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A Comprehensive Report on Three Regional Stakeholder Workshops in Europe, North America and Asia

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NUCLEAR ENERGY AGENCY
COMMITTEE ON NUCLEAR REGULATORY ACTIVITIES

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FOREWORD

The OECD Nuclear Energy Agency (NEA) Committee on Nuclear Regulatory Activities (CNRA) Working Group on Public Communication of Nuclear Regulatory Organisations (WGPC) was created in 2000 as an outcome of the CNRA workshop entitled "Investing in Trust: Nuclear Regulators and the Public." Since then, the WGPC has dealt with a broad range of communications issues and produces a variety of reports, including, most recently, Nuclear Regulatory Organisation and Communication Strategies (NEA/CNRA/R(2015)2), Nuclear Regulatory Organisations, the Internet and Social Media: The What, How and Why of Their Use as Communication Tools (NEA/CNRA/R(2014)6), and "Public Meetings in Nuclear Regulatory Organisations".

After the Fukushima Daiichi nuclear power plant accident in 2011, Nuclear Regulatory Organisations (NROs) around the world recognised the need to strengthen stakeholder outreach and communication, and to create more robust avenues for stakeholder involvement in regulatory matters.

The working group acknowledged the wide range of stakeholders relevant to NROs, including: elected officials, public authorities, local information committees, nuclear experts, plant operators and professionals, opinion leaders, non-governmental organisations (NGOs), trade unions and professional federations, the media, the public and others. The working group further acknowledged the inherent difficulty in communicating with so many different audiences with varying needs for information and interests in affecting decision making. However, the group also confirmed that while challenging, communicating with stakeholders is an important endeavour for NROs to pursue.

The CNRA approved WGPC's proposal to hold one-day stakeholder workshops in conjunction with the group's regular meetings, to offer a platform for stakeholder exchange with NRO communicators. This would provide a means by which stakeholders would play an active role in the group's annual meeting. The CNRA approved the undertaking with two requirements:

- to invite a limited number of selected people from various backgrounds;
- to encourage lively discussions, well-argued criticisms and to face real issues.

This document reports on the three regional workshops that were held in Europe, North America and Asia in 2014, 2015 and 2016, respectively.

ACKNOWLEDGEMENTS

The three stakeholder workshops were made possible by the significant work of past and present working group chairs and members, the Working Group on Public Communication (WGPC) Secretariat and with the support from many nuclear regulatory organisations.

The organisation of the 2014 European workshop held in France was led by Mr Emmanuel Bouchot (Communication Manager, Nuclear Safety Authority [ASN], France). It was supported by:

- Ms Yeonhee Hah (WGPC Chair, Korea Institute of Nuclear Safety [KINS], Korea);
- Mr Anton Treier (WGPC Vice-Chair, Swiss Federal Nuclear Safety Inspectorate (ENSI),Switzerland);
- Mr András Molnár (Hungarian Atomic Energy Authority [HAEA], Hungary);
- Ms Reeta Rani Malhotra (Atomic Energy Regulatory Board [AERB], India);
- Ms Dagmar Zemanova (Nuclear Regulatory Authority of the Slovak Republic [ÚJD], Slovak Republic);
- Ms Malin Nääs (Swedish Radiation Safety Authority [SSM], Sweden);
- Ms Céline Faidherbe (Federal Agency for Nuclear Control [FANC], Belgium);
- Ms Aurélie Lorin Nuclear Energy Agency (Nuclear Energy Agency [NEA]).

The organisation of the 2015 North American workshop held in the United States was led by Mr Eliot Brenner (WGPC Chair, Nuclear Regulatory Commission [USNRC], United States of America [USA]). It was supported by:

- Ms Holly Harrington (USNRC, USA);
- Ms Sunni Locatelli and Mr Aurèle Gervais (Canadian Nuclear Safety Commission [CNSC],Canada);
- Ms Dagmar Zemanova (ÚJD, Slovak Republic/WGPC Vice Chair);
- Mr Emmanuel Bouchot (ASN, France);
- Mr Risto Isaksson (Radiation and Nuclear Safety Authority [STUK], Finland);
- Ms Aurélie Lorin (NEA).

The organisation of the 2016 Asian workshop held in Japan was led by Mr Eliot Brenner (WGPC Chair, USNRC). It was supported by:

- Mr Go Kobayashi, Ms Yoshiko Aoyama and Ms Megumi Naito (Nuclear Regulation Authority [NRA], Japan);
- Ms Donghee Yeo (KINS, Korea);
- Ms Eun-Jung Shim (Nuclear Safety and Security Commission [NSSC] , Korea);

- Ms Sunni Locatelli and Mr Aurèle Gervais (CNSC, Canada);
- Ms Holly Harrington (NRC, USA);
- Ms Dagmar Zemanova (ÚJD, Slovak Republic/WGPC Vice Chair);
- Mr Emmanuel Bouchot (ASN, France);
- Mr Soumen, Ms Reeta Rani Malhotra and Mr Duraisamy (AERB, India);
- Ms Marine Formentini (NEA).

The WGPC is thankful to the organisers, the moderators and the panellists, and to the staff of the French Nuclear Safety Authority (ASN), the US Nuclear Regulatory Commission (USNRC) and the Nuclear Regulation Authority (NRA), in Japan for the great work accomplished.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS AND ACRONYMS

ADAMS	Agencywide Documents Access and Management System
AERB	Indian Atomic Energy Regulatory Body (India)
ANCCLI	Association Nationale des Comités et Commissions Locales d'Information (France)
ASN	Nuclear Safety Authority (France)
ATI	Access to information
BA	Bachelor of arts
CNRA	Committee on Nuclear Regulatory Activities (NEA)
CNSC	Canadian Nuclear Safety Commission (Canada)
CSN	Spanish Nuclear Safety Council (Spain)
CT	Computed technology
DRE	Department of Environment
ENSI	Swiss Federal Nuclear Safety Inspectorate
FANC	Federal Agency for Nuclear Control (Belgium)
FOIA	Freedom of information act
HAEA	Hungarian Atomic Energy Authority (Hungary)
IAEA	International Atomic Energy Agency (Korea)
KINS	Korea Institute of Nuclear Safety (Korea)
LIC	Local information committees
MA	Master of arts
NEA	Nuclear Energy Agency
NGO	Non-governmental organisations
NHK	Nippon Hoso Kyokai (Japan)
NNSA	National Nuclear Security Administration (China)
NRA	Nuclear Regulatory Authority (Japan)
NRO	Nuclear regulatory organisations
NSC	Nuclear Safety Council
NSSC	Korean Nuclear Safety and Security Commission (Korea)
NUJS	National University of Juridical Sciences
PhD	Doctor of philosophy
PR	Public relation
SKB	Swedish Nuclear Fuel and Waste Management Company (Sweden)

TEPCO	Tokyo Electric Power Company Holdings (Japan)
ÚJD	Nuclear Regulatory Authority (Slovak Republic)
USA	United States of America
USNRC	Nuclear Regulatory Commission (United States)
WGPC	Working Group on Public Communication (NEA)

Executive summary

The Nuclear Energy Agency (NEA) Committee on Nuclear Regulatory Activities (CNRA) Working Group on Public Communication of Nuclear Regulatory Organisations (WGPC) acknowledged the wide range of stakeholders relevant to Nuclear Regulatory Organisations (NROs). Recognising the challenges in communicating with so many different audiences with varying needs for information and interests in affecting decision-making, the WGPC organised international stakeholder workshops for sharing views on the NROs communication. These regional workshops offered a rich platform for exchanging with the varied stakeholders, by bringing together communication experts from NROs and stakeholders from different backgrounds and by encouraging lively discussions, well-argued criticisms and facing real issues.

The workshops provided the opportunity to stimulate co-operation and improve NROs' communication by better understanding stakeholders' perceptions, needs and expectations. To ensure the effectiveness of the workshops, the organising committee strived to set the framework to enable genuine dialogue and meaningful exchanges based on discussions as equals and with respect between participants.

Workshop process

The international workshops with stakeholders were held in conjunction with the WGPC's regular meetings, as follows: European Workshop on 9 April 2014, North American Workshop on 1 April 2015 and Asian Workshop on 5 April 2016. These one-day workshops were split into two half-day sessions.

The European workshop was moderated by Ms Ann MacLachlan, a former journalist and with special guests Mr Michel Bourguignon, a commissioner from Autorité de sûreté nucléaire (ASN) and Mr Alain Delmestre, Deputy Director-General of Communication, ASN.

The North America workshop was moderated by Mr Roger Hannah, a Nuclear Regulatory Commission (NRC) Senior Public Affairs Officer and former journalist and with special guests Mr Stephen Burns, NRC Chairman and Mr William D. Magwood IV, NEA Director-General.

The Asian workshop was moderated by Mr Eliot Brenner and Mr Aaron Sheldrick, with special guests Dr Nobuhiko Ban, Commissioner of Nuclear Regulation Authority of Japan (NRA) and Mr William D. Magwood IV, NEA Director-General.

The first topical sessions held in the mornings were dedicated to exchanges with journalists and experts in communication while the second topical sessions held in the afternoons were devoted to discussions with various stakeholders, including government officials, activist group leaders and industry representatives. To obtain a regional perspective, all stakeholders in each workshop came from the area around the location of the workshop.

Key findings

The first topical sessions with the media focused primarily on the needs and opinions of journalists, including what kind of information they expect from NROs and how they see their role in informing the public, especially during a nuclear event or accident. Please see the regional workshop sections, including in Chapters 1, 2 and 3 of this report, for a more comprehensive review.

Discussions highlighted the challenge for NROs to maintain a good reputation and be perceived as trustworthy; it takes years to build credibility while in many countries, the NRO is not well known. As the public is naturally sceptical and the level of trust in NROs may be low, the importance for NROs to maintain independence from the industry they regulate was noted. Similarly, in some countries and regions, the relationship between the media and the government/NRO may be perceived as too close.

The participants noted that although a nuclear accident poses communication challenges, it also provides an opportunity for NROs to enhance their credibility with the public. When the NROs fail to communicate, journalists turn to other sources of information, with reporters acknowledging the difficulty of covering such a complicated and emotional topic as nuclear.

There was overall consensus that social media is an important tool for NROs, as long as they choose the right platform, be prompt but accurate, monitor what is being said, and have well-trained staff to manage it.

Overall, the three most important elements for coverage were the need for NROs to be transparent, provide information in a timely way and provide access to expertise.

Some of the identified problem areas included information not being provided in timely manner, the use of too much technical jargon by the NROs, a lack of public awareness of nuclear and the perception of a lack of independence of the NROs.

Some of the identified good practices included responsive public affairs officers, active social media, regular contact with the media and the public, use of graphics to explain information, and accessible public meetings.

Suggestions for improvements included quarterly face to face briefings, active press officers, website tools to understand technical terms and timely communications.

Although there were several common elements raised throughout the three workshops, the WGPC participating members recognised that NROs ultimately operate in the culture context of their country and region. The infrastructure for media reporting and relationships between media and NROs are basically the same European, North American and Asian counterparts, wherein the media independently gathers its information, makes its own evaluation of credibility and accuracy, and takes responsibility for what it reports. That said, some general cultural traits were raised. For example, Asian media relatively seem to have more proximity and show deference to the government, and the relationship building process with individual sources may involve more personal level of interactions.

The second topical sessions focused primarily on the needs and opinions of the various stakeholders. While the sessions with the media tended to be more uniform in representation and input, panellists in the sessions with the stakeholders varied more from regional workshop to workshop given the cultural climate of each location. Stakeholders ranged from industry representatives to non-governmental organisations to private citizens. Please see the regional workshop sections, included in Chapters 1, 2 and 3 of this report, for a more comprehensive review.

Discussions highlighted that educating the public about basic science tenets was an important component to helping the public understand a nuclear or radiological incident. The public also expects to receive information that is digestible, without too much technical terminology. Ultimately, the public is largely unaware of the mechanisms to ensure nuclear safety. Participants remarked that, unless they live near a nuclear power plant, the public's attention to nuclear matters is difficult to attract outside of an emergency. However, in this regard, NROs are expected to be reliable sources of information and exercise openness and transparency in a crisis situation.

Participants also noted that two-way communication and websites are important communication tools.

Some of the identified problem areas included the potential for regulatory capture, the limited public education on and understanding of radiation risk, a lack of interest on the part of the public, and NRO overuse of technical jargon.

Some of the identified good practices included listening to the concerns of local communities and providing opportunities for direct stakeholder dialogue with NRO staff, the use of integrated digital communication channels, the use of plain language to communicate the right information to the right audience, and the use of social media as much as possible.

Suggestions for improvement included integrating social media into regular communications practice, anticipating information and education needs before an emergency occurs, building credibility before an incident and using community advisory panels or other means to obtain input and achieve dialogue.

As noted in the sessions with the media, there was an overall acknowledgement that governmental, cultural, regional and national differences exist in how and when NROs communicate with stakeholders and how effective they are in the process.

Conclusions and recommendations

While the working group found the three workshops interesting and educational, there was general agreement that the vast cultural differences between Asia, Europe and North America limited the benefit members received in terms of tangible improvements to their own communication practices and process. Indeed, the biggest take-away was how very different the challenges of communicating with stakeholders is between regions, and even within nearby countries, i.e. between the USA and Canada and between European countries. Furthermore, there was clear agreement that very few NROs could provide the staff and time resources that are required to put together such a significant event every year, and to produce a subsequent report.

Overall, the workshops provided positive opportunities for NROs to gain insights on the needs of the media and various stakeholders with respect to communication and understanding risk, as well as strengthen their relationships with these groups. Panel members found value in getting viewpoints from the media and stakeholders in different geographical and cultural regions and in visiting different NRO facilities, especially, as was the case for the working group meeting that followed the workshop in Japan, a visit to Fukushima. The workshop provided a more tangible global view of communicating and helped member countries understand challenges and constraints faced by fellow NROs in a way that mere discussions might not have achieved as fully. These workshops strengthened each of the communicators' ability to work together on behalf of global stakeholders should there be a future nuclear power or radiological emergency anywhere in the world.

With the constraints of applicability of content and availability of resources but recognising the benefits of meetings and workshops occurring outside of NEA headquarters in Paris, the working group is proposing future workshops to be case-study based and held every other year in the home facilities of working group members. For example, it has been proposed that the 2018 working group meeting be held in Switzerland, hosted by the Swiss Federal Nuclear Safety Inspectorate (ENSI) and include a national case study and a site visit. The 2019 working group meeting would return to Paris and the 2020 working group meeting would be in the home country of a working group member who would host and produce a case study presentation.

CHAPTER I: EUROPEAN WORKSHOP 2014

The European workshop with stakeholders was hosted by the French Nuclear Safety Authority (ASN) on 9 April 2014 in Paris, France.

