes were able to be undertaken simultaneously which helped make the process efficient, in terms of time and cost".

Even though blogs are one of the oldest social media tools, they have many advantages as an engagement tool, and the MAP 2.0 blog proved a successful way of inspiring interest in the topic of national progress, and enabling to quickly gain insights into people's views. The blog allowed a range of responses from short replies to more lengthy and complex replies. One aspect of promoting interest in the blog and the consultation was to post contributions from prominent opinion leaders, from entrepreneurs through to sports people. Media outlets picked up on these contributions and a series of interviews and radio talk back sessions followed, further promoting and broadening the conversation about progress. ABS Facebook and Twitter were used to channel people to the MAP 2.0 blog. The social media campaign was successful with many thousands of website hits and page visits and hundreds of quality comments that organisers could use.

"[The team] developed a list of 'MAP Community' contacts during the consultation and used these to tap into further online networks. [They linked] to relevant progress and well-being sites, particularly by developing innovative infographics that captured interest and imagination [...]".

Source: Adapted from wikiprogress.org and from theblogprogress.blogspot.fr, blog entry of Wednesday 30 April 2014.

3. Implementation and assessment

The numerous details that the practitioner will encounter when implementing the tailored initiative are beyond the scope of this guide. However, advice is given on some useful preparatory steps. Section 3.2 on assessment will help foresee arrangements for checking satisfaction and compliance, but also, to anticipate common pitfalls and challenges.

3.1. Looking towards implementation

Implementation advice ranges from best practice tips to flow charts and worksheets that may be printed out. The US Environmental Protection Agency (EPA, 1996) provides extremely detailed briefs and checklists for implementing 19 public participation approaches. AccountAbility's T15 template (AccountAbility, 2006: Vol. 2) reminds conveners of concrete and information needs: stakeholder invitations, venue and timing, pre-information, logistics including travel and refreshments, ground rules and terms of reference, roles and facilitation on the day, record keeping and quality assurance, etc.

The detailed arrangements and choices implied by actual implementation are beyond the scope of this short guide. However, insight is offered on preparing initiatives at different levels of involvement (see Section 1.3 and Section 2.5).

The organisational goal of informing or educating implies developing appropriate public information materials. Information materials will be useful only if they can be understood and interpreted by their intended audience. The Aarhus Convention recognises that this is a necessary foreground condition and a right. Even materials formerly considered as confidential by organisations may be appropriate for communication (and a judicial review may determine that they must be shared).

Today, gathering information from stakeholders is often achieved by the use of social media tools. It may also be accomplished by large-scale public consultation approaches (polls or surveys). Almost everyone has been upset about a survey whose questions or multiple-choice responses did not match the way one would express one's own opinion. Survey items will deliver meaningful results only if they are built up from an understanding of how people indeed construe the issues explored by the survey.

Preparing adequate information material, similarly to preparing an adequate survey questionnaire, is a skilled professional task. Each should be adapted to the starting position of the stakeholder population. For both information material and survey questionnaire development, it can be beneficial to perform in-depth, reduced-scale preparatory studies (focus groups or individual interviews) exploring

the starting positions or mental models of the various stakeholders including experts (NEA, 2003b).

The US National Academy of Sciences (National Research Council, 2008) highlights the role of basic descriptive information in ensuring transparency. The involvement process should be clear to those involved in it and to those observing it. When a public agency is conducting the participatory process, all participants and the general public should be informed of the purpose and objectives as well as requirements, and constraints – alongside authorities' contact information.

It might be desirable to have ongoing communication about the involvement initiative and public access to information about the process and material being used in. When the convener wishes to make a broad announcement of involvement initiatives or publicise their outcomes, guidance may be found in a European Commission manual on successful communications using the mass media (EC, 2004a).

Higher levels of involvement (discussed in Section 2.5) usually imply that participants will have the opportunity to communicate their views and judgements in detail, as well as learn from other stakeholders. Nevertheless, the planner may find preparatory small-scale studies or consultations useful for e.g. scoping the issues or identifying target stakeholder groups.

Quality criteria have been identified for high-level involvement processes that gradually build up both competence and mutual trust among participants. These are: inclusive of relevant stakeholder groups; empowerment to participate actively and constructively; co-designed framing of the dialogue issue; generate a common understanding of the problem and proposed solutions based on expertise of all participants; provide fair and equal opportunities for all parties to voice opinion and preferences; and establish a connection between the participatory decision-making bodies and the political implementation level (EC, 2004b; Renn and Schweizer, 2009).

