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Working Group on Public Communication of Nuclear Regulatory Organisations (WGPC)

Crisis Communication of Nuclear Regulatory Organisations: Towards global thinking

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The mission of the NEA is:

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

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

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

COMMITTEE ON NUCLEAR REGULATORY ACTIVITIES

The Committee on Nuclear Regulatory Activities (CNRA) of the OECD Nuclear Energy Agency (NEA) is an international committee made up primarily of senior nuclear regulators. It was set up in 1989 as a forum for the exchange of information and experience among regulatory organisations.

The committee is responsible for the programme of the NEA, concerning the regulation, licensing and inspection of nuclear installations with regard to safety. The committee's purpose is to promote cooperation among member countries to feedback the experience to safety improving measures, enhance efficiency and effectiveness in the regulatory process and to maintain adequate infrastructure and competence in the nuclear safety field. The CNRA's main tasks are to review developments which could affect regulatory requirements with the objective of providing members with an understanding of the motivation for new regulatory requirements under consideration and an opportunity to offer suggestions that might improve them or avoid disparities among member countries. In particular, the committee reviews current management strategies and safety management practices and operating experiences at nuclear facilities with a view to disseminating lessons learned.

The committee focuses primarily on existing power reactors and other nuclear installations; it may also consider the regulatory implications of new designs of power reactors and other types of nuclear installations.

In implementing its programme, the CNRA establishes cooperative mechanisms with the Committee on the Safety of Nuclear Installations (CSNI) responsible for the programme of the Agency concerning the technical aspects of the design, construction and operation of nuclear installations. The committee also co-operates with NEA's Committee on Radiation Protection and Public Health (CRPPH) and NEA's Radioactive Waste Management Committee (RWMC) on matters of common interest.

FOREWORD

Nuclear regulatory organisations (NROs) have long agreed that public information is integral to the overall management of a nuclear or radiological emergency, understanding that effective crisis communication is essential to maintaining the public's trust in an organisation's good governance.

A previous report "Road Map for Crisis Communication of Nuclear Regulatory Organisations – National Aspects" (CNRA/R(2011)11) provided all NROs with a set of good communication practices that could be integrated within overall crisis communication planning. It is based on an important premise that is widely accepted among national regulators: "Each actor communicates in its own field of competence"; that is, each organisation's role during an emergency should be clearly defined and well understood by other competent stakeholders - as a preliminary step to ensuring effective crisis communication for nuclear regulatory authorities.

The March 2011 events at the Fukushima Dai-ichi nuclear power plant have further increased the awareness that effective public communication management during crises -especially those of a high magnitude- entails a comprehensive, quick and well-balanced response to the growing demand for information by the public and the media in this globalised world. Globalisation has made crisis communication even more multi-faceted: access to reliable up-to-date information is more difficult; media and social pressure increase; translation to other languages becomes more complicated, etc. Therefore, CNRA organised on May 9-10, 2012 in Madrid an international workshop "Crisis Communication: facing the challenges" attended by senior regulators from more than 30 countries which discussed the international dimension of the communicative response to crises. The topics adressed were: Key elements in crisis communication, lessons learned from past crisis (nuclear & non-nuclear), panel on social expectations (politicians, NGOs,…), panel on respective roles Media & Regulators, need for global approach (networking) to communication and future improvements in Crisis Communication.

In his summary conclusion at the May 2012 workshop the CNRA Vice-Chair recalled that was that the mission of NROs is controlling operators and communication is part of this control noting that NRO's credibility is fundamental to get trust of the public. He highlighted the importance of openness and empathy: need for NROs to involve all stakeholders and to communicate timely and regularly, being as clear and objective as possible. He insisted on the need for consistency between NROs: emergency preparedness is essential for which exchange of information between NROs is fundamental. The major conclusion was the need for NRO to think globally when communicating about a crisis communication has become international, any world citizen has access to news, so it is crucial that NRO's communication should consider not only the public in the affected countries but all other countries as well.

The present report results from the mandate given to the Working Group on Public Communication (WGPC) by the OECD Nuclear Energy Agency to capture lessons for NROs from the discussion held in Madrid. In particular it provided an extended Road Map for NRO crisis communication which is now fully considering the « global thinking » which should become a rule for future NRO crisis communication.

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ACKNOWLEDGEMENTS

This study was conducted by the same WGPC Team on crisis communication who produced in 2011 the "Road Map for Crisis Communication of Nuclear Regulatory Organisations- National aspects". Answers to the questionnaires were provided by Belgium (FANC), Canada (CNSC), Czech Republic (SUJB), Finland (STUK), France (ASN), Germany (BMU), Hungary (HAEA), India (CAERB), Ireland (RPII), Korea (KINS), Norway (NRPA), Poland (PPA), Romania (CNCAN), Slovak Republic (UJD SR), Spain (CSN), Sweden (SSM), Switzerland (ENSI), United Kingdom (ONR) and Unites States of America (USNRC). Two consultants and experts in the area of international and regulatory communication, Meritxell Martell (Merience Strategic Thinking) and Susan Menéndez (Snap Comunicación), have worked on developing this report, coordinated by Marina Calvo (CSN, Spain).

