IAEA
International Atomic Energy Agency
Incident and Emergency Centre

MEETING REPORT
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Prepared by: Technical Secretary
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EIGHTH MEETING OF THE REPRESENTATIVES OF COMPETENT AUTHORITIES IDENTIFIED UNDER THE CONVENTION ON EARLY NOTIFICATION OF A NUCLEAR ACCIDENT AND THE CONVENTION ON ASSISTANCE IN THE CASE OF A NUCLEAR ACCIDENT OR RADIOLOGICAL EMERGENCY

REPORT OF THE EIGHTH MEETING

Summary

The Eighth Meeting of Competent Authorities was convened by the IAEA Secretariat at IAEA Headquarters, Vienna, Austria, from 6 to 10 June 2016. Mr C.-M. Larsson, CEO, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), chaired the Meeting. A total of 146 participants from 84 States and 6 international intergovernmental organizations attended the Meeting.

The Meeting reviewed the implementation of conclusions from the Seventh Meeting and welcomed the reports on the EPR Conference 2015 and the Fukushima Daiichi Accident Report by the Director General and its five technical volumes.

The Meeting acknowledged the information provided on the IAEA's newly established Emergency Preparedness and Response Standards Committee (EPReSC), on the new publication *Preparedness and Response for a Nuclear or Radiological Emergency*, General Safety Requirements, IAEA Safety Standards Series No. GSR Part 7 and on European legislation in the area of emergency preparedness and response.

Selected competent authorities presented their national arrangements for communication with the public; arrangements for domestic and international notification and information exchange in nuclear or radiological emergencies, including those triggered by nuclear security event; arrangements for requesting and receiving international assistance in case of nuclear or radiological emergencies;, and training and exercise activities in EPR. They also shared information on improvements in EPR arrangements made on the basis of lessons from the Fukushima Daiichi accident.

The IAEA's Incident and Emergency Centre (IEC) presented the progress made in the development of the IAEA assessment and prognosis process, assessment and prognosis tools and the remaining challenges. Selected competent authorities presented their national assessment and prognosis programmes and/or experience gained in exercises with the IAEA.

Finally, the system, arrangements and future development of the International Radiation Monitoring Information System (IRMIS) were discussed.

The Meeting completed all agenda items, and a total of 15 Meeting conclusions with associated action items were endorsed.

The Ninth Competent Authorities Meeting will be held from 18 to 22 June 2018.

CONTENTS

INTRODUCTION

1. The Eighth Meeting of Representatives of Competent Authorities (CAs) identified in accordance with the Convention on Early Notification of a Nuclear Accident (Early Notification Convention) and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Assistance Convention) took place in Vienna from 6 to 10 June 2016 at the invitation of the International Atomic Energy Agency.

2. In all, 139 representatives of competent authorities from 84 States, and 7 representatives from 6 international intergovernmental organizations, attended the Eighth Meeting. The list of participants is provided in Appendix I.

3. The following documents and reports were prepared and made available to participants:

Meeting Documents	
CAM/DOC/2016/00	Provisional Meeting Agenda
CAM/DOC/2016/01	Outcomes from the CAM-2014
CAM/DOC/2016/02	Progress Report on the IAEA Assessment and Prognosis
CAM/DOC/2016/03	Progress Report on the ConvEx-3 (2017) Exercise Preparation
CAM/DOC/2016/04	International Radiation Monitoring Information System (IRMIS)
CAM/DOC/2016/05	IEC activities since the CAM-2014

Reports available on the IAEA website	
EPR Conference 2015	http://www-pub.iaea.org/iaeameetings/45986/International-Conference-on-Global-Emergency-Preparedness-and-Response
Assessment and Prognosis in Response to a Nuclear or Radiological Emergency	https://www.iaea.org/sites/default/files/iem9-assessment-and-prognosis.pdf.pdf
The Fukushima Daiichi Accident	http://www-pub.iaea.org/books/IAEABooks/10962/The-Fukushima-Daiichi-Accident

4. The following Meeting side events were also prepared and conducted: the Fourth Regular RANET Meeting; a display of IAEA guidelines and tools in EPR; and workshops on the EPR Information Management System (EPRIMS), the Unified System for Information Exchange in Incidents and Emergencies (USIE), the International Radiation Monitoring Information System (IRMIS) and the IAEA assessment and prognosis in an emergency.

5. All Meeting presentations are available at:

https://nucleus.iaea.org/sites/iec/cam/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2Fsites%2Fiec%2Fcam%2FShared%20Documents%2FCAM%202016%2FPresentations&FolderCTID=0x0120004D0CE84A9BE1CC45B82383DFE1FA1676&View=%7B8F23BA65%2D1EE4%2D445C%2D9EF3%2DA0E37135FFB2%7D

1. OPENING OF THE MEETING

6. Mr Juan Carlos Lentijo, Deputy Director General, Head of the Department of Nuclear Safety and Security, IAEA (DDG-NS), opened the Meeting and expressed the IAEA's appreciation for the wide range of cooperation in providing experts and resources to the IAEA for implementation of its programme in nuclear safety and security. On behalf of the IAEA, he expressed his gratitude to Hungary for its willingness to host forthcoming the ConvEx-3 (2017) exercise. Mr Lentijo stressed that many observations and lessons were identified in response to the Fukushima Daiichi nuclear accident, as reflected in the IAEA Report. Five years after the accident, it was time to discuss which corrective actions at the national and international levels had been implemented or still needed to be

implemented. He concluded his opening address by wishing all participants a constructive and productive meeting. Mr Lentijo's Opening Address can be found in Appendix II.