The panellists shared their experience based on specific national framework with Nuclear Regulatory Organisations (NRO) communicators from the member countries. It allowed to discuss communication practices of regulators and to identify areas of possible improvement.

Effective participation of stakeholders in such events is essential to develop mutual understanding and clarify issues of importance. Exchange with stakeholders is a component of a strategy of transparency and openness. The regulatory body should develop that kind of relation with stakeholders.

To ensure the effectiveness of this event, the organising committee strived to set the framework to enable a genuine dialogue between the regulatory body and stakeholders, meaning exchanges of information based on discussions between parties as equals and with respect. Every participant has had the possibility to express and discuss its positions and views. As a result, the NROs were able to better understand the needs, concerns and interests of the stakeholders and, in return, the role, views and positions of NROs and of the nuclear safety specificities have been better understood by the stakeholders. The participants list is available in appendix I.

Topical session with the media

The objective of this session was to give opportunity to stakeholders, mainly journalists, to indicate what kind of information they expect from the NROs.

Moderator

Ms Ann MacLachlan, journalist, former European Bureau Chief, Nuclear Publications, Platts.

Panellists

- Mr Michel Rose, *Thomson Reuters*, France;
- Mr Jeroen van Horenbeek, *De Morgen*, Belgium;
- Ms Eva González Herrero, *Europa Press Noticias*, Spain;
- Ms Fabienne Cadenat, TNS Sofres, France ;
- Ms Isabelle Oudot-Klein, expert in social media, France;
- Mr Alain Delmestre, ASN Deputy Director-General, Director of communications, France.

About the documentation

The morning session was divided into five themes but some comments overlapped. This documentation should be read as a synthesis, not as comprehensive minutes.

1. Reputation and trustworthiness

It is a constant challenge to gain a good reputation and to be perceived as trustworthy organisation. Perception is influenced by many things, some not depending on the NRO, some depending on it.

In many countries, the NRO is not well known. The majority knows that there is a regulator, but less knows its name. One difficulty that was pointed out was that the NROs have a tendency to change names because of administrative re-organisations, which creates confusion. It was recommended that NROs work on their "brand image".

Another problem is that sometimes the relationship between NROs and the operator is not clear. The journalists pointed out that the NROs should keep a tight distance from the industry and let it be known. The NROs must be perceived as an independent body not to be subjected to the nuclear industry. The positions of the NRO should remain known in the noise of debate among pro- and anti-nuclear factions.

A nuclear crisis is one of the biggest challenges NROs could have to cope with. It generates a lot of risks but this is also an opportunity to enhance their reputation and their trustworthiness. For example the awareness of ASN went up strongly after the Fukushima Daiichi nuclear power plant accident due to the huge effort made for informing the public and the media.

Also, it is important that the NROs try to increase the public's awareness in every day communication. It takes years to build awareness and trustworthiness.

When the NROs do not communicate, the journalists turn to other sources of information instead. Sometimes those sources are not independent and the information they provide is not as objective as the information from the regulator.

Suggestions for improvement

The NROs need to communicate in a more direct and understandable manner.

The NROs should improve their branding, so the public will know where to turn if there is a nuclear problem.

The NROs need to keep the distance between them and the industry and to let it be known.

Another suggestion was to carry out public surveys to learn what the public knows about the NROs' role and functions. This could be helpful when the NROs elaborate their communication plan.

2. Needs, constraints and knowledge building

It is important to explain technical terms, otherwise journalists might not understand the information. A good practice that was highlighted is ASN´s web-lexicon on technical terms.

Also, it is important to communicate "in time". Journalists do not have the time to wait. It is also important to let the journalists know when they can expect an answer.

Proactivity is not always successful in "peace time". Journalists are often busy with other things.

NROs should provide accurate and objective answers, not only be fast and reactive. During the session, cultural differences were discussed. The conclusion was that you need to respect the cultural context of a country or a region. For example, it is important to have personal relationships with the journalists. How this should or could be done differs from one country to another.

Suggestions for improvement

Some journalists recommended face to face briefings quarterly, even off the record, just to provide them with some contextual information, not with the aim to get an article published. But this cannot always happen since journalists are too busy (the need of this differs from one journalist to another).

The press officer should be well-known and recognised by the journalists. These relationships could only be built over the long term.

It could be helpful for the journalists and the public to have a tool on the website to help understand technical terms (as ASN does). Most journalists have a background in social sciences, which makes it even more important that the NROs communicate in an understandable language.

The journalists pointed out the importance of receiving clear and uniform messages from the NRO during a crisis.

3. Relations

In general the journalists have good relations with the press officers, but in other cases the journalists do not even know who the press officer is.

It is important for the press officers to have personal relationships with the journalists. How this should or could be done differs between countries. During the session, there was a discussion about differences between countries. In some countries, it is possible and even wanted for journalists and press officers to meet outside the offices – for example, having a drink together. In other countries, that would not be possible.

Some journalists do not call the regulator when they need information, because they do not think the technical information is useful. Instead they call the operator.

Some journalists do think that the regulators are not very communicative and do not have strong voice.

Some NROs have an "Advisory Committee" and stakeholders can attend the committees' meetings. This is the case in Japan and in the USA for instance. This strengthens the relationship between the NROs and the stakeholders. In Spain, the summary records of the Commission meetings are publicly available.

Suggestions for improvement

The regulator should call the journalists when something happens. Some journalists would appreciate "off the record" meetings with the press officers.

If the press officers cannot answer a question or do not have the information, they should always inform the journalists at what time they would be able to provide the answer.

The regulators should avoid giving too technical information.

4. Transparency and emotion aspects

The journalists think that most NROs are trying to be as transparent as they can be and are trying to present information as clearly as possible.

NROs must maintain their efforts in this field.

An example of good practice that supports transparency is to publish the summary records of the NROs Commission's meetings.

In a crisis, people need uniformed messages being repeated. Also do not speculate because in crisis there is no place for "may" or "I think". Even if there is no news, repeat the core message.

Information from NROs has high credibility.

Spain, Canada and France have open meetings, which often are webcasted. These open meetings were highlighted as a good practice.

Suggestions for improvement

The panel wanted to receive minutes from meetings and hearings at the NROs. They also wanted more press conferences. They do not expect the NROs to show emotions. Instead, the NROs must stay competent, rigorous and mobilised in an emotional situation. It is important for the NROs to understand the public's emotions. Empathy is one of the pillars of trustworthiness, as well as mobilisation and openness.

5. Traditional/social media

Social media is a way to fight against false information/rumours and on a daily basis you can observe your e-reputation. Social media is a tool for the NROs to spread information and deliver messages to a large audience.

The following was noted from the panel:

- There are three activities linked to social media:
  - commenting and communicating;
  - creating content;
  - listening and reading.
- The right platform to be used needs to be identified.
- They are useful to monitor one's reputation.
- Communicate fast – release information as soon as you get it (do not wait). Social media is a 24/7 tool.
- Resources and a well-trained staff are needed to handle social media.

Also the following dilemmas were discussed during the session.

Some journalists do not think NROs should use Twitter as the primary information channel. Press releases and e-mails are more appropriate. Break news in the traditional channels or at least inform your press contacts you are about to tweet an important piece of new.

When using social media, the conflict between information verification and promptness has to be considered. At the same time slow communication creates doubts. Find out how to adapt your organisation to real time communication. But some challenges must be considered. The reaction time is very short. Social media means horizontal communication – so there is less control (anybody can comment). Messages are also less formal and require less management oversight.

Nowadays, social media is absolutely "unavoidable". It is becoming an increasingly common way to communicate. It has increased the difficulty for NROs to manage communication quickly and accurately. As a consequence, it requires a change of mind and, possibly, additional staff and resources to be able to take a proactive part in discussions.

Social media has recognised benefits. It provides regulators with new channels for information distribution and re-tweeting or relaying by others boosts the impact.

It permits quick dissemination and repetition of messages during a crisis. It allows discussions and dialogue. It provides a timely feedback loop that allows adjustment of information to meet the identified needs.

NROs are not used to take part instantaneously in discussions occurring on social network. Besides, social media can spread misinformation, rumours and polemics.

Influence strategy must be considered: identify the key e-influencers and establish a relational programme to raise their awareness.

Also the NROs must plan their resources – the use of social media takes time. Regulators must monitor social media closely. Co-ordinating a social media organisation entails the creation of content dedicated to the specific platforms. The staff who is handling social media should be qualified.

Some key figures

- 26% of world's population taking part to the conversation;
- Facebook: 1.14 billion active users sharing 2.5 billion pieces of content each day;
- 5 700 tweets per second;
- Part of our daily life, and new way to consume media: 30% US adults use Facebook to get news.

Suggestions for improvement

The US representatives gave an example. In a crisis, you may have small pieces of news, but not enough for a press release. Publish the news on Twitter as soon as possible, then, when you have enough content for a press release, create a press release from the tweets.

Develop a social media policy.

Tweet when you have something to say – otherwise do not. It is better to be quiet than to communicate "nonsense".

Topical session with various stakeholders

The objectives of this session were to give an opportunity to stakeholders, mainly to mayors and members of local information committees, to explain their relation with NROs, and beyond with their own stakeholders (non-governmental organisations [NGOs], operators), and to express their needs and expectations concerning NRO's communication.

Moderator

Ms Ann MacLachlan, journalist, former European Bureau Chief, Nuclear Publications, Platts.

Panellists

- Ms Margareta Widen-Berggren, Mayor of Östhammar, chair of the Local Information Committee of Forsmark Nuclear Power Plant (NPP), Sweden.
- Mr Ladislav Ehn, mayor of Kalná nad Hronom, member of the Local Information Committee of Mochovce NPP, Slovak Republic.
- Mr Yves Lheureux, representative of the French National Association of Local Information Committees, France.
- Mr Yannick Rousselet, representative of Greenpeace, France.
- Mr Michel Bourguignon, ASN Commissioner, France.

The panellists in their introductive presentation informed participants of their background and introduce the organisation they represent.

Greenpeace – national office in Paris: 7 people working in the field of nuclear safety. They are perceived as a confrontation organisation but they feel like being seen as an organisation interested in nuclear safety and that has constructive relations with regulators and other stakeholders. Greenpeace produces expertise on technical issues and would like it to be better known.

They organise regular meetings with the French safety authority. They are satisfied that ASN reads their reports about safety (such as the one they produced about the stress tests). Greenpeace mentioned that Local Information Committees (LIC) in France work on voluntary basis. A specific status should be established for the members – to have time and resources to deepen their relation with people. It is also a question of efficiency to share information. People should be aware that they have a right to ask and receive information.

LIC of Forsmark NPP: Östhammar is located on the east coast of Sweden. In this municipality, there are three reactors and a waste facility (storage for low and intermediate level). Position of LIC staff is given by law and they are appointed by the government. The public is allowed to get information about safety of nuclear facilities in their vicinity. Each municipality around the NPPs has a LIC. They organise meetings with the public, trainings in the field of emergency preparedness and open meetings with the operator and the regulator. Everyone is welcomed, even NGOs participate. LIC does not serve as a "translator". Each organisation should inform the public about its activities.

Forsmark is currently selecting a site to build a spent fuel repository facility. Swedish Nuclear Fuel and Waste Management Company (SKB) submitted an application. Sweden is a democratic country so municipalities are entitled to refuse such a nuclear facility. The application is under evaluation by LIC.

The Slovak Republic was represented by the mayor of Kalná nad Hronom who is also a member of the Local Information Committee of Mochovce. LIC Mochovce works as an independent channel for communication with the public in nuclear issues. It was established in 2005. The LIC comprises 17 members: representatives of the citizens of towns in the vicinity of Mochovce site, representatives of the Regional Association of Towns and Villages Mochovce, representatives of municipalities from the first zone of emergency planning area around the nuclear facility, representatives of academic institutions, representatives of operators and observers who are represented by the national regulator Úrad Jadrového Dozoru (ÚJD) and a representative of the National Labour Inspectorate. The LIC organises regular meetings with the top managers of operators and the NRO. The LIC also maintains important exchanges of information with Bohunice and Dukovany Czech NPPs. They organise meetings and seminars with the public and sometimes special topical meetings (for example, on "stress tests"). They also co-operate with international communities.

LIC France (named CLI): Creation of the LICs was initiated in 1981 and was generalised by the act on Transparency and Security in the Nuclear Field of 2006 (article 22). The LICs have a pluralistic composition: representatives of the municipal councils or representative bodies of the groups of communes, representatives of General Councils and Regional Councils concerned, members of Parliament elected in the area, representatives of environmental protection associations, of economic organisations and trade and medical unions representatives. The representatives of governmental bodies, including ASN, and of the licensee have an automatic right to participate in the work of a LIC, in an advisory capacity. The broad role of the LICs is to monitor, inform and be a channel for discussion on questions of nuclear safety, radiation protection and its impact on the population and on the environment of the nuclear activities of installations on the site(s) that concern them.

About the documentation

Even though the thematic division of the morning session was slightly different from the afternoon's one, some comments from the panellists overlapped. As a consequence, this chapter is a synthesis, not a comprehensive report.

1. Sources and relations

Panellists discussed their sources of information. In Sweden, the main source of information for LICs are operators and the regulator. Both are invited at the same time to the same meetings organised by LICs in order to get views from both sides on the issue. They organise many open meetings so people have the opportunity to ask questions. LICs have a close relationship with industry because they are located in the

vicinity of NPPs. They also have good relations with regulatory bodies even if the NRO is based in Stockholm which is far from them. LICs trust the NRO. They receive from them any information they request. Special issue is crisis. In such cases, they need prompt information mainly from operators which they receive immediately. In crisis situations, they have a special state organisation which is responsible for protective actions of the population. In the Slovak Republic, operators and the regulator are the main source of information. The public also uses traditional media, social media, views of experts, etc. It was mentioned that there is also a good relationship with operators of nuclear facility. In crisis situations, special procedures are launched and special channels are used as a source of information including the Ministry of Interior, operator and the NRO. Firstly, information is coming from operators and then from the NRO. LIC is not in a position to spread information in a crisis situation;. This role is given to local authorities (mayors for instance).

Communication with NGOs is different. Greenpeace France underlined that they have good relations with the ASN. They respect the safety authority in France, contribute to democratic debate and have regular meetings with operators, NRO and LICs. Whenever they ask NRO for information, they receive it. They do not have any problem obtaining information from operators. They are not in opposition with NRO.

In the Slovak Republic, Greenpeace is strictly anti-nuclear. On the contrary, people living around NPPs support this source of energy. LIC have no relations with Greenpeace so the public is not seeking information from this source.

Representative of LIC France mentioned that meetings are organised at regional and at the national level by "Association Nationale des Comités et Commissions Locales d'Information" (ANCCLI) (national association of LIC) with operators, NGOs, experts from universities, researchers, etc. French LICs want to have a diversification of information.

