#### 15-17 May 2017

EAN - NERIS Workshop on optimization & emergency, Lisbon, Portugal

#### 17-19 May 2017

NERIS Workshop & 8<sup>th</sup> NERIS General Assembly, Lisbon, Portugal

#### 9-13 October 2017

4<sup>th</sup> ICRP Symposium & Radiation Protection Week 2017, Paris, France

# 品 NERIS

EUROPEAN PLATFORM
ON PREPAREDNESS
FOR NUCLEAR AND RADIOLOGICAL
EMERGENCY RESPONSE AND RECOVERY

### **■ EDITORIAL**

Issue 12 - November 2016

The first Radiation Protection Week (RPW), held in Oxford in September 2016, was a real opportunity to strengthen the cooperation with the other research platforms on radiation protection in Europe and to promote the radiation protection research. A focus was notably put on the recent development of the research agenda on social sciences and humanities dedicated to radiation protection, a topic largely present within NERIS researches and activities.

Promoting the results of the research performed within NERIS has been identified as a key challenge during the last NERIS General Assembly. In this perspective, it is to note the recent publication of the proceedings of the final workshop of the NERIS TP European research project, funded by the European Commission, as a special issue of the journal Radioprotection as well as the proceedings of the NERIS workshop held in Milano in May 2015 (available on NERIS website). In addition, the proceedings of the final workshop of the PREPARE European research project, also funded by the European Commission, will be published in the following weeks as a special issue of the journal Radioprotection.

Improving the strategic research agenda is also a key challenge. A process has been initiated during the last R&D committee meeting. The process will be developed during the following months and the next NERIS Workshop, to be held in Lisbon on May 17-19, 2017, will provide the opportunity to further exchange on the key challenges for the different topics of the research agenda. At the same period in Lisbon, from May 15 to 17, 2017, NERIS will contribute to the organisation of the European ALARA Network workshop on the implementation of ALARA approach in emergency and recovery situations.

CONCERT project has definitely set up the cooperation between the research platforms in Europe. The first research call, published this summer, was a good incentive for organising the funding in Radiation Protection research as well as the cooperation between the different platforms with the focus of the call on uncertainty, a key challenge for NERIS. The first research projects will be funded through the CONCERT project in the following weeks, while the second CONCERT call would be issued at the beginning of next year. There is now a need for NERIS to follow the research developments that will be achieved within these projects and to elaborate its roadmap for the future.

This newsletter is providing more details on the NERIS contribution during the RPW 2016.

Thierry Schneider – CEPN – President of the NERIS Platform



Newsletter

Issue 12

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## NERIS & the Radiation Protection Week 2016, 19-23 September 2016, Oxford

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With over 350 attendees and 30 satellite meetings, RPW2016 brought together new insights, information and complementary strands of radiation protection research with the established European platforms MELODI, EURADOS, NERIS and ALLIANCE as co-organisers.

For NERIS, it was the occasion to chair some sessions dedicated to Post-Accident topics and to emphasize the work conducted within NERIS. NERIS members took also the opportunity of the RPW16 to organize some satellite meetings: the R&D Committee meeting, Management Board meeting, WGs...

This newsletter presents the main points that came out during this first Radiation Protection Week.

### Lessons learned and remaining gaps from Chernobyl and Fukushima accidents: Emergency and recovery perspective

For this session dedicated to lessons from Chernobyl and Fukushima, the following key messages have been presented for the NERIS Platform.

Following the Chernobyl accident, a series of researches, supported by the European Commission, have been conducted with the Republics of Belarus, Russia and Ukraine, notably focussed on a better understanding of the countermeasures and their efficiency as well as on the decision-making processes. Among the main lessons, it could be mentioned the importance of improving preparedness and the tools to assess and predict the situation, the crucial role of local situation (including radioecological issues), and the long lasting consequences (in terms of exposure and social disturbances) induced by the contamination of the environment.

The Fukushima accident has reinforced the need for further development to improve preparedness for emergency and recovery situations. The long lasting discharges have pointed out the need for new modules related to dispersion modelling in the early phase of an emergency with significant incidence on evacuation/sheltering strategies. In addition models that are able to account for site-specific characteristics are expected to better cope with each situation. The accident also draw attention to the lack of development related to aquatic modeling.