When the dialogue issue is embedded in a complex decision-making process or in a long-term domain (like radioactive waste management), public agencies or other conveners will need to support competence building for stakeholder representatives. The Aarhus Convention highlights this as an important background condition to assuring participation rights and continuity. One response to this need is the partnership model of involvement (NEA, 2010a). A particular example in the radioactive waste management field is that of the ongoing competence-building partnership between a national regulatory technical support organisation and a national federation of site-related local information commissions, convening dialogues, study groups and workshops.[1]

Conveners of stakeholder involvement on technological subjects will probably benefit from advice on communicating about risks. The US Nuclear Regulatory Commission offers a risk communication handbook (NRC, 2004a, 2004b) to support those who must translate complex information into a readily accessible form, and those who must talk and interact with a range of stakeholders who may not have

1. www.anccli.org/le-partenariat-avec-lirsn-2.

technical training. Box 7 highlights the challenges of integrating scientific information into a participation process.

Box 7. Advice from the US National Academy of Sciences on integrating science into public participation processes

Special care is needed to integrate science into public participation processes because of three kinds of potential obstacles to effective use of science in assessment and decision-making processes that involve interested and affected parties.

First, the science required is inherently complex and uncertain, and the data available are nearly always less than ideal. Consequently, scientists must be explicit about the extent and limits of knowledge, develop understanding of which knowledge participants consider most decision relevant, and possibly reconsider standard approaches to handling uncertainty.

Second, many participants in environmental assessment and decision processes lack sufficient scientific and technical background to easily interpret complex scientific information. Moreover, in the absence of structured decision processes, people tend to consider less than the full range of relevant information in making decisions. And there is not just one view among participants. Rather, there are diverse values, interests and concerns.

Third, there are substantial challenges in communication between scientists and the public. Scientific models are difficult to translate into forms that are transparent to scientists across fields and even more difficult to translate for the public. In addition, debates about scientific uncertainty can be hard for non-specialists to follow, and the rules for validating facts may be different for scientists than for many segments of the public and may even differ in significant ways across scientific disciplines. All of this can make the public sceptical of the neutrality of scientific analyses and the scientists sceptical of local experience-based knowledge of the public.

Formidable as these challenges may be, there are effective tools available for meeting them. Research converges on five key points of guidance about how to integrate science and public participation into analytic-deliberative processes:

- ensuring transparency of information and analysis;
- paying explicit attention to both facts and values;
- promoting explicitness about assumptions and uncertainties (because all uncertainties of facts and values cannot be eliminated), including independent review of official analyses or collaborative inquiry.
- allowing for iteration between analysis and deliberation;

Source: Adapted from National Research Council, 2008.

3.2. Assessment: Checking satisfaction and compliance

Post hoc assessment of stakeholder involvement initiatives is a duty to all those who have participated in good faith, and a must for learning and improving the next initiative. This section points to guidance for preparing that assessment. It

also touches on some typical obstacles to satisfactory involvement, which conveners should consider and attempt to eliminate before they arise.

The same criteria used by planners to match involvement approaches to desired outcomes (Section 2.3) should be applied for the later assessment of the initiative. The targeted goals and outcomes should be translated into aspects that can be measured or, at least, listed and clarified so that the different participants (stakeholders and conveners alike) can judge how well these criteria were achieved.

Because goals, underlying rationales and desired effects (Section 1.4) can differ so greatly across organisations and involvement initiatives, assessment criteria may also be very diverse. For example, a success criterion under a functionalist rationale might focus on whether compliance with statutory requirements was achieved, or whether the decision-making process gained in credibility. Quality of information input by stakeholders might be the main evaluation criterion under a substantive rationale, while a normative rationale will ask to check whether some standard of democracy was effectively achieved. At an extreme, "the models inspired by post-modernism and emancipatory schools are not interested in output, but rather in the changes that were induced in the minds of the people participating (raising awareness and emancipation)" (Renn and Schweizer, 2009). Different players and participants in a single initiative may also hold very different rationales and value different criteria. Therefore, the assessment should embrace a range of criteria.