Representatives of LIC from Sweden shared their dialogue with Greenpeace in Sweden. Greenpeace does not aim to discuss nuclear issues but aims to close NPPs immediately.

Representatives of NGOs (Greenpeace France) mentioned that they are very satisfied with their communication with NRO. All requested information was given, Information on security and confidential matters were excluded. Moreover, operators are requested to answer any specific questions, which they do.

ASN pointed out that in France there are special provisions in nuclear law that define transparency and the right to information in the nuclear field: "*Transparency in the nuclear field consists in the set of provisions adopted to ensure the public's right to reliable and accessible information on nuclear security*".

Operators are therefore required to answer all relevant questions that the public asks. Any person has the right to obtain information that the public authorities, the nuclear licensees, the persons responsible for transport of radioactive materials or holders of such materials receive or produce.

ASN strives to achieve these requirements by leading a multi-targeted and multimedia approach, using Internet and social media, press relations, public affairs, professionals events, publications, information centres and educational exhibitions. One of the most popular tools is the website. For instance, all ASN's inspection letters and all the opinions and recommendations of ASN's Advisory Committees are published on its website. Moreover, ASN seeks to involve the public in its decision-making process by developing public consultations on the Internet.

A representative of ÚJD (NRO) from the Slovak Republic mentioned that similar duties exist for industry to inform the public about the safety of the nuclear facility they operate, which is set in an Atomic act. ÚJD has a website on which important documents are published including all decisions approved by NRO. The representative of ÚJD participates in all sessions of LIC and informs about safety of the nuclear facility in their vicinity. The chairperson of NRO is in close relations with mayors who have the opportunity to contact her directly if they need any information.

An interesting experience was given by the NRO representative of Korea. In Korea, they have similar LICs but they do not have a good relationship with operators. They only trust NRO. They want to be seen as small regulators, as a member of the regulatory family. They want to share information with the regulatory body and want to appear as a reliable source of information.

Swedish LICs receive relevant information from operators. In addition, they do not have the intention to be a regulatory body. If you want to build trust, you should share correct information and you should have correct information from all sources.

There are no LIC in Japan. A representative of Japanese NRO raised the following questions: Are there internal rules in LIC to avoid conflicts due to the various positions of the members? How do you manage to keep meetings in a peaceful atmosphere? A representative of France answered that LICs were established several years ago and underlined the fact that it takes a long time to develop trust between LIC, operators, NRO as well as the public. But it should be stressed that during the time there was no conflict. Despite the different members in LIC – pronuclear and anti-nuclear, there was no conflict. They are still trying to find the best way to share proper information with the public.

Subsequently, the situation concerning existence of local information committees was discussed. The situation is not uniform. Some countries have LICs and they appreciate their activities a lot (France, Sweden, the Slovak Republic and Hungary). Some countries do not have LICs and they do not see reasons to have some (US NRC mentioned direct contact and direct public participation without mediator). Other countries do not have LICs but support their existence and advantage (Japan, India). Concerning relations of LICs with NGOs, it was mentioned regular or occasional or no exchange.

Summary finding

Representatives of LIC consider operators as a main source of information. The reason is that they are living in the neighbourhood of nuclear facilities and expect open and transparent communication from those who are responsible for the safety of the aforementioned facilities. This approach is irrevocable in case of an emergency.

NROs are a reliable source of information and LICs have correct relations with them and have regular contact with representatives of those bodies.

Relations with NGOs – there are different approaches. Some countries mentioned feeble relations with Greenpeace despite efforts to discuss with them (the Slovak Republic, Sweden), other countries communicate on a regular basis with Greenpeace which was appreciated by a representative of this organisation (France). Communication with NGOs in the Slovak Republic is not common while in France, LIC communicates with NGOs at the national and regional level. Greenpeace France underlined good relations with the NRO in France.

LICs often have an excellent and instant information exchange with operators, NRO and government (Sweden is an example of such a situation).

Long-term personal relationship based on mutual trust between all the stakeholders is the best possible practice, however it takes time to develop trust and confidence.

Experience exchange with similar committees around nuclear facilities in other region is important (Slovak and Czech LIC).

Panellists acknowledged correct relations with operators and regulators. Different opinions were presented by the audience – some declared that LICs do not trust operators and they rely only on regulators.

In some countries there are no established Local Information Committees.

In France, the provisions of the act on Transparency and Security in the Nuclear Field gives citizens the right to be provided with information about nuclear safety of nuclear facilities from both industry and the NRO.

Similar provisions with obligation to inform the public about safety of nuclear facilities are included in the Atomic act and in the Act on Freedom of Information in the Slovak Republic.

LICs declared that they appreciate the exchange of information but they are also prepared to go to a higher level of consultation.

With the aim of enhancing efficiency and relevance of LICs, a change in their status (all work on a voluntary basis) should be considered.

Relations with NGOs vary from one country to another. Some countries mentioned feeble relations with Greenpeace despite efforts to discuss with them (the Slovak Republic, Sweden), other countries communicate on a regular basis with Greenpeace which was appreciated also by representative of this organisation (France). Communication with NGOs in the Slovak Republic is not common while in France LIC communicate also with NGOs at the national and regional level. Greenpeace France underlined good relations with the NRO in France.

2. Needs, constraints and knowledge building

It was discussed what kind of information LICs need and whether they would need more technical information.

The members of Swedish LICs are public representatives and are not experts in the nuclear field. As such, they rely on information received from operators and the NRO.

A panellist from the Slovak Republic stated that information about NPP operations and their safety are too technical so if there is an intention to discuss this issue with the public, it should be provided in an understandable manner. It is normal that the general public does not understand technical documents but LICs are not in a position to translate them or to educate the population. Educational activities are expected to be done by operators or NROs. People should be educated continuously, step by step and in several ways. It is not conceivable to organise multi-days education in the nuclear sector. The best way is to use short movies, newspapers, brochures, etc.

As it was already mentioned, French LICs have been existing for a long time. Members of LICs have a mandate to spread information they receive from operators and the NRO. For this reason, they need more technical knowledge. They want to understand decisions taken by the NRO for example. They devote time to develop their knowledge in this field. It is not easy to assimilate all information published on the ASN website. A way of receiving more information could be to have more meetings with NROs to explain decisions made. ASN is used to organising or participating in meetings with LICs. This happened several times and many LIC members participated. ASN and LICs are open to communication and co-operation. In 2013, fourteen LICs were thus able to attend to fourteen ASN's inspections of French facilities.

The representative of Sweden LICs again emphasised reliability of information from regulators. LICs are not experts but some of them developed certain experience and knowledge. They have good experience concerning final repository facility. Initially, they were provided with documents which were too technical. Afterwards, they asked for a more intelligible version of documents which they received. In that case, many inhabitants were interested and the analysis that they worked out was very similar to those that which was elaborated by scientists.

Greenpeace mentioned that sometimes governments do not communicate with the public; although they expect that people believe what they are telling.

Edward Lazo, Principle Administrator in the Radiation Protection & Radioactive Waste Management Division, Nuclear Energy Agency, mentioned information exchange and transparency necessity. Information should be understandable, and education in nuclear – especially in radiation protection – needs time. It is important to answer essential questions: Decisions are driven by which values? How to explain these values? Why decisions should be taken? (to protect people). Since radiation protection is crucial in emergency, transparent information is especially important in such a case. A representative of LICs and a mayor have similar thoughts. Both talk about the necessity of education in the radiation protection field. People should be aware of the risk of radiation and should also be assured that all efforts are made to minimalize this risk as much as possible. It is also substantial to familiarise the population with physical units used in radiation protection. LICs in Sweden deals also with risk analysis, organises trainings in this field and discusses the reasons for issuing certain decisions. Members of LICs are mainly politicians who are elected by local people (mayors) and therefore, they are responsible for the protection of citizens, They should co-operate with operators and NRO in this issue.

In Sweden, 82% of people feel safe, but declared that if they were involved in the process, they would feel even safer.

ASN mentioned that LICs in France organise public meetings which are important tools in a two-way communication. ASN also mentioned that LICs intend to evaluate documents. And their knowledge in the field increased over the past years. Level of expertise is very important. Better expertise was received because LICs used university people as advisers. Nevertheless, LICs should stay in their role of debate and dissemination of information.

A representative of LICs France explained that LICs not only disseminate information, they also create important opinions and serve as citizens experts. LICs have the ambition to participate in consultations. The representatives of the Swedish LIC underlined that they are not translators, they create a place for discussion. A representative of Hungary pointed out that communication at the regional level is crucial because people are living in the same place (vicinity of NPP) for a long time, sometimes their entire life, and they appreciate to be informed even when most of them are working at the NPP. In addition, if something was happening in a nuclear facility, it would happen locally and local people should know how to behave.

Summary finding

The general public expect to receive information which is “digestible”. It is not interested in too technical information which it does not properly understand.

Members of LICs (LIC) aim at developing their expertise and therefore they are willing to dedicate time to be educated in this field. Since they are a mediator between the operator, the NRO and the general public, they want to understand information they share and disseminate.

Technical training in order to gain the basic knowledge in the field of management, structure and scope of activities of individual operational units, nuclear and radiation safety and emergency planning according to the needs and types of nuclear facilities could be valuable.

It is important to educate people by providing information about nuclear technologies and radiation, because, in most countries, the general public is largely unaware of the mechanisms to ensure nuclear safety.

Education in nuclear should focus mainly in radiation protection, which takes time.

In some countries, education of the population is expected to be organised by operators or by NROs.

NROs use several channels to inform the public. The main one is their website. It allows publishing and disseminating NROs decisions and some safety significant technical documents for the public. It is a good tool for direct communication with stakeholders. NROs also publish brochures explaining issues

concerning nuclear safety and information about regulatory actions being taken, inspections and follow-up letters.

Two-way dialogue is another tool. NROs in France and the Slovak Republic organise public meetings in co-operation with LICs. Open discussion about safety of nuclear facility is very important, It is essential not only to inform but also to listen to the public's needs.

Crisis situation is specific because in many countries other organisations are involved as well (Ministry of Interior, emergency response organisation, etc.). In such cases, demand of relevant information increases. The NRO should be a reliable source of information, Openness and transparency are crucial.

Many members of LICs are politicians elected by local stakeholders and they are responsible for radiation protection of the population in their localities.

3. Contribution to public information

How do local information committees and NGOs deal with the information they receive from different sources (nuclear regulators, licensees and public authorities)? What are their policies and contributions to public information? What are their interactions with the public?

Greenpeace uses its website and social media. For example, they spent a lot of time to explain and correct misinformation about the Fukushima Daiichi nuclear power plant accident using a blog. Social network is not easy to use. It is part of their job. They manage public meetings, trainings and press relations.

ASN expects LICs to organise meetings with the general public. ASN is prepared to contribute when it happens. Of course if there is activity at the national level, for example communication with a dedicated group (e.g. medical doctors), NROs organise such meetings or directly communicates with them.

LICs in France stressed that if they want to communicate properly with the public, human and financial resources are needed. the Slovak Republic mentioned the same, and for the same reason, LICs in the Slovak Republic ask operators and regulators to organise and finance some meetings and discussions with the public. Mayors who are mainly members of LICs in the Slovak Republic must deal with lots of other duties so they expect operators to take part in the process of informing the public. It is the case as operators of nuclear facilities in Mochovce disseminate information brochures, and calendars explaining how to behave in case of a nuclear accident, etc. Recently, a meeting with the NRO has been organised in connection with NPP Mochovce 3 and 4 which are under construction. They try to share as much information as possible.

Public acceptance of officials' instructions: What is the point of view of local information committees and NGOs regarding people following instructions for protective actions in case of an emergency?

Mr Ramacker, from the emergency centre of the Federal Government, Belgium, presented a movie about how to behave in case of an emergency and explained the perception of Belgians of this humoristic campaign. Some people appreciated the movie, but many citizens did not like it. As a consequence, the Belgian government withdrew it and decided to no longer use humour for such campaigns.

In the discussion, it was stressed that the issue is very sensitive and therefore, difficult to find the right way of communicating about it. LICs in France mentioned that they try to find relevant ideas about how to educate people in emergency preparedness. They prepared cartoons on what to do in case of an accident that were published on a special website entitled "No panic". These cartoons were understandable and catchy even for children. LICs in Sweden informed they recently had a bus at their disposal for six months and visited several places. They met people and discussed nuclear and radiation protection issues.

Sweden LIC mentioned that emergency drills are useful. Thanks to the accident simulation, people are trained to cope with a real accident. If people are educated, they are more likely to react suitably.

At national and regional levels, panellists and the auditorium discussed exercises which are organised in countries with nuclear facilities with the aim to be properly prepared in the case of a nuclear incident. Greenpeace considers such drills a good tool for institutions and communicators but not for the public.

Summary finding

NGOs (Greenpeace) use several ways to reach the public and the most proper way in their opinion is using a website and social media. They organise public meetings, some trainings and maintain contact with the media (press releases), etc. They consider social networks difficult to use but represents an interesting new tool of communication. By using this media, information could be spread to a larger audience.

Some LICs use meetings while others use websites to share information they have received with members of the public

All LIC representatives see appropriate human and financial resources as a key requirement for effective communication.

LICs support the organisation of drills as a tool for educating people in how to behave in case of a nuclear accident.

Educating the public is very important. Some campaigns are very useful, but using humour seems to be inadequate.

LICs communicate with the population mainly at the local level. Other communications with special groups of people at the national level are expected to be done by NROs or other institutions.

4. Public involvement and risk culture

Opinion surveys show that the public does not feel informed enough about nuclear matters and that they feel not involved enough in nuclear issues.

Public involvement is considered as a strategic activity of both operators and NROs. Significance of public consultation and public participation in activities and decision-making process in the nuclear field have been mentioned by all participants. It was declared that information on risk culture is an inherent part of communication. Questions on the best way of involving people in the decision-making process and whether more public involvement is required was discussed. It was concluded that more debate about important projects is needed. Another important issue was that in some countries, people are not interested in consultations, so it was discussed how to make the population more involved to the decision-making process in the nuclear field. Greenpeace stressed the fact that the debate about important projects is needed. The representative of the French LIC agreed that discussions and public involvement are important but the first objective is to take into consideration the comments and ideas of the public. It is important to be prepared before, and during, the discussion.

Summary findings

Communication and consultation are strategic instruments to support operators in their activities and regulatory bodies in achieving their regulatory functions.

Democratic debates are crucial for good relations with the public.

Involvement of the public in nuclear matters improves the public’s confidence in the quality of the nuclear safety regulation.

The public must be sure that they have a voice in the decision-making process otherwise they lose interest to participate.

It is important to increase awareness of the general public about its right to participate.

Conclusion

Since all the members of the WGPC from each nuclear regulatory organisation are communication experts, the WGPC believes that every valuable view and opinion discussed during the workshop have been well received by the group members, and, more importantly, would influence positively their current work so that it can improve communication practices of regulatory organisations.