1. INTRODUCTION

The OECD Nuclear Energy Agency (NEA) Committee on Nuclear Regulatory Activities (CNRA) Working Group on Public Communication of Nuclear Regulatory Organisations (WGPC) organised the workshop "Crisis communication: facing the challenges" on 9-10 May 2012 in Madrid to address the international dimension of the communicative responses to crises by assessing the experience of Nuclear Regulatory Organisations of the NEA member countries and their stakeholders. The CNRA/WGPC also prepared in 2011, before the Fukushima-Daiichi nuclear accident occurred, a Road Map for Crisis Communication of Nuclear Regulatory Organisations which focused only on national aspects. This 'road map' had not considered the international dimension. CNRA mandated the WGPC to expand the Road Map so as to conclude the follow-up activity on crisis communication.

The objective of the present document is to firstly, identify the key messages which can be extracted from three surveys carried out among the WGPC members after Fukushima-Daiichi's accident (Appendices II, III and IV), and incorporate them into the Road Map for Crisis Communication. Secondly, the good practices on public communication of NROs, which were presented during the OECD/NEA Workshop on Crisis Communication: Facing the Challenges, are reported. Following the structure of the road map for public communication responses during crisis included in the NEA report entitled "Road Map for Crisis Communication of Nuclear Regulatory Organisations- National aspects", the good practices on communication before, during and after a crisis are provided. Overall, the emphasis of this report is on the international aspects of crisis communication, rather than the national dimension.

2. BACKGROUND

Even though not originally included in the agenda of the 12th regular session of the WGPC, which took place on 16-18 March 2011 in Paris, the impact of the earthquake and tsunami on Japan's Fukushima-Daiichi nuclear power plant on March 11th was discussed. Due to the magnitude of the accident and its impact in the NRO's daily operations, the working group decided to follow-up the different reactions from the public communications perspective among Member States (MS) regulatory authorities during the crisis. This activity was not only considered as a way to analyse and compare the different public information demands received by regulators during the immediate weeks after the accident, but also as a way to start testing the relevance and potential effectiveness of the measures streamlined in the paper "Road Map for Effective Public Communication by Regulatory Organisations in Case of a Nuclear Crisis – National Aspects". Coincidentally, this report was developed during the previous year by the WGPC surveying member countries on their crisis communication experiences at a national level. It was officially presented to the working group during the 12th session in Paris, soon after the Fukushima Daiichi accident.

Considering that the assessment was still fresh, the WGPC members decided to launch a special item discussion (with participation of the NEA Deputy Director for Safety and Regulation, Mr. Uichiro Yoshimura), and start collecting as soon as possible the preliminary feedback from communication actions taken by Nuclear Regulatory Organisations (NROs) other than Japan and by the International Atomic Energy Agency (IAEA) after the Fukushima Daiichi accident. A total of three questionnaires were issued since March 16th 2011 until May 15th 2012 to WGPC members.

Therefore, on March 16th 2011, the WGPC sent a first quick survey to its members asking them to describe their communication activities during the first week after the Fukushima Daiichi accident. Four brief questions were submitted and a total of 16 countries answered (Appendix II).

On June 2011 the CNRA formally assigned the WGPC the task to dedicate a specific activity to the follow-up of NROs crisis communication during the Fukushima Daiichi accident from an international perspective and to take into account the lessons learned.

As an outcome of this mandate, in September 2011 the working group decided to issue a new questionnaire in order to complete the first quick survey post Fukushima Daiichi. Three questions were sent out to the NROs (except Japan) on September 29th - a total of 18 countries answered (Appendix III). In addition, the WGPC had also agreed in 2011 to hold an International Crisis Communication Workshop in Madrid on 9-10 May 2012.

On May 7-8 2012, the WGPC held in Madrid its 14th regular session, before the International Crisis Communication Workshop. At the suggestion of Norway's NRPA, it was agreed to send members an additional short question survey addressing the assessment on the policy and staff changes after the Fukushima Daiichi experience. The questions were sent on 15th May and a total of 17 countries answered (Appendix IV).

During the Workshop in Madrid, numerous statements referring to the Fukushima Daiichi crisis communication actions such as “we did not do sufficient in those circumstances”, showed that more needs to be done to take into account the instant communication required nowadays during a global-scale crisis, where prompt and highly used means of communication require new solutions.

3. ANALYSIS OF THE FUKUSHIMA CRISIS SURVEYS: MAIN FINDINGS

The findings and recommendations included in the "Road Map for Crisis Communication of Nuclear Regulatory Organisations – National Aspects" (NEA, June 2011) were streamlined from the perspective of a national crisis. However, the analysis of the answers provided by NROs to the three questionnaires issued by the WGPC since March 2011 contribute to confirm its relevance and effectiveness as a tool to improve crisis communication management under critical situations.

As a matter of fact, most of the hurdles described by NROs during their post Fukushima Daiichi communication efforts had already been taken into account and addressed in the pre-crisis, crisis and post-crisis recommendations of the Road Map. Nevertheless, WGPC members agreed during the 14th regular session in Madrid that the Road Map needs to be expanded in order to include concise communication measures for an international nuclear crisis which may affect directly or indirectly other countries.

