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**Lessons Learned in Stakeholder Involvement:
The Villigen Workshop Series**

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Abstract. Recent years have seen a profound shift in societal expectations with regard to the operation and regulation of complex technologies. Radiation protection has certainly witnessed this transformation. In many instances, this has taken the form of a move away from top-down, expert-led approaches to decision-making and towards participatory forms of governance, which are characterised by the involvement of a potentially wide range of stakeholders with diverse points of view. This shift has profound implications for expert disciplines such as radiation protection. At first sight, these can appear troubling. But, as considerable experience in this field has already shown, it can represent an opportunity to improve the relationship between radiation protection and society, to enhance decision-making, and improve the acceptability and acceptance of decisions. Since 1998, the Villigen Workshops have provided an opportunity for radiation protection specialists to explore the issue of stakeholder involvement and to consider its implications for practice. This paper provides a brief overview of these Workshops before summarising the practical lessons learned in stakeholder involvement in radiation protection decision-making.

1. Introduction

It is now a decade since the CRPPH published its collective opinion paper entitled ‘Radiation Protection Today and Tomorrow’ in which it was significantly observed that the social dimension would play an increasing role in the work of radiation protection specialists—in other words, that the field would come to be seen less as a purely technical domain, and rather one that was ever more aware of and responsive to societal concerns. Nor was this a shift that affected only radiation protection: the mid-1990s saw a growing expectation on the part of the public that it would be more directly involved in decision making about technology in general. This, of course, represented a clear challenge to the way in which such decisions had traditionally been taken.

In liberal democracies, duly elected governments had been understood to have a mandate to take those decisions and to delegate authority to a whole range of expert bodies to oversee the implementation and operation of technologies. Consultation with interested parties was always a part of this overall process, but the complex nature of many of the issues at stake made it natural that much would remain the preserve of the experts in the various fields. The notion, therefore, that a broad range of ‘stakeholders’, many perhaps without any expertise in the field in question, should be involved in decision making raised apparently difficult questions.

A series of Workshops organised by the Committee on Radiation Protection and Public Health has explored these questions in the context of radiation protection. Held at Villigen, Switzerland in 1998, 2001 and 2003, these three Workshops have progressively moved from an examination of the broad question of the societal aspect of decision making in complex radiation situations, through a more focused consideration of how radiation protection may be better integrated in society, to an exploration of the processes and implications of stakeholder involvement in radiation protection decision making.

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2. The Villigen Workshop Series 1998-2003

The *First Villigen Workshop* in 1998, entitled *The Societal Aspects of Decision Making in Complex Radiological Situations* [1], focused on the particularly difficult question of contaminated areas and their restoration to a point where people could continue to live there. Cases examined included:

- the resettlement of indigenous populations to areas of the Marshall Islands contaminated by nuclear weapons testing;
- the rehabilitation of a community in Belarus affected by the Chernobyl disaster; and
- the remediation programme in the area of Eastern Germany affected by uranium mining residues.

Additionally, the Workshop heard papers on a range of dimensions and components of the decision process, including:

- perceived risk and public confidence;
- community involvement and public engagement;
- the role of the expert; and
- the role of the decision maker.

The broad, and influential, conclusion emerging from the discussions at the first Workshop was that *radiological protection must adapt to meet the needs of society and not the reverse*. In other words, however content radiological protection specialists might be with the procedures and practices within their field, they could no longer expect to continue with them if it became evident that society more generally demanded change. Quite what sort of change might be required and what could be regarded as feasible remained to be seen.

The *Second Villigen Workshop* in 2001, entitled *Better Integration of Radiation Protection in Modern Society* [2][3], sought to make some preliminary suggestions in this regard. The Workshop first heard from a range of experts on topics such as:

- social trust;
- risk and confidence;
- expertise and risk governance; and
- acceptability, acceptance and decision making

The Workshop then considered a range of initiatives in a number of countries which exemplified a desire to change the way that radiation protection policy is developed and implemented, including:

- the US Environmental Protection Agency's project *The Future of Radiation Protection* conducted in conjunction with the Institute for Alternative Futures;
- BNFL's Stakeholder dialogue exercise in the UK;
- the Consensus Conference on Radioactive Waste organised by the UK Centre for Economic and Environmental Development;
- IPSN's information project on stakeholder involvement in emergency preparedness in France;
- the Agriculture and Food Countermeasures Working Group enabling stakeholder pre-involvement in the post-accident management of rural areas in the UK;
- the Nord-Cotentin Radioecology Group's experience with pluralistic evaluation in France;
- the US Department of Energy's experience with stakeholder involvement in opening and operating the Waste Isolation Pilot Plant; and

- Stakeholder involvement in remediation programmes in a uranium mining area of Eastern Germany;

These examples, ranging from high-level priority setting down to mechanisms to address specific local level issues, shared a common characteristic of involving a wide range of stakeholders. The Workshop demonstrated, therefore, that the radiation protection community was indeed sensitive to the shift in societal expectations and had begun to develop responses. While these responses dealt with different issues at different levels and in different parts of the world, it was nevertheless possible to draw some conclusions at the end of the second Workshop. These addressed the need:

- to foster mutual trust between the radiation protection community and society as a whole;
- to develop approaches to interacting with stakeholders that are sensitive to specific contexts but which share features of openness, inclusiveness and agreed procedures;
- to clarify the respective roles of the various actors involved; and
- to understand interactions with stakeholders as opportunities for mutual learning.

