

Practices and Experience in Stakeholder Involvement for Post-nuclear Emergency Management



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Summary of the Workshop

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Committee on Radiation Protection and Public Health (CRPPH)
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Foreword

The Committee on Radiation Protection and Public Health (CRPPH) of the OECD Nuclear Energy Agency (NEA) began exploring the role of stakeholders in radiological protection decision processes in the early 1990s. Since 1993, the CRPPH has been conducting nuclear and radiological emergency preparedness and response exercises to investigate the role and contribution of stakeholders in reaching sustainable decisions in emergency management. Experience and exercises conducted to date have identified particular interest in looking at the involvement of a range of governmental and non-governmental stakeholders to better identify and implement sustainable approaches to longer-term recovery after a nuclear or radiological emergency.

Accordingly, the CRPPH organised, and the US Nuclear Regulatory Commission hosted, a workshop for over 70 experts representing organisations from 16 countries. The objective of the workshop was to provide a forum for the exchange of information and experience in stakeholder involvement in post-nuclear emergency management, and to identify areas in which improvements could be made nationally and internationally.

The workshop captured the collective experience and wisdom of the participating experts. It has provided key information to the radiological protection profession and to the CRPPH for enhancing emergency preparedness and response with input from stakeholders

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Executive summary

The Committee on Radiation Protection and Public Health (CRPPH) of the OECD Nuclear Energy Agency (NEA) invited governmental and technical support organisations involved in emergency management, and particularly those developing or involved in related processes for stakeholder involvement, to attend the NEA workshop on Practices and Experience in Stakeholder Involvement for Post-nuclear Emergency Management. The workshop was held on 12-14 October 2010 in Bethesda, Maryland, United States and hosted by the US Nuclear Regulatory Commission (NRC).

The NEA workshop provided a forum for over 70 experts representing organisations from 16 countries:

- to exchange information and experience on approaches to, and issues in, stakeholder involvement in post-nuclear emergency management; and
- to identify areas in which enhancements in stakeholder involvement in post-nuclear emergency management could be achieved nationally and internationally, and to recommend approaches to address these areas.

Since the early 1990s, the CRPPH has been investigating and promoting stakeholder involvement in radiological protection decision-making. This interest was most notably manifested in three stakeholder involvement workshops (the Villigen series) organised by the CRPPH in 1998, 2001 and 2003. In parallel, the preparedness and response aspects associated with consequence management and transition to recovery have been taken up by the CRPPH Working Party on Nuclear Emergency Matters in its International Nuclear Emergency Exercise (INEX) series. Recent exercises addressing consequence management following a nuclear or radiological emergency have clearly demonstrated that the involvement of a range of governmental and non-governmental stakeholders presents opportunities for better identifying and implementing sustainable approaches to longer-term recovery. This workshop was conducted to further explore this main aspect of emergency management.

The key collective views of the international experts participating at the workshop concurred that:

- preparedness for stakeholder involvement should be a top priority;
- stakeholder involvement is not a goal in itself;
- radiological protection professionals are themselves stakeholders;
- it can be difficult for organisations to proactively work with stakeholders;

- use of existing networks and communication systems increases efficiency and enhances interactions;
- incentives for participation enhance stakeholder involvement;
- agreement on rules, procedures and processes is essential for effective stakeholder interactions;
- in some cases, skilled and experienced communications experts are needed;
- a broad spectrum of stakeholders is essential in emergency exercise planning;
- types of stakeholders and their roles will be different during different phases of emergency management, particularly during the recovery and rehabilitation phase;
- an all-hazards approach to emergency management is most efficient.

The workshop concluded with the expert participants identifying activities and recommended actions to advance stakeholder involvement, particularly in planning for post-nuclear or radiological emergency management. In particular, a holistic, all-hazards, public health approach to emergency management was recommended, particularly in the planning, response and conduct of the late phase activities of recovery and rehabilitation. Because it will require a multi-disciplinary team of professionals to deal with the spectrum of stakeholder issues resulting from a nuclear or radiological emergency, it will also be essential to engage stakeholders in the development of a “roles and responsibilities” document for the various phases of emergency management. With a goal of establishing long-term relationships based upon trust, organisations should develop and conduct nuclear and radiological emergency exercises that include a wide variety of stakeholders.