The survey's main findings may be divided in five groups:

1. Topics of interest
2. Communication management challenges
3. The role of internet and social networks
4. Some lessons learned
5. New procedures implemented

3.1 Topics of interest

The globalised impact of the crisis triggered very different types of questions by the media and the public, ranging from health-related demands to doses measures, maps, prognosis, etc. NROs made extensive efforts to disseminate confirmed information from the field and/or cleared by IAEA, and to provide accurate answers to the questions addressed by the public. According to the WGPC surveys, the majority of media enquiries during the crisis phase fell into the following categories:

- Questions about the situation at the Fukushima Daiichi nuclear facilities. Journalists needed help to understand the design of the affected plants and the status of the accident, the exact extent of the crisis and what was being done to control it.
- Questions about technical solutions adopted in Fukushima Daiichi.
- Safety/robustness of other nuclear power plants (designed, being designed or those operating beyond life design). Capacity of NPPs to endure natural and man-made hazards (earthquakes, floods or malicious attack).
- Likelihood of a severe accident happening in the country. Comparison with other accidents.
- Emergency measures adopted at a national level.

- Possibilities of airborne radiation reaching the country. Safety of imported food and products from Japan. Contamination of passengers, airplanes and ships.
- Questions about the levels of radiation and its impact on national citizens currently in/returning from/travelling to Japan.
- Potassium Iodine and health-related questions.
- Impact of the accident on energy policies and the nuclear industry, as well as stress tests.
- Radioactive waste management.
- Long-term effect of the accident.

3.2 Communication management challenges

NROs had to activate mechanisms to face the sudden increase of workload in their public affairs divisions. Communication offices walked the extra mile, working around the clock, not knowing when the huge information demand about Fukushima Daiichi accident would decrease. Those efforts, however, had to be combined with the NRO's local regular activities.

- Regulators highlight the tremendous increase of local information requests received, even though the disaster had occurred in another country, in many cases thousands of miles away.
- The volume of media and public inquiries by telephone and e-mail was extremely high during the first days and weeks after the Japan accident.
- Call centres were overwhelmed with information inquiries. More than 1,000 phone calls from the public were answered in France and Korea.
- Some regulators activated their contingency plans; others had to improvise. In Hungary, a "work from home" system was specially set-up for HAEA's press officers. In Slovakia and Switzerland, due to the lack of media staff, members of the Board had to communicate directly with the media. In the USA, the NRC applied successfully for the first time in a real-scenario a plan which pulled out temporarily technical experts and public affairs officers from other areas into the crisis communication team.
- Regulators had to increase the number of spokespersons and experts to be able to meet the heavy media demand for interviews in different media around the clock. It is not clear, however, if all those spokespersons had been previously media-trained.
- Communication priorities in the day immediately following the Fukushima Daiichi accident were centred in two aspects: 1) to explain to national citizens the possible consequences of the accident to their health, and 2) to provide national citizens living abroad, and their families, information about the situation in Fukushima.
- Sweden's SSM applied a new communication strategy during Fukushima Daiichi crisis: an "occupy the sofas" approach, consisting of having some 15 spokespersons (all experts) accepting invitations to participate in debates and interviews on major TV channels, radio stations and digital newspapers. ("We did not let other so-called experts put through their messages.")

3.3 The role of Internet and social networks

The Fukushima Daiichi accident is the first nuclear crisis to occuring in the era of Internet as a global communication tool, with the media and the public accessing to social media platforms, instant sharing apps and monitoring tools.

Many of the NROs were analysing their social media communication approach before March 11th, but in the light of events in Japan and the massive demand of information some started to use Twitter and Facebook as part of their communication strategy.

Some regulators note the high amount of requests received by digital media, asking not only for information and pictures, but for spokespersons available for live chats. In Norway, an online chat with an NRPA expert received the record number of 3,000 questions.

NROs used their websites as a main channel of communication with the public. Many of them created a special sub-section for Fukushima Daiichi's information.

The fast pace of digital media implies a high demand and pressure over the NROs. The US NRC updated a newly launched blog to get out additional information via social media, with successful results.

In the absence of accurate information early in the event, NROs had to rely on the Internet to keep updated. On many occasions, media (including digital papers, blogs, social networks, TV channels, etc.) acted in fact as the source of information for the regulator.

3.4 Some lessons to learn

The analysis of the responses to the questionnaires show certain common challenges faced by NROs during the Fukushima Daiichi crisis. Many of them were acknowledged and addressed during the NEA's international workshop held in Madrid in May 2012 (see Section 4 of the present report).

- National emergency plans for nuclear accidents were not activated in the majority of countries, as the events had not occurred within their territory. Therefore, the mechanisms to deal with massive media requests during emergencies were not promptly activated, making it difficult sometimes to handle the situation with other government agencies or not being able to request extra staffing to help bear the increased workload.
- The sometimes burdensome process NRO's press departments face in order to obtain information from other government departments may delay the regular flow of highly demanded information from the regulator. This lack of speed in the process may lead to disseminate information without official approval or verification.
- The overwhelming thirst for early knowledge and advice which emanates from the highest levels of Government may contribute to increase the stress of the regulator's media officers.
- The lack of clear and verified information from Japan in the first days following the accident was a major hurdle for all NROs, who also had to face an important language challenge as the majority official communications were not disseminated originally in English.
- The wide range of often conflicting information and rumours in the media, especially online, which leads NROs to: 1) spend a large amount of effort in seeking to validate information, and 2) add the correction of online misinformation to their crisis communication responsibilities.
- Maintaining the "24/7 crisis mode" for several weeks and combining it with the routine daily national activities of the NRO did not seem realistic for many countries. If the accident had

occurred closer to Europe, with even more intense media pressure, some members acknowledge that an effective communication activity might have been impossible to maintain.