The second Workshop was useful in demonstrating the way in which the radiation protection community had responded to changing societal expectations, and in sharing experiences and best practice. The conclusions drawn, however, remained at a rather conceptual level. The need was felt to move forward further and develop practical guidance for stakeholder involvement in radiological protection decision making. The *Third Villigen Workshop* in 2003, entitled *Stakeholder Participation in Decision Making Involving Radiation: Exploring Processes and Implications* [4][5][6], accordingly had as its aim a much broader understanding of how stakeholder participation in decision-making can be appropriately integrated in national and international radiological protection decision-making. In preparation for this, three in-depth analyses of specific case studies were conducted with a view to providing a vehicle for the Workshop to identify commonalities in stakeholder involvement processes and their possible implications, and to facilitate discussion of the key issues.

These were as follows:

- Stakeholder Involvement in the Canadian Review Process for Uranium Production Projects in Northern Saskatchewan;
- The ETHOS Project for post-accident rehabilitation in the area of Belarus contaminated by the Chernobyl disaster (which had been mentioned during the First Villigen Workshop); and
- The Rocky Flats Controversy on Radionuclide Soil Action Levels in the US.

Furthermore, insight was sought from outside the radiation protection field on factors of success in organising public participation in environmental decision-making, relying on a published analysis of 239 initiatives [7]. One of the authors of that study served as discussant of the Workshop case studies, thereby providing access to a broader, systematised context in which the radiation protection case findings could be evaluated.

The result of this approach was to allow an attempt at an answer to the questions that radiation protection professionals—in common with their peers in a wide range of technological fields—increasingly ask when confronted with the need to consider stakeholder participation processes. It was rapidly clear that there is no one-size-fits-all blueprint for such processes: the sheer range and diversity of the situations where they may be appropriate dictates a much more flexible approach. Nonetheless, the Workshop demonstrated that it is possible to identify common themes and features.

The three Villigen Workshops thus constitute a concerted effort by the radiation protection community to explore the implications of stakeholder involvement for its practice. The work done at Villigen demonstrates clearly that far from having to learn from other disciplines, radiation protection has often been in the vanguard in embracing and experimenting with stakeholder involvement. By now, as a consequence, drawing on such a wide range of experience and discussion among radiation protection specialists, it is possible to offer some guidelines with respect to stakeholder involvement. These

should assist professionals in developing participation processes without detracting from the flexibility needed to remain responsive to the particular demands and expectations of any given situation.

3. Practical Guidance on Stakeholder Participation in Decision Making Involving Radiation

3.1 *When should stakeholder participation be used?*

Generally speaking, stakeholder participation has typically been used in response to an emergent problem. In other words, something has gone wrong and the more traditional, expert-led methods are seen to be in need of some form of input from other stakeholders. Most dramatically, such emergent problems might take the form of accidents. Milder but equally important problems might result in tensions between, for example, government or regulators, on one hand, and the wider society, on the other, when decisions are taken about such things as the deployment of a new technology, the location of a new installation, the decommissioning of an existing facility, the licensing of operational emissions, or facility re-licensing. Increasingly, however, there is much greater willingness to be proactive in regard to stakeholder participation and to view such processes as an integral part of normal business or regulatory operations. To use the language of dispute prevention and resolution, the initial approach to stakeholder participation might be characterised as resolving a dispute or problem once it has arisen, whereas increasingly the emphasis is on preventing a dispute from arising in the first place.

Radiation protection professionals today thus seek to organise their action in such a way that it does not trigger one of the crises of confidence in technology and expertise that have been such a feature of the past decade. Here the question arises as to how they can determine whether a given issue, situation or context calls for some form of stakeholder participation—a question posed by experts in a whole range of technological fields. To be clear, there is no suggestion that such participation must become a feature of everything they do, but there will be times when it will be useful, and perhaps even necessary.

Among the most obvious indicators that stakeholder participation may be appropriate are those which suggest that relations between experts and the wider society are already strained, if not yet at a point where confidence has been lost. Radiation protection professionals can, accordingly, consider whether:

- there is already activity by pressure groups; or
- the issue in question is already a topic on the political agenda.

If this is the case, radiation protection professionals may first consider whether the questions voiced in the public forum can be answered in an easy and uncontentious manner. If so, simply providing information—actively, and in an accessible form—may be a better solution than seeking deeper involvement of stakeholders. In this regard, recall that tensions not infrequently arise when stakeholders are unable to find answers to their legitimate questions because information is held back on grounds of commercial confidentiality, security, or simply because ‘that is how it has always been done’. Increasing access to information can go a long way towards decreasing the sorts of tensions that can ultimately result in a breakdown of confidence. If, however, there are clearly more profound disagreements about facts or values then it may be necessary to consider some more participatory arrangements.