Evaluation may be summative (did the participative initiative support substantive progress in the topical area?), formative (what lessons were learnt for improving processes or institutional functioning?), or impact-oriented (how did the participation affect programmes and decisions?). Impact evaluation contributes to fulfilling the Aarhus duty of accountability to participants. Finally, "goal free" or "adaptive" evaluation uses a broad range of data (e.g. a reading of community and agency interests) and engages participants in capturing a holistic view of small, incremental changes in many areas that may be sparked by involvement (Chess, 2000; Raimond, 2001).

The US National Academy of Sciences states that both involvement initiatives and the larger decision-making processes in which they are embedded "benefit from engaging in self-assessment and design correction as they proceed. The design of a participatory process should create opportunities for participants and sponsors to assess the process both as it is under way and at the end. The design must be flexible enough to allow for mid-course adjustments and to generate lessons learned that can be incorporated into future public participation efforts. [...]Even when resources are limited, expenditures on systematic evaluation deserve high priority, as this is the only valid means to ensure institutional learning and constant improvement" (National Research Council, 2008: 230).

Both immediate effects and later impacts should be captured by assessment. Therefore, participants need an opportunity to express their satisfaction and critiques at checkpoints during the dialogue, at the end of a given involvement initiative, and again at a distance; the conveners should also plan ahead to analyse later effects and measure how well the organisation has taken up or, otherwise, responded to the substantive outputs of involvement. As seen in Section 2.1,

engagement should be integrated with organisational governance.[3] Furthermore, the Aarhus Convention stipulates that due account should be given of how statutory participation has influenced decision making; this duty implies that resources for monitoring, measurement and reporting must be foreseen.

Guidance on assessment can be found in documents by the NEA (2003a) and US Federal Register (2000). The International Association for Public Participation's Manual (IAP2, 2000-2003) describes four assessment tools implying different levels of resource engagement: debriefs[4], questionnaires, peer reviews and end of project assessments. This training manual suggests evaluative questions to address outputs and outcomes, level of satisfaction, impacts on the decision-making process, overall value-for-effort of the initiative and key learning for future projects. It points out that face-to-face debriefs or interviews are useful for deepening insights on more interpretative questions, while exit surveys or questionnaires will deliver more restricted data. Not all stakeholders will have the knowledge or motivation to provide feedback on all the areas that should be evaluated.

Abelson and Gauvin (2006) review how to assess the impact of citizen engagement on both the policy process and on the subsequent political and civic behaviour of the citizen participants and provide tables of possible criteria.

There may be several (and perhaps overlapping) reasons why a stakeholder involvement initiative gives unsatisfactory results. Bergmans et al. (2007) reviewed country case studies to identify "different structural and contextual elements can have a constraining effect on the creation of opportunities for power sharing and co-governance". Factors may relate to behaviours or intentions of participants, or lie on the side of conveners and the design of the process, or be embedded in the overall context.

Reaching consensus on complex subjects and building up trust in highly ambiguous contexts (see Section 1.3) is very difficult. Highly controversial subjects by nature reflect polarised views, values, concerns and preferences. The stress on the involvement process may be exacerbated when the issue also concerns some threat to well-being, health or other valued good. "Being inclusive and open to social groups does not, therefore, guarantee constructive co-operation by those who are invited to participate. Some actors may reject the framing of the issue and choose to withdraw. Others may benefit from the collapse of an inclusive governance process. It is essential to monitor these processes and make sure that particular interests do not dominate the deliberations and that rules can be established and jointly approved in order to prevent destructive strategizing" (Renn and Schweizer, 2009).

The International Risk Governance Council's framework recognises several problems that may thwart the aims of genuine stakeholder involvement. These are: stakeholder participants cannot (always) be understood as a representative sample; many stakeholders are interest-driven and often unwilling to accept evidence or

3. AccountAbility (2006) template T5 helps assess organisational "response-ability".
4. AccountAbility (2006) template T18 facilitates a very simple pragmatic debriefing.

uncertainty; diversity and plurality of representation may lead to trivial or inconclusive results; and stakeholders may use the involvement process to stall action. The framework provides general guidance on addressing these problems (IRGC, 2013). In particular, the roles of different actors and stakeholders in decision making must be carefully defined and understood, and involvement initiatives must be appropriately inserted into the different levels and phases of the governance framework. Gathering information on what is "true", including preferences and concerns, is separated from evaluation and management phases in which value judgements are made about what is "desirable". This organic separation of phases is said to provide an important impediment to the domination of initiatives by interest-driven participation.