7. Ms Elena Buglova, Head, Incident and Emergency Centre (IEC), IAEA, welcomed the participants and introduced Mr Carl-Magnus Larsson as chairman of the meeting. Mr Larsson is the CEO of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

8. Mr Larsson expressed his appreciation for being given the opportunity to chair such an important meeting. He noted significant development in the EPR area, citing specifically the establishment of the Emergency Preparedness and Response Standards Committee (EPReSC) as a fifth Safety Standards committee at the IAEA. He also emphasized the need for a coherent approach to dealing with incidents and emergencies and the need to avoid fragmentation in how to deal with the prevention, preparedness for and response to such events. The Chairman's Introductory Remarks are given in Appendix III.

9. Ms Buglova, the Scientific Secretary of the Meeting, presented the Meeting's objectives and expectations and explained its logistics. She emphasized that this was not a meeting of the Parties to the Early Notification and Assistance Conventions but a technical meeting of representatives of competent authorities identified according to both conventions. Since EPR is universal, all States and relevant international organizations were invited to attend the Meeting.

10. Mr Larsson explained the provisional Meeting Agenda and asked if any changes or corrections were needed. The Meeting Agenda was adopted with minor changes and as such is provided in Appendix IV.

2. REPORTS TO THE MEETING

11. Mr R. Martincic, IAEA, presented the progress made in implementing the 23 conclusions reached at the Seventh Competent Authorities Meeting held in 2014. Ten conclusions were implemented, 5 conclusions did not require any specific action, while the implementation of 8 conclusions is in progress.

12. Ms Buglova summarized the report on the EPR Conference 2015 that had taken place at IAEA Headquarters from 19 to 23 October 2015 in cooperation with 13 international intergovernmental organizations. The conference had provided a forum for networking and exchange of information and experiences and had promoted effective preparedness as a key to efficient response. In particular, it had brought together officials responsible for EPR, experts in nuclear safety and nuclear security, emergency responders, as well as relevant stakeholders. It had also provided opportunities to refresh and update knowledge in specific areas of EPR; to deliberate on challenges and priorities in EPR in round table discussions; and to visit the IEC's operational area. The conference was attended by over 420 participants from 82 States and 18 international organizations. In addition, six international organizations, 13 companies and two Member States that were registered in RANET prepared displays, exhibits and demonstrations of instruments, publications, educational tools and assessment methods and tools.

13. Mr G. Caruso, IAEA, presented the Report by the IAEA Director General on the Fukushima Daiichi Accident and its five technical volumes, which had been released at the 59th IAEA General Conference in September 2015. In the report, 45 key observations and lessons are highlighted, and Mr Caruso pointed out that the legacy of the accident has been a sharper focus on nuclear safety everywhere.

14. The Meeting noted all three reports and welcomed the work done. Representatives of the competent authorities of Brazil, Canada, Iran, Ireland and the Russian Federation took part in the ensuing discussion. With one exception, all issues raised were connected with the IAEA's comprehensive report on the Fukushima Daiichi accident.

The representative of the Russian Federation stressed the importance of national EPR reports for sharing the EPR experience that was gained during the two year period between the meetings of the

competent authorities and proposed to continue with the practice introduced at the Seventh meeting. The point was noted.

3. SAFETY STANDARDS IN EPR

15. Ms A. Heinrich, United States of America (USA), explained the role of the newly established Emergency Preparedness and Response Standards Committee (EPReSC) within the IAEA system for the development and establishment of IAEA safety standards. She also presented the EPReSC work programme and the priorities of its current term.

16. In November 2015, the IAEA issued a new General Safety Requirements publication, *Preparedness and Response for a Nuclear or Radiological Emergency*, IAEA Safety Standards Series No. GSR Part 7. It has been sponsored by 13 international intergovernmental organizations and replaces IAEA Safety Standards Series No GS-R-2. Mr M. Breitinger, IAEA, presented the main changes and highlighted the improved consistency in terminology, the new or strengthened concepts and the interface with nuclear security in EPR.

17. Mr C. Constantinou, DG ENER, Directorate D – Nuclear Energy, Safety and ITER, Unit D3 – Radiological Protection and Nuclear Safety, European Commission (EC), gave an overview of the European Union (EU) legislation on EPR, based on the Euratom Treaty and consisting of Regulations (binding for all EU Member States), Directives (binding for all EU Member States through their own national laws), Decisions (binding for those Member States to whom they are addressed) and Recommendations (non-binding).

18. The Meeting noted all three presentations. In the discussions, representatives from Brazil, Canada, China, Germany, the IAEA, India, Nigeria and South Africa raised questions and offered comments. All questions and comments concerned General Safety Requirements GSR Part 7.

4. COMMUNICATION WITH THE PUBLIC IN AN EMERGENCY

19. The following representatives presented their national arrangements for communication with the public in an emergency: Ms W. Bakr, Egypt, Mr S. Muston, Australia, Mr K. Dabrowski, Poland, and Mr F. Al Bloushi, United Arab Emirates.

20. The meeting noted all the presentations. The representatives of the following competent authorities and international organizations participated in the discussion: Australia, Austria, Brazil, Canada, Egypt, Finland, France, IAEA, India, Iran, Ireland, Japan, Poland and United Arab Emirates (UAE). The main topics of the discussion were the emerging importance of the social media in emergencies; plain language communication with the public; risk perception and fear; education of the media; and gaining public trust in advance of an emergency.

5. INFORMATION EXCHANGE IN AN EMERGENCY

21. Ms M. Bailey, USA, Ms H. Chuda, Czech Republic, Mr D. Rauber, Switzerland, Mr M. N. Hussain, Pakistan, and Mr J. Kuhlen, Germany, presented their countries' national arrangements for information exchange in an emergency.