The Fukushima accident also demonstrated the need of combining data and information from governmental and non-governmental organizations. This lead to the development a European analytical platform within the PREPARE research project, funded by the European Commission under the 7th Framework programme. Furthermore, the analyses of the management of the consequences of the Fukushima accident leads to revisit the existing framework for public participation notably in the perspective of the Aarhus Convention and ways for improving the implementation of protection strategies, highlighting the importance to make more transparent and possibly improve/foster the decision-making processes at the local, regional and national levels. Stakeholder involvement, local preparedness and communication strategies have been largely challenged following the Fukushima accident. The access to environmental monitoring has played a crucial role at local, national and international levels and the use of modern social media has significantly changed the exchange of information and stakeholder involvement processes in both emergency and recovery situations. .

In conclusion, besides the need for adequate tools and decision-support systems to assess and predict the situation and define efficient protection strategies, it has to be noticed the importance of favouring access to information on the radiological situation based on reliable monitoring networks and the crucial role of societal dimensions to cope with the short and long term consequences of the accident.

Thierry Schneider – CEPN – President of the NERIS Platform







#### Criteria for lifting countermeasures

There were four presentations in this session on the criteria to be used when considering the lifting of shorter and longer-term countermeasures.

- Pascal Croüail (CEPN) spoke on the issues being faced in lifting the evacuation orders in territories affected
  by the Fukushima Dai-ichi accident. There are balances to be struck between different stakeholder views
  when determining the criteria for lifting of countermeasures. This can have an impact on where
  decontamination is required and how to make the best use of available resources for such clean-up. This
  demonstrates that radiological protection is just one of the many concerns of the public alongside
  economic, cultural, social and ethical issues.
- Anne Nisbet (PHE) described the processes involved in lifting restrictions imposed on sheep after the
  Chernobyl accident in upland areas of the United Kingdom. The approach of using an activity concentration
  limit of 1000 Bq/kg was reviewed in 2010 to estimate realistic doses to representative persons using
  surveyed activity concentrations. This concluded that doses to the most restrictive representative person
  would be lower than the maximum dose using an activity concentration limit approach. Therefore the
  restrictions were lifted in 2012.
- Deborah Oughton (NMBU) explained the challenges with the countermeasures on reindeer in Norway
  following Chernobyl. There has been consideration over whether the higher activity concentration limits
  used in Norway (3000 Bq/kg) should be lowered to bring them in line with the 1500 Bq/kg value used in
  Sweden. However, it was explained that there would be significant potential consequences such as the
  cultural impacts associated with any requirements for fencing or clean feeding which alongside the extra
  resources required may lead to significant loss of knowledge and traditions in the Sami population.
- Wolfgang Raskob (KIT) postulated on the potential role for decision-support systems (DSS) when planning
  the lifting of countermeasures. Much of the current focus for DSS is on the implementation of
  countermeasures with less consideration of how countermeasures may be lifted through the transition
  phase. DSS can be used to assess residual doses following the implementation of a countermeasure
  strategy. As noted in the other talks, there are many non-radiological aspects to consider when lifting
  countermeasures such as acceptability, stakeholder preferences and costs. These aspects could be
  considered using multi-criteria decision aiding tools (MCDA) to accommodate differing priorities.

Antony Bexon - PHE



### Post-accident stakeholder engagement – do we have it right? (1/2)

The first part of the session was consisted of three lectures covering the practical, theoretical and analytical aspects of stakeholder participation and decision analysis.

Anne Nisbet from Public Health England gave a keynote lecture: From bi-lateral discussions to multinational stakeholder networks: we are going in the right direction summarising 20 years of experience with stakeholder engagement in the UK, and more recently the USA. This was largely related to countermeasures in the agricultural sector, wherein the establishment of stakeholder groups and networks has been central to raising awareness of key issues and development of accident recovery and tools.

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Post-accident stakeholder engagement – do we have it right? (2/2)

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Stéphane Baudé from Mutadis presented on *Radiation protection and democratic culture in post-accident preparedness and management: Insights from theory and practice* highlighting the complexity of post-accident management and the multiple lines of communication and information flow. He introduced the Arhus convention and work carried out by Nuclear Transparency Watch, concluding that there is still much work to do, including developing a legal framework for involving civil society organisations in stakeholder engagement.

Finally, Nadia Papamichail from Manchester University lectured on *Decision Analysis in the Nuclear Sector* presenting an overview of academic methods of analysing and evaluating decision-making processes.