- Some emergency response centres faced access problems to the internet and e-mails during the crisis, affecting media response in unforeseen ways. A Plan-B for internet connectivity in case commercial DSL services fail, or offices have to be evacuated for any reason, should be foreseen in crisis communication plans.

3.5 New procedures implemented

The responses to the third survey sent to the WGPC members indicate that even though no NRO has changed drastically its Public Affairs Office (PAO) structure or resources after the Fukushima Daiichi accident, the crisis has stimulated internal analysis and evaluations in order to accommodate the new demands of the media and the public in the globalisation era.

- NROs have not increased their PAO staff after Fukushima Daiichi accident (besides Switzerland[1]). However, as a result of the analysis of the internal workflow and the media's increasing demands, some countries have re-evaluated the use of their resources, focusing more in social media, and have increased their roster of experts and trained spokespersons.
- The majority of countries have reviewed their communication strategies as a result of the Fukushima Daiichi crisis, extracting lessons learned and good practices.
- In some cases, crisis communication plans have been or are being updated, adopting some of the recommendations of the WGPC's Road Map and workshop in Madrid (i.e. preparing "dark websites", training spokespersons, testing the scalability of their call centres).
- When deemed necessary, PAOs provide relevant documents and press releases translated into English. Translations are usually managed by external agencies or other institutional departments other than the regulator's communication team.

3.6 Road map: International dimension

In the light of the analysis of the post Fukushima Daiichi accident surveys made by the WGPC, the Road Map presented in March 2011 proves its worth as a valuable tool to improve crisis communication management under critical situations. As a matter of fact, the majority of the hurdles described by NROs during their post Fukushima Daiichi communication efforts had already been taken into account and addressed in pre, during and post crisis recommendations of the Road Map.

Nevertheless, WGPC members agreed in May 2012 that this valuable tool needs to be expanded in order to include a set of concise communication measures for international nuclear crises. Some of these recommendations, extracted as a result of the analysis of the aforementioned surveys and the international Crisis Communication Workshop in Madrid, are:

- Crisis communication plans should be prepared and tested in advance, and well adjusted including special measures to be activated during international events (i.e. extra staffing, roster of trained spokespersons, special sections in the NRO website).
- Those measures should anticipate that some crisis might not reach the level of a significant threat to domestic population but generate social alarm (i.e. Fukushima Daiichi).

[1] Midyear 2011, ENSI set up a new section of Communication. In spring 2012, this section includes 5 persons (with 460% quota of manpower) compared to 2 persons before Fukushima-Daiichi accident.

- The emotional dimension must not be ignored during any crisis. The perceived risks, fears and preconceptions of the public towards the nuclear issue have to be acknowledged. Spokespersons must be able to connect with the audience and show empathy.
- Communication plans should streamline the exchange of information procedures during international crisis (for example, confirming who is in charge of what), taking into account in which cases national legislation requires the creation of a centralised emergency unit.
- International crises imply difficulties on getting verified information. Eventually, the dispatch of a NRO's press officer to the field as soon as possible may guarantee first-hand reliable information.
- All relevant communications should be translated into English. Keeping neighbouring countries and international organisations informed is crucial in avoiding misinformation.

Thus, the Road Map has been reviewed to include the international dimension of crises and a new updated version is included at the end of this report (Appendix I). The WGPC is also working on a digital version of this tool, accessible online to all NRO communication officers.

4. ANALYSIS OF KEY MESSAGES FROM THE WORKSHOP

In this section, the good practices on public communication of NROs which were presented during the OECD/NEA Workshop on Crisis Communication: Facing the Challenges, are reported. Following the structure of the road map for public communication from the NEA report entitled "Road Map for Crisis Communication of Nuclear Regulatory Organisations - National aspects", the actions on communication undertaken by NROs before, during and after the crisis follow.

4.1 Before a crisis

One of the key messages conveyed during the Workshop on crisis communication held in Madrid was the need to "think global - national nuclear crisis communication no longer exists". All NROs must assume that they work under global scrutiny, and even the slightest incident in the national territory might trigger international media attention. For this reason, a number of actions can be undertaken before a crisis to prepare NROs to handle a critical situation in an efficient manner. NROs faced with the crisis of Fukushima Daiichi reflected, during the workshop, on the actions to be undertaken before a crisis with global consequences and which are briefly reported below.

Pre-crisis actions focused on language skills

- NROs should have a version of their website in English.
- PAOs should be able to write, speak and understand English fluently.
- Training NRO's spokespersons is beneficial in case they have to face a crisis communication episode. Besides having technical knowledge and a high rank in the organisation, spokespersons must be able to connect with the audience, show empathy and speak English.
- NROs should prepare templates for newsletters, factsheets and briefings in English.