Participants further stated that it was important to team with other professions (e.g. meteorologists, public health experts) who regularly communicate scientific information to stakeholders in order to enhance communication of technical information associated with nuclear emergency planning, response and management. Radiological protection professionals should also identify and work with decision makers who must take decisions based upon “societal” input to determine how the profession can best assist them in their decision-making processes. In addition, organisations should proactively reach out to stakeholders to explore and, if possible, reach agreement with stakeholders on post-nuclear or radiological emergency relocation plans which could become necessary for establishing new living conditions and their associated trade-offs.

Participants also recommended that organisations should evaluate the need to hire or retain risk communications experts to assure the maximum opportunity for success in advancing the organisation’s mission when working with stakeholders. In addition, the *ISO 13 000 Risk Management Standard* should receive more widespread and consistent use in emergency preparedness and response activities to facilitate more effective communication among all stakeholders. Lastly, a web-

based repository for the collection of lessons learnt, best practices, tools and training materials in stakeholder involvement should be established.

The radiological protection profession can benefit from increased outreach and involvement with its stakeholders in order to provide more effective post-emergency management, in particular for preparedness and response aspects associated with consequence management and transition to recovery and rehabilitation.

In conclusion, the international workshop presentations and resulting discussions were of high quality and led to wide agreement among participants for a recommended direction forward. The outcomes of the workshop represent a significant contribution to the radiological protection profession and specifically to the CRPPH in developing its future programme of work to further advance stakeholder involvement in emergency management.

1. Overview

1.1. Introduction

The Committee on Radiation Protection and Public Health (CRPPH) of the OECD Nuclear Energy Agency (NEA) invited governmental and technical support organisations involved in emergency management, and particularly those developing or involved in related processes for stakeholder involvement, to attend the workshop on Practices and Experience in Stakeholder Involvement for Post-nuclear Emergency Management. The workshop was held on 12-14 October 2010 in Bethesda, Maryland, United States and hosted by the US Nuclear Regulatory Commission (NRC).

The workshop provided a forum for over 70 experts representing organisations from 16 countries:

- to exchange information and experience on approaches to, and issues in, stakeholder involvement in post-nuclear emergency management; and
- to identify areas in which enhancements in stakeholder involvement in post-nuclear emergency management could be achieved nationally and internationally, and to recommend approaches to address these areas.

1.2. Background

Key lessons in nuclear and radiological emergency preparedness and response (emergency management) identified through events and exercises have led to improvements in emergency arrangements nationally and internationally. Among these lessons has been the recognition that effective management of complex situations such as those during emergencies requires the involvement of a broad range of stakeholders. In this context, stakeholder refers to organisations and individuals, including governmental and non-governmental entities and civil society, which will be involved in, or affected by, the management of the situation. To be effective, such involvement must begin and be organised as part of preparedness. This fact has been incorporated into the International Commission on Radiological Protection's (ICRP's) new recommendations for the protection of people in emergency situations and for those living in long-term contaminated areas after a nuclear or radiological accident (ICRP, 2007).

Since the early 1990s, the CRPPH has been investigating and promoting stakeholder involvement in radiological protection decision-making. This interest was most notably manifested in three stakeholder involvement workshops (the Villigen series) organised by the CRPPH in 1998, 2001 and 2003 (NEA, 1998; 2001; 2004). In 2006, the CRPPH published a study of stakeholder interactions with radiological protection experts in the post-Chernobyl recovery situation, and has also investigated the implications of stakeholder involvement for organisational structures (NEA, 2006).

In parallel, the post-emergency management situation, specifically the preparedness and response aspects associated with consequence management and transition to recovery, has been taken up by the CRPPH Working Party on Nuclear Emergency Matters in its International Nuclear Emergency Exercise (INEX) series (NEA, 2007). Recent exercises addressing consequence management following a nuclear or radiological emergency have clearly demonstrated that the involvement of a range of governmental and non-governmental stakeholders, while posing challenges to emergency management structures, presents opportunities for better identifying and implementing sustainable approaches to longer-term recovery. This workshop was conducted to further explore this key aspect of emergency management.