The second part of the session was a short panel discussion on the challenges, introduced by some thoughts from Gaston Meskens, SCK-CEN on *Stakeholder Engagement: What might go wrong*? The lecturers were joined by Tatiana Duranova, VUJE. The panellists discussed challenges with engaging with the relevant sectors of society, the importance of maintaining stakeholder competence and interest, and the valuable contribution of stakeholder experience and knowledge on post-accident decision-making. While there is still a lot to learn about stakeholder engagement processes, what works, what doesn't and why, it is still an important part of emergency and recovery preparedness.

Deborah Oughton – NMBU



### NERIS Representation in "Education and Training" session

The Session on Education & Training in Radiation Protection: From researcher to practitioner was co-ordinated by the EUTERP Foundation - a European Platform for Education and Training in Radiation Protection. The special session provided a good opportunity for sharing output on E&T activities of the NERIS, ALLIANCE, EURADOS and MELODI Platforms. It was pointed out by presenters the proactive and effective E&T initiatives as essential components within the platforms in ensuring that the knowledge and understanding of the radiation protection workforce, in the fields of both research and operational application, is kept up to date and valid. Each presentation focused on key objections of E&T, which include: to strengthen the capability and effectiveness of the research effort, to maintain and improve know-how and technical expertise in the areas of interest of all platforms; and to support a research stay of young scientists in the framework of platform's activities.

The E&T activities in each platform are realised via various actions, covering working group's activities, topical workshops and annual platform meetings, and training courses, the majority of these supportive and engaging activities have been developed for and in cooperation with the young generation of scientists and with participation of stakeholders across Europe. Despite coming from different backgrounds and having different histories of development, each platform has a common interest in contributing to the development of a policy with regard to education, training and competence advancement in radiation protection. As a result of interaction of the platforms under the umbrella of CONCERT project the following text was included in the first CONCERT call: "To respond to the challenge of developing and maintaining new competence, there is a need for support of E&T in the sciences underpinning radiation protection in general, and in particular specific research areas such as the hazards from low-dose radiation, medical applications of ionising radiation, radioecology, emergency and recovery management and dosimetry. CONCERT will provide a Programme of E&T support consistent with the priorities identified in strategic research agendas developed as part of the Programme." The NERIS platform is actively involved in those activities and this work is also supported by the platform's key objective of promoting more coherent approaches in preparedness for nuclear or radiological emergency response and recovery throughout Europe.

Tatiana Duranova - VUJE



Protection of the environment and protection of humans — striking the correct balance

This session was organized and chaired by Jacqueline Garnier-Laplace (ALLIANCE) and Eduardo Gallego (NERIS) and was focusing on the controversial topic of comparing human versus ecological risk assessment, illustrated for both chemical and radioactive substances.

Two invited speakers made presentations on the lessons learnt from Integrated chemical Risk Assessment (IRA) (Philipe Ciffroy, EDF, France) and the ICRP system for radiological protection for both humans and the environment (David Copplestone, U. Stirling, UK). IRA is defined as "the mutual exploitation of environmental risk assessment for human health risk assessment and vice versa". This is an emerging topic within the chemical regulatory framework, the goal being to coherently and more efficiently characterize the overall risk to humans and the environment. On its side, the ICRP has developed a robust system of radiological protection; however, while considering the environment in its own right is appropriate and facilitates communication, there are differences and similarities when actually undertaking assessments for humans and the environment. Although there is enough information to apply the one system of radiological protection, further advice and recommendations are still being developed.

Brenda Howard (CEH, UK) and Maarit Miukku (STUK, Finland) made critical comments to start discussions on the main questions:

- Do we need independency, simple harmonization or full integration regarding the methodology? How integrated can regulation be?
- Would a holistic approach to regulation and risk assessment methodologies (when considering exposure to chemical and radioactive substances) lead to better decision making?

As an example, Rodolphe Gilbin (IRSN, France) presented the possibility of determining an integrated and conservative criterion to protect human health and the environment from the presence of uranium, from the chemical and radiological point of view.

The topic is closely linked to the SRA on Radioecology of ALLIANCE, with two research lines directly related. From NERIS perspective, it is also an issue with regard to the response to nuclear accidents, certainly not for the emergency phase, but relevant to design post-accident remediation strategies, given the important impact on the environment of the accident itself and that countermeasures may have.