Pre-crisis actions focused on networks and contacts

- One of the elements, which may improve the management of a crisis, is to prepare beforehand a list of experts whom NROs can trust, in case highly specific information is required. These experts should be able to answer questions based on their international experience (for example, questions such as to what extent the reactors in my country are similar to those affected in other countries). In parallel, having a contact list of qualified certified interpreters or translators who have the knowledge of nuclear jargon and can interpret it, can prove very useful during a crisis.

- NROs can prepare a list of reliable NRO sources and contacts in other countries they can get in touch with easily and quickly if needed.
- NROs should have a checklist of contacts in international organisations (like the IAEA, NEA, WHO, FAO, etc) and centres that can provide official information.
- NROs can organise international site visits or open doors events for policy-makers, journalists, technical staff, PAOs, etc.

- NROs can engage with environmental groups, NGOs or groups which are critical of nuclear energy, to study their concerns and prepare messages.

Pre-crisis actions focused on coordination

- NROs should establish mechanisms for sharing information among themselves, based on bilateral arrangements or multilateral mechanisms. Additionally, NROs might study the possibility of working together with other countries (or have them participating) in national exercises or drills.
- The development of schemes for international crisis coordination (including issues like who should you contact? when? why? who has the responsibility for what?) is essential. It is important to streamline the process in order to quickly obtain and disseminate information from different organisations if a crisis occurs.
- The technical infrastructure to create blogs or a dedicated webpage for crisis communication should be prepared in case a crisis occurs. Additionally, PAOs might be trained in basic website content in order to update information promptly.
- NROs might have a contact list of information advisors at embassies and diplomatic missions abroad.
- NROs can (where applicable) have a scalable call centre in place, able to handle the sudden influx of thousands of calls in case of a crisis. Staff should be trained on how to redirect calls from international media.

Pre-crisis actions focused on social media

- NROs could be proactive, providing information and maintaining social media tools "alive", not only during a crisis. Furthermore, PAO staff can be trained on the do's and don'ts of social media. Any misstep in Twitter or Facebook can circulate around the world in just a matter of seconds. In addition, it is very important to monitor social media at national and international levels in order to correct any online misinformation.

Pre-crisis actions focused on connections and connectivity

- Plans to "work from home" should be foreseen, providing staff with secure VPN internet connections and access to intranets to be able to communicate nationally and also internationally.
- It is essential to have a Plan-B for internet connectivity. In case commercial DSL services fail or offices have to be evacuated for any reason, PAO staff has to be able to work and communicate effectively from anywhere.

4.2 During a crisis

This section highlights the specific elements, actions and good practices that NROs should consider during a crisis with international consequences.

On-going crisis actions focused on media

- NROs should organise technical experts to respond to questions accurately and to be ready for international media (TV, radio, newspapers, etc…) using lay language.

- Some crises might require an NRO to bring in extra staff from other departments if needed (e.g. to respond to social media increase interest, correct misinformation, etc) and they also have to be trained to respond to international information demands.
- During the crisis, the translators and interpreters should be immediately contacted to make sure all communications are translated (at least) into English.
- During the crisis, NROs should activate the online crisis communication tools: a special area in the official website, activate a dark website or create a dedicated blog, among other actions identified in the pre-crisis stage;
- NROs should be proactive both in social media (e.g. produce video scripts, YouTube, Twitter, Facebook, etc) and in traditional communication tools (e.g. public hearing, press releases, etc) on an international dimension. It is important not to underestimate or ignore social media. NROs must answer to all their press requirements during a crisis and accept their invitations to participate in online activities such as chats or forums.

On-going crisis actions focused on international coordination

- It is essential for NROs to keep track of the information received by international official sources to adopt national communication messages and disseminate information at the international level as well.
- NROs should keep neighbouring countries and international organisations informed of the evolution of the crisis;
- NROs must assist international organisations in their assessment of the situation;
- NROs might evaluate the convenience to dispatch of a NRO's press officer to the field as soon as possible if needed in order to streamline the flow of information.

4.3 After a crisis

NROs might undertake post-crisis measures as a result of the crisis' impact on public perception. In the case of an international crisis, some of the good practices pointed out by NROs are summarised below.

Post-crisis actions focused on media

- NROs should continue the interaction with international media after a crisis. They can organise visits to nuclear facilities addressed to media in order to explain the situation, the magnitude and consequences of the accident.
- NROs can use their collaboration mechanisms to monitor media feedback in other countries.

Post-crisis actions focused on international coordination

- It is important to share experiences at international level on how crisis communication is handled in different countries to learn from each other and improve crisis communication both at national and international levels.

Post-crisis actions focused on stakeholder involvement

- After a crisis, NROs might study the possibility of organising open workshops, information exchange meetings and seminars with different stakeholders to explain the situation and how the crisis was handled.

5. MAIN CONCLUSIONS

No organisation can be sufficiently prepared for a communication crisis when it happens. Numerous statements heard in Madrid about the Fukushima Daiichi crisis communication actions show that more needs to be done to take into account the external response required nowadays during a crisis on a global scale, where new instant and highly used means of communication demand new solutions. However, an efficient preparedness and anticipation of the needs and demands of information from the media and the public are crucial for the success under extremely difficult circumstances of any NRO, as it has already been pointed out by the WGPC in the paper "Road Map for Crisis Communication of Nuclear Regulatory Organisations – National Aspects."