22. Ms H. Aaltonen, Finland, presented the case of caesium-137 contamination at the premises of Finland's Radiation and Nuclear Safety Authority (STUK) that occurred in March 2016. Mr F. Baciu, IAEA, summarized the outcomes of the Technical Meeting on Information Exchange during Nuclear or Radiological Incidents and Emergencies, held at IAEA Headquarters from 4 to 8 April 2016.

23. The meeting noted all the presentations. The following representatives participated in the discussion: Brazil, Bosnia and Herzegovina, Czech Republic, China, European Commission, Finland, IAEA, India, Iran, Ireland, Japan, Luxembourg, Nuclear Energy Agency of the Organisation for

Economic Co-Operation and Development (OECD/NEA), Nigeria, Tanzania, UAE and USA. The main topics of discussion were the establishment of common criteria for protective actions; prompt exchange of information among neighbouring countries and among experts; and language issues in the prompt exchange of information and ways to overcome them.

6. INTERNATIONAL ASSISTANCE IN AN EMERGENCY

24. Mr B. Yao, China, Mr S.-Y. Jeong, Republic of Korea, Mr A. Cortés Carmona, Mexico, Mr I. Sambo, Nigeria, and Mr P. Hofer, Austria, presented their countries' national arrangements for international assistance in an emergency.

25. Mr S. Vasilev, Russian Federation, introduced the system of preparedness and response to nuclear and radiological emergencies of the State Atomic Energy Corporation ROSATOM; Mr P. Wasiolek, USA, presented international assistance capabilities using aerial measuring systems; Mr R. dos Santos, Brazil, described an example of the registration process of National Assistance Capabilities (NAC) in the IAEA Response and Assistance Network (RANET); and Mr J.-F. Dodeman, France, presented the enhancements made to the French radiation emergency medicine arrangements to support international assistance.

26. Mr P. Kenny, IAEA, summarized the forthcoming new publication in the EPR Series, *Guidelines for the Harmonization of Response and Assistance Capabilities,* and the plans to support their implementation.

27. The meeting noted all the presentations. The following representatives participated in the discussion: Bangladesh, Bosnia and Herzegovina, Brazil, Canada, China, Germany, Ghana, India, Iran, Japan, Republic of Korea, Madagascar, Mexico, Morocco, Russian Federation, South Africa and USA. The main issues discussed were bilateral agreements; RANET processes and capabilities; logistical issues in sending assistance teams abroad; integration of assisting teams into emergency management of the requesting State; and the importance of the compatibility of assistance capabilities.

7. TRAINING AND EXERCISES IN EPR

28. Mr J. P. Garcia Cadierno, Spain, Mr J. Kupila, Finland, Ms L. Villanueva Zamora, Chile, and Mr D. E. Sumargo, Indonesia, presented training and exercise activities in EPR in their countries.

29. Mr R. Salinas Mariaca, IAEA, described the IAEA training activities. He presented the progress in establishing EPR Capacity Building Centres (CBCs), including the establishment of the School of Radiation Emergency Management, and discussed challenges and the way forward. Mr G. Winkler, IAEA, presented an evaluation of the ConvEx exercises, together with the challenges and proposals for improvement, and Mr F. Baciu, IAEA, explained the concept of the ConvEx-3 (2017) exercise and the progress made in its preparation. Ms O. Guzmán López-Ocón, OECD/NEA, presented the ongoing INEX 5 exercise.

30. The meeting noted all the presentations. The following representatives participated in the discussion: Brazil, Canada, Dominican Republic, Egypt, France, India, Iran, Japan, Luxembourg, OECD/NEA, Pakistan, Slovenia and Sudan. The issues that were raised concerned the challenges in merging nuclear security and safety in an emergency; announced and non-announced exercises; training of real media; the new type of ConvEx exercises; and issues connected to CBCs.

8. IMPROVEMENTS IN EPR AFTER FUKUSHIMA DAIICHI ACCIDENT

31. Ms J. Zubarev, USA, Mr N. Ichii, Japan, Mr K. Horvath, Hungary, and Mr M. Tkavc, Slovenia, presented improvements in EPR arrangements made in their countries based on the lessons from the Fukushima Daiichi accident.

32. The meeting noted all the presentations. The following representatives participated in the discussion: Brazil, Canada, France, Hungary, IAEA, Iran, Pakistan, Slovenia and USA. Issues discussed were the notification according to the Early Notification Convention; and the monitoring, modelling and sharing of experience.

9. ASSESSMENT AND PROGNOSIS IN AN EMERGENCY

33. Mr V. Krasnyuk, Russian Federation, explained the medical response in case of nuclear or radiological incidents and emergencies within the emergency management of the Federal Medical Biophysical Center (FMBC) of Russia.

34. Mr F. Baciu, IAEA, described the progress made in the development of the IAEA assessment and prognosis (A&P) process and the remaining challenges, while Mr J. Chaput, IAEA, presented the IAEA assessment and prognosis tools and provided examples of assessment outputs generated in recent exercises with Member States.

35. The following representatives discussed their countries' national arrangements for assessment and prognosis, the operational aspects and the experiences gained: Mr J. Zhang and Mr N. Huang, China, Mr O. Isnard, France, Mr L. Sigouin, Canada, Mr K. Hancke, South Africa, Mr N. Ichii, Japan, Mr R.K. Mishra, India, Mr D. Perkins, United Kingdom, and Ms I. Soufi, Morocco.