This first pilot was valuable for several reasons.

First of all, the workshop was a success due to the quality of the panellists and of the moderator: the discussions were open, frank and lively.

Secondly, several interesting ideas were raised during the workshop making it a valuable experience for the NROs which attended. Some key lessons must be emphasised:

- Reputation and trustworthiness: the nuclear issue, being at the same time central and sensitive, and by working on knowledge and image, helps NROs to build their trust and credibility. It is a long-term job. It goes slowly and is a constant challenge. In particular, NROs must be capable of ensuring a quick rebound after a crisis. Crisis is a situation when credibility can be rapidly gained or lost. As the awareness and knowledge of NROs are modest and other actors such as research centres, NGOs, etc. are sometimes better known, not to say acknowledged, NROs need to remain both alert and humble. Keep and inform others about the separation between NRO's staff and industry. NROs should avoid changing names (brand building).
- Reeds, constraints and knowledge building: there is a need to establish a positive relation between NROs and stakeholders based on openness, educational approach, quick response and proactive communication. Media need accurate, lively, timely and clear information from NROs (budget cuts so journalists are less numerous and over-pressured). Media need updated information (information presented when the annual report is issued has already been covered the previous year as things occurred). The role of the communication officer is crucial. He or she should not hesitate to develop a personal and confident relationship with journalists. In addition, it is appreciated to give sense to the technical information, explain the benefits in terms of nuclear safety, radiation protection, environmental protection, etc. The workshop has shown that a continuous and close interaction with stakeholders is very important and that effective communication with them is the way forward to building public confidence in NROs.
- Relations: the risk for the NROs is to be squeezed between the pro- and the anti-nuclear factions. They have to develop their own position between them and to keep a good distance. This is a strong factor of independence and trustworthiness.
- Transparency and emotional aspects: it is a tricky issue for NROs because transparency is a demanding concept. Nuclear topics are complex and can be misunderstood or scare people. NROs must find the proper balance. Give reliable and objective information. Give the correct assessment of the seriousness of an event. Media do not expect emotion from NROs. NROs must remain capable of making decisions while recognising the emotional aspects of a situation.
- Traditional and social media: as shown during the Fukushima Daiichi nuclear power plant accident, there is a strong need to provide clear messages that are understandable by non-experts and delivered in a timely manner. Furthermore, national regulators have to ensure the consistency of those messages. The globalisation of information and the impact of new technologies, including social media, disseminate information instantly, anywhere in the world.

Social media is more than a new channel of communication. It can contribute to make NROs fulfil their mission: inform, educate and prevent accidents. Social media can help by reaching a larger audience (beyond experts) and to talk directly to the public. Social media is also a way to build NROs e-reputation

and to get it known as a credible, transparent and independent organisation. It is a way to show and share expertise, and to deliver accurate information with transparency.

But social media includes some constraints:

- People can reach directly into the organisations to express their opinion, dissatisfaction or to ask questions. This creates a huge amount of work.
- When asking questions they expect feedback within a few hours.
- As far as nuclear safety is concerned, not getting a quick answer can provide fear, anxiety or bring suspicion that something is hidden.
- Bringing a quick answer in a crisis situation is a real difficulty for organisations like NROs that need time to check, analyse and give expert feedback.

It means that using social media platforms and monitoring e-reputation is time consuming. It requires online communication and community management expertise. Depending on the size of the organisation and the size of the audience, it may require several people to manage all related activities such as content production and publishing, monitoring, community development and moderation.

The constraints of real time is perceived as conflicting with the mission of a NRO which needs time to verify information and to analyse it before taking a position.

Public involvement and risk culture

Enhancing the knowledge of nuclear issues and the safety culture of the public is a difficult issue because NROs have to find the proper balance between denial and panic, have to give reliable and objective information and have to give the correct assessment of the seriousness of an event.

The purpose is to make the citizens responsible for their own protection (e.g. enhance the awareness of countermeasures in case of an emergency situation).

It is a long-term job, required to be conducted both in routine and in emergency situations.

Outcomes

Even if NROs have a common will to improve their communication methods and build constructive relationships with stakeholders, every country has its own practices and cultural background, and therefore, its own challenges. The workshop was held on a regional basis with stakeholders coming from European countries. For the future, it would be interesting to learn lessons from another continent. This would enable WGPC to go further and to get a worldwide view on how to improve NROs' communication.

CHAPTER II: NORTH AMERICAN WORKSHOP IN 2015

The North American workshop with stakeholders was hosted by the United States of America Nuclear Regulatory Commission (NRC) on 1st April 2015 at Rockville, Md United States of America (USA).

Moderator and special attendees

The sessions were moderated by Mr Roger Hannah, an NRC Senior Public Affairs Officer who is a former journalist. The workshop began with introductory remarks by Eliot Brenner, Working Group on Public Communication (WGPC) Chair and Director, Office of Public Affairs, NRC; Stephen Burns, Chairman, U.S. NRC; and William D. Magwood, IV, Nuclear Energy Agency (NEA) Director-General. The participants list is available in appendix II.

Stakeholder presenters

- Ann Bisconti, PhD; President, Bisconti Research, Inc;
- Steven Dolley, Managing editor of Inside NRC, a Platts newsletter;
- Matthew L. Wald, Retired science writer;
- Shawn McCarthy, Energy reporter for The Globe and Mail, Ottawa bureau;
- Dan Yurman, Publisher, NeutronBytes **http://neutronbytes.com**;
- Paul Gunter, Director, Beyond Nuclear's Reactor Oversight Project;
- Jessica Weider, Acting Director, United States Environmental Protection Agency's Center for Radiation Information and Outreach;
- J. Scott Peterson, Senior Vice President – Communications, Nuclear Energy Institute;
- Linda Thompson, Former Mayor, Municipality of Port Hope, Canada. Shawn-Patrick Stensil, Senior Energy Analyst, Greenpeace Canada.

Topical session with the media – expectations of traditional and social media from NROs' communication

Panellists

- Mr Steve Dolley, Platts, USA;
- Mr Matt Wald, New York Times, USA;
- Mr Shawn McCarthy, Globe and Mail, Canada;
- Mr Dan Yurman, Nuclear Blogger, USA.

Topic areas

The panellists were presented with questions from four topic areas: expectations and concerns; relations; translating risk; and social media. Each is presented below with a synopsis of the discussion, which is not intended to be comprehensive, along with observations and notes from WGPC members.

1. Expectations and concerns

- What do the media expect from NROs in terms of information? How can Nuclear Regulatory Organisations (NROs) provide them with that information?
- What are the media's concerns in covering radiological/nuclear events?
- What are the media's needs in terms of type, format, level of specification, rapidity and distribution methodology for information in both routine and crisis situations?
- How could NROs help the media to improve its knowledge of nuclear technical subjects?
- What education/information would be necessary for them to be better prepared to explain a nuclear incident?

Synopsis of panellists' conversation

Reporters generally recognised the difficulty of covering such a "complicated" field and acknowledged they relied on the regulator to tell them what was happening and to help them be "familiar" with the nuclear industry. Reporters also acknowledged that those of them who routinely covered the topic of nuclear energy were in a much better position to understand the intricacies of events than those who "yesterday covered a fire in downtown Toronto". It was advised that NROs' public relations personnel differentiate between the audiences and not consider one "the media" in their communications.

Reporters agreed they were looking for "straight goods" and not "industry spin" from the NRO, but there was some expression of scepticism towards the NROs' ability to accomplish that. The reporters did agree that the three most important elements for coverage were NROs being transparent, providing information in a timely way and providing access to expertise.

Timeliness was cited as particularly important during an event, as reporters saw a gap between what the agency knew (the NRC in this example) and what was made available to the media. It was observed that the lack of information breeds "all kinds of ideas". There was acknowledgement of the challenge of meeting the demands of a constant news cycle in an event, as well as the relative scarcity of experts who can be made available to the media. However, it was noted that expertise was particularly important in an event, and NROs must anticipate that and have plans in place to ensure technical expertise remains available even in the crush of an incident.

Reporters agreed that channels for information are different when the routine becomes a non-routine incident. What is acceptable in routine times – press releases, for example – is not acceptable in an event. With a nuclear incident, reporters advocated the use of the website and social media to post information rapidly. Educating reporters ahead of an incident was also encouraged. Plants that offer tours for reporters and an NRC –sponsored training "Reactors 101" for reporters were cited as excellent approaches, as were webinars for reporters.

Obtaining information through an NRO's digital files (NRC's Agencywide Documents Access and Management System (ADAMS) document collection) was discussed. Reporters who were familiar with it found the amount of information both useful and daunting. The reporters also discussed the usefulness and shortcomings of the U.S's Freedom Of Information Act (FOIA), which requires federal government entities to provide specific information, by request. It was noted other countries may have similar laws, including Canada's Access To Information (ATI).

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- Translating technical information for journalists, with an emphasis on animations, graphics and video to explain material.

- Use of good websites to provide information easily to journalists.
- Being responsive to reporter inquiries and recognising the need for timeliness of response.
- Providing explanations without “industry spin”.
- Transparency, timeliness of information; access to expertise; an “independent voice”.
- Language needs to be clear, fair.

Identified Inadequacies or Problem Areas

- Information does not get provided quickly enough to meet deadlines.
- There is a lack of familiarity between the NRO and the general public.
- There is a lack of “translation” for difficult technical information disseminated by the NRO.
- Too many acronyms are used.
- Websites may not be fully current, especially in a crisis event such as a hurricane.
- The public is generally not familiar with nuclear because plants don’t familiarise them, in part due to security concerns.
- Perception that the NRO may not be fully independent i.e. regulatory capture hinders a relationship with journalists.
- If the NRO is silent on an issue, the vacuum may be filled with others with an agenda or questionable information.
- Meeting the challenge of “bad news” squeezing out “good news” that NROs may be trying to communicate.

Suggestions for Improvement

- NROs must retain an independent voice.
- Build confidence by making the information readily available to reporters and the public.
- Provide context beyond a simple press release.
- Monitor social media to get involved in the dialogue.
- Be prepared to large number of press calls during an incident.
- Publish information rather than waiting to be asked for it.
- Step out of “regulatory language” to truly communicate.
- Offer training opportunities such as workshops or webinars for journalists i.e. Reactors 101.
- Catch and correct media mistakes.
- Post information as rapidly as possible in an emergency.
- Provide easy access to experts who can help reporters understand the technical aspects of an issue or incident.
- Use multiple channels to communicate.
- Be proactive in communicating with journalists and the public.
- Know your public.

2. Relations

How to build a positive relationship between journalists and NROs (communication team, press officers in NROs) before an incident occurs?

Synopsis of panellists' conversation

The panel began by discussing the relationship between the agency (in this case the NRC) and the public, rather than between the communication personnel and reporters. The reporters noted that public meetings are not always a useful platform for exchange, and at times the agency has not defended itself against attacks by the public. It was also noted that some NRC technical experts do not believe public meetings or public outreach to be important. A distinction was made between the Office of Public Affairs and the agency management, noting the communicators are only as empowered as management allows.

The panel noted that getting an early "heads up" about an upcoming issue or activity was useful but also stated there is such a thing as too much information. "Drinking from a fire hose," was one panellist's observation for the amount of information provided to the public and reporters.

There was a conversation related to sensationalised coverage, especially from reporters who are not expert in the particular area or issue at hand. Mr Dolley noted, "Every reporter likes a scoop but none of us can read everything and so particularly for someone who may be has not ever covered nuclear power before [...] they may not be aware what is and is not a scoop".

The panel also discussed the role of the industry in communications, with an observation of a "bunker mentality" for industry communicators. Also cited as the need for industry messaging to go through multiple approval chains that produce what was called "day-old mush" rather than useful communication.

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- Responsive public affairs offices and active efforts to keep reporters "in the loop".
- Active Twitter accounts to disseminate information quickly.
- Building good relationships with the media and having regular contact.
- Grouping information on websites in a useful way, such as putting all the information on a facility in one location.
- Technical staff needs to "defend the brand" when under attack, and when appropriate.
- Avoiding any hint of taking an advocacy role for nuclear power or the nuclear industry.

Identified Inadequacies or Problem Areas

- NROs may pump out too much information that is not relevant to journalists (likened to drinking from a fire hose).
- Reporters not getting an early "heads up" on issues before they are made fully public.
- NROs not defending themselves against critics, particularly in one-on-one fora such as public meetings (Panel noted this may not be the responsibility of the public affairs office, but that of top management).

Suggestions for Improvement

- Improve public meetings and meeting summaries or transcripts after-the-fact.
- NROs should contact journalists regularly, not just when something happens.
- Provide extra guidance to journalists inexperienced in covering the nuclear field.

- More empowered public affairs staff/offices.
- Reputation is very important. NROs must find the proper way to communicate emotions.

3. Translating risk

- How can NROs help accurately translate risk to the general public?
- How can NROs deal with the emotional nature of the issues they communicate about?

Synopsis of panellists' conversation

The panel suggested that regulators stop implying that no accident can occur because "we are a robust regulator" and instead provide facts related to relative risks. It was suggested that data and info graphics are sound ways to explain the often emotional topic of a nuclear power plant accident. It was further suggested that regulatory agencies have to be patient, find ways to communicate visually when possible and to use multiple tools.

However, panellists disagreed about the NRO's role in determining risks of nuclear power versus risks of other means of generating electricity. Similarly, outlining the benefits of nuclear power over other means of generating electricity may be outside of the mission of the regulator (which regulates but does not promote).

There was a conversation about how the public views two fundamental questions: can you describe whether a plant is safe or not and if it is not, when will it be safe again. It was acknowledged that while the public "looks for black and white answers" to those questions, the "answers aren't black and white". Panellists agreed that it is a great challenge to translate complex ideas into something the public can understand. It was also acknowledged that risk "ultimately gets down to the public deciding on a gut feel is this thing under control or not".

The panel also discussed the involvement of emotion in any conversation about risk associated with nuclear power plant incidents, without a consensus about how it should be handled. It was suggested that while regulators must explain and defend their actions, they need to be cautious about taking on the role of "trying to calm people down about the risks of nuclear power". It was also suggested that regulators take the time to listen to the public before an incident to hear their questions and concerns, which will serve to "tell you what kinds of emotions you are likely going to be dealing with" in an accident.

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- Explaining the events through graphics (the Fukushima accident was very well explained through graphics).
- Regulator shouldn't promote nuclear power but should promote themselves and their decisions, especially related to risk of nuclear power or nuclear power plant safety.
- Repetition is important when explaining risk.
- NROs need to use multiple tools to explain risk.
- NROs need to get out to the public and talk one-on-one

Identified Inadequacies or Problem Areas

- People do not understand all the risks and it is the NRO's job to explain them, but the public is naturally sceptical and level of trust in NROs may be low.
- The public looks for black and white (safe or not safe) answers while often things are much more complicated.