The main conclusions from the "Workshop on Crisis Communication: Facing the Challenges", held in Madrid from 9 to 10 May 2012 can be summarised under the following headings: global thinking, building trust, emotional dimension and communication, working with media, stakeholders' involvement, international cooperation and areas of improvement.

'Global thinking'

- "Think Global - National nuclear crisis communication no longer exists". All NROs must assume that they work under global scrutiny, and even the slightest incident in the national territory might trigger international media attention.
- Communication has become global and globalisation has become a common element. A holistic global approach is required for communication.
- Think global implies a good interaction between NRO communication staff and NRO international relations' personnel.
- Media and media agencies are working on an international floor. That means that their information channels are very quick. An event can be disseminated in a few minutes all over the world. Indeed media can be faster than official (NRO) channels of communication.

Building trust

- NROs' credibility is fundamental to get public trust. Credibility is an ideal goal, but it is difficult to reach and can be lost easily. A long-term perspective is necessary for building and maintaining trust.
- Public trust can be maintained not only by managing risks, but by communicating risks, and working continuously in the pre-crisis stage.

Emotional dimension and communication

- The nuclear issue does not always inspire rational reactions; it is important to acknowledge the emotional frame, the perceived risks, fears and preconceptions.
- Emotions and rationalisation need to be balanced.

- Communicate timely, effectively and regularly, be clear and objective and use language appropriate to the audience.
- It is important to address the concrete public expectations.
- In short, speak with the public.

Working with media

- Establish professional relations with media: work with media and not against or independent from media.
- Answer media demands, be prepared for matters you do not expect, provide media with information that is easy to understand by non-experts and strive to be a reliable source of information.
- Social media is universal. NROs should take benefit of emerging media, as it offers flexibility, quick channels of communication and can help NROs to increase credibility. However, it should not replace classic media and it often requires extra staff.
- Be conscious that media decide topics and news duration; follow your own agenda and persuade journalists on the importance of covering the relevant facts, regulatory decisions, etc. (especially post-crisis).

Stakeholders' involvement

- Regulators need to be continuously learning organisations and need to strive for improved and increased interaction with all stakeholders.
- Openness and empathy are key aspects to improve and increase interaction with stakeholders, including with at local level.
- It is necessary to involve stakeholders (particularly media) in various ways: in drills, training, delivering and discussing information on risks, sharing information.

International cooperation

- NROs communication should consider not only the public in the affected countries but all countries as well.
- Differences among countries' responses and between the measures adopted to manage crisis, undermine trust, since communication has become global. Therefore, there is a need for:
    - Consistency between NROs in emergency preparedness.
    - Harmonisation of protective actions among neighbouring countries through bilateral or multilateral arrangements.
- NROs should continue to exchange information by enhancing bilateral and international cooperation, and through international drills. The use of current tools, like *Flashnews*, can be optimised.
- Coordination between States and the responsible organisations (e.g. EC, IAEA) and feedback at international level are essential.

Areas of improvement

- What transparency means in practice is not clear. Practical transparency is an interesting concept. The quality of access to information is more important than the quantity.

- Partnership with health and safety authorities in other domains (e.g. aviation, health-related organisations) to share experiences can be very fruitful.
- An effective crisis communications management implies the development and constant update of a communications plan, including all kinds of risk scenarios. Furthermore, it requires the integration of communications professionals in the organisation and training on communication skills.
- If we are not able to manage a crisis, the crisis will manage us. NROs need to be prepared in advance.

APPENDIX I. ROAD MAP FOR NRO CRISIS COMMUNICATION

	Pre-CRISIS	**During CRISIS-1**	**During CRISIS-2**	**Post-CRISIS**
MANAGEMENT	Approve a Crisis Communication plan (including a comprehensive check list). Integrate it into the overall Emergency Response strategy. Define level of response/ resources in case of an international crisis which generates social alarm.	The Head of the Public Affairs Office (PAO) communicates internally the occurrence of a crisis, distributing responsibilities following the Crisis Communication plan.		Crisis team communicates the end of the crisis mode. The Head of the PAO meets with communication / press officers to exchange impressions and feedback.
MANAG.	Establish the core Crisis Communication Group and its lead person: a small group, flexible, with experienced skilled team players and fluent in English. Define the line of command (who has to approve what).	The PAO will receive relevant briefings of the Crisis Team. Officers shall contact with communication experts from other organisations and governmental departments to exchange and coordinate messages. Only approved spokespersons are authorized to release information.	Keep "one voice" during the crisis. Keep focused; don't go beyond the NRO's competences. Verify all news before releasing them. Beware of online rumors: Do not let media act as the source of information for the NRO.	Report evaluating response from NRO, analysing coordination, actions and results (achievements, failures, media impact). Underline what can be improved in the future.
MANAG.	Assign crisis management roles to	Officers assume their crisis roles (non-emergency work	Evaluate the convenience of dispatching a press	