Radiation protection experts can also discern indications of the need for participation by seeking to understand an issue from the perspective of other stakeholders. Is the issue inherently controversial? What is the media response likely to be? What will the public reaction be, given the nature of the issue and the likely media coverage? What is the image of the industry (or regulator or other expert body) from the point of view of other stakeholders? Has that entity at all times been honest and open about what it is doing or problems it has experienced? Are lines of communication already fully open between the entity and its principal stakeholders and affected publics? If questions such as these are considered honestly, radiation protection experts can quickly see whether they are likely to enjoy

public confidence going forward on the basis of their own decisions, or whether an effort must be made to construct confidence through meeting stakeholders in a participatory context.

Note that different intensities of public participation, and thereby influence on a decision process, can be considered. Many approaches have been used, and there is no hard-and-fast rule. However, one example that has been used in the context of health-related risks distinguishes five levels of involvement [8][9]:

1. The active provision of information, well adapted to audience needs, is described as a very low level of participation, but still it can signify that the informing entity considers stakeholders and the public to be important interlocutors and potential partners.
2. A slightly greater degree of public participation or influence may be arranged through the simple gathering of information or views. Here there is no promise made by the expert organisation to integrate public views, but if the entity does consider such input to be of value (and demonstrates this), the consultation can contribute to building trust as well as help the entity adapt to its real context.
3. When two-way dialogue is sought (in the setting of, for example, a hearing, or better yet a discussion forum in which the agenda can be set by concerned participants), there is a potential for greater involvement and influence. In these settings care must be taken to avoid polarisation between experts and other participants. Setting the rules of the game ahead of time is useful: the expected utility of the exercise for the organising entity must be clearly indicated, as well as how far public input from the dialogue can be integrated.
4. More effective engagement is found when experts can ask stakeholders to deliberate on complex, value-laden decisions, and when they can take action to integrate stakeholder input and demonstrate that it has been done. This level of involvement may be chosen when, in legal and organisational terms, policies can effectively be (re)shaped by the persons affected. Deliberative exercises often require somewhat open timeframes in order to allow participants to become sufficiently familiar with the features of the situation and the options at hand. They often require repeated sessions of exchange and elaboration between technical experts and stakeholders, and therefore the sustainability of, for example, the volunteer efforts of community representatives must be considered.
5. The highest level of public involvement and influence is seen when an actual partnership is set up, by which institutions can empower stakeholders to manage a decision or components of an actual radiation protection process. In such cases an agreed framework must lay out clearly the limits of stakeholder power and authority, as well as the guarantees offered by higher authority that outputs will be respected and implemented.

This forms a wide range of options to facilitate different degrees of public participation and influence. The options differ also in terms of:

- the types of situations in which they can actually be applied (legal and practical constraints); and
- the demands they place upon organisers.

Clearly radiation protection professionals must carefully analyse the latitude offered by their situation, and prepare the exercise by securing not only the informed participation of stakeholders, but also the enlightened agreement of all those whose work and action will be affected by that participation. In other words, a stakeholder involvement exercise first requires *a concerted process of consultation, deliberation and education inside the radiation protection professional's own organisational context.*

This internal organisational process can sometimes be facilitated by third-party mediators or consultants. It should be prepared in any case by a task leader who will take advantage of the many stakeholder involvement handbooks developed by public administrations and available today on the Internet [5].

3.2 *Who should be involved in stakeholder participation?*

Confronted with the notion of stakeholder participation, radiation protection experts sometimes suggest that this is something they are already doing and have always done, inasmuch as consultation has always been a feature to a greater or lesser extent of decisions about the development of policy. It is a question, however, of determining precisely what sort of interactions they are having and why.

Historically, many industries and regulatory bodies have based their interactions with other actors on whether they have an established legal obligation to speak to them, on the basis perhaps of a piece of legislation or a contract. Increasingly, however, those same bodies are looking beyond those strict legal relationships and considering who has an interest or a stake in the matter at issue as a basis for deciding with whom they need to have closer interactions. In determining who has a stake or an interest that would suggest they should be involved in decision-making, it can be helpful to consider for the situation under discussion:

- who is bearing the costs, and
- who is receiving the benefits.

‘Costs’ and ‘benefits’ should be broadly interpreted for this determination, and in both cases potential as well as actual effects should be taken into consideration. This simple formula immediately suggests that the list of people whom an industrial or regulatory body should regard as potential stakeholders may be considerably longer than that restricted only to those with an immediate legal relationship. It is also worth bearing in mind that the list of stakeholders must always be regarded as flexible rather than fixed, because those with a stake or interest may change as an issue evolves.

3.3 *What distinguishes stakeholder participation from what is already done?*

As well as involving a different set of people with whom radiation protection experts may be interacting, often stakeholder participation will differ qualitatively from previous activities. This potential difference should be clear from the discussion of degrees of stakeholder involvement offered above in subsection 3.1. Consider, for instance, the difference between simple *consultation*, which the organisation may have performed traditionally, and a new initiative to form a stakeholder *partnership*. In the traditional consultation, views may be canvassed from an (often restricted) list of established actors without any guarantee that the views will be acted upon or responded to. However, when an initiative is made to form some kind of partnership, there is more emphasis on establishing an ongoing working relationship. In this regard, there is, then, an attempt to have *dialogue*, rather than simply to receive information from consultees. The qualitative difference is even more remarkable if stakeholder involvement in the past has been limited to a dissemination of information to the public at large.