1.3. Objectives

The objective of the workshop on Practices and Experience in Stakeholder Involvement for Post-nuclear Emergency Management was to share practices and experience in approaches to stakeholder involvement as part of preparedness for consequence management and recovery following a nuclear or radiological emergency. The workshop was organised to:

- **Provide an international forum for information and experience exchange** among governmental and technical support organisations (international, national and local) on approaches to, and issues in, stakeholder involvement in post-emergency management, including in international implications. The focus was placed on sharing practices and experience from many countries on approaches to stakeholder involvement during preparedness to facilitate an effective and coherent response.
- **Identify commonalities in strategies and good practices as well as limitations** for developing effective stakeholder involvement processes as part of preparedness. This included experience in how the radiological protection profession and public institutes have responded to the challenges and opportunities in stakeholder involvement.
- **Identify a path forward** to enhance stakeholder involvement in post-emergency management.

2. Workshop discussions

In order to share practices and experience in approaches to stakeholder involvement as part of emergency preparedness, the workshop included a series of plenary presentations that provided participants with an overview of processes that have been successfully used in various countries. International experience in involving stakeholders in emergency preparedness and response was shared through the plenary presentation of case studies. The latest information on principles, tools and techniques in risk communications were also presented. Break-out sessions were conducted with participants to discuss and share their experience on identified topics and related issues to enhance stakeholder involvement in post-nuclear emergency management. This allowed participants to discuss their relevant international and national experience and to identify areas for enhancing stakeholder involvement in post-emergency management. The outcomes of these interactive sessions were summarised with a view towards elaborating the direction forward to achieve more effective stakeholder involvement as part of preparedness at the international and national levels. For the interested reader, copies of all the presentations from this workshop are available at www.oecd-nea.org/rp/washington10/documents.html.

2.1. Processes in stakeholder involvement

This workshop provided participants with an opportunity to gain knowledge about the various processes for stakeholder involvement in post-emergency management in various countries. The presentations and subsequent discussions with workshop participants identified a number of commonalities in processes for stakeholder involvement that bridge country, language and cultural differences:

- stakeholder buy-in is negotiated and decision-making processes are dynamic;
- although the framework for decision-making may be harmonised, decisions are case-specific;
- stakeholder involvement is a dynamic process and the stakeholders who participate will evolve with time as the situation and conditions change;
- stakeholder involvement:
 - is useful for complex situations;
 - takes patience, commitment and resources;

- requires “new” skills by the radiological protection professional;
- radiological protection actions during the recovery phase are locally driven, and require broad co-ordination in order to be understood and accepted;
- non-technical factors increasingly drive decisions;
- different stakeholders will need different information at different times and at different levels of detail;
- self-help approaches become increasingly important during the recovery phase after an accident in order to provide affected populations an opportunity to manage their radiation exposure and to gain some control over their future.

The participants also identified that it is a challenge to achieve stakeholder ownership, to move towards practical approaches and to manage the many levels of expertise within the stakeholder community. To assist in dealing with these challenges, it was determined that it is important to make sure that decisions and information are “correct” and timely, or credibility with stakeholders could be compromised. Participants also noted that non-radiological protection experience, such as that gained in dealing with public health or safety issues, is very useful to improve the success of stakeholder involvement when working with stakeholders on radiological issues.

Participants felt strongly that stakeholder involvement is not an end in itself. Stakeholder involvement is a tool available to the radiological protection professionals to enhance the decision-making process. As stakeholder involvement is particularly critical in emergency preparedness and during recovery and rehabilitation after a nuclear or radiological event, experience has provided some processes in stakeholder involvement that have been shown to be effective across national and cultural boundaries.