36. The meeting noted all the presentations. The following representatives participated in the discussion: Austria, Brazil, Canada, China, Egypt, Finland, France, Germany, IAEA, Iran, Iraq, Ireland, Japan, Netherlands, Nigeria, Pakistan, Slovenia, UK and USA. Issues discussed and commented on included: benefits of exercising A&P with the IEC; potential difficulty of direct access to experts in the 'accident state'; planning of dedicated resources at the national emergency operations centre (EOC); credible worst case and most likely scenarios; issues of uncertainties (possible deviations from the forecasted situation); modelling pitfalls; and availability of credible source terms.

10. INTERNATIONAL RADIATION MONITORING INFORMATION SYSTEM

37. Mr F. Baciu, IAEA, described the system, arrangements and future development of the International Radiation Monitoring Information System (IRMIS) recently launched by the IAEA.

38. Mr M. De Cort, European Commission, presented the European Radioactivity Data Exchange Platform (EURDEP) and described the past and present collaboration with IRMIS, while Mr D. Askren, USA, discussed the experience gained during the IRMIS testing phase and brought up some considerations for a public version of IRMIS.[1]

39. The meeting noted all three presentations. The representatives of Canada, the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), France, Germany, Iran and Madagascar contributed to the discussion on IRMIS.

[1] The presentation on the International Radiological Information Exchange (IRIX) standard was not delivered due to absence of the presenter.

11. CONCLUSIONS OF THE MEETING

40. At the end of each working day, the Chairperson proposed daily Meeting conclusions that were then printed and distributed the next morning to all participants for their feedback. Before the daily closing of the Meeting, the proposal was discussed and revised. The process culminated on the last day of the Meeting, when all proposed conclusions were reviewed and finalized. The final text was adopted with the agreement that editorial changes would be possible before inclusion in the Meeting Report.

41. The following representatives contributed to the final version of the conclusions of the Meeting: Austria, Bosnia and Herzegovina, Brazil, Canada, EC, Egypt, Finland, France, Germany, IAEA, India, Iran, Ireland, Japan, Republic of Korea, Nigeria, Netherlands, Pakistan, Portugal, Russian Federation, USA and the Chairperson.

42. The Meeting adopted 15 Conclusions, with associated action items. These Conclusions are provided in Appendix V.

12. CLOSING OF THE MEETING

43. As part of this agenda item, Ms Buglova used the opportunity to present plaques of recognition to those organizations that registered assistance capabilities in RANET in recent years. The list of these organizations is provided in Appendix VI.

44. Mr Larsson pointed out that, for the real impact of the Meeting on improving EPR worldwide, the Conclusions needed to be implemented by the IAEA Secretariat as well as by the competent authorities. The action item associated with each Conclusion would assist competent authorities in their efforts to do so. Mr Larsson thanked all the participants for their contributions and for the fruitful discussions throughout the week.

45. Ms Buglova, on behalf of Mr Lentijo, DDG-NS, noted the significant contributions by all participants and thanked them for the productive discussions that were aimed at improving EPR. She reassured the participants that the IAEA Secretariat would follow up on the issues that were discussed and agreed upon. In her capacity as Scientific Secretary, Ms Buglova expressed her gratitude to Mr Larsson for chairing the Eighth Competent Authorities Meeting and for his outstanding contribution to the success of the Meeting.

46. Ms Buglova closed the Meeting on Friday, 10 June 2016, at 12:00.

APPENDIX I: LIST OF PARTICIPANTS

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8th CAM Moments

FINAL

APPENDIX II: DDG-NS OPENING ADRESS

Mr Juan Carlos Lentijo
Deputy Director General, Head of the Department of Nuclear Safety and Security, IAEA

On behalf of the IAEA, it is my great pleasure to welcome you to Vienna for the Eighth Meeting of Representatives of Competent Authorities identified under the Early Notification Convention and Assistance Convention.

I would like to begin by expressing my appreciation for the extensive cooperation that you and your countries have given to the Agency by providing experts and resources, both in the form of funds and through in-kind contributions for improving the emergency preparedness and response to all types of nuclear or radiological emergencies.

Our common challenge is to capture and disseminate the experience from the relatively few nuclear emergencies so that all of us can learn from it and build upon it in preparing for possible future emergencies that might occur. And I hope that meetings such as this can build up a networking effect that can help to focus these initiatives into a coherent programme of concrete, practical steps to strengthen emergency response capabilities worldwide.

The elements of effective response to nuclear or radiological emergencies also include reliable information exchange, communication with the public in an understandable language and efficient international assistance; you will discuss these elements this week.

In this regard, I would like to stress that the IAEA and its Member States need to work together with a view to further developing arrangements for the timely sharing of relevant information during an emergency. At the same time, Member States need to establish and maintain effective communication channels between the responsible national authorities at all times to improve the coordination and decision making process relating to nuclear or radiological incidents and emergencies, regardless of whether they arise from an accident, negligence or a deliberate act.

I am pleased to note that the Amendment to the CPPNM entered into force on 8 May this year, which now provides for expanded international cooperation and information exchange. It contains a number of assistance obligations for States Parties, the latter of which may involve the IAEA, notably in the context of recovery and protection of nuclear material and in the case of sabotage of nuclear material or facility or the credible threat thereof. Let me also note in this context that the current practical and operational arrangements, and more broadly the IAEA's Incident and Emergency System, essentially already cover the practical implementation of such international cooperation, information exchange and assistance with the IAEA’s Incident and Emergency Centre as a single focal point in this context.