The new approach of deeper stakeholder involvement views its goal as achieving outcomes that are as far as possible *mutually acceptable*. This is a qualitative difference as well, when compared with a traditional view of interaction with other stakeholders (some of whom may have diametrically opposed views), as *zero sum games* with winners and losers. Similarly, there is a new focus on *proactivity* and on achieving decisions that are relatively stable in the medium and long term, rather than on *reactivity* and on short-term patches or fixes.

In short, the process itself by which experts interact with other stakeholders becomes just as important as the outcome of any such process. It is sometimes objected that the outcome achieved by means of a process of stakeholder participation is the same as would have been achieved had the matter been left to experts alone, except that it has taken longer and been more expensive. That may be so, but if experts operating according to traditional procedures do not enjoy public confidence, this more expensive route may be the only one available. If the involvement exercise is well conducted, this extra expense may be balanced by actual gains in confidence. Furthermore, there is no guarantee that the decision outcome indeed will be the same. Experience has shown that what is technically feasible may not be socially acceptable, and that the input of societal values to otherwise technical processes may yield innovative solutions. That is why, as was seen above, the Second Villigen Workshop

discussed the need to regard stakeholder participation processes as opportunities for both *collective* and *mutual learning*. In such a perspective, all parties to such processes will contribute to building up knowledge about the issues they confront. At the same time they learn about each other and their interests and concerns—meaning that these potentially may be better weighed and accommodated.

3.4 *How long does stakeholder participation last?*

There is no hard-and-fast rule for how long a process of stakeholder participation should last. In many respects, this will depend upon the demand that exists within the wider society, the willingness of other stakeholders to continue with a process, the agreement of all concerned that a process has fulfilled its objectives, and so on. In short, decisions about the duration of such a process will be guided as much by other stakeholders as by the industrial or regulatory body that has initiated it. Thus, a given process may be finite and related to a single, well-defined issue—as in the Rocky Flats case study—or it may be ongoing, linked to partnerships that are integral to an organisation's structure. It is true to say that industrial or regulatory bodies which have once embarked upon such a process at the very least tend to remain open to the option of stakeholder participation in the future, more often than not adopting a proactive approach. These organisations may indeed endeavour to establish long-term relationships with stakeholders, even after having dealt with a particular issue.

3.5 *How extensive is a process of stakeholder participation?*

Just as for the question of duration, so there is no one-size-fits-all response to the issue of the scale of such processes. The answer will depend upon the nature of the issues at stake. As the Second Villigen Workshop demonstrated, stakeholder participation has been employed in the context of high level priority setting as well as in that of local problem solving, and in each case the scale of the process was different. At the highest level, opportunities for society-wide participation may be appropriate, whereas at other levels the processes may be regional or only local in extent.

The issue of extent will also have a bearing on the appropriate format of the participation: it may be appropriate at the most local level to consider individual contacts or small group meetings of fairly limited scope. In contrast, it may be necessary at the highest level to consider comprehensive, structured processes, perhaps even making use of a range of information technologies. The choices related to extent will depend, then, very much upon such factors as the nature of issues at stake, the degree of stakeholder concern, and so on.

3.6 *What sort of issues may be discussed within a participation process?*

This can prove to be one of the most problematical questions for experts, whether in the field of radiation protection or in any other technological domain. What precisely is it that experts will have to say to other stakeholders that the latter will be able to understand? And what can other stakeholders tell experts that will be of any relevance to the specialist work that they are required to do? There is no doubt that difficulties can arise here. Many of the case studies considered in the context of the Villigen Workshops indicate that there are times when it is impossible to avoid pluralistic discussion of technical matters. This brand of discussion does present a challenge both to the experts (who must attempt to communicate concepts they and their peers take for granted) and to the other stakeholders (who recognise that their unfamiliarity with such concepts may have a profound impact on their ability to dialogue meaningfully).

The very fact that stakeholder participation is an issue for the radiation protection community is indicative of a much wider shift within society in recent years, characterised by a reduced willingness to take the word of governments, regulators, corporations and other powerful actors at face value. That in many instances this has reached crisis point can be taken as evidence that experts have found it difficult to discern and understand the concerns of other stakeholders—a difficulty that does not magically disappear as soon as everyone is involved in a participation process. The needs of pluralistic discussion challenge all parties to such an exchange. Other stakeholders may be confronted with the challenge of learning about technical concepts in order to be able to deal better with complex societal

issues. In a symmetrical fashion, technical experts may well have to consider what they have previously viewed as purely scientific or engineering issues in terms of the social and ethical values of the wider community of which they are a part. There are no easy answers to how these challenges may be overcome, but they do indicate once again the importance of the emphasis placed by the Second Villigen Workshop on collective and mutual learning as key features of stakeholder participation processes. The detailed case studies presented at the Third Villigen Workshop and published separately [5] describe how such pluralistic discussion has been achieved in typical radiation protection contexts of new facility licensing, decommissioning, and post-accident rehabilitation. They also indicate that other stakeholders can understand technical issues, and that social and ethical input from such stakeholders can have a meaningful and valuable impact on radiation protection decision-making.