- NRO cannot dismiss risk; they cannot say there is no risk.

Suggestions for Improvement

- NROs need not ignore the topic of risk for fear it will make the public fear nuclear power.
- Messaging needs to go beyond the statement: "this is not going to happen".
- NROs have to become comfortable in the knowledge that risk can be an emotional topic.
- Using new channels, such as social media, images and info graphics to communicate risk.
- NROs must find a way to show the balance between benefit and risk.
- Listen to what the public says in order to craft messaging that reflects their concerns.
- Communicate reasonable risk in an understandable way so responsible adults can make informed decisions.

4. Social media

- How can NROs use social media to better communicate with the media and the public?
- How can NROs counteract rumours and misinformation transmitted via social media?

Synopsis of panellists' conversation

This discussion began with an acknowledgement that social media is "many to many" communication rather than two-way communication, and this is "going to put some stress on regulatory agencies [...] because you are used to communicating to the public in a very structured and formal way". The panel also acknowledged the strain social media puts on communication resources, with the need for people not only to produce social media content, but to monitor and respond to it as well. Visual social media platforms were singled out for their usefulness. Short videos on YouTube, for example, put "a face on the regulator" in a positive way. It was also recommended that NROs not waste resources on the "trolls because these people are not interested in an effective dialogue with you". A triage system was also cited as one way to reduce resources associated with social media while still benefiting from the communication.

However, not all of the panellists supported social media as a platform for expressing complicated nuclear concepts. Twitter was particularly singled out as a difficult platform for NROs to use.

Panellists also agreed that social media, while often framed as a "generational thing", is, in fact, used by all demographics and played an important role after the Fukushima nuclear power plant accident.

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- Graphic and video explanatory materials are very helpful.
- Social media had an important role during Fukushima (when crises occurs, people turn to social media).
- Putting a face on the regulator (via YouTube, etc.) helps strengthen public relations.
- Ignore the trolls.
- Triage social media messages to determine if a response is necessary.
- Take emotions into account.

- Maximise the two-way communication (or many to many communications) that social media allows.

Identified Inadequacies or Problem Areas

- Budget allocations for social media.
- Communication of regulators is often too formal (press release etc.).
- Social Media is interactive and puts the regulator out of his or her comfort zone because we were used to inform in other ways.
- The complex world of nuclear issues is hard to show on a tool like Twitter; in 140 characters.

Suggestions for Improvement

- Relocate some staffing structures to create positions that can handle the social media.
- Release short video series on the YouTube channel.
- Be ready for social media situations; be aware of the different scenarios.
- Do not feed the trolls on social media; NROs do not need to respond to everything on social media.
- Use interactive elements, visual elements and webinars.
- Incorporate social media in strategic plans for communication.
- Greater use of Twitter, particularly in a crisis situation.
- Rumours are uncontrollable, but NROs can address them by placing accurate information to counter them; extinguishing a fire.

Topical session with various stakeholders – expectations of stakeholders from NRO's communication

Panellists

- Mr Paul Gunter, Nuclear Information and Resource Service, USA;
- Mr Scott Peterson, Nuclear Energy Institute, USA;
- Ms Jessica Weiner, U.S. Environmental Protection Agency, USA;
- Linda Thompson, former mayor, Port Hope, Ontario, Canada;
- Mr Shawn-Patrick Stensil, Greenpeace, Canada.

Topic Areas

The panellists were presented with questions from five topic areas: Expectations and Concerns; Relations; Translating Risk; Social Media; and Public Involvement. Each is presented below with a synopsis of the discussion, which is not intended to be comprehensive, along with observations and notes from WGPC members.

This session of the workshop addressed the following issues:

1 Expectations and concerns

- What is your agency/organisation's role in response to a nuclear power plant accident?
- How would you communicate with the NRO's involved in response and what do you expect from NROs in terms of information?

- What are your needs in terms of type, format, level of specification, rapidity and distribution methodology for information in both routine and crisis situations?
- What role do you play in helping to explain the science behind a nuclear incident and its possible impact on the public?

Synopsis of panellists' conversation

Each of the diverse stakeholders spoke briefly about their roles in response to a nuclear power plant accident. Paul Gunter spoke about answering media questions during the Fukushima response, speaking for his organisation and offering their viewpoint on the accident. He also spoke about serving both as a watchdog over the regulator and as a conduit of information to the community. Linda Thompson spoke about the role of local government/municipality in notifying the public of an incident as well as challenging both the regulator and the industry for accountability. Scott Peterson spoke about Nuclear Energy Institute's role as part of the "broader industry emergency response" to an event, and offering technical assistance or advice to help a company manage the incident. Shawn-Patrick Stensil noted that Greenpeace is a global organisation and is poised to provide information to the public and the media and context for incidents around the world, especially when there is little trust in the official authority for the incident. Jessica Wieder outlined the Environmental Protection Agency's role in collecting and sharing data with other government agencies and the public related to a radiological emergency.

The stakeholders offered various opinions about how they communicated with NROs and what they wanted from the nuclear regulator. Ms Thompson felt a prior, established good relationship and a history of sharing information was important to ensure that channels of communication were open during an incident. Mr Stensil noted Greenpeace will request and expect to receive technical documents for which they have the expertise to understand, and will not rely on press releases for information. He echoed Ms Thompson by stating a prior relationship with a regulator and a regulators' history of not being promotional for the nuclear industry are important facets of open communication with his organisation. Mr Peterson cited the need to get the right information out to the public in the right ways and in the right language. He emphasised the importance of integrating digital communications and social media as much as possible. Paul Gunter noted that one of the key concerns is "how the regulator integrates information with regulation".

The panellists all agreed that educating the public about basic science tenets was an important component to helping the public understand a nuclear/radiological incident. There was also general agreement that it can be difficult to attract the public's attention outside of an emergency, unless they live near a nuclear power plant. "Radiation in general is not something that people are actively paying attention to", said Ms Wieder. It was further acknowledged that radiation is not a topic easily communicated. It was noted that the industry tries to educate/inform their local communities through open houses, school programmes, etc., but they are largely limited to those near a plant. Mr Stensil reflected on the issue of "regulatory capture" as something that serves to impede education of the public by the NROs. Mr Gunter reflected on poll numbers that show great interest in renewable energy and a decline in interest in nuclear power, which presumably makes education about nuclear issues more difficult.

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- Listening to the concerns of local communities and providing opportunities for direct stakeholder dialogue with NRO staff.
- Having a comprehensive website and integrating it with digital communication channels.
- Briefing stakeholders ahead of issues/incidents; building credibility as an independent regulator.
- Using videos, Q&As and other tools to educate the public.

- Getting the right information out to the right audience in the right language.

Identified Inadequacies or Problem Areas

- Stakeholders, such as Greenpeace, get calls from the public when the NROs are not providing timely and trustworthy information, and clear indications of independence.
- NROs not always clearly state that they promote nuclear safety, not the industry.
- Use of technical jargon in public meetings.
- Evidence of "regulatory capture".
- Limited opportunity for education in radiation risk among the general public (except local NPP communities).

Suggestions for Improvement

- Provide NRO expert assistance to technical people from the communities.
- Use phone calls to reporters and release of technical documents, not just sending out a press release.
- Use social media to communicate with stakeholders; integrate social media into communications practice.
- Anticipate the information and educational knowledge needed before an emergency occurs.
- In non-emergency times, prepare products for possible use in a future incident.
- NROs need to be aware of their "blind spots".
- Build credibility before an incident.
- Create opportunities to teach basic science principles to the public, especially those around nuclear power plants.
- Anticipate information that will be useful to public in near future, particularly during a crisis.

2. Relations

- How would you characterise your relationship with your NRO and what could be done to improve the relationship between stakeholders and NROs (communication team and press officers in NROs)?

Synopsis of panellists' conversation

The panellists generally asserted a "love hate" relationship with the NRO, but generally conceded the importance of the relationship and dialogue, even when disagreeing about issues. Mr Gunter pointed out his organisation's concern was less with the communications' staff, and more with an agency not enforcing its own regulations. Mr Peterson asserted that dialogue between industry and technical staff at the NRC results in better understanding on issues and possibly better regulation. Ms Wieder noted the importance of communication staff at different agencies knowing each other and trusting each other prior to an incident, to make working together easier and more effective. Mr Stensil offered the viewpoint that a promotional perspective on the part of the NRO made building a relationship difficult.

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- U.S. NRC and CSNC have improved relations with stakeholders through regular meetings and dialogue, and more "active listening" to concerns.

- Dialogue with local people.
- Ensuring relevant staff and stakeholders know each other.
- Developing a licensee condition handbook (a manual that explains the conditions of a licensee).

Identified Inadequacies or Problem Areas

- NRO information that is seen as promotional is a concern for NGOs wanting independent information.
- NROs not enforcing their own regulations.

Suggestions for Improvement

- Provide more independent information.
- Respect the opinion of local communities.
- Enforce regulations.
- Develop rules on what should be communicated.
- When renewing a license, there should be a dialogue between stakeholders and the NRO.
- Provide FAQs on the NRO's website, along with simple education.
- Be prepared to listen and encourage conversation.

3. Translating risk

- How can stakeholder groups help accurately translate risk to the general public?
- How can NROs deal with the emotional nature of the issues they communicate about?

Synopsis of panellists' conversation

Mr Gunter noted a gap in acknowledging how risk is quantified by the NRO, and how risk is "played out" in reality, in real accidents that affect real people. Mr Peterson recommended that communication about risk also include communication about benefits. He also noted that the level of discussion regarding risk is determined by the specific audience. It was underscored that not all radiation experts "are excellent public communicators", which complicates the discussion of risk related to nuclear power or radiation.

Mr Stensil noted that in order to understand the quantification of risk, one must also understand the underlying assumptions so the public can then determine if they find the risk acceptable or not. There was a brief conversation about how people in different countries may view the same risk differently. A WGPC member said of France: "People have an apocalyptic perception of nuclear risk. Because they have in mind the bomb, the nuclear bomb". Representatives from France noted on-going work in the country to "develop a risk culture".

Panellists also asserted the use of peer review of NRO documents to be an important element of risk communication, as well as community advisory panels providing context to the local population. It was noted that the issue about risk communication is not necessarily just the purview of the NRO communication staff; the technical experts and regulators writing the rules and proposing policies have a large role to play as well.

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- Being receptive to questions posed by the public and stakeholders.

- Getting the concerned public involved in regulatory matters.
- Using a community advisory panel to obtain comments, achieve dialogue.
- Providing opportunities for external peer reviews of relicensing documents or to address concerns.

Identified Inadequacies or Problem Areas

- The difficulty of translating risk to the public because of the technical language is necessary to make the information accurate.
- The emotional barrier that a risk conversation can create.
- NRO risk technicians are not always the most appropriate people to explain the perception of risk. (The best scientist can explain risks to the public. But it is useless if no one understands it).

Suggestions for Improvement

- Find a balance in communicating something that is very emotional for the audience.
- Find the correct person to start the dialogue about risk.
- Establish risk metrics, when stating that risks are acceptable the assumptions must be disclosed.
- Give people the opportunity to participate in the risk culture by giving them information.
- Allow NGOs to participate in peer reviews.
- NROs should not be constantly in a defence mode but take advantage of external inputs.
- Increase knowledge and awareness of risk.

4. Traditional/social media

- How can NROs counteract rumours and misinformation transmitted via social media?
- What role would stakeholder groups play in countering misinformation?

Synopsis of panellists' conversation

There was general consensus about the importance of social media during a radiological event, although it was acknowledged that NROs may struggle with resource limitations that make full implementation of social media difficult or impossible. Further "horizontal communication" i.e. "peer to peer" communications are generally highly trusted and facilitated by social media that serves to "leverage" the "regular employees" who are subject matter experts active in social media. Mr Peterson summed up his remarks by saying: "Digital is critical, whether you are a regulator, whether you are a company or whether you are an NGO". Social media usage must be upfront, panellists warned, with staffers properly identifying themselves online and not hiding their affiliations. Members of the panel noted the difficulty of dealing with rumours online; Greenpeace stated they used their website to combat rumours or provide credible sources of information for the public.

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- NRO blogs that can explain issues and concepts in plain language.
- Having a written social media policy.
- Challenging misinformation.
- Peer to peer communications builds trust.

Identified Inadequacies or Problem Areas

- Limited staff dedicated to the social media.
- A lack of honesty with those managing social media for the NRO not properly identifying themselves.
- Depending on the NRO, there is some restriction on using social media.

Suggestions for Improvement

- Participate in digital platforms on a regular basis.
- Hire people in the NROs who are early adaptors that are familiarised with social media. (Recommendation – at least two people).
- Have a policy on social media use.
- Produce short and inexpensive in-house videos.
- Retweet information from other organisations.
- Use a third party to drive public education via blogs etc.

5. Public involvement

- How can your organisation help to enhance the participation of the public in nuclear topics (via public debates, consultations, working group, etc.)?

Synopsis of panellists' conversation

It was acknowledged that outside of communities directly situated near nuclear power plants, it can be difficult to attract attention to NRO matters. It was noted that when "things are going very well," there is not a great impetus on the part of the public to pay attention to NRO activities. Getting the public engaged in more long-term issues, such as a hearing or licensing, can be difficult, said Ms Thompson. Mr Stensil posed the question about whether or not regulators wanted and valued outside interveners, moving the conversation away from public meetings and discourse. There was a brief conversation about whether or not "dialogue" with the public was an intrinsically useful and appropriate goal, and whether or not NROs wished to "provide a conversation" with the public.

Summary of WGPC Member Notes and Observations

Identified Good Practices of NROs

- The community is happy when it receives information.
- Local government (host community) can promote the stakeholder involvement easily as a "neutral party" unlike the industry.
- NROs need a presence in schools and to participate in nuclear education.
- Open houses in addition to or instead of formal meetings.
- Ensuring the public has adequate information to be able to participate fully in meetings.
- Keeping the public engaged.

Identified Inadequacies or Problem Areas

- People are not interested in public meetings if nothing happens.
- NROs must walk a fine line with public involvement. If industry promotes public involvement, the activities may seem like a "set up" to the public.

Suggestions for improvement

- Encourage energy information centres in the local communities.
- Encourage public dialogue on a regular basis.
- Keep momentum and interest up between proceedings.

Presentation – public opinion on nuclear power

Preceding the first panel was a presentation on "Public Opinion on Nuclear Power," by Ms Ann Bisconti, President of Bisconti Research, Inc. Ms Bisconti has conducted national surveys related to nuclear power in the U.S. at least twice a year since 1983; the latest in spring 2015. She's also conducted biennial surveys of plant neighbours since 2005; the most recent in summer 2013.