The main conclusion was that further research is needed on harmonised risk assessment methodologies, although regulations would probably stay compartmented, given the fact that chemical and radiological risks are generally managed by different regulatory bodies.

Eduardo Gallego - UPM



## **NEWS**



### **NERIS R&D Committee – current developments**



On September 19, 2016, during the Radiation Protection Week in Oxford, a NERIS R&D Committee meeting was organized with as main topic on the agenda the possible revision of the NERIS Strategic Research Agenda (SRA) and the development of the NERIS roadmap. The meeting was open for both NERIS R&D Committee and Management Board members. The meeting resulted in the identification of a potential new structure of the NERIS SRA, covering all current topics. Following research areas were defined:

- 1. Challenges in radiological impact assessment during all phases of nuclear/radiological events;
- 2. Challenges in countermeasures and countermeasure strategies in emergency & recovery, decision support & disaster informatics (an option to split this area into two areas: countermeasures/decision support was kept open);
- 3. Challenges in setting-up a holistic /multi-faceted framework for preparedness for emergency response & recovery (with input from all perspectives).

This new structure should on one hand allow the definition of very clear research domains and on the other hand guarantee a balanced distribution of key research themes over the different research areas. For the different research areas a first attempt was made to define the key research domains within the research area. This will be worked out in more detail by small working groups which were defined during the meeting. A first new detailed structure of the NERIS SRA is planned for the end of this year. Beginning of next year (draft date Friday, 20 January 2017) a R&D Committee meeting will be organized to discuss the draft structure with the goal to have an updated NERIS SRA ready for broader consultation by May 2017, notably at the occasion of the NERIS Workshop to be held in Lisbon from 17 to 19 May.

Johan Camps – SCK-CEN

# Save the Date!

# Radiation Protection Week 2017 & 4<sup>th</sup> ICRP Symposium

4th International Symposium of the System of Radiological Protection in conjonction with the European Radiological Protection Research Week are being organized in Paris from 9 to 13 October 2017.

This combined event will offer the opportunity for professionals, experts and researchers worldwide to discuss their respective concerns and the current challenges faced in all areas of radiological protection, as well as the ways forward through new research, updating doctrines, or better interactions with stakeholders.



## RICOMET 2017

The Third International Conference on Risk Perception, Communication and Ethics of Exposures to Ionising Radiation (RICOMET 2017) will be held from the 19<sup>th</sup> to 21<sup>st</sup> of June 2017 in Vienna.

NERIS Workshop & 8<sup>th</sup> General Assembly, 17-19 May 2017, Lisbon

The Third NERIS Workshop on the « State of the art and Needs for further research for emergency and recovery preparedness and response » will be held in Lisbon (Portugal) from 17th to 19th May 2017.

The NERIS Workshop 2017 will provide an opportunity to discuss and exchange views with NERIS members, international organisations and European Research communities on research developments and priorities for the European NERIS Platform.



Plenary sessions will be organized on topics related to the 3 research areas of the NERIS SRA, as well as two special topics:

- Challenges in radiological impact assessments during all phases of nuclear/radiological events.
- Challenges in countermeasures and countermeasure strategies in emergency & recovery, decision support & disaster informatics
- Challenges in setting-up a holistic framework for preparedness for emergency response & recovery
- Stakeholder involvement and engagement in emergency and recovery
- Uncertainty handling issues for emergency and recovery

Participation of stakeholders to contribute to the NERIS SRA / NERIS Roadmap is also expected for this workshop.

You are encouraged to submit an abstract for oral or poster presentation on emergency and recovery preparedness and response. All topics related to the 3 research areas of the NERIS SRA or related to the Stakeholder involvement and engagement in emergency and recovery as well as uncertainty handling for emergency and recovery issues are welcomed. The submission deadline for abstract is the 19th December 2016.

At the occasion of this workshop, NERIS will organise its General Assembly on May 17 in Lisbon.

For program, registration and further information, please visit the NERS Website or contact the NERIS Secretariat (sec@eu-neris.net)

Registration website (http://www.planetreg.com/EANworkshop17NERISworkshop3):

Deadline on April 19, 2017.



European ALARA Network – NERIS Workshop on ALARA in emergency and recovery situations, 15-17 May, Lisbon

Emergency exposure situations can arise as a result of a nuclear accident, a malicious or terrorist act, or any other unexpected radiological event. It requires a quick response and sustainable countermeasures and remedial actions in order to avoid or reduce adverse short-term and long-term consequences.