3.7 *Who is responsible?*

Another frequently encountered question when technical experts discuss stakeholder participation is that of responsibility. There is often concern by government, regulatory authority officials and private industry that if such processes are undertaken, the responsibility for important decisions will either be taken away from those who have the expertise to make them (or to offer scientifically sound advice to policy makers), or will be diluted to the point where it will be impossible to identify who can/should take them. The whole question of the location of decision making in relation to technological issues is, of course, a complex one that has implications for the respective roles of policy actors and technical and scientific experts in a wide range of fields. In cases of stakeholder participation, however, especially in the domain of radiation protection, it is clear that the responsibility for taking decisions must remain in the hands of regulators, operators, etc., but the process of reaching decisions may be shared with other stakeholders.

More concretely, it may be suggested that questions of acceptability, examination of options, and so on, might usefully be considered in participation processes, while the task of taking final decisions on these matters will remain with accountable regulatory authority experts or policy actors as appropriate. Insofar as this is the case, it may be asked whether the participation process is really necessary, whether its effect is simply to delay the decision that would anyway have been taken. And it is true that sometimes there may be no apparent difference in the decision emerging from a purely technical process and a participation process. The difference may lie, however, in the acceptability of that decision to those it is ultimately designed to serve. And by the same token, the net effect of the participation process may be to produce a sustainable decision on the part of the regulatory authority experts or policy actors that would not otherwise have been reached. In either case, it is clear that the participation process can add value.

3.8 *When does it work?*

Even if it is accepted that a process of stakeholder participation may be appropriate to address an issue touching the field of radiation protection, it is clear that simply sitting the concerned stakeholders round a table will not guarantee that the process will be successful. The case studies examined in the Villigen Workshops suggest that there are certain preconditions for a successful participation process.

For a start, it appears that the parties to the process must have shared values or at least sufficient shared values to allow the process to continue. For example, shared values could be the government and local stakeholders both feeling that public health and environmental protection are the highest priority considerations in the decision. Reaching consensus on shared values may seem like an unrealistically high obstacle to overcome in many cases: it is not hard to imagine radiation protection issues arising for which a stakeholder participation process may be indicated, but where the participants hold diametrically opposed views. But this precondition clearly does not mean that everyone must agree about everything in advance. If that were the case then there would be no need for the process in the first place. It means only that, whatever their views about the issues at stake, the participants must at least have in common a willingness to discuss the issues, and to seek to resolve them by means of dialogue.

Similarly, the case studies indicate that the participants must have shared goals or at least sufficient shared goals. For example, the shared goal of improving the living conditions of populations affected by an accident, or of improving job opportunities for indigenous inhabitants around mines in remote areas could be shared goals. The extent to which goals must be shared in common in order that an outcome agreeable to all stakeholders may be reached will, of course, vary from case to case. It may be sufficient that all involved, whatever their views on the issues at stake, have in common a desire to reach a conclusion.

Finally, the case studies considered at the Villigen Workshops suggest that trust is a vital component in a participation process. There must be trust among the parties or at the very least the process must itself be understood to represent a genuine effort to build trust in situations where confidence may have broken down. In some cases, it may be necessary to employ third parties who are trusted or at least perceived as neutral to provide expertise or to facilitate the process itself.

3.9 *When won't it work?*

As the foregoing discussion suggests, stakeholder participation processes will have little or no chance of success insofar as they are characterised by a lack of sufficient shared values, goals and trust, or where trusted third parties have not been brought in as appropriate. Furthermore, trust is likely to diminish if, in the course of an involvement process, it appears clear to other stakeholders that those with responsibility for taking decisions have already reached conclusions and are engaging in little more than a public relations exercise to sell what has already been settled. Problems are also likely to be encountered when it is clear to other stakeholders that the process has not been properly resourced, whether in terms of time or money or other factors. In short, there has to be clear and realistic commitment to the process by organisers.

It has also been suggested that an involvement process may be paralysed if there is a possibility of litigation that would challenge the outcomes once the process has been completed. An alternative view is that the shadow of litigation can produce a desire to reach an agreed solution.

4. Assessing Stakeholder Participation

The guidance developed from the Third Villigen Workshop (and drawing also from experience gained in the previous Workshops) is intended to answer some of the questions most frequently asked about stakeholder participation processes in the context of technical domains such as radiation protection. It might also allay some of the fears that experts sometimes have about a price to be paid if issues that have previously been treated on purely scientific or engineering grounds are opened up to consideration by a potentially very wide range of lay actors holding diverse views and values. For it is true to say that those approaching an issue from a scientific perspective are sometimes sceptical about the value of broadening the discussion.

There can be concern that decisions will be based on values rather than on science, on emotions rather than on hard facts—in short, that decisions will be irrational. It should hopefully be clear, however, that stakeholder involvement is not an effort to expose what is properly the domain of science to non-scientific methodologies, nor to transform science into a matter to be treated on the basis of majority rule. Rather, stakeholder participation is about enriching the context of scientific and technical practices and processes, of assisting those who must take decisions about the way in which technology will be operated for the benefit of the broader society. While science is still the most appropriate path to the quantification of public health, worker health and safety, and environmental protection risks, stakeholder involvement is intended to address the identification of risks of concern to society, and their acceptability in a given context.