Over the past decade, many international nuclear emergency exercises have taken place. Much experience has been gained in the important fields of emergency preparedness and response. In order to be able to face new challenges in preparing and responding internationally to events caused by nuclear security events, I believe it is worthwhile to continue to conduct exercises with various scenarios to allow the testing of systems and arrangements aimed at addressing the consequences of such events. In this regard, I would like to thank Hungary for hosting the next ConvEx-3 exercise in 2017 and thus providing the IAEA, its Member States and relevant international organizations an opportunity to evaluate again their response arrangements in case of a severe nuclear emergency with elements involving nuclear security.

Ladies and Gentlemen
I would also like to mention that many observations and lessons were identified in response to the Fukushima Daiichi nuclear accident, as reflected in the IAEA Report. Five years after the accident, let us discuss which corrective actions at the national and international levels were implemented or still need to be implemented.

Last but not least, a new publication in the IAEA Safety Standards Series (GSR Part 7) sets out the requirements which all States toned to consider when developing or enhancing their EPR arrangements. This publication will be a major source of information for States seeking to enhance their national emergency arrangements for many years to come.

I started by thanking you for the many generous contributions in support of the Agency's work, and I will finish with an appeal to you to continue to provide further support. We know that we need to strengthen both our own response capability and the worldwide network of expertise. I hope that you will continue to support us in this, and I am confident that you will.

Once again, welcome to Vienna. I wish you a very constructive and productive meeting.

APPENDIX III: CHAIRMAN'S INTRODUCTORY REMARKS

Mr Carl-Magnus Larsson
CEO, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

Thank you DDG Lentijo and Ms Buglova for your kind introduction. Thank you also for inviting me to chair this 8th Meeting of the Competent Authorities under the terms of the Assistance and Early Notification Conventions. I would in this capacity also like to extend my warm welcome to all representatives from States and international organizations. I am looking forward to be working with you over the next few days in this important meeting.

By means of introduction, I am Carl-Magnus Larsson, Chief Executive Officer of the Australian Radiation Protection and Nuclear Safety Agency, ARPANSA. While Australia does not operate any power reactors, we do operate major nuclear research and radiopharmaceuticals production facilities and take a keen interest in all nuclear developments in the region.

As an initial remark with regard to this meeting, I note that 84 countries and six international organizations are participating in this Meeting, and the number of registrations is in the order of 170. This is a very satisfactory development, and the rate of participation has increased considerably from the 68 countries that participated in the 7th Meeting. I would also like to acknowledge the work of the chair of the 7th Meeting, Ms Lynn Hubbard of the Swedish Radiation Safety Authority, and point all delegates to the record and the list of conclusions from the 7th Meeting.

We will have an opportunity during this Meeting to monitor progress against these conclusions, to the extent they are measurable and clearly point in the direction of actions. I note that one of the conclusions from the previous Meeting was that there should be an opportunity to discuss the conclusions a bit more thoroughly. I will therefore endeavour to build the list of conclusions successively so that we don't have to force ourselves to consider all of them towards the end of the Meeting under inhibiting time constraints. I also note that, in line with requests from the last Meeting, this Meeting has a greater focus on topics, and that parallel sessions have been avoided by setting aside Wednesday afternoon for the side events.

I think it is also worth pointing out that since the previous Meeting, there have been some significant developments that perhaps stand out, one of these being the establishment of the Emergency Preparedness and Response Standards Committee, a fifth safety standards committee, which recently had its inaugural meeting. We have a report on its activities on the programme, and I'm sure we all appreciate the importance of this Committee for the subject matter we are discussing here. Other significant events include the publication of GSR Part 7, the publication of the DG's report on the nuclear accident in Japan in 2011 and the recent EPR Conference. In relation to the last one, it might be relevant to also mention the work on guidance for how to communicate with the public in the case of an emergency. Words like hazard, risk and safe are all difficult ones; this issue is being addressed in DS 475, currently under development.

I would also like to emphasise the necessity of a coherent approach to dealing with incidents and emergencies, regardless of whether they are triggered by safety and security events, and the need to avoid fragmentation in how to deal with the prevention, preparedness and response to such events. Once again, a warm welcome to the 8th Meeting of the Competent Authorities.

APPENDIX IV: MEETING AGENDA

Meeting Sessions	
1	Opening of the Meeting
2	Reports to the Meeting
3	Safety Standards in EPR
4	Communication with the Public in an Emergency
5	Information Exchange in an Emergency
6	International Assistance in an Emergency
7	Training and Exercises in EPR
8	Improvements in EPR after Fukushima Daiichi Accident
9	Assessment and Prognosis in an Emergency
10	International Radiation Monitoring Information System (IRMIS)
11	Conclusions of the Meeting
12	Closing of the Meeting

Monday, 6 June 2016

Meeting Sessions		
9:30	**1**	**Opening of the Meeting** • Welcome address/Opening remarks *J.C. Lentijo, DDG-NS, E. Buglova, Head IEC* • Introduction of the Meeting Chairperson *E. Buglova, IAEA* • Meeting nature, objectives, orientation/logistics *E. Buglova, Scientific Secretary* • Adoption of Agenda *C.-M. Larsson, Meeting Chairperson*
10:00	**2**	**Reports to the Meeting** • Outcomes of the 7th CA Meeting – paper CAM/DOC/2016/01 *R. Martincic, IAEA* • EPR Conference 2015 *E. Buglova, IAEA* • Fukushima Daiichi Accident Report *G. Caruso, IAEA* • Discussion and feedback
11:00	**3**	**Safety Standards in EPR** • Emergency Preparedness and Response Standards Committee (EPReSC) *A. Heinrich, EPReSC Chair, USA* • GSR Part 7 Requirements *M.N. Breitinger, IAEA* • European legislation in EPR *C. Constantinou, European Commission* • Discussion and feedback
12:30		**Lunch Break**
14:00	**4**	**Communication with the Public in an Emergency**