Radiation exposures can be received by the public, first responders, workers and volunteers engaged in the post-accident recovery.

The ICRP recommendations and European Basic Safety Standards – the bases for national regulations –reemphasize the principle of optimisation (ALARA) as applying to emergency and existing exposure situations. For the purpose of radiological protection, reference levels for emergency and existing exposure situations should be set. More importantly, it is necessary to establish emergency and recovery plans based on an optimum protection strategy, resulting in more good than harm for the exposed people and the affected territories. In that perspective, lessons learnt from the Fukushima accident are of utmost importance.

The objectives of the workshop, organised by the European ALARA Network (EAN), jointly with NERIS, are:

- To show, in particular from the experience of Fukushima accident, the challenges posed by the optimisation of exposures in emergency and post-accident situations;
- To review the national arrangements for assessing, monitoring and mitigating the radiological consequences of an emergency, especially with regard to applying the ALARA principle to public and occupational exposures;
- To review the arrangements for managing emergency doses to workers
- To review the arrangements for providing ALARA-based training for the different types of stakeholders who would be engaged in the emergency response and long-term recovery actions.

The workshop will consist of presentations (oral and posters) intended to highlight the main issues, and a significant part of the program will be devoted to discussions within working groups. From these discussions, participants will be expected to produce recommendations on ALARA in emergency and existing exposure situations, which are addressed to relevant local, national and international stakeholder.

For program, registration and further information, please visit the NERS Website or contact the coordinator for EAN (sylvain.andresz@cepn.asso.fr)

Registration website (http://www.planetreg.com/EANworkshop17NERISworkshop3):

Deadline on April 19, 2017.



The training course is co-funded by the European Joint Programme for the Integration of Radiation Protection Research CONCERT. Organized in collaboration with NERIS, this training course focuses on the early to intermediate phases after a nuclear/radiological accident, and addresses the state of the art in nuclear and radiological emergency management including the international recommendations and the lessons learned from the Eukushima accident

This includes, but is not limited to, principles of intervention; radiological evaluations; decision-support tools; different aspects of planning and organization in off-site emergency response; economic, social and psychological impact. The European and international dimension is addressed through lectures on Community legislation and international data and information exchange.

This training course could contain the following modules:

- Radiological emergencies
- Transfer pathways to the environment and exposure pathways
- Monitoring and data management strategies
- Principles of intervention
- Implementation of early countermeasures Practical aspects
- Countermeasures for contaminated food production systems
- Countermeasures for inhabited areas
- Decision support systems: RODOS
- International data and information exchange
- Economic, psychological, social and ethical aspects of intervention
- Emergency plans: organisation & requirements
- Communication
- Community legislation
- · Stakeholder involvement in preparedness activities
- The Fukushima accident
- Specific issues related to radiological emergencies of other origin than nuclear accidents
- Triage, monitoring and treatment of people exposed to malevolent use of radiation
- Organisation of exercises and lessons learned

Group activities are organised to explore in depth several aspects presented during the course lectures. A comprehensive table-top exercise simulating a nuclear accident is organised, plunging participants in the decision-making process and confronting them with the real difficulties. A technical visit of several points of interest in SCK•CEN can be also foreseen.

#### For further information, please visit the SCK-CEN website.

The course is mainly targeted towards technical and radiological advisors, staff responsible for the overall emergency organisation and policy, such as civil protection officers and environmental protection officers, either entering the domain or being interested in refreshing the basics and getting acquainted with latest developments in the field. A basic knowledge of radiation protection is recommended.



# Training course on "Modelling and measurement", 6-17 March 2017, Roskilde, Denmark

The training course on "Assessment of long-term radiological risks from environmental releases: modelling and measurements", 6-17 March 2017, Roskilde, Denmark is organised by the Center for Nuclear Technologies at the Technical University of Denmark (DTU). The training course is co-funded by the European Joint Programme for the Integration of Radiation Protection Research CONCERT.

The course is aimed at providing the participants with an understanding of how to assess by measurements and modelling the long-term radiological risks from releases to the environment of radionuclides. Nuclear power plant accidents will particularly be in focus, but RDD's will be considered.