Similarly, there can be concern that engaging in stakeholder participation processes will lead to delay and additional cost. There is no question but that such processes will require additional time and money as compared with purely technical alternatives, but this must be considered in the light of the

possible delays and costs associated with decisions that have not been taken following participation processes and which have turned out not to enjoy public confidence. In other words, stakeholder participation can in fact *reduce* cost and delay: time and money spent on preventing disputes may be less than time and money spent resolving them should they arise.

Stakeholder participation has the merit, therefore, of responding to the observed shift in societal attitude towards science, industry, government, etc. It offers a possibility of resolving the tension between economic and social concerns that has so often caused problems in recent years. It can actually reduce cost and create opportunities for those bodies that are thus able to foster improved long-term relations with their stakeholders. In short, far from being a burden, if carried out properly stakeholder involvement can make good business and regulatory sense.

Nor is this very positive conclusion based only upon the experiences revealed by the three case studies underpinning the Villigen Workshops. As was mentioned above, the Third Villigen Workshop also heard from one of the co-authors of a major review of some 239 examples of public participation in environmental decision making in the United States [7]. Of particular interest in the present context is the finding of that survey that the majority of the cases studied were highly successful in achieving the following five social goals:

- incorporating public values into decisions
- increasing the substantive quality of decisions
- resolving conflict among competing interests
- building trust in institutions
- educating and informing the public

As the authors conclude, public participation is a complex social process, often frustrating and time-consuming, but ultimately a potent tool for making good decisions and overcoming the contentious politics of environmental policymaking.

In the end, however, the evaluation of any given stakeholder participation process must itself be a matter for stakeholder involvement. Such a process is only as good as its stakeholders judge it to be. If stakeholder participation is to be taken seriously, then the criteria by which it is judged must also be a matter for all of those involved, and not just for those who have initiated the process and whose measure of success or failure may be of little relevance to the other stakeholders.

Radiation protection experts will find a small but growing store of guidance on how to design and conduct the evaluation of stakeholder involvement exercises. Within the OECD, for instance, the Public Management (PUMA) programme has developed a checklist for use in planning evaluation. Steps include:

- Identifying the purpose of the evaluation—for example, checking outcomes in a spirit of verification, or adjusting an ongoing process in a management perspective;
- Deciding who will conduct the evaluation—for example, the organising body, external oversight bodies, or civil society organisations;
- Choosing the methods of evaluation—for example, surveys, interviews, observation, or review of decisions or documentary outputs
- Determining the manner of stakeholder participation—for example, in formulating questions, in answering questions, in using the results;
- Organising, planning, resourcing the evaluation—note that for a large-scale (national) government consultation, for instance, the estimated costs of evaluation may represent 30% of the total budget, whereas 40% is devoted to implementation and 30% to disseminating the outputs of consultation;

- Reporting the evaluation—implying choice of key recipients [11]

A set of criteria for evaluating stakeholder participation has been developed in the context of an EC-sponsored programme with the notable participation of at least one national radiation protection agency [12]. These criteria concern the shape, quality and aims of the method or process at hand. If consulted in advance of organising a dialogue process, they lend assistance in thinking about choices that otherwise might remain implicit: for example, what types of knowledge are to be elicited in stakeholder participation—‘best’ knowledge, innovative proposals, new shared interpretations of a situation?

5. Implications

What, then, are the implications of stakeholder participation for the radiation protection community? First of all, it is worth stressing that this community is by no means alone in having to come to terms with this new way of going about the business it has hitherto been left to conduct by itself. A wide range of governmental and corporate actors in diverse technological domains are facing similar challenges and seeking to adapt to the new context of risk governance that has been the backdrop for the Villigen Workshops. Across the board, such actors are having to become more sensitive to the broader societal response to their activities and to be ready to engage in participatory processes where that is appropriate [13][14].

Overall, the guidance discussed in this paper implies that stakeholder participation can have an impact at every stage of the policy process, from the framing of problems through the development and implementation of solutions to the evaluation of the foregoing stages and the feedback of lessons. This may appear to be an extreme proposition, but is much less so when considered in a little more detail. In terms of the framing of problems, for example, if this is left entirely to technical experts, there is no guarantee that this picture matches the perceptions of the wider society they are ultimately serving. And as regards the development of solutions, as was mentioned earlier, what may be technically feasible may not also be socially acceptable.

This implies that government policy and regulation, and corporate policy will need to incorporate the desire and ability to include stakeholder participation, as appropriate, in decision-making processes. The adoption of such an approach implies the willingness to embark on a long-term commitment to engage in and dedicate sufficient resources to stakeholder participation processes. This commitment should reach into the very heart of organisational structures and operational procedures.

None of this suggests, however, that any given process should be allowed to be diverted from its objectives by the fact that some stakeholders essentially want to discuss something that is not necessarily relevant. This will always be a fine balance to strike, since what may appear to technical experts as irrelevant may appear to other stakeholders as the main issue. But there will be times when stakeholders have to accept that as important as a given issue may be, it is not within the remit of the process to discuss it—for example, because the process is local in scope and the issue sought to be included is one that could only be decided at a higher level. (This implies that setting clear ground rules in advance will be of great benefit.) By the same token, of course, regulatory and corporate bodies must be ready to be flexible when it becomes clear that their understanding of all the issues of concern to stakeholders may not be adequate.