Turning to factors on the convener's side: some participatory processes are conducted as a tactic to divert the public's energy away from criticism and into activities considered safe by an agency. This use of stakeholder involvement, which ignores conflicts on important issues, is counterproductive in the long term. Participation convened as a superficial formality or without adequate support by decision makers increases public distrust of government (National Research Council, 2008).

A review of participation in environmental policy making found that tokenistic participation, organised to only meet formal requirements, may correspond to a particular view on representative democracy: in which "it is the responsibility of the politicians and the administration to solve environmental problems, not of the public or stakeholders: 'the public is involved through elective processes which put local authorities in place' (United Kingdom, academia)" (Wesselink et al., 2011). Administrators may find that participation disturbs their work. Complexity of the mass of rules and regulations with insufficient linkages, low priority assigned to areas where participation is required and the low effective integration of input, may lead to actors focusing on strict compliance without ascribing to any other goal of participation (Wesselink et al., 2011).

A case study analysis developed by legal experts uncovered structural, pragmatic and attitudinal factors that may result at country level in insufficient respect for the requirements of public participation in spatial planning (Justice and Environment, 2013). These factors could be studied by organisations in national contexts where participative and deliberative democracy is a new concept, in order to help wisely adjust involvement initiatives to this context.

The Aarhus Convention Guide and Recommendations (UNECE, 2014a, 2014b) contain strong encouragement to overcome these real obstacles. Recognising the need to support the evolution towards more effective participation, the Aarhus Convention Article 15 mandates optional compliance review arrangements at the level of the meeting of the parties to the treaty, which must be of a non-confrontational, non-judicial and consultative nature. The intention of compliance review is to recognise and assess the shortcomings of parties and to work in a constructive atmosphere to assist them in complying. Moreover, the convention requires that the review arrangements include appropriate public involvement.

4. Conclusions and areas for future development

The NEA Forum on Stakeholder Confidence (FSC) supports the view that involvement of relevant stakeholders is appropriate and advisable throughout a socio-technical management or decision-making process. In certain contexts, the means for involvement are specified by law, while elsewhere, a specific player may have to create the opportunity and the means for engaging other stakeholders.

The present study provides insight into the extensive literature on stakeholder engagement for decision making. It takes into account expanded experience and evolutions since the publication in 2004 of *Stakeholder Involvement Techniques: Short Guide and Annotated Bibliography* (NEA, 2015). The annotated bibliography has been published separately from this short guide on the NEA website to facilitate updating (NEA, 2015).

Approaches for involving stakeholders in complex decision-making processes are continuously being developed. They respond to the ever-growing demand for participation by stakeholders, to the experience and knowledge gained as processes move forward and to new possibilities and demands introduced by the expansion of social media. Developments also respond to challenges identified in stakeholder engagement experiences.

This closing chapter points to new horizons and opportunities acknowledged in recent meetings of the FSC or in the process of research for this short guide. As the demand for stakeholder involvement in decision making continues to grow, challenges arise. These challenges will shape the development of new approaches and guidance.

4.1. The new media context

Major international events have proved that new and social media are changing the communication and participation context in fundamental ways. From Arab Spring countries to the communities around Fukushima, citizens – and especially younger populations – have used personal devices and social networks to co-operate, act collectively and take charge of their own concerns in previously unanticipated ways. Civil demand for rapid and exhaustive information can sometimes overwhelm official communication channels, especially when other informants attempt to fill the gap. Conversations take place in full public view and are archived and accessible for years. The rise of social media also revives old questions on how decision-making processes can achieve balance between representative, delegable, participative and direct democracy.

Stakeholder involvement initiatives have already leveraged such approaches to inform and consult. Advances may be made in using social media to attain higher levels of involvement in decision making, going well beyond informal referenda designating a favourite actor. Institutions need to monitor evolutions, and learn to reason and respond in new ways. Social media and electronic tools can simplify and facilitate opportunities for the public. A challenge today is inventing sufficiently smart and sensitive rules to guide officials' behaviour in this new context.

4.2. The evolving participation context

Traditionally, public participation has been addressed as an institutional process following a circumscribed procedure during a limited window of time. The Aarhus Convention, which establishes the right to participation in environmental decision making, has introduced a different vision of participation as a continuous process. This produces new demands on organisations. At the same time, civil society is gaining autonomy and coming forward to propose its involvement in issues they identify as important (UNECE, 2013; ACN-France, 2012).