1. Synopsis

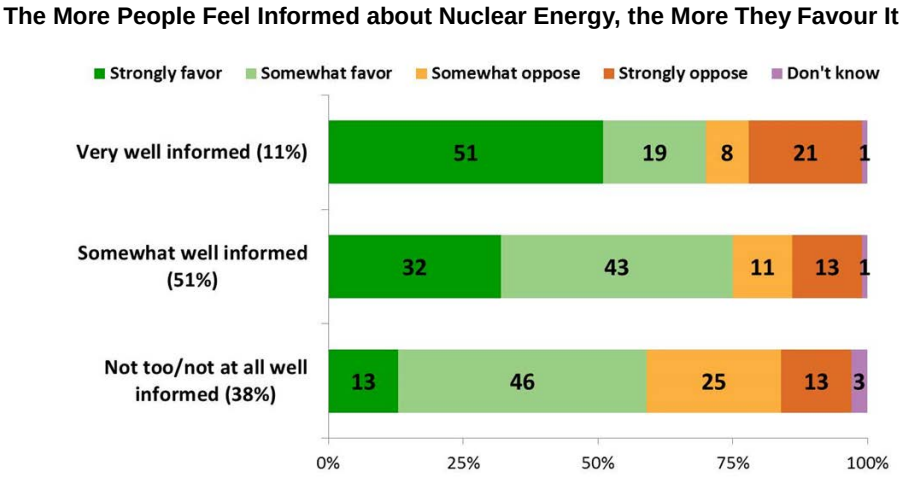
Presented here is a synopsis of the presentation and discussion, which is not intended to be comprehensive. Ms Bisconti began by stating that perceptions of nuclear power plant safety have dramatically changes in the U.S. In 1984, when the question was first asked, 35% of the public gave a high rating to the safety of nuclear power plants. Today, she said, that number is 64%. She also noted that a majority of people who describe themselves as "environmentalists" favour nuclear energy. But she gave this caveat "Let's be very clear up front, Americans do not love nuclear energy". She said people express preferences for social energy, for example. What Americans do favour, however, is energy diversity, with 96% saying it is important that electrical generation comes from a variety of sources.

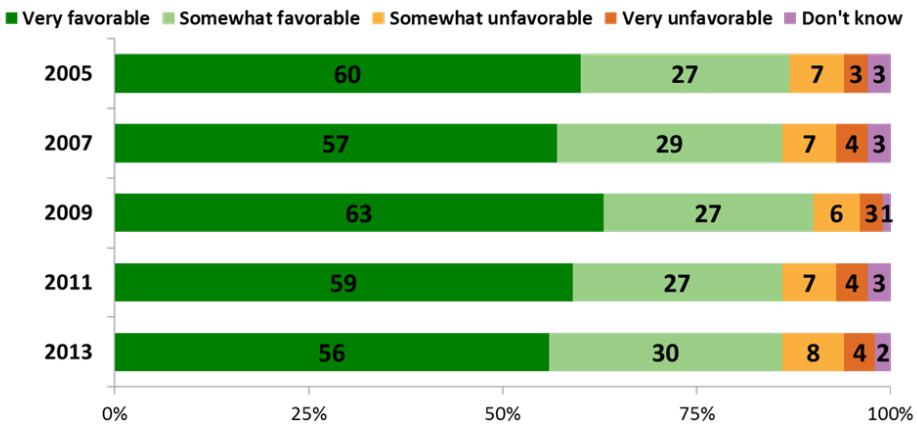
In a Question and Answer period, Ms Bisconti was asked why her polling numbers differ from a recent Gallup poll, which found much less support for nuclear power. Ms Bisconti responded that the way the questions are posed and framed will influence the outcome. The Gallup poll, for example, asked about nuclear energy as it related to social and wind and other energy options, which are universally supported by the public. "Nuclear energy is not going to win a popularity contest," she said.

2. Findings

- 68% of Americans favour nuclear power; 30% oppose.
- 64% give nuclear power high safety ratings; 22% give low safety ratings.
- 78% of Americans felt nuclear played an important role in the country's electrical generation.

3. Sample slides





4. Recommendations

- Assume your audience has no prior knowledge about energy and nuclear energy.
- Keep communications simple—depth, not breadth. Communicate in terminology that is both accurate and that the public can interpret. (She noted that the frequently used phrase "passive safety systems" is not well received by the public who interpret it as meaning "not actively responding" or "sleeping on the job".) Other terms that did not work well with the public included "materials degradation," "life extension" and "ageing management."
- Outreach is essential to communities near nuclear energy facilities – the more informed an audience is, the more likely it is going to be favourable towards nuclear power.
- Strong regulators must increase their visibility so the public understands who they are and what they do.

5. Video presentations

The afternoon panel was separated by a video break. Two videos were presented by the Canadian Nuclear Safety Commission and the U.S. Nuclear Regulatory Commission. Both focused on community-building.

CNSC's "Nuclear in Your Neighborhood" Video

As part of its mandate, the Canadian Nuclear Safety Commission disseminates objective scientific, technical and regulatory information to the public. To do so, we reach-out to a wide-variety of audiences with a diverse suite of communications products. One of our target audiences includes youth, specifically in host communities. We that by hope by reaching out to these stakeholders early that they become informed and engaged members of the public that take interest in the regulatory role of the CNSC.

The latest online module and video is geared to youth between the ages of 13 and 17. The module and video demonstrate the CNSC's role in ensuring the safe regulation of everyday applications of nuclear materials and energy that surround us. The module users can click on different icons to find out how these substances are used in industry, agriculture and even at flea markets. The video and module are showcased at youth-oriented events such as science fairs, teachers' conferences and community events.

The video can be found online here: www.nuclearsafety.gc.ca/eng/resources/videos/player/index.cfm?videoid=nuclear-in-your-neighbourhood

CNSC Website (28 August 2017), "Nuclear in your neighbourhood", www.nuclearsafety.gc.ca/eng/resources/videos/player/index.cfm?videoid=nuclear-in-your-neighbourhood

"U.S. NRC & Your Community" – the video

The U.S. NRC has an active YouTube channel with dozens of videos created to enhance the public's understanding of the agency's activities, responsibilities and achievements. In 2014, as video topics were being analysed for the following year's production schedule, it was determined that the perspective of who actually makes up the NRC was missing. NRC's Public Affairs staff believed the "people perspective" was being lost in larger conversations about rulemaking, concerns about radiation and the risks and benefits of nuclear power.

So a class of the next generation of NRC leaders – called the Senior Executive Service Candidate Development Program – worked with the Office of Public Affairs to produce a video focusing on the people behind the NRC, and how they help support society as a whole and the communities in which they – and the public – live. This video, accompanied by a branding logo and hand-out materials is being used for outreach during public meetings, workshops, open houses and other public interactions. It is also posted on the agency's YouTube channel here: www.youtube.com/watch?v=DWyzt7CnYfg

For the most part WGPC members found the workshop valuable, with some concrete suggestions for actions and/or confirmation that current policies and practices were sound. Because the panellists were focused on North America, some of the discussions were not directly relevant to members from Europe and Asia. This unavoidable shortcoming is largely addressed by the decision to hold three such workshops focusing each on the specific media and stakeholder groups found in that geographical area, with a realisation that cultural differences would affect the applicability of some recommendations.

It should also be noted that there was not always agreement among the panels on the recommendations offered and some panellists noted shortcomings that were outside the purview of NRO communicators. The lively exchange of information in and of itself, however, strengthens relationships and may serve as a foundation to build trust for the future.

CHAPTER III: ASIAN WORKSHOP IN 2016

The Asian workshop was hosted by the Japanese Nuclear Regulation Authority (NRA) Headquarters on 5 April 2016 in Tokyo, Japan. It was organised in collaboration with the Japanese Nuclear Regulatory Authority, the Korean Nuclear Safety and Security Commission (NSSC), the Korea Institute of Nuclear Safety (KINS) and the Indian Atomic Energy Regulatory Body (AERB).

The morning session entitled "Media expectations of Asian Nuclear Regulatory Organisations (NRO) communications" was dedicated to exchanges with journalists. The afternoon session entitled "Relationship/communications between Asian NROs and regional stakeholders" was devoted to discussions with various stakeholders, including a mayor, a community group leader and evacuee from the Fukushima Daiichi Accident, and experts on risk communication and nuclear law from academia. To obtain a regional perspective, all stakeholders came from the Asian region.

The morning session was moderated by Mr Eliot Brenner, Working Group on Public Communication (WGPC) Chair and Director, Office of Public Affairs, Nuclear Regulatory Commission (NRC). The afternoon session was moderated by Mr Aaron Sheldrick, Thomson Reuters, Japan.

Stakeholders and attendees

The workshop was attended by 40 participants (participants list available in appendix III).

It began with introductory remarks by Dr Nobuhiko Ban, Commissioner of NRA of Japan; and Mr William D. Magwood IV, NEA Director-General. Prior to the beginning of the afternoon session, Ms Yali Cao, Deputy director of the Institute of Information of the Nuclear and Radiation Safety Centre of Ministry of Environmental Protection, People's Republic of China gave a presentation entitled "NNSA's Practice of Public Communication". Experienced and varied stakeholders were invited:

- Mr Aaron Sheldrick, Chief Correspondent, Commodities and Energy, Thomson Reuters, Japan
- Mr Hidehiro Hanada, Nippon Hoso Kyokai (NHK), Japan
- Mr Chun ho Oh, Editorial Writer (Economics, Industries, Science and Technology), The Korea Economic Daily, Korea
- Ms FeiTing Tang, Editor and Journalist, China Environmental News, People's Republic of China
- Mr Yutaka Nose, Mayor of Takahama, Fukui Prefecture, Japan
- Ms Reiko Hachisuka, Head of Commerce and Industry Association of Okuma Town
- Dr Takeshi Iimoto, The University of Tokyo, Japan
- Dr Mulavana Parameswaran Bhattathiry Ram Mohan, Associate Professor, Centre for Post Graduate Legal Studies, TERI University, India

Topical session with the media

The objective of this session was to give opportunity to stakeholders, mainly journalists, to indicate what kind of information they expect from the NROs.

Moderator

Mr Eliot Brenner, WGPC Chair.

Panellists

- Mr Aaron Sheldrick, Thomson Reuters, Japan;
- Mr Hidehiro Hanada, Nippon Hoso Kyokai (NHK), Japan;
- Mr Chun ho Oh, The Korea Economic Daily, Korea;
- Ms FeiTing Tang, Editor and Journalist, China Environmental News, People's Republic of China.

The morning session was divided into five themes with some comments overlapping. This documentation should be read as a synthesis, not as comprehensive minutes.

1. Cultural context

- What are some of the cultural tendencies – possibly distinct from Western culture – that could have an influence on the relationship between media and NROs?

There does not seem to be a major cultural difference when it comes to how the media interacts with governments and NROs. The media decide what they report and take responsibility for providing the public with their own stories.

In Asia, in a very broad sense, there probably is more deference to authority perhaps due to more paternalistic aspects of authority. Building trust with sources requires a lot of effort and personal contacts in comparison with what may be needed in the European or North American context.

2. Constraints, expectations and concerns

- What are the media's constraints in dealing with nuclear technical subjects?
- What do the media expect from NROs in terms of information and how it is provided?
  - What kind of format, level of specification, rapidity and distribution methodology would be appropriate during routine situations, abnormalities reported by licensees, natural events (e.g. earthquakes, volcanoes, tornadoes etc.) and actual radiological/nuclear emergency situations?
  - How would it be treated differently from the information provided by promoters of nuclear energy (government agencies and/or licensees)?
- What are the media's concerns in covering radiological/nuclear events? How can those concerns be addressed by NROs?

Korean media has suffered from the fact that most sources are in English. It is important that translated versions are provided by NROs and other sources.

There are currently plenty of resources available on the internet. One of them is the industry body, the global industry: the World Nuclear Association. Others include the Department of Environment (DRE), the Department of Energy Information, the NRC, and the Nuclear Regulatory Authority (NRA) website. Greenpeace also provides some information, although it has its own agenda.

When journalists recognise that they are dealing with a difficult and complex subject, they want as much information as possible, and quickly. They also want it presented as clearly as possible. During the Fukushima Daiichi Accident, nobody knew what was happening and was anxious. The power utility companies and regulators were not saying anything, but people had the general idea that a nuclear

meltdown could happen when power is lost for several hours. However, the fact that a meltdown did occur was made public only two months later. The danger of this meltdown was not well communicated.

Especially during crises, journalists get information dropped on their desks with no context and without explanation. During the Fukushima Daiichi Accident, even the NRO itself seemed to have trouble interpreting the data coming from the plant, and yet it was shared with the media. The media could not figure out how to use such information. NROs, when failing to interpret or communicate data, should at least be prepared to come up with a sufficiently conservative explanation of what such data could mean, rather than just refraining from commenting.

3. Relations

- How would a positive relationship between journalists and NROs be characterised?
- What could NROs do to build such a relationship (communication team, press officers in NROs)? What might be a hindrance to sustaining such a relationship?

In Japan, *kisha clubs* (press clubs) often can act as a sort of filter for information. Sometimes the media and the ministry or the organisation involved might be too close. The Fukushima nuclear crisis is thought to have brought that out. That said, there has been definite improvement in giving out information and transparency by the NRA, the new Japanese regulator.

The media has a responsibility to report accurate facts to the public, and to do that, they must be able to tell how precise and accurate the information coming from the government and NROs is. Having a close relationship with the NROs is an important factor to enable this.

In China, the government would proofread articles prior to their publishing to ensure accuracy. Journalists belonging to media that is part of the government can enjoy this privilege. That said, how to report when the government is reluctant to make it news, and how to be independent when the government has a chance to review the article prior to publishing is a challenge for Chinese media.

Korean citizens tend to place their trust more in individual experts over the media, so the media tries to find trustworthy experts in the field. This could be a challenge, and a possible area where the NRO could help by providing their information on experts.

The International Atomic Energy Agency (IAEA) told media not to refer to the IAEA as “the international regulator”, but that was how media and the public were seeing IAEA’s role, which was confusing during times when the media needed reliable information.

Workshops like this or media events where NROs would hold a seminar and explain how they will disseminate information when there are changes in procedures or during an emergency would most definitely be welcomed by the media.

4. Perceptions of risk and associated emotions

- As an independent regulator, to what extent should NROs serve the media and the general public on how to perceive risks?
  - What is expected of promoters of nuclear energy (government agencies and/or licensees)?
- How can NROs deal with the emotional nature of the issues they communicate about?
- How can NROs demonstrate that the basic assumptions about nuclear safety are being continuously challenged and re-examined?

Nuclear safety is a subject that is highly complex on its own, without even considering the sociological aspects. It is a subject that seems to cause no small amount of fear among the public, especially in situations like the Fukushima Daiichi Accident. During that time, it was a steep learning

curve for everyone involved along with the respondents. It was also accompanied by one of the world's worst natural disasters in history. There was a huge disaster unfolding on a human scale at the same time that there was this nuclear crisis. No one really knew how bad it was for obvious reasons.