The course builds on decades of international research work, e.g., in European research projects such as ECP-4, STRATEGY, EURANOS, NERIS TP and PREPARE, including unique experience from extensive practical investigations in contaminated areas and laboratory assessments. It comprises a hands-on introduction to laboratory measurement techniques including state-of-the-art radiochemistry methods for determination of radionuclides that can not easily be determined. It also includes a hands-on decision support modelling session using a state-of-the-art computerised decision support system for nuclear and radiological emergency management.

The course will provide insight into:

- Assessment of long-term radiological risks from releases to the environment
- Theoretical principles of dosimetry
- Implications of different contamination scenario types
- Migration of radioactive contaminants in different types of environment
- Modelling internal dose and specific factors influencing ingestion dose
- Modelling external dose in contaminated inhabited areas
- Decision support systems for accident management
- Important concepts in sampling and gamma spectrometry
- Radiochemical analysis for radionuclides that are difficult to measure
- Rapid radiochemistry techniques for multiple samples

Registration: Deadline on 15<sup>th</sup> of January 2017. Limited to 12 participants

Do not hesitate to contact Per Roos (<a href="mailto:roos@dtu.dk">roos@dtu.dk</a>) or Kasper G. Andersson (<a href="mailto:kgan@dtu.dk">kgan@dtu.dk</a>) at DTU if you need further information.

The targeted audience is PhD students and young scientists / advisors. The course is expected to give students 2.5 ECTS points. There is no registration fee. Participants are expected to cover their own travel and subsistence costs (e.g., meals, hotel, visa if needed).



Training course on "Late Phase Nuclear Accident Preparedness and Management", 19-23 June 2017, Gomel

The Training Course on "Late Phase Nuclear Accident Preparedness and Management" is organised by the Nuclear Protection Evaluation Center (CEPN - France) and the Institute of Radiology (RIR - Belarus) in cooperation with the European platform NERIS on emergency and post-accident preparedness and response. The course will take place from June 19-23, 2017 at the Institute of Radiology (RIR) in Gomel, Belarus. The training course is co-funded by the European Joint Programme for the Integration of Radiation Protection Research CONCERT.

The main objective of the course for late phase nuclear accident preparedness and management is to provide principles and practical guidance for the key players involved in the preparedness and recovery of living conditions in contaminated areas in the aftermath of a nuclear/radiological accident. The course offers a comprehensive overview of the various dimensions and challenges of the long-term rehabilitation. It includes also practical elements for the implementation of countermeasures for managing long-term contaminated rural and urban environments, notably through the planning of direct meetings and dialogue with local stakeholders (inhabitants, pupils, local authorities, etc.) living in the areas affected by the Chernobyl accident.

The course is based on international recommendations and on the material produced and developed in several European and international projects: ETHOS, SAGE, FARMING, CORE, EURANOS, NERIS TP, PREPARE etc. as well as the first results obtained under SHAMISEN research project, funded through the European research project OPERRA. The course is made of lectures, practical working sessions, technical visits and discussions. It strongly relies on the practical experience of Belarussian organisations in the management of the Chernobyl consequences as well as on the first lessons from the management of the consequences of the Fukushima accident.

Registration: Deadline on April 15, 2017. Limited to 24 participants.

For program, registration and further information, please visit the NERS Website or contact the coordinators (Sylvain Andresz - sylvain.andresz@cepn.asso.fr- and Pascal Croüail - pascal.crouail@cepn.asso.fr-).

## 4<sup>th</sup> ICRER, 3-8 September 2017, Berlin

The International Conference on Radioecology and Environmental Radioactivity (ICRER) is an international conference that covers all subjects related to radioecology/environmental radioactivity. This conference holds every 3 years. The 2017 conference will be in Berlin (Germany) from 3rd to 8th September 2017. The conference will be held at the Maritim Hotel, in centre of Berlin (Stauffenbergstrasse 26).

ICRER 2017 will cover the acquisition of basic scientific knowledge in research dedicated to any human and wildlife exposure situations for a wide range of radioactive sources and scenarios (planned, existing and emergency situations), as well as identifying new societal needs along with technical requirements for regulators and industry. In this respect, members of the NERIS platform are highly encouraged to submit abstracts for the conference.

The key dates for the meeting are:

- Opening of the abstract submission: 15 November 2016
- Closure of abstract submission: 15 February 2017
- Information to authors on acceptance for presentations: 30 April 2017

Web page: http://www.icrer2017.com/