	Pre-CRISIS	**During CRISIS-1**	**During CRISIS-2**	**Post-CRISIS**
	all public affairs officers according to the crisis level. Define the organisational chart and distribute internally.	delayed; meetings rescheduled). Contact on-call staff.	officer to the field during the first 48 hours in order to expedite the flow of information.	
MANAG.	Designate spokespersons. List by name and contact and include level of training and experience. Identify a roster of technical experts able to assist if necessary. All of them must have communication skills, be media-trained and approved by the Board. They shall be able to connect with the audience and show empathy.	Schedule press conferences as soon as possible with spokesperson(s) in NROs headquarters and/or affected area. PAO will assist at all time preparing talking points and the key messages to be delivered. Start press conferences with an opening written statement. Allow media questions.	Be accurate and consistent. Present clear information and maintain a calm presence. If a question cannot be answered, explain why (i.e."Beyond our competences / matter under investigation / further assessment needed"). Acknowledge real risks, but also address perceived risks. Recognise uncertainties.	The spokesperson should be available for more in-depth interviews, evaluating the outcome of the crisis, the role of the NRO, etc.
MANAG.	Intranet: establish a crisis management area (simple, clean, visible, easy to update by crisis team).	Update intranet with latest information on spokespersons, media officers, instructions for personnel, urgent messages, etc.		Update intranet with final assessment of the crisis and lessons learnt.
MANAG.	Appoint public affairs liaisons with other NROs. Maintain up-to-date list of stakeholders who need to be informed prior to the media: board members, health and local authorities, etc. Establish liaison mechanisms at	Keep neighbouring countries and international organisations informed (in coordination with International Affairs Departments). Use the NEA *flashnews* platform (and other similar networks) to share information with NROs and ensure contacts between the		Share the report and lessons learnt internally. Assess the relevance of sharing experiences with other affected organisations and foreign NROs. Organise meetings with liaison mechanisms at different levels (regional, provincial, municipal) like committees,

	Pre-CRISIS	**During CRISIS-1**	**During CRISIS-2**	**Post-CRISIS**
	different levels (regional, provincial, municipal) through committees, commissions, forums, etc	officer in charge of international media requests and the contact points in charge of international notifications.		commissions, forums, etc. to provide information on the crisis and how it was handled.
LOGISTICS	Identify additional staffing needs. Approve mechanisms to reinforce the PAO during relevant crisis.	Activate additional staffing plan.		Assess the efficiency of crisis drills (self-assessment exercise or conducted by an external organisation), including the response to media pressure. Re-evaluate the possibility of working together with other countries (or have them participating) in national exercises or drills.
LOGIST.	Once a year conduct regular crisis drills and media-training exercises (in collaboration with other countries). Brainstorm possible crises. Identify those most likely to occur, or for which the NRO eventually must be prepared.			
LOGIST.	Prepare and maintain technical equipment in the Emergency Centre (video conference, secure telephone lines, internet connections).	Activate the Emergency Centre.		Deactivate Emergency Centre.
LOGIST.	Prepare Call-centre and Toll-free number (instruct operators in telephone-triage techniques). Record voice mail messages for crisis situations.	Activate call-centre and toll-free number (include number in all press releases). Communicate operators the process to follow with incoming calls.		Deactivate call-centre and toll-free number.
LOGIST.	Identify tools needed by journalists in any Media Centre and stock them if necessary (i.e. chairs, phone lines, sound and TV signals).	Establish Media Centre next to event scene. Anticipate media needs and assign technical staff to help.	Reporters will need images of the scene. If access is restricted, arrange press pools.	Evaluate to what extent the tools needed by journalists (digital, press, TV, radio, depending on whether they were generalists, specialised, local) were provided.

	Pre-CRISIS	**During CRISIS-1**	**During CRISIS-2**	**Post-CRISIS**
LOGIST.	Identify translation services (cleared professionals with nuclear & radiological knowledge for written translation and interpreting).	Call translators / interpreters if needed.	Translate important messages and documents into English and languages of key immigrant communities.	
PUBLIC AFFAIRS OFFICE (PAO)	Draft templates for press releases and short ms alerts, ready to be updated as soon as any event is notified. Create a newsletter or subscription e-bulletin.	Issue first news release no later than 2 hours after confirmation of event. Follow with regular updates until the end of crisis. Send news bulletin to subscribers (referring them to the website to keep updated).	End press releases indicating that more information will be provided. If possible, announce date of issue or further press releases and press conference.	Distribute post-crisis communications.
P.A.O. P.A.O.	Maintain media contact lists (News Agencies, Print, TV, Radio and Online media; national, regional and local). Update periodically (twice a year). Have a list of PAO contacts in international organisations (IAEA, NEA, WHO, FAO, etc) and centres that can provide relevant official information. Maintain an updated list of information advisors at embassies and diplomatic missions abroad. Establish trusting relationships with key media and journalists during non-crisis times. Establish dialogue	Send news releases and statements via e-mail and fax. Follow-up calls may be made to main media outlets to ensure the information has been received.	Send relevant information to embassies and diplomatic missions abroad.	Return unanswered calls to the media. Update contact lists. Assess the NRO response to the crisis (messages, channels of information used, etc) with environmental groups, NGOs or groups which are critical with nuclear energy.