The Aarhus Convention insists on creating opportunities in each phase of decision making for citizens to gain information, prepare and participate effectively. Time and continuity are major enablers of effective participation in the radioactive waste management field because of the technical factors, the multi-year development process and the necessary long-term monitoring. These require a significant ongoing investment from members of the public, who must be willing to raise competence, to develop their capacity for investigation and follow up, and to influence and inform the decision-making process at local, national and European levels. On this point, the convention stipulates in Article 3.4 that: "Each Party shall provide for appropriate recognition of and support to associations, organizations or groups promoting environmental protection and ensure that its national legal system is consistent with this obligation."

Future development of stakeholder engagement will probably reflect and address the need to:

- accompany institutions in achieving participation as a long-term and continuous requirement;
- foster a solid democratic culture in the population;
- support civil society representatives in ongoing knowledge, competence and capacity building and deliberative activities (REC, 2013).

4.3. The increasing role of political commitment, innovation and advocacy

In today's societies, merely changing scientific input in public policy making will not have the power to change its outcomes. Nowadays, political deliberation and democratic interaction are paramount and need to be part of any successful decision-making process.

"[...P]articipatory-deliberative policy analysis [is] embedded in political environments [...] with political concerns: how harmful is the information for someone's power position, how many people believe the problem to be important, how much political support is mobilized through tackling the problem, what are its financial and other types of social and political costs relative to competing problems [...]. Whether and how it is possible to achieve any [engagement best practice] recommendations in a given situation ultimately remains a matter of advocacy, convincing, context-sensitive political judgment and political struggle. [...C]reating space for deliberative experiments, persuading policy makers to listen to scientific findings, and transitions to a fairer and more sustainable world all require political commitment and action" (Wesselink and Hoppe, 2011: 19-20).

4.4. Continued relevance and recognition of ethical dimensions

"…[R]adioactive waste management policy making is currently taking place within a participatory and analytic-deliberative decision-making framework; one that seeks to integrate public and stakeholder values and perspectives with scientific and technical expertise. One important aspect of this socio-technical reframing of the radioactive waste problem is an explicit recognition that legitimate and defensible policy making must take into account important ethical issues if it is to be a success. Thus, there is a need for tools to incorporate adequate assessment of ethical issues in a way that is compatible with this approach" (Cotton, 2009: 1). There are many competing philosophical models that can be used to frame and assess both involvement initiatives themselves and the topics around which they are convened. Recently, there has been renewed interest in this topic, for instance in the area of radiological protection (Oughton and Hansson, 2013), and there will probably be development of tools that facilitate participative consideration of these complex and sometimes contentious issues.

4.5. Addressing differing standards of accountability

Practitioners may feel challenged by imbalances between stakeholders in terms of responsibility and accountability. For instance, a national institution is properly held to a very high standard in terms of truthfulness, exactness and verifiability of information used in an engagement process. In contrast, no authority requires of non-institutional stakeholders participating in an open consultation that they apply the same standard. When the decision topics are related to potential risks for health and well-being, a situation may result in which some actors take advantage of the facilities offered, particularly through new media, to broadcast interpretations that may not correctly represent the situation but that may nonetheless heavily influence other actors.

Processes and approaches must be combined that allow for both broad expression of concerns and progressively more centred delivery of validated information to the actual decision makers, or those who have a political mandate (IRGC, 2013). Where facts are disputed and subject to a high level of uncertainty (whether scientific or societal), the decision-making process will need to benefit

from specific activities that investigate facts and reduce uncertainty (National Research Council, 2008). Stakeholders should be welcome partners in a number of such activities, which are served for example by participative technology assessment methods (Laes and Meskens, 2006).

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Stakeholder Involvement in Decision Making: A Short Guide to Issues, Approaches and Resources

Radioactive waste management is embedded in broader societal issues such as the environment, risk management, energy, health policy and sustainability. In all these fields, there is an increasing demand for public involvement and engagement. This 2015 update of *Stakeholder Involvement Techniques: Short Guide and Annotated Bibliography*, assists practitioners and non-specialists by outlining the steps and issues associated with stakeholder involvement in decision making and by facilitating access to useful online resources (handbooks, toolboxes and case studies). The updated guide has been considerably enriched with experiences since 2004 and includes extensive references to the literature. It is published alongside the release of an online annotated bibliography that will be updated regularly.

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