Stakeholder participation accordingly implies that radiation protection specialists, in common with their counterparts in other technological domains, may find themselves increasingly in situations that they are not used to and for which they have little if any training. It can be suggested, therefore, that the increasing importance of stakeholder participation implies for the radiation protection community that it must actively consider how it will accommodate this shift in societal expectation both at the level of the regulatory and corporate organisations it operates within, and at the level of the individual personnel.

At the organisational level, the challenge appears to be to shift away from the insularity that can characterise many regulatory and corporate bodies when it comes to questions of what they do as their core tasks and how they do them, and to move instead to an orientation that sees interaction with other stakeholders as part of normal day-to-day business. This does not mean that everything that radiation protection specialists do will have to be agreed by all stakeholders, but rather that such specialists are more accessible and known to their stakeholders, and also willing to contact them when the need is perceived.

Such a new organisational orientation, of course, depends crucially on the individuals working there having the skills and expertise to perform the required roles. This in turn suggests that at the management level, consideration must be given to whether radiation protection specialists—in common with their counterparts in a wide range of other technological domains—will need targeted training in communication with other stakeholders as part of their standard education, or at least to have such training for one or some designated members of relevant teams.

6. Conclusions

There is no question but that the shift in societal expectations with respect to government and corporate actors, especially in the field of complex technologies—and thus certainly where questions of radiation protection arise—poses considerable challenges for the radiation protection community.

One possible response to this challenge is to resist and to maintain—undoubtedly with justification—that traditional methods have by and large served society well, and that involving non-experts in this domain itself raises risks.

As the experience of the three Villigen Workshops illustrates, however, such a response looks ever more unrealistic in the context of a society that is increasingly sceptical of complex technologies and of those who are charged with operating and regulating them.

By the same token, it should hopefully also be clear that processes of stakeholder participation should not represent a threat to an expert domain, but should rather be an opportunity to cement better relations between the field of radiation protection and the wider society which it serves, and to allow decisions to be reached that are robust and sustainable and which enjoy wider acceptance.

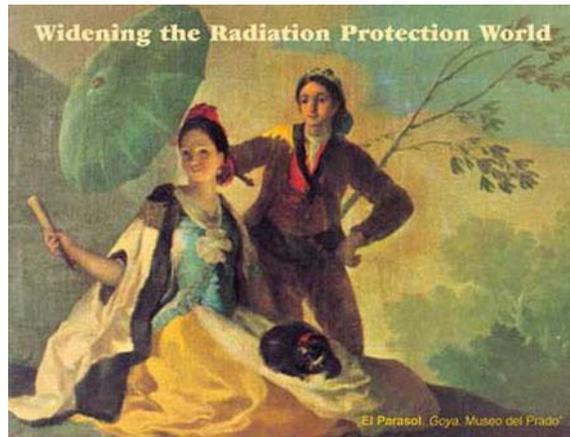
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**International Radiation Protection Association
11th International Congress
Madrid, Spain - May 23-28, 2004**



Refresher Course 9a

**Lessons Learned in Stakeholder Involvement
The Villigen Workshop Series
John Paterson, University of Westminster, UK**

Lessons Learned in Stakeholder Involvement

The Villigen Workshop Series

John Paterson
University of Westminster, UK

Background: why stakeholder involvement?

- Shift in public expectation towards involvement in decision-making
- Responded to in many technology sectors
- CRPPH: 'Radiation Protection Today and Tomorrow', 1994
 - Increased role for the social dimension in radiation protection

Background: why the Villigen Workshop Series?

- Shift raised difficult questions
 - Liberal democracies developed through functional differentiation
 - Operation and regulation of technology left to experts
 - Consultation with public always a feature...
 - ...but deeper involvement of non-expert stakeholders problematic

The Villigen Workshop Series

- Villigen 1 (1998)
 - The societal aspects of decision-making in complex radiation situations
- Villigen 2 (2001)
 - Better integration of radiation protection in modern society
- Villigen 3 (2003)
 - Implications of stakeholder involvement in radiation protection decision-making

Villigen 1

- Case studies
 - the resettlement of indigenous populations to areas of the Marshall Islands contaminated by nuclear weapons testing
 - the rehabilitation of a community in Belarus affected by the Chernobyl disaster
 - the remediation programme in the area of Eastern Germany affected by uranium mining residues

Villigen 1

- Transversal topics
 - perceived risk and public confidence
 - community involvement and public engagement
 - the role of the expert
 - the role of the decision maker

Villigen 1

- Key conclusion
 - *radiological protection must adapt to meet the needs of society and not the reverse*

Villigen 2

- Case studies
 - EPA's project: The Future of Radiation Protection (US)
 - BNFL's Stakeholder Dialogue (UK)
 - Centre for Economic and Environmental Development: Consensus Conference on Radioactive Waste (UK)

Villigen 2

- Case studies
 - IPSN: information project on stakeholder involvement in emergency preparedness (France)
 - Agriculture and Food Countermeasures Working Group: stakeholder pre-involvement in the post-accident management of rural areas (UK)