- National arrangements
  W. Bakr, Egypt
- National arrangements
  S. Muston, Australia
- National arrangements
  K. Dabrowski, Poland
- National arrangements
  F. Al Bloushi, United Arab Emirates
- Discussion and feedback

15:00		**Coffee Break**
15:30	**5a**	**Information Exchange in an Emergency**

- National arrangements
  M. Bailey, USA
- National arrangements
  H. Aaltonen, Finland
- National arrangements
  H. Chuda, Czech Republic
- Discussion and feedback

17:45		**Daily Closing**
18:00		**Reception**

Tuesday, 7 June 2016

Meeting Sessions		
09:00	**5b**	**Information Exchange in an Emergency**

Comment: Proposal for Meeting conclusions distributed (based on Monday's discussions)

- National arrangements
  D. Rauber, Switzerland
- National arrangements
  N. Hussain, Pakistan
- National arrangements
  J. Kuhlen, Germany
- Outcomes of the TM on Information Exchange in an Emergency
  F. Baciu, IAEA
- Discussion and feedback

10:30		**Coffee Break**
11:00	**6a**	**International Assistance in an Emergency**

- National assistance arrangements
  B. Yao, China
- National assistance arrangements
  S.-Y. Jeong, Rep. of Korea
- System of Preparedness and Response to Nuclear and Radiological Emergencies of the State Atomic Energy Corporation ROSATOM
  S. Vasilev, Russian Federation
- National assistance arrangements
  A. Cortés Carmona, Mexico
- National assistance arrangements
  I. Sambo, Nigeria
- Discussion and feedback

Comment: Chairperson recap of the proposal for the Mereting's conclusions

12:30		**Lunch Break**
14:00	**6b**	**International Assistance in an Emergency**

- Enhancing international assistance capabilities for AMS
  P. Wasiolek, USA

- Example of NAC registration process in RANET
  R. dos Santos, Brazil
- Austrian arrangements for international assistance in an emergency
  P. Hofer, Austria
- Enhancements to French radiation emergency medicine arrangements to support international assistance
  J.-F. Dodeman, France
- Guidelines for Response and Assistance Products
  P. Kenny, IAEA
- Discussion and feedback

15:30		**Coffee Break**
16:00	**7a**	**Training and Exercises in EPR**

- National arrangements
  J. Garcia Cadierno, Spain
- National arrangements
  J. Kupila, Finland
- National arrangements
  L. Villanueva Zamora, Chile
- National arrangements
  D. E. Sumargo, Indonesia
- Discussion and feedback

Comment: Feedback on the proposal for Meeting conclusions gathered

17:30		**Daily Closing**

Wednesday, 8 June 2016

Meeting Sessions		
09:00	**7b**	**Training and Exercises in EPR**

Comment: Proposal for revised/amended Meeting conclusions distributed and chairperson's recap

- IAEA training activities in EPR
  R. Salinas, IAEA
- ConvEx exercises – evaluation and challenges
  G. Winkler, IAEA, F. Baciu. IAEA and A. Cortes, Mexico
- INEX 5 exercise
  O. Guzmán López-Ocón, OECD/NEA
- ConvEx-3 (2017) exercise
  F. Baciu, IAEA
- Discussion and feedback

10:30		**Coffee Break**
11:00	**8**	**Improvements in EPR after Fukushima Daiichi Accident**

- Improvements in EPR arrangements in USA
  J. Zubarev, USA
- Improvements in EPR arrangements in Japan
  N. Ichii, Japan
- Improvements in EPR arrangements in Hungary
  K. Horvath, Hungary
- Improvements in EPR arrangements in Slovenia
  M. Tkavc, Slovenia
- Discussion and feedback

Comment: Feedback on revised/amended proposal for Meeting conclusions gathered

12:30		**Daily Closing**

Wednesday, 8 June 2016

Meeting Side Events	
Display of IAEA Guidelines and Tools in EPR	
09:00 to **13:00**	Meeting participants were able to request documents from the EPR Series and related training material for their use and then collected them on Thursday, 9 June, at the registration desk in front of the Boardroom A

Workshops and Demonstrations	**Boardroom A**
14:00	**EPRIMS session** • EPRIMS demonstration, Q&A on EPRIMS *R. Salinas, IAEA*
15:00	**USIE session** • USIE registration, USIE demonstration, Q&A on USIE *M. Eklund, IAEA, G. Winkler, IAEA*
16:00	**IRMIS session** • Data visualization, Q&A on IRMIS *F. Baciu, IAEA*
17:00	**Assessment and prognosis session** • Demonstration of assessment tools, Q&A on assessment tools *J. Chaput, IAEA*

Thursday, 9 June 2016

Meeting Sessions		
09:00	**9a**	**Assessment and Prognosis in an Emergency** *Comment: Proposal for revised/amended Meeting conclusions based on feedback received distributed* • FMBC Management of Emergency. Medical response in case of radiation accidents or incidents *V. Krasnyuk, Russian Federation* • IAEA assessment and prognosis – current process and path forward *F. Baciu, IAEA* • IAEA assessment and prognosis – tools and lessons *J. Chaput, IAEA* • Discussion and feedback
10:30		**Coffee Break**
11:00	**9b**	**Assessment and Prognosis in an Emergency** • China's development of nuclear emergency assessment and diagnosis system *J. Zhang , N. Huang, China* • National arrangements for assessment and prognosis – the FASTNET project *O. Isnard, France* • Operational aspects of A&P, experience and approach of the Canadian regulator *L. Sigouin, Canada* • National arrangements for assessment and prognosis *K. Hancke, South Africa* • Discussion and feedback *Comment: Chairperson's recap of proposed Meeting conclusions*
12:30		**Lunch Break**
14:00	**9c**	**Assessment and Prognosis in an Emergency**