2.2. Case studies in national and international experience

The workshop provided participants the opportunity to learn from the presentation of case studies of national and international experience concerning stakeholder involvement in post-emergency management. The presentations and subsequent discussions with workshop participants identified a number of key themes:

- stakeholder involvement requires a broad mix of stakeholders, including governmental participation from all levels;
- not everyone will be satisfied, but they will be heard;
- public-private partnerships can be very effective, but require trust, commitment, resources and political leadership;
- it is challenging to mobilise citizens;

- knowledge of radiological protection exists very unevenly, but some knowledge is a must for first responders, the medical community and elected officials;
- diverse approaches are needed to engage with stakeholders;
- each stakeholder involvement activity is unique and addresses specific, local situations;
- organisation and approaches to stakeholder involvement need to be extremely diverse and flexible;
- successful stakeholder involvement projects are as open and inclusive as possible;
- self-help approaches have been central to the successful management of local situations to move the affected people from feeling like and being treated as a “victim” to feeling like and being treated as a “pioneer” with hope for their future;
- tools for stakeholder involvement are essential to effective management.

The case studies and the experience of the participants demonstrated and confirmed that stakeholder involvement, although presenting some challenges, was essential in reaching sustainable decisions impacting populations affected by a nuclear or radiological event. Stakeholder involvement helps all parties identify important self-help tools and activities that allow the affected population to gain some hope for their future by managing their radiation exposure.

2.3. Interactive workshop on risk communications: principles, tools and techniques

The workshop also provided participants with the latest examples of principles, tools and techniques to enhance their ability to conduct successful stakeholder involvement. To facilitate the implementation of these concepts, Dr. Vincent Covello made the following key remarks to improve risk communications among radiological protection professionals and stakeholders:

- people want to know that you care before they care about what you know;
- in stressful situations, people have difficulty hearing, understanding and remembering information;
- people trust those who are willing to acknowledge the importance of uncertainty;
- to address these “truths”, it is necessary to focus messages in stressful situations, such as those in emergency situations, to 3 specific points, expressed in 9 seconds and in 27 words or less;
- “message maps”, aimed at a 6th-grade level, can be an effective tool to enhance risk communication.

Dr. Covello also stated that in order to enhance communication skills it is critical to practice. As he noted, “You wouldn’t send an athlete to the Olympic Games without practicing, so you should not attempt risk communications without practice.” In order to improve communications between radiological protection professionals and stakeholders it is critical to anticipate questions, develop responses and then practice their delivery in order to be an effective communicator. This preparation should not be considered as “insincere” but instead should be considered as just good planning to improve understanding between parties.

2.4. Enhancing stakeholder involvement in post-nuclear emergency management

After providing examples of national and international experience in post-nuclear emergency management, workshop participants identified opportunities to enhance stakeholder involvement. To identify the collective views of the participants at the workshop, three topics were chosen for discussion: 1) conditions and means to engage stakeholders; 2) tools and sustainability for stakeholder involvement; and 3) stakeholder involvement in emergency exercises. Each of these areas of discussion is described below.

Conditions and means to engage stakeholders

In order to gather the collective experience and knowledge of the participants from the workshop, outreach methods using conditions and tools as a means to effectively engage stakeholders in the aftermath of a nuclear or radiological emergency were investigated.

Participants agreed that preparedness for stakeholder involvement is the top priority. Performing the necessary “due diligence” in the early stages of emergency preparedness, prior to the accident, will vastly improve post-emergency communications. Greater emphasis should be placed on planning for recovery and rehabilitation, or long-term nuclear emergency management, during emergency preparedness activities. The participants felt strongly that stakeholder involvement is not an end in itself, but that it is a process that is needed in all stages of emergency planning.

Planning for stakeholder involvement is a top priority.

Post-emergency radiological clean-up priorities may not match what stakeholders need to improve their quality of life. Planning for the conduct of management operations during recovery and rehabilitation needs to be flexible and able to adapt to changing conditions over time. Management during the recovery phase also needs to be sufficiently flexible to account for the diverse needs of different affected groups.

The radiological protection profession should consider itself a stakeholder and not think of stakeholder involvement as “us versus them”. It is through the

development of a partnership with stakeholders, including the radiological protection professional, that informed and sustainable decisions can be made to address stakeholder issues.

Sometimes organisations fail to proactively work with stakeholders due to resource limitations and the attitude to “let another department sort it out”. There is a need for organisations to build relationships with their local populations as a “member of the community”, and not to simply leave this to the legal, public relations or other staff, but to involve everyone in the organisation including top management.