Villigen 2

- Case studies
 - Nord-Cotentin Radioecology Group: pluralistic evaluation (France)
 - Dept. of Energy: stakeholder involvement with Waste Isolation Pilot Plant (US)
 - Stakeholder involvement in remediation programmes in a uranium mining area of Eastern Germany

Villigen 2

- Transversal topics
 - social trust
 - risk and confidence
 - expertise and risk governance
 - acceptability, acceptance and decision making

Villigen 2

- Key conclusions:
 - radiation protection community sensitive to the shift in societal expectations
 - responses already developed in different countries and at different levels

Villigen 2

- Key Lessons
 - foster mutual trust between the radiation protection community and society
 - develop context-specific approaches with common features of openness, inclusiveness and agreed procedures
 - clarify respective roles of actors involved
 - see interactions with stakeholders as opportunities for mutual learning

Villigen 3

- Villigen 1 and 2 demonstrated RP community was responsive to changing societal expectations
- Workshops also allowed sharing of experience
- Conclusions remained conceptual
- Motivation now was to develop practical guidance

Villigen 3

- Approach adopted
 - Three in-depth case studies conducted to help identify commonalities and implications
 - Input from co-author of US study of 239 examples of public participation in environmental decision making
 - Seek to answer practical questions relating to stakeholder involvement

Villigen 3

- Case Studies
 - Stakeholder Involvement in the Canadian Review Process for Uranium Production Projects in Northern Saskatchewan
 - The ETHOS Project for post-accident rehabilitation in the area of Belarus contaminated by the Chernobyl disaster
 - The Rocky Flats Controversy on Radionuclide Soil Action Levels in the US

Villigen 3

- Overall conclusion
 - No 'one-size-fits-all' blueprint
 - Common themes and features can, however, be identified
 - These can assist the radiation protection professional confronting the need to consider stakeholder involvement

When should SI be used?

- Examples
 - Accident
 - Emergent issue resulting from evolution of industrial process (decommissioning, waste disposal)
 - New technology or deployment of existing technology in new location

When should SI be used?

- Shifting practice
 - Historically SI deployed in response to an emergent problem (*resolution* approach)
 - Increasingly deployed as part of normal business or regulatory operations (*prevention* approach)

When should SI be used?

- Indicators
 - Existing NGO or political activity
 - Relationships with stakeholders already poor
 - Issues inherently controversial (e.g. nuclear)
 - Existing disagreements about facts or values
 - Industry perceived to have 'previous form'
 - Other stakeholders lack information

Who should be involved?

- Historically, those with an established regulatory or contractual relationship
- Increasingly, those with an interest or stake in the issue in question
- Based on consideration of who benefits and who bears costs, broadly defined
- List must be flexible rather than fixed

What is different about SI?

- *Partnership* rather than *consultation*
- *Dialogue* rather than *informing*
- *Mutually acceptable outcomes* rather than *zero sum games*
- *Long-term stable decisions* rather than *short-term fixes*
- Focus on *process* as well as on *outcome*
- Ideal is *mutual learning*

How long does it last?

- May be finite, related to a one-off, well-defined issue
- May be ongoing, linked to partnerships integral to an organisation's structure

What is the scale of SI?

- Individual contact, small group meeting or structured, comprehensive process
- Confined to local level or extend to regional, national, global levels
- Choice related to nature of issue, degree of stakeholder concern, etc.

What sort of issues are included?

- May be restricted to very practical issues
- May involve more complex questions touching ethics, values, etc.

Who is responsible?

- Responsibility for decisions remains in the hands of regulators, operators, etc.

but

- Process of reaching decision is shared with other stakeholders

When does it work?

- Shared values
- Shared goals
- Trust among partners or effort made to build trust

When won't it work?

- Decisions are already settled
- Time, money or other resources lacking
- It is perceived only as a public relations exercise
- Lack of shared values, goals
- Likelihood of litigation

Negative assessments

- Decisions based on values rather than science, on emotions rather than hard facts
- Decisions likely to be irrational
- Delay
- Additional cost
- Pandering to the 'usual suspects'

Positive assessments (1)

- Responds to shifts in societal attitude to science, industry, government, etc.
- Offers possibility of resolving tension between economic and social concerns
- Makes good business and regulatory sense
- Can reduce cost and create opportunities
- Identifies allies

Positive assessments (2)

- Helps to resolve disputes and conflict where it is deployed *ex post*
- Helps to prevent disputes and conflict where it is deployed *ex ante*

US Study Findings

- Public participation successful in:
 - incorporating public values into decisions
 - increasing the substantive quality of decisions
 - resolving conflict among competing interests
 - building trust in institutions
 - educating and informing the public

Stakeholder assessments?

- Ultimately, the evaluation of stakeholder involvement processes must itself be a matter for stakeholder involvement
- Note that OECD PUMA guidance foresees stakeholder participation in evaluation

Implications for radiation protection

- Potential impact at every stage of the policy process
- Implies long-term commitment and dedication of resources
- Cannot be left to one part of an organisation

Implications for radiation protection

- Does not imply diversion from core objectives
- Balance must be struck between stakeholder demands and ability of process to meet them
- Organisational and training implications

The Villigen Workshop Series

- Radiation protection has already responded to the increasing demand for stakeholder involvement
- It represents an opportunity to cement relations with society and enhance decision making