The media tried hard to go back to how radiation could be compared to, for example, a flight from Hong Kong to New York. On the other hand, one foreign media faced issues when presenting that radiation levels in Tokyo was lower than in other cities even after the accident, as it was counter to the fact that employees were leaving Tokyo to go back to their home countries.

At the NRA, risk communication is being practised by the chairman, Dr Tanaka. He expresses his views as the chairman. Even if the nuclear power plant meets the criteria of the regulatory requirements, there is no such thing as absolute safety. Therefore, a continuous approach to enhance safety is required. That is the spirit. However, that message is not fully understood by the general public. They see "further need for improvement" as a sign of "not sufficiently safe".

5. Traditional/social media

- How can NROs use social media to better communicate with the media and the public?
- What is expected of NROs regarding rumours and misinformation transmitted via social media?

Social media has its merits and demerits. NROs could use it as a tool to provide real time monitoring data.

The NRA sends its information via social media, mostly notifications of YouTube broadcasts. This is quick and convenient access to information, and the effort is commendable. However, it should be noted that for the elderly people and those living in the countryside, social media is not an information source. Their sources are newspapers and/or TV.

Topical session with various stakeholders

The objectives of this session was to give opportunity to local stakeholders, such as mayors and members of local community organisations, and members of academia to express their views, needs and expectations concerning NRO's communication.

Moderator

Mr Aaron Sheldrick, Thomson Reuters, Japan.

Panellists

- Mr Yutaka Nose, Mayor of Takahama, Fukui Prefecture, Japan;
- Ms Reiko Hachisuka, Head of Commerce and Industry Association of Okuma Town;
- Dr Takeshi Iimoto, The University of Tokyo, Japan;
- Dr Mulavana Parameswaran Bhattathiry Ram Mohan, Associate Professor, Centre for Post Graduate Legal Studies, TERI University, India.

The panellists made brief introduction presentations to inform participants of their background.

Introduction by Mr Yutaka Nose

Mr Nose presented the status of Takahama town. The town's main industries are agriculture, fishery, tourism and nuclear power generation. There are four units of nuclear power plants in Takahama town. He explained the socio-economic impacts and reactions to the long shutdown period after Fukushima Daiichi nuclear power plant accident. Subsequently, the Takahama plants were approved to restart under the new regulatory requirement set by the NRA, and as the hosting community, the town started its process of agreeing to restart. In parallel to this process, the local court ordered the restart to be suspended. This

situation is very confusing to the town. He highlighted the following points as his expectations of nuclear regulation organisations:

- Timeliness of safety reviews
  - NRA to expedite its review for restarting the plant.
  - NRA to compare its regulatory requirements with other nations, and maintain a realistic level of requirements that matches with global practices.
- Persuasive outreach on new regulations and safety reviews
  - NRA to provide the public with a more persuasive message against the injunction issued by local court.

Introduction by Ms Reiko Hachisuka

Ms Hachisuka recalled her experience of evacuating from her home town, Okuma, in the wake of the Fukushima Daiichi Accident. She stressed that most of the people of the town had not expected anything would go wrong at the nuclear power plant because Okuma town's hosting of the Fukushima Daiichi nuclear plant was advocated by not only Tokyo Electric Power Company (TEPCO) but the central government of Japan as well. Relevant facilities were set up, some for information dissemination, one for dealing with emergencies, but as the accident unfolded, the facility was abandoned due to evacuation orders. The people felt helpless and confused because no one could understand what exactly was going on at the plant when they were given explanations like "an Article 10 event is underway". As the area ordered to evacuate expanded in a matter of hours, and the evacuation procedure wasn't consistent – some were told to use public transport (buses), while others were to use their cars – the townspeople's trust towards the government and TEPCO eroded.

Ms Hachisuka also shared the challenges that evacuees face today, including reputational damage from rumours. She pointed out that too much precautionary measures for the sake of evacuees returning to their homes – such as wearing protective suits to enter their hometown – could send the wrong message about the actual health risks from the dose levels in that area to the general public. Such sentiment will reflect back on evacuees trying to decide whether or not they want to return.

She stressed that there could never be too much information and communication regarding nuclear safety and radiation protection.

Introduction by Dr Takaeshi Imoto

Dr Imoto explained that in the wake of the Fukushima Daiichi Accident, the strong demand for "expert views" and the low supply thereof created a crisis for dissemination of correct and accurate information on risks. In part to prevent this from happening in the future, he introduced results from a long-running opinion survey on public awareness concerning nuclear energy based on Japanese nationwide fixed-points polls, since 2006, for 10 years. He showed that there is a trend to public opinion variations on the use of nuclear energy. He is studying to find an effective way to provide adequate information on safety and risk of nuclear energy to public.

He commented on risk communication as follows:

- Approaches towards the public can be strengthened by focusing on groups with "high high" sociality (groups that show both high levels of awareness and high levels of local action).
- Providing direct explanation to the public in each municipality as the national regulatory authority is important, and doing it repetitively is the key.
- Building a trustful relationship and mutual respect between the national regulatory authority and operators/users has a positive effect on the risk communication to the general public.

- Providing appropriate information beforehand to those who might function as "experts on the topic" during nuclear emergencies is effective.

1. Cultural context

- What are some of the cultural tendencies – possibly distinct from Western culture – that impact the relationship between a stakeholder and NROs?

Before the Fukushima Accident occurred, many Japanese people did not know or worry about nuclear safety because the word 'safety' was used together with "relief" or "reassurance", and there were wide spread notions that everything was kept safe. After the accident, many scrambled to comprehend the various terminologies involved in nuclear safety, including local governments. The demand for information seemed to be consistently stronger than the supply of appropriate information from both the government and utilities. Once the trust was lost, there were people who suffered economic and health loss out of their own overreaction and too much anxiety, rather than actual impacts from radiation exposure.

In times of accidents, studies showed that people tend to believe in information from public broadcasting. However, in a stable situation, the most popular channel of information turned out to be local newspapers or the local community publication because it is more suited to their daily concerns and needs.

In India, debates in the parliament were mainly about the budget of nuclear energy and there were few questions on nuclear safety before the Fukushima Accident. That the nuclear programme was part of a national project could be one factor for safety not being scrutinised. In India, there are 29 states and 29 different languages. Some states are much richer or educated than others. Therefore, it would be difficult for states which are less educated or which are in the tribal regions to accept information regarding nuclear issue such as uranium mine.

2. Constraints, expectations and concerns

- What kind of constraints might the stakeholder groups face in dealing with nuclear technical subjects?
- What might the stakeholder groups expect from NROs in terms of information and how they are provided?
  - What kind of format, level of specification, rapidity and distribution methodology would be appropriate during: routine situations, abnormalities reported by licensees, natural events (e.g. earthquakes, volcanoes, tornadoes etc.), and actual radiological/nuclear emergency situations?
  - How would it be treated differently from the information provided by promoters of nuclear energy (government agencies and/or licensees)?
- What are some examples of stakeholder groups' policies and interactions with the public?

The local government must think and act based on how to appropriately deliver information on nuclear safety to its citizens. Takahama Town requested that the NRA create an explanatory video to broadcast within the community, and this proved to be effective in stressing the importance of informed decision making regarding issues of nuclear power plant restarts.

Prior to the accident, local citizens were provided with information from the licensee but they rarely had the opportunity to visit the nuclear plant. Now, TEPCO provides evacuees with monthly newsletters, but some feel that they are being water hosed with information, and a more personalised and tailored method of communication is required to rebuild trust, especially upon deciding whether they could return to their homes or not.

Given that people's level of awareness is volatile, one answer to disseminating basic but accurate information to the general public could be through the educational system. After the Fukushima Accident, educational programmes for radiation safety have revived nationwide in Japan, and the students are becoming accustomed to units of measurements such as Sievert's and Becquerel's. This takes a great deal of burden off the government, utilities, media, etc. in times of nuclear emergencies.

In some communities, nuclear and radiation safety have been parts of compulsory educational programmes long before the Fukushima Accident. However, witnessing what unfolded during the accident, it seems to have had a very limited effect on the local population's level of awareness and behaviour. It is a matter of life or death, so there can never be too much information dissemination.

3. Relations

- How could a positive relationship between stakeholder groups and NROs be characterised?
- What could NROs do to build such a relationship? What might be a hindrance to sustaining such a relationship?

In Japan, the local government has been exchanging opinions with local citizens groups very frequently after Fukushima accident, and the quality of information has improved.

India's national nuclear generating capacity is currently only 4 000 megawatt so that Indian people do not understand or pay attention to nuclear experts. India will upscale its capacity to around 25 000 megawatt in the next 20 years. They need to change the mode of communication with the public.

To make information on nuclear energy interesting and relevant to the public, the kind of opportunities and benefits that would be accrued to the communities such as employment, access to health facilities, education and so on is also important.

In order to gain public trust, NROs should have an agency that keeps them under surveillance so that they can find and correct any faults.

Having an abundance of skilled and talented staff with rich experience and knowledge is essential for gaining trust and respect from licensees. In stable times of nuclear operation, NROs have to work with the licensees so NROs should pay them respect and vice versa, in a way that reinforces the safety culture in both sides.

The local government does not have many opportunities to talk to NROs directly.

4. Perceptions of risk and associated emotions

- How can stakeholder groups help accurately translate risk to the general public?
- How can stakeholder groups deal with the emotional nature of the issues they communicate about, and how can NROs help them in doing so?

After the Fukushima accident, the local media near Takahama announced measurements of dose levels by area every day, so even when the actual risk was not correctly understood, people had a general idea of where was safer. This was a great source of bringing peace to their minds.

The national government must nurture people who have the necessary skills to handle risk communication.

People living in the three-kilometre radius from the nuclear power plant in Fukushima Daiichi had the opportunity to take part in an annual evacuation drill. However, people who live farther away had never participated in the evacuation drill. Nowadays, there is a strong demand to take part in the drill and to understand the procedure for evacuation. At the same time, the planning of the evacuation is under scrutiny. Some are saying NROs could play a role in the various local evacuation planning.

5. Traditional and social media

- How can NROs use social media to better communicate with the media and the public?
- What is expected of NROs regarding rumours and misinformation transmitted via social media?
- What role would stakeholder groups play in countering misinformation?

In the current local town in Fukushima prefecture, there is a Public Relations (PR) publication to describe the current situation of the nuclear power plant. TEPCO explains every month in a brochure about the status of the nuclear power plant and what kind of work is being done. However, more popular modes of media are television programmes and newspapers. For older generations, use of social media is not a matter of strong attention.

At the time of the accident, there was very little information and the public could only get it from television. The newspapers provided exaggerated information. Later, the people discovered that the announcement being done on Japanese television by the government was quite different from what was actually happening in the nuclear power plant. That created an environment where the source of reliable information could not be distinguished from those sources disseminating misinformation.

After the accident, people are looking towards social media for quick information. In doing so, however, most people seem to have a healthy level of scepticism and know that not all information is correct. The primary value is the speed of obtaining the information for those using social media.

Social media is more suitable for simple communication rather than traditional communication. NROs should use more of this tool, and not use it only for sharing notices about decisions which have been already made. Trying to communicate large volumes of information should also be restrained.

In India, the language of communication is difficult because NROs need to communicate in 29 official languages.

6. Public involvement and risk culture

- How can stakeholder groups help instigate a risk culture and avoid a prevalence of the "safety myth"? (e.g. public debates, consultations, working group, etc.)

The fact that hosting a nuclear power station could be dangerous was not communicated by the government or utility during the time of deciding to host or not. It is difficult for citizens to determine the accuracy and completeness of the information provided.

Before the accident, authorities tried to convey the nuclear energy issue with some other appealing information, such as cooking lessons, in order to attract people not interested in nuclear. After the accident, some local Japanese governments, with the help of local groups, prepared textbooks for children to study about nuclear power.

Providing basic nuclear safety education in schools should be considered. Making the basic mechanisms of nuclear reactors and units of measurements for radioactivity common knowledge would create a much better environment for discussion.

After the accident, we are becoming aware that there are benefits and there are risks. We should have been educated about the risk. Risk-informed residents would be better prepared during an evacuation. This information should be communicated to the people as much as possible in light of how so many lives were affected.

7. Presentation from China

Prior to the beginning of the afternoon session, Ms Yali Cao, Deputy Director of the Institute of Information of the Nuclear and Radiation Safety Centre of Ministry of Environmental Protection, People's Republic of China gave a presentation entitled "NNSA's Practice of Public Communication".

Ms Cao presented a general introduction of National Nuclear Security Administration (NNSA). NNSA is China's regulatory body responsible for the safety of nuclear installations, nuclear activities, nuclear and radioactive materials and the response to radiological environment management. After the Fukushima Daiichi nuclear accident in 2011, NNSA emphasised that public confidence building in nuclear safety is one of their important work.

NNSA's outreach activities include creating a multimedia platform for public communication on nuclear safety. People can go to the online library and obtain information on nuclear safety and radioactive protection. NNSA also has an official WeChat account (a Chinese web service similar to Twitter) to have a two-way communication with the general public.

Conclusions

1. Conclusion on topical session with media

The discussions that took place between panellists, the moderator and WGPC members were open, frank and lively. While the discussions did not strictly follow the five topic areas nor explicitly cover every question raised for each topic, many of the points raised had cross-cutting aspects, and can be summarised as follows.

Cultural context

The infrastructure for media reporting and relationship between media and NROs are basically the same as European and North American counterparts, wherein the media independently gathers its information, makes its own evaluation of credibility and accuracy, and takes responsibility for what it reports. That said, some general cultural traits were raised by panellists. For example, Asian media relatively seem to have more proximity and show deference to the government, and the relationship building process with individual sources may involve significant personal level interactions. Some WGPC members noted that Asian media may be more passive and receptive to information provided by the government than Western counterparts.

Constraints, expectations and concerns

Language was consistently raised as an issue by panellists. One panellist mentioned the NROs could help provide the public and the media with more international documents regarding nuclear safety translated into their own language. There was common understanding that significant amount of useful information can be found on the internet. As with the previous regional workshops, the importance of timeliness, accuracy and level of transparency was stressed. In addition, the panellists emphasised the importance of NROs giving context to the information and/or data they present, especially in times of emergencies as was the case during the Fukushima Daiichi Accident. In discussions with the WGPC members, the participants shared the challenge of obtaining the public's interest towards reports on nuclear safety during "peace time", especially when they are "good news".