Best practices for engaging with stakeholders identified by workshop participants included:

- frequent engagement with the media and public;
- in co-ordination with the licensee, inviting media to the facility;
- establishment of local information committees that include elected officials and activist groups;
- development of pre-crafted messages that can address stakeholder issues in identified situations and scenarios; and
- recruiting expertise for future stakeholder involvement activities.

Means and methods for engaging stakeholders have included fact sheets, press releases and editorials. The challenge is to keep these current in a rapidly evolving incident environment, but in the long term they may work well. The participants felt that the profession should investigate the appropriate use of blogs, social media, webcasts and other electronic means that have become very popular to efficiently inform and involve stakeholders. Different scenarios and situations may favour different types of methods and means to reach out to and involve stakeholders. Planning should include the appropriate outreach options to address the spectrum of stakeholders involved.

Tools and sustainability for stakeholder involvement

Building upon the IRPA *Guiding Principles for Radiation Protection Professionals on Stakeholder Engagement* (IRPA, 2009), participants stated that there is a need for the profession to develop guidance on roles and responsibilities, and to identify and collect tools and good practices in the conduct of stakeholder involvement. In addition, roles and responsibilities should be matched with respective skills and training in emergency planning and response, particularly as it relates to stakeholder involvement.

In order to increase effectiveness and efficiency, there is also a need for the radiological protection profession to reach out to stakeholders by tapping into existing communication systems and networks. Increasingly stakeholders have their own capabilities (e.g. web pages, list servers, twitter accounts, blogs or newsletters) to effectively communicate with their constituents. The radiological protection profession should reach out to those stakeholders to identify how best

to utilise these existing mechanisms to more effectively and efficiently involve stakeholders.

In order to enhance the probability for success in stakeholder involvement there is also a need to find incentives that would encourage stakeholders to become involved. This is of particular importance during the emergency planning stage. Stakeholders need to be identified and dialogue initiated with them to determine what incentives are necessary to keep them involved for the long-term success of emergency planning, management and response. It can be very helpful to work with stakeholders to identify a “common goal” (for example, the protection of children, maintaining or re-establishing commerce, self-help programmes) as the incentive to remain actively involved. Appointing local leaders to steering or working groups can also assist in maintaining their involvement.

Strategic buy-in of stakeholders was felt by participants to be critical. This was recognised as a long-term process that needs to be planned together with stakeholders and to which appropriate resources need to be committed.

Other mechanisms to assist in establishing effective stakeholder involvement were identified by participants. These included taking the time to reach agreement on the rules, procedures and processes for stakeholder involvement at the beginning of the process, investment in communications and facilitation of training for those leading the process, viewing stakeholder involvement as an educational opportunity for all parties, and providing consistent and regular communications, such as continual feedback (e.g. interim milestone status, project updates, draft reports), access to external experts, or use of websites where status and information can be shared and made readily available.

Depending upon the complexity of the situation, organisations should consider the use of skilled and experienced communications and facilitation experts, instead of using scientists or doctors who have received training in these areas. On major projects, such as the siting of new reactors or development of a high-level waste repository, the investment in the outcome may warrant the minimal additional expense to hire communications experts to increase the probability of success in establishing a sustainable stakeholder involvement process to ensure stakeholder support of the activity.

Stakeholder involvement in emergency exercises

The workshop also focused on gathering the collective experience and knowledge of the participants as to how a broad range of stakeholders could participate in emergency exercises.

Participants recognised that there is a wide spectrum of stakeholders to consider in planning for exercises (e.g. first responders, security, government authorities, industry, civil society) and that effective stakeholder involvement will depend upon relationships built beforehand. It is therefore important to build networks of experts and stakeholders upon which specific emergency exercises can be organised. Future exercise planning should include the organisation of networks of stakeholders to share experience and to develop arrangements leading to targeted exercises involving stakeholders.

Establishing these stakeholder networks will rely on outcomes from identifying the means and conditions for involving stakeholders as well as the conditions that will encourage stakeholders to become involved. Stakeholder involvement networks will also rely on having the right tools, mechanisms and resources in place to ensure sustainability.