	Pre-CRISIS	**During CRISIS-1**	**During CRISIS-2**	**Post-CRISIS**
	with environmental groups, NGOs or groups which are critical with nuclear energy, to study their concerns and prepare messages			
P.A.O.	Prepare a "dark" website or a set of special web pages (light, in servers able to handle massive traffic, easy to update, hacker-proof). Train officers in basic web maintenance.	Initiate website modification (update with news releases, facts and figures, Q&A, practical information, contact numbers).	Be consistent and avoid duplicating efforts. If a dark website is launched, the regular website must redirect users to the crisis web	Return the crisis website to non-visible mode. Update the regular website with the latest information and final technical reports. Evaluate the website's performance during the crisis.
P.A.O.	Add an English section to the NRO's website, with general information, contact numbers and useful links.	Update English web section with translations of all relevant press releases and notifications. Publish key messages in social media in English too.	Add updated telephone numbers of call-centres, relevant embassies and consulates, etc, and information useful for expatriates and international journalists.	Update regularly with key press releases in English.
P.A.O.	Prepare alternative internet secure connection plan in case regular internet and e-mail access fails.	Activate Plan B for PAO staff if regular internet communications fail.		If activated, evaluate effectiveness of Plan B.
P.A.O.	Evaluate convenience of opening social media accounts (keep regular maintenance under normal circumstances). Train staff on the do's and don'ts of social media.	Decide within the Crisis Team the use of emerging media to send out key information.	Link any communication via social media (i.e. Twitter) to the official NRO website.	If activated, return social media accounts to regular maintenance mode.
P.A.O.	Prepare a mass notification system to deliver text messages (sms) to mobiles.	Send sms alerts to pre-defined groups (authorities, press, and communication experts		

	Pre-CRISIS	**During CRISIS-1**	**During CRISIS-2**	**Post-CRISIS**
		from affected organisations).		
P.A.O.	Establish a regular media-monitoring service (for traditional and new media). Contemplate the possibility to request a closer monitoring if needed under special circumstances.	Increase media-monitoring. If mistakes are made by the NRO in its interaction with the media, they must be corrected.	Identify inaccurate information and handle the situation case-by-case. Publish rectifications if necessary on the website.	Evaluate message effectiveness. Review coverage and identify if any issue needs further clarification by spokesperson or the PAO. Monitor media feedback in other countries.
P.A.O.	Prepare pictures, maps and technical documentation useful for journalists and general population (i.e. INES scale). Use plain language.	Distribute a backgrounder and relevant fact sheets to the media. Publish all important information on the website.		Distribute useful information to the media. Organise conferences and events for journalists.

APPENDIX II. QUESTIONNAIRE 16 MARCH 2011

Quick survey on Nuclear Regulatory communication outside Japan in the days following the March 2011 Fukushima events

Questions sent by WGPC on 16 March 2011

The Fukushima event attracted a lot of communication activity in all NROs so WGPC surveyed its member (outside Japan) on special communication during the week 11-17 March with the 4 following questions:

- What were the topics of interest (about situation in Japan and situation in your country) for the media and the public contacting your NRO?
- What were the main communication actions taken by your NRO (activation of Emergency Center, press release, use of website, use of social media, press conference, hearing with Authorities ...)?
- What were the main elements of NRO messages to the public and the media?
- What were the main difficulties or challenges for the NRO communication (including level of media/pressure, phone calls...)?

A total of 16 countries answered: Belgium (FANC), Canada (CSNC), Finland (STUK), France (ASN), Germany (BMU), Hungary (HAEA), Ireland (RPII), Korea (KINS), Poland (NAEA), Romania (CNCAN), Slovakia (UJD), Spain (CSN), Sweden (SSM), Switzerland (ENSI), UK (ONR) and USA (NRC).

APPENDIX III. QUESTIONNAIRE 29 SEPTEMBER 2011

Second WGPC Survey on Fukushima accident communication by NROs

(Questions sent out on 29 September 2011)

Questions to NRO communicators

1. During this crisis, did you do any action that was not foreseen (if yes, please specify)?
2. During the crisis, did you experience any difficulty to perform actions that were foreseen in your communication procedure?
3. On the basis of this experience have you change something in you communication strategy?

A total of 18 countries answered: Belgium (FANC), Canada (CNSC), Czech Republic (SUJB), Finland (STUK), France (ASN), Germany (BMU), Hungary (HAEA), Ireland (RPII), Korea (KINS), Norway (NRPA), Poland (PAA), Romania (CNCAN), Slovakia (UJD), Spain (CSN), Sweden (SSM), Switzerland (ENSI), UK (ONR) and USA (NRC).

APPENDIX IV. QUESTIONNAIRE 15 MAY 2012

WGPC Survey on NRO Communication activity changes

(Questions sent out on 15 May 2012)

Questions to NRO communicators

A. Has the staff of NRO Communication team been increased after Fukushima-Daiichi accident? – How much?

B. Have new Communication procedures been implemented? Are there plans for new ones?

C. If relevant, what does represent the communication English translation activity (staff, percentage of notice, web…)

A total of 17 countries answered: Belgium (FANC), Canada (CNSC), Finland (STUK), France (ASN), Germany (BMU), India (AERB), Ireland (RPII), Korea (KINS), Norway (NRPA), Poland (PAA), Romania (CNCAN), Slovakia (UJD), Spain (CSN), Sweden (SSM), Switzerland (ENSI), UK (ONR) and USA (NRC).