Relations

Many WGPC members noted that the Asian media seem to be very close – possibly too close – to the government and NROs compared to European and North American standards. That the Chinese government would proof read articles prior to publishing when necessary, seemed to be received by most

WGPC members with a surprise. Elsewhere, the need to cultivate the relationship with government and NROs because it impacts the quality of information they receive and the media's capacity to evaluate the accuracy of that information was raised by some panellists. One panellist noted that the IAEA'ss role is unclear, mentioning that it is often referred to as an "international regulator", suggesting that it entails the expectation that the IAEA can provide an independent assessment of nuclear incidents and accident, when in reality, this is not the case. From the discussions, some WGPC members felt that Asian media are challenged with a reliable pool of experts that can provide their views and comments independent of both industry and government.

Perceptions of risk and associated emotions

The main focus regarding this topic was various countries' reactions to the Fukushima Daiichi Accident. A panellist explained his experience as a "steep learning curve" in nuclear power plant designs and radiation protection, amidst dealing with the chaos from the earthquake and its aftershocks. The media tried to use simple comparisons of radiation exposures such as Computed Tomography (CT) scans and long haul flights, and found them helpful for the public, but the government and operators were presenting readings of certain measurements without a clear explanation of how to interpret them. Through the discussions, the need for NROs to have a strategy on how to explain to the general public when the information at hand is limited and/or difficult to interpret was recognised. The notion of "continuous improvement to nuclear safety" can be confusing too, as some see it as a sign that safety is not sufficiently achieved.

Traditional and social media

Social media is increasingly becoming a useful information gathering tool for the media, but the media must acknowledge that it is just one of many options to obtain information and steps to verify it needs to be taken. On the other hand, governments and NROs must recognise that social media's outreach has its limitations, both for geographical and generational reasons, in light of the rate of smartphone adoption.

2. Conclusion on topical session with various stakeholders

The discussions that took place between panellists, the moderator and WGPC members were open, frank and lively. Ms Hachisuka's first-hand story of her life in a nuclear power plant hosting community and the eventual evacuation was a valuable input for all those present. While the discussions did not strictly follow the six topic areas nor explicitly cover every question raised for each topic, many of the points raised had cross-cutting aspects, and can be summarised as follows.

Cultural context

In Japan, the word meaning safety ("*anzen"*) was often used in combination with the word meaning relief or reassurance ("anshin"), which led to a nationwide "safety myth" that nothing would go wrong. Some WGPC members noted that they felt the potential risks of stressing safety excessively. Others pointed out that the stronger the conviction, once an accident occurs, a communication based on trust will be lost quickly and completely. People's behaviours could also prove to be a greater risk factor than radiation exposure, and this has to be taken into account by communication divisions of NROs. A member noted the value of having a public broadcasting network as an information source that benefits from a relatively higher level of trust than other media. In the case of India, the lesson is that regional difference in levels of development needs to be taken into account when considering effective modes of communication. Another member noted the possible existence of the same cultural tendency raised during the morning session among journalists in which recipients of information tend to be more passive and receptive towards the government in comparison to Western cultures.

Constraints, expectations and concerns

Many WGPC members had similar concerns on how to engage with an uninterested public. Some noted it worthwhile to consider compulsory education, as was stressed by one of the panellists. Others noted that having an education programme itself is not sufficient, and whether the teachings were effective or not must be evaluated in some form, e.g. regular evacuation drills for local residents. Several commented that NRA's response to Takahama Town's request to make a video presentation for the residents on its decision to approve the Takahama plants' restarts is an example of good practice to customise information for target audiences.

Relations

The local government can take initiative in promoting discussions among local residents. That said, local governments do not have the kind of skills and experience on nuclear safety communication, which is where NROs could play a role. Some WGPC members emphasised the need for NROs to engage in detailed and targeted, interactive discussions and not just be one-sided providers of information.

Perceptions of risk and associated emotions

Even if the public is not well versed to understand the implications, a regular publication of spreadsheets with measurements could be a source of relief. A WGPC member pointed out that regular publication of measurements would be trusted if this was consistently done in both stable times and in emergencies. One member felt it important that NROs have a pool of third party experts who can be relied for accurate comments to tackle misinformation.

Traditional and social media

Social media is good at getting information quickly, bad at distinguishing trustworthy information. Some members noted that there will be age gaps, technology gaps and that social media could only serve as a subsidiary mode of communication. That said, others noted that if there is recognition about such tendencies of social media among both NROs and the public, it would be an effective tool for targeted communication.

Public involvement and risk culture

In times of making the decision to host a nuclear power plant or not, it is difficult for local residents to determine the accuracy and completeness of the information provided by utilities and the government. Some members noted that such processes would warrant NRO participation from an early stage in their countries. Others had concerns that NROs must restrain itself from certain types of information dissemination activities so as not be seen or interpreted as promoting the use of nuclear. Some noted that educational systems do not have enough capacity for nuclear safety education, which is where stakeholder groups could play an important role. Many members reiterated that this is indeed a matter of life and death for the local residents, and should have the attention it deserves from various stakeholders, especially the licensees.

APPENDIX I: PARTICIPANTS LIST FOR 16th WGPC MEETING AND EUROPEAN WORKSHOP IN 2014

French Nuclear Safety Authority (ASN) headquarters
Montrouge (Paris), France -
9 April 2014

Austria	Eva	Gratzer-heilingsetzer	Federal Ministry of Agriculture, Forestry, Environment and Water Management
	Katharina	Stangl	Federal Ministry of Agriculture, Forestry, Environment and Water Management
Belgium	Céline	Faidherbe	Agence Federale du Controle Nucleaire
	Benoit	Ramacker	
	Jeroen	Van horenbeek	
Canada	Aurèle	Gervais	Canadian Nuclear Safety Commission
	Sunni	Locatelli	Canadian Nuclear Safety Commission
Finland	Risto	Isaksson	Radiation and Nuclear Safety Authority (STUK)
France	Marie-Christine	Bardet	Nuclear Safety Authority (ASN)
	Emmanuel	Bouchot	Nuclear Safety Authority (ASN)
	Michel	Bourguignon	Nuclear Safety Authority (ASN)
	Fabienne	Cadenat	TNS Sofres
	Estelle	Cauvin	Nuclear Safety Authority (ASN)
	Anne-Isabelle	De la bourdonnaye	Nuclear Safety Authority (ASN)
	Nathalie	Clipet	Nuclear Safety Authority (ASN)
	Alain	Delmestre	
	Olivier	Javay	
	Yves	Lheureux	ANCCLI
	Ann	Maclachlan	
	Thomas	Mieusset	Nuclear Safety Authority (ASN)
	Isabelle	Oudot-klein	Equaero
	Evangelia	Petit	Nuclear Safety Authority (ASN)
	Michel	Rose	Thomson Reuters
	Yannick	Rousselet	Greenpeace France
Germany	Roland	Styranowski	Bundesministerium für Umwelt Naturschutz Bau und Reaktorsicherheit
	Deniz	Yüksel	Bundesministerium für Umwelt Naturschutz Bau und Reaktorsicherheit
Hungary	Gábor	Körmendi	Hungarian Atomic Energy Authority (HAEA)
Japan	Yoshiko	Aoyama	Nuclear Regulation Authority (NRA)
Korea (	Yeonhee	Hah	Korea Institute of Nuclear Safety (KINS)
Norway	Ann Marit	Skjold	Norwegian Radiation Protection Authority (NRPA)
Poland	Bartosz	Sklodowski	National Atomic Energy Agency
Russia	Pavel	Kharlampiev	Nuclear Regulatory Authority (Gosnadzor)
	Ilona	Polyachek	Nuclear Regulatory Authority (Gosnadzor)

Slovak Republic	Ladislav	Ehn	Kalna nad Hronom
	Igor	Gogora	Kalna nad Hronom
	Dagmar	Zemanova	Slovak Nuclear Regulatory Authority (UJD)
Spain	Eva	González Herrero	Europa Press Noticias
	Angel	Laso d'lom	Nuclear Safety Council (CSN)
	Adriana	Scialdone García	Nuclear Safety Council (CSN)
Sweden	Malin	Naas	Swedish Radiation Safety Authority (SSM)
	David	Persson	Swedish Radiation Safety Authority (SSM)
	Anna-Lena	Söderblom	Östhammars kommun
	Margareta	Widen-berggren	Östhammars kommun
Switzerland	Anton	Treier	Swiss Federal Nuclear Safety Inspectorate (ENSI)
United States	Eliot	Brenner	Nuclear Regulatory Commission (NRC)
	Holly	Harrington	Nuclear Regulatory Commission (NRC)
Nuclear Energy Agency (NEA)	Edward	Lazo	
	Aurélie	Lorin	

APPENDIX II: PARTICIPANTS LIST FOR 17th WGPC MEETING AND NORTH AMERICAN WORKSHOP IN 2015

Rockville, MD, USA
1 April 2015

Canada	Aurèle	Gervais	Canadian Nuclear Safety Commission
	Sunni	Locatelli	Canadian Nuclear Safety Commission
	Shawn	Mccarthy	Globe and Mail
	Shawn-Patrick	Stensil	Greenpeace
	Linda	Thompson	Xplornet
Finland	Risto	Isaksson	Radiation and Nuclear Safety Authority (STUK)
	Kaisa	Raitio	Radiation and Nuclear Safety Authority (STUK)
France	Emmanuel	Bouchot	Nuclear Safety Authority (ASN)
	Alain	Delmestre	Nuclear Safety Authority (ASN)
Germany	Deniz	Yüksel	Bundesministerium für Umwelt Naturschutz Bau und Reaktorsicherheit
Hungary	Gábor	Körmendi	Hungarian Atomic Energy Authority (HAEA)
Japan	Go	Kobayashi	Nuclear Regulation Authority (NRA)
	Yoshiko	Aoyama	Nuclear Regulation Authority (NRA)
Slovak Republic	Dagmar	Zemanova	Slovak Nuclear Regulatory Authority (ÚJD)
Spain	Angel	Laso d'lom	Nuclear Safety Council (CSN)
	Adriana	Scialdone García	Nuclear Safety Council (CSN)
Sweden	Andreas	Von Schmalensee	Swedish Radiation Safety Authority
Switzerland	Sebastian	Hueber	Swiss Federal Nuclear Safety Inspectorate (ENSI)
	Anton	Treier	Swiss Federal Nuclear Safety Inspectorate (ENSI)
United States	Ann	Bisconti	Bisconti Research, Inc.
	Eliot	Brenner	Nuclear Regulatory Commission (NRC)

	Scott	Burnell	Nuclear Regulatory Commission (NRC)
	Stephen	G. Burns	Nuclear Regulatory Commission (NRC)
	Maureen	Conley	Nuclear Regulatory Commission (NRC)
	Ivonne	Couret	Nuclear Regulatory Commission (NRC)
	Steven	Dolley	PLATTS
	Geraldine	Fehst	Nuclear Regulatory Commission (NRC)
	Paul	Gunter	Beyond Nuclear
	Roger	Hannah	Nuclear Regulatory Commission (NRC)
	Holly	Harrington	Nuclear Regulatory Commission (NRC)
	David	Mcintyre	Nuclear Regulatory Commission (NRC)
	Scott	Peterson	Nuclear Energy Institute (NEI)
	Lance	Rakovan	Nuclear Regulatory Commission (NRC)
	Jennifer	Schwartman Holzman	Nuclear Regulatory Commission (NRC)
	Diane	Screnci	Nuclear Regulatory Commission (NRC)
	Neil	Sheehan	Nuclear Regulatory Commission (NRC)
	Glenn	Tracy	Nuclear Regulatory Commission (NRC)
	Lara	Uselding	Nuclear Regulatory Commission (NRC)
	Matt	Wald	
	Stephanie	West	Nuclear Regulatory Commission (NRC)
	Jessica	Wieder	Radiation Protection Programme (EPA)
	Daniel	Yurman	
International Atomic Energy Agency (IAEA)	Bushra	Nasim	
Nuclear Energy Agency (NEA)	Aurélie	Lorin	
	William	Magwood	

APPENDIX III PARTICIPANTS LIST FOR 18th WGPC MEETING AND ASIAN WORKSHOP IN 2016

Tokyo, Japan
5 April 2016

Canada	Sunni	Locatelli	Canadian Nuclear Safety Commission
Finland	Kaisa	Raitio	Radiation and Nuclear Safety Authority (STUK)
France	Emmanuel	Bouchot	Nuclear Safety Authority (ASN)
	Alain	Delmestre	Nuclear Safety Authority (ASN)
Hungary	Gábor	Körmendi	Hungarian Atomic Energy Authority (HAEA)
Japan	Masahiro	Aoki	Nuclear Regulation Authority (NRA)
	Nobuhiko	Ban	Nuclear Regulation Authority (NRA)
	Shinji	Kinjo	Nuclear Regulation Authority (NRA)
	Go	Kobayashi	Nuclear Regulation Authority (NRA)
	Yoshiko	Aoyama	Nuclear Regulation Authority (NRA)
	Reiko	Hachisuka	Association of Okuma Town
	Hidehiro	Hanada	Nippon Hoso Kyokai NHK
	Takeshi	Iimoto	University of Tokyo
	Megumi	Naito	Nuclear Regulation Authority (NRA)
	Yutaka	Nose	Takahama, Fukui Prefecture
	Aaron	Sheldrick	Thomson Reuters Markets KK
Korea	Choon	Ho OH	The Korea Economic Daily
	Eun-Jung	Shim	Korean Nuclear Safety and Security Commission
	Donghee	Yeo	Korea Institute of Nuclear Safety (KINS)
Norway	Synne Margrethe	Egset	Norwegian Radiation Protection Authority (NRPA)
	Anne Marit	Skjold	Norwegian Radiation Protection Authority (NRPA)
Poland	Bartosz	Sklodowski	National Atomic Energy Agency
Slovak Republic	Dagmar	Zemanova	Slovak nuclear regulatory authority (ÚJD)
Spain	Angel	Laso d'Iom	
	Adriana	Scialdone García	Safety Security Council
Sweden	Andreas	Von Schmalensee	Swedish Radiation Safety Authority
Switzerland	Sebastian	Hueber	Swiss Federal Nuclear Safety Inspectorate
United states	Eliot	Brenner	Nuclear Regulatory Commission (NRC)

	Holly	Harrington	Nuclear Regulatory Commission (NRC)
India	Kulkarni	Hemant	Atomic Energy Regulatory Board
	Mulavana Parameswaran Bhattathiry Ram	Mohan	The Energy and Resources Institute (TERI)
China	Yali	Cao	Nuclear and Radiation Safety Centre of Ministry of Environmental
	Lianjun	Sun	Nuclear and Radiation Safety Regulatory Body of Jiangsu Province, China Nuclear and Radiation Safety
	Feiting	Tang	China Environmental News
International Atomic Energy Agency (IAEA)	Patrick	Meschenmoser	Department of nuclear safety and security
Nuclear Energy Agency (NEA)	Marine	Formentini	
	Yeonhee	Hah	
	Naoko	Inadome	
	William D., IV	Magwood	
	Takayoshi	Nezuka	