The stakeholders involved and their level of involvement will depend on what is being exercised. Types of stakeholders and their roles will be different in the early response phase for an accident as compared to the recovery and rehabilitation phases. Workshop participants found that for an early phase exercise, it is not appropriate to address the situation-specific, decision-making and stakeholder input relevant to longer-term issues. Some common features of stakeholder involvement, regardless of the exercise scenario were identified as: 1) the roles of the stakeholders in the planning process need to be identified and mutually agreed upon; 2) the outcomes of the planning and exercises need to be communicated and discussed with the stakeholders with clear recognition of the latter's contribution; and 3) lessons learnt are collected and shared with stakeholders to build interest, involvement and ownership.

An all-hazards approach to emergency management is the most efficient use of available resources, including stakeholders.

To make the stakeholder involvement process in nuclear and radiological emergency response planning more meaningful to stakeholders, workshop participants recommended the use of an all-hazards approach to engage stakeholders. This approach facilitates co-ordination and the sharing of experience and resources among all related emergency management activities. As the nuclear and radiological emergency response planning must be complementary to the broader emergency response planning, the involvement of stakeholders will identify opportunities for synergy and the sharing of resources that will enhance planning and response.

More substantive details on each of the conclusions outlined above and copies of the presentations are provided at: www.oecd-nea.org/rp/washington10/documents.html.

3. Conclusions

The workshop concluded with a plenary session during which workshop participants identified activities and actions to advance stakeholder involvement, particularly in planning for post-nuclear and radiological emergency management. This was followed by concluding remarks by the workshop organisers.

3.1. Way forward

After a spirited and engaging discussion, the following were identified by workshop participants as key directions to pursue to enhance emergency preparedness and response with input from stakeholders in order to reach sustainable decisions:

- Use a holistic, all-hazards, public health approach to emergency management, particularly in the planning, response and conduct of the late phase activities of recovery and rehabilitation. This approach would also provide the opportunity for the more long-term engagement of stakeholders and would be more responsive to the spectrum of stakeholder issues during the recovery and rehabilitation phases. It would also expand the amount of available resources for emergency management as other professional disciplines become involved in the response, resulting in the elimination of duplicative activities and the generation of synergies that could optimise and leverage the resources of all organisations involved. This approach would also lead to the development of multi-disciplinary teams of emergency planners and responders who would more effectively and efficiently deal with the spectrum of stakeholder issues. An all-hazards approach would also include the development of co-ordinated and complementary guidance, and information and legislation to optimise resources, as needed.
- Engage stakeholders in the development of a “roles and responsibilities” document for various phases of emergency management. Although radiation exposure is a part of a nuclear or radiological event, it is but one consideration in the planning, response and management of the situation. The multi-disciplinary team approach to planning and addressing these situations would benefit from the clear identification of the roles and responsibilities of the various professionals required (e.g. medical; business; local, regional and national governments/authorities; clerical; education) in particular as they pertain to the long-term recovery and rehabilitation phases of an accident.

- With a goal of establishing long-term relationships based upon trust, develop and conduct exercises with a wide variety of stakeholders. This is of particular importance and would be most productive in the case of post-emergency scenarios, including recovery and rehabilitation. It is far better to involve stakeholders in exercises and determine mutually agreeable actions in support of their issues early in the planning process, than to attempt to deal with stakeholders in the midst of a crisis.
- Team with other professions who regularly communicate scientific information to stakeholders in order to enhance communication of technical information associated with nuclear emergency planning, response and management. For example, in some countries the radiological protection professionals are teaming with meteorologists to communicate to the public the spread of contamination and actions they should take, such as sheltering instructions, in the case of a nuclear or radiological emergency. The public is familiar with gaining “technical” information from professionals such as meteorologists daily. Because of their credibility and profession, they could readily describe the movement of a radioactive plume in terms the public would easily understand. Another example would be the use of a public health professional network, such as those for infectious disease control, to help communicate with the public on measures they can take to plan and to protect themselves during emergencies. This would require joint training with other scientific professions in order to establish a working and trusting relationship that would enhance planning and response in a nuclear or radiological emergency.
- Identify and work with decision makers who have to take decisions based upon “societal” input when determining how the radiological protection profession can best assist them in their decision-making processes. Open a long-term dialogue with these decision makers to establish a mutual learning environment that creates a relationship based upon mutual trust.
- Explore and discuss potential relocation plan trade-offs with stakeholders. During the planning phase with stakeholders, scenarios should be discussed, and if possible agreed upon, concerning when, and under what circumstances, evacuation or relocation might be appropriate, and what would be the risks associated with different scenarios and their associated trade-offs. Again, this is an opportunity for mutual learning. In the event of widespread radioactive contamination, where evacuation or relocation is the best option, at some point the affected people will want to go back to their homes (be they urban or rural) for a variety of reasons. Emergency planning should address this desire for people to return to their homes and the need to arrive at a common understanding of radiation exposure levels. The issue is not “how clean is clean?” or at what level do you terminate “controls”, but on reaching agreements on options and compromises to establish new living conditions based upon informed decisions with full knowledge of the options and their associated trade-offs. ICRP Publication 103 supports this approach with its recommendation to optimise exposures (ICRP, 2008).