- National arrangements for assessment and prognosis
  N. Ichii, Japan
- National arrangements for assessment and prognosis
  R.K. Mishra, India
- National arrangements for assessment and prognosis
  D. Perkins, United Kingdom
- National arrangements for assessment and prognosis in radiological emergency
  I. Soufi, Morocco
- Discussion and feedback

15:30		**Coffee Break**
16:00	**10**	**International Radiation Monitoring Information System (IRMIS)**

- IRMIS – present and future
  F. Baciu, IAEA
- European regional hub for IRMIS
  M. De Cort, EC
- Experience gained in IRMIS testing phase
  D. Askren, USA
- IRIX – present and future
  M. Eklund, IAEA
- Discussion and feedback

Comment: Feedback on revised/amended proposal for Meeting conclusions gathered

17:30	**Daily Closing**

Friday, 10 June 2016

Meeting Side Event	
4th Regular RANET Meeting	**Boardroom A**
08:30	• Recent and future RANET activities *Meeting Chair: P. Kenny, IAEA*

Final Meeting Sessions		
10:00	**11**	**Conclusions of the Meeting**

- Proposed meeting conclusions
  C.-M. Larsson, Chair
- Discussion, feedback and endorsement of meeting conclusions

12:30	**12**	**Closing of the Meeting**

- RANET Ceremony
  E. Buglova, P. Kenny and C.-M. Larsson, Chair
- Closing Addresses
  C.-M. Larsson, Chair
  E. Buglova, Head IEC

13:00	**End of the Meeting**

APPENDIX V: CONCLUSIONS

Conclusion **CAM-2016/01**

The Meeting acknowledged the opportunity for Competent Authorities (CAs) and other participating organizations to exchange information on national arrangements on a range of selected EPR topics.

Action: *The Secretariat should continue, at the 9th CAM, to invite CAs to share information on national EPR arrangements and capabilities, present national arrangements on specific EPR topics, and exchange views on the implementation of the Early Notification Convention and the Assistance Convention.*

Conclusion **CAM-2016/02**

The Meeting took note of the observations and lessons of the Report by the Director General on the Fukushima Daiichi accident, the conclusions of the International Conference on Global Emergency Preparedness and Response and the publication, in the IAEA Safety Standards Series, of the Safety Requirements GSR Part 7 on Preparedness and Response for a Nuclear or Radiological Emergency. The Meeting agreed on the need to take stock of the new information and developments and to implement the new requirements as they pertain to the Early Notification Convention and the Assistance Convention.

Action: *CAs should work toward improving national EPR arrangements, including implementation of the requirements of GSR Part 7, with the Secretariat providing assistance in the implementation.*

Conclusion **CAM-2016/03**

The Meeting took note of the fact that the gradual evolution of the EPR arrangements in different international and regional fora has sometimes led to inconsistent use of terminology, which may cause confusion in communication among concerned parties, including the public.

Action: *CAs should strive for and encourage harmonization of terminology when developing EPR arrangements, including public messaging, by making reference, for example, to the IAEA Safety Glossary and GSR Part 7.*

Conclusion **CAM-2016/04**

Information exchange in an emergency is linked with communication with the public. There is a requirement for expeditious information exchange among relevant national and international bodies as well as for providing information to the public as soon as practicable. This requirement may conflict with the need for quality control of the information disseminated and with efforts to provide a consistent and unified message.

Action: *CAs should strive to develop and improve, as applicable, their roles in public communication arrangements, taking into account the expectations of the media and the public, in sharing up-to-date and credible information in a timely manner.*

Conclusion **CAM-2016/05**

There is a need to find mechanisms to put the consequences of nuclear and radiological emergencies in perspective and to explain terms such as ‘hazard’, ‘risk’ and ‘safe’. Experience has shown that the use of scales, simple terminology and/or colour schemes that are easily understood by the public may help to achieve this objective (e.g. by emulating an approach such as the one used for describing the likelihood of severe weather conditions). The Secretariat is developing guidance on this matter.

Action: *CAs should support the Secretariat as practicable in the development of guidance on appropriate systems that may assist in putting the consequences of nuclear and radiological emergencies in perspective, such as currently pursued by the Emergency Preparedness and Response Standards Committee (EPReSC).*

Conclusion **CAM-2016/06**

The Meeting took note of the arrangements between some European countries with shared borders that operate, or do *not* operate, nuclear facilities, which are aimed at facilitating consultation and coordination on protective actions and other response actions. The CAs considered it important to

maintain and further enhance such arrangements, where appropriate, through unified and harmonized analytical approaches, geographic data presentation, protection strategies, public messaging (such as short pre-prepared messages), regular exercises and—in particular—harmonized approaches to decision making at national levels.

Action: *CAs should develop or enhance arrangements, as relevant, to facilitate the timely exchange of information on protective actions and other response actions in a nuclear and radiological emergency between bordering countries, in order to support national decision making based on harmonized technical advice.*

Conclusion **CAM-2016/07**

The Meeting took note of the increased number of Parties to the Assistance Convention that are offering assistance capabilities in the case of a nuclear or radiological emergency, as well as of the broadened range of capabilities that are being offered. The Meeting also acknowledged the Secretariat's development of guidance on compatibility and harmonization of response and assistance capabilities and products, and it supported the publication and implementation of this guidance.