- Evaluate the need to hire or retain risk communications experts to ensure maximum opportunity for success in advancing the organisation's mission when working with stakeholders. Organisations should evaluate their current programmes and, based upon the associated risk of failure or difficulties, consider engaging with a professional risk communicator to interface with stakeholders. If other than a risk communications professional is selected for this position, then the organisation should provide the appropriate training and experience to the selected individual(s) to enhance their ability to succeed in advancing the mission of the organisation.
- Make greater use of the ISO 13 000 *Risk Management Standard* (ISO, 2002). This standard and its associated supporting documents should be reviewed and receive more widespread and consistent use in emergency preparedness and response activities to facilitate more effective communication among all stakeholders, in particular for post-nuclear emergency management into recovery and rehabilitation.
- Establish a web-based repository for the collection of lessons learnt, best practices, tools and training materials in stakeholder involvement. Organisations are encouraged to assess the US Nuclear Regulatory Commission's *Lessons Learned Program*, and subsequent supporting documents, as a model for establishing similar national or organisation programmes (NRC, 2006). Having a formal lessons learnt programme in place not only helps avoid repeating mistakes, but also provides stakeholders with the knowledge that such programmes provide value-added direction in the formulation and execution of future emergency planning and response programmes. Collecting lessons learnt, best practices, tools and training materials and making them readily available would greatly assist radiological protection professionals in preparing for stakeholder involvement interactions which would enhance the ability of the profession to build stakeholder trust in advancing their organisational mission.

The radiological protection profession can benefit from the initiation of increased outreach and involvement with its stakeholders in order to provide more effective post-emergency management, in particular for preparedness and response aspects associated with consequence management and transition to recovery and rehabilitation.

3.2. Concluding remarks

Closing remarks were made by the workshop organiser, the NEA Committee on Radiation Protection and Public Health (CRPPH). The CRPPH thanked the workshop host, the US Nuclear Regulatory Commission, for an exceptionally productive workshop. Workshop participants were also congratulated for their active participation and contribution to advance the knowledge and preparation of the radiological protection profession in involving stakeholders in post-nuclear

emergency management. Workshop participants were advised that the outcomes of this workshop, and those of other CRPPH initiatives (NEA, 2010), would be used by the CRPPH in developing its future programme of work in order to further advance stakeholder involvement in emergency management.

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Practices and Experience in Stakeholder Involvement for Post-nuclear Emergency Management

One of the most important aspects of post-accident consequence management is the involvement of stakeholders: in the planning, preparation and execution as well as in sustaining efforts over the long term. Having recognised the significance of stakeholder participation in several International Nuclear Emergency Exercises (INEX), the NEA Committee on Radiation Protection and Public Health (CRPPH) decided to organise the Practices and Experience in Stakeholder Involvement for Post-nuclear Emergency Management Workshop to explore these issues. This summary highlights the key issues discussed during the workshop, which brought together 75 emergency management and communication specialists from 16 countries. In light of the accident at the Fukushima Daiichi nuclear power plant, the experience shared during this workshop will be central to further improving national emergency management arrangements.

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