Action: *CAs, as applicable, should consider registering their national assistance capabilities with the IAEA's Response and Assistance Network (RANET). The Secretariat should publish the guidance as soon as practicable, and CAs should implement this guidance as applicable to their response and assistance capabilities.*

Conclusion **CAM-2016/08**

The Meeting acknowledged the challenges faced by many CAs in providing frequent updates in English during a nuclear and radiological emergency. Using short messages in USIE could be one of the solutions to overcome these challenges. Exchange of liaison officers between neighbouring countries may also address these issues.

Action: *The Secretariat should upgrade USIE to include the option of sharing up-to-date information via short messages. CAs should consider mechanisms for exchanging liaison officers to address any language barriers, where necessary.*

Conclusion **CAM-2016/09**

The Meeting took note of the ConvEx exercises and evaluations that have been performed over the recent years and supported the development of two specific ConvEx-2 exercises—ConvEx-2f on public communication in an emergency and ConvEx-2g on emergencies triggered by a nuclear security event. The Meeting considered ConvEx exercises to be useful and necessary; however, these exercises also represent a substantial commitment for CAs and for the Secretariat. Improved long term planning and coordination of exercises, based on particular needs, would assist CAs in their own planning and in maximizing the benefit of participating in these exercises.

Action: *CAs and the Secretariat should work toward enhanced long term planning of ConvEx exercises. The Secretariat should further strengthen the collaboration among different international organizations in organizing these exercises. CAs and relevant international organizations should consider testing their EPR arrangements in the ConvEx-3 (2017) exercise.*

Conclusion **CAM-2016/10**

The Meeting acknowledged that the sharing of experience gained in national exercises and/or actual events—in particular when such experience revealed weaknesses in the response— provides an opportunity for improving the EPR arrangements also in other countries.

Action: *The Secretariat should introduce in future meetings an agenda item on sharing lessons identified in national exercises and/or recent events.*

Conclusion **CAM-2016/11**

The Meeting took note of the improvements in EPR after the Fukushima Daiichi accident. The Meeting also noted that actions taken to improve EPR had identified the need of further strengthening the preparedness arrangements for requesting assistance and for the proper integration of the capabilities of the assisting State(s) with those] of the requesting State.

Action: *CAs should, as relevant and depending on the national context, continue to support the development of the national capability and arrangements, including arrangements to request and receive assistance under the terms of the Assistance Convention.*

Conclusion **CAM-2016/12**

The Meeting took note of the launch of the EPR Information Management System (EPRIMS). EPRIMS serves as a tool for self-assessment and may provide comprehensive information on national EPR arrangements and capabilities and, if applicable, on reactor technical data that can be shared among relevant bodies nationally and internationally.

Action: *CAs should, as applicable, nominate or encourage appropriate national authorities to nominate EPRIMS national coordinators. Information on EPR arrangements and capabilities, as well as reactor technical data, where applicable, should be uploaded or updated in EPRIMS. CAs should also share, or encourage applicable national authorities to share, EPRIMS information and data with relevant bodies nationally and internationally.*

Conclusion **CAM-2016/13**

The Meeting took note of the Secretariat's efforts to enhance EPR training programmes and, in particular, to establish EPR Capacity Building Centres (CBCs). These centres are aimed at providing national and regional education, training and information sharing in various areas of EPR (e.g. first response, response to radiological or nuclear emergencies and medical response in emergencies).

Action: *The Secretariat should continue enhancing its EPR training programmes, and CAs should encourage relevant national bodies to host CBCs in different EPR areas.*

Conclusion **CAM-2016/14**

The Meeting noted the Secretariat's efforts to operationalize its assessment and prognosis process. Experience from past exercises has demonstrated that sufficient capabilities and resources need to be available to the 'Accident State' and to the Secretariat in order to support information exchange, discussion of assessments and prognoses, and the resolution of open issues in a timely manner. The meeting noted that the first priority for the 'Accident State' is to employ its capabilities and resources for the protection of the public.

Action: *CAs should consider allocating appropriate capabilities and resources at the national level to assist in the implementation of the assessment and prognosis process at the international level, as practicable, while recognizing the national priorities.*

Conclusion **CAM-2016/15**

The Meeting noted the substantial progress in the development and launch of the International Radiation Monitoring Information System (IRMIS) and the need to extend the coverage to include results from various types of monitoring, such as radionuclide concentrations in the environment. The Meeting also noted a need for the Secretariat to continue its work with Member States to discuss the possibility of making IRMIS publicly accessible.

Action: *CAs, as applicable, should consider providing monitoring data to IRMIS to support national decision making in a nuclear or radiological emergency, directly or indirectly through the regional hub(s).*

APPENDIX VI: ORGANIZATIONS THAT RECEIVED RANET PLAQUES OF RECOGNITION at CAM-2016

State	Organization
Belgium	General Directorate Civil Security
Canada	Canadian Nuclear Safety Commission
China	China Atomic Energy Commission
Germany	Federal Office of Civil Protection and Disaster Assistance (BBK)
	Federal Office for Radiation Protection (BfS)
	Bundeswehr Institute for Radiobiology
Israel	Israel Atomic Energy Commission
Japan	Nuclear Regulation Authority
Korea, Republic of	Nuclear Safety and Security Commission
	Korea Institute of Nuclear Safety
	Korea Institute of Radiological & Medical Science
Mexico	Comision Nacional de Seguridad Nuclear y Salvaguardias
Russian Federation	A.I. Burnazyan Federal Medical Biophysical Center of the Federal Medical Biological Agency of the Russian Federation
Spain	General Directorate of Civil Protection and Emergencies
Switzerland	National Emergency Operations Centre
USA	U.S. Nuclear Regulatory Commission