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Report from final project conference – RICOMET 2016

The Second International Conference on Risk Perception, Communication and Ethics of Exposures to Ionizing Radiation

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(D-N°:4.11) – **Report from final project conference – RICOMET 2016**

Dissemination level: **PU**

Date of issue of this report: **30/06/2016**

Project Context

<http://eagle.sckcen.be>

In Europe today, institutions, media and the general public exchange information about ionizing radiation (IR) and associated risks. The 2011 Fukushima accident has demonstrated the need for further improving this communication. EAGLE is a coordination project under FP7-EURATOM that aims at clarifying information and communication strategies to support informed societal decision-making.

Education, training and information to the public are key factors in the governance of ionizing radiation risks, as are opportunities for dialogue and stakeholder involvement in decision making. EAGLE assesses the current dissemination of ionizing radiation information to the public and provides practical guidance tools for best practice to support the ideal of a participative, citizen-centred communication. A network of stakeholders reviews national and international data, tools and methods as well as institutional work in order to identify education, information and communication needs and coordination possibilities at the European level.

To achieve these objectives, EAGLE brings together representatives of nuclear actors, users of ionizing radiation, authorities, mass and social media, and informed civil society, from a range of European countries employing nuclear power or not. The following work packages will be carried out in the three-year project:

- WP1 seeks to improve education, training and information (ETI) material employed in communication about ionizing radiation by information sources (industry, experts, authorities, medical field) across EU member states. Tools will be assessed through interviews with heads of nuclear institutions along with protocols and questionnaires given through Euratom national contact points. Upgraded ETI material, activities, and communication strategies will be proposed as a coordinated European approach for practical implementation.
- WP2 engages members of information source institutions and practitioners/representatives of the social and traditional media in a series of national and international virtual dialogues (face-to-face and virtual). These dialogues will consider information transfer and media handling, as well as the context of institutional, media and citizen discussion of ionizing radiation and associated risks. The dialogue groups will review existing aids and produce practical guidance tools to improve communication for more informed decision-making.
- WP3 analyses education, training and information (ETI) from the point of view of the final recipients of information – EU citizens. Existing desk research for all EU Member states are analysed along with polls, interviews and the outcome of workshops conducted in select countries. The ‘mental model’ approach will be employed to investigate potential differences between professionals and the public regarding social and cognitive representations of ionizing radiation risks, and identify means to better support informed public decision-making related to this topic.
- WP4 Stakeholder participants have the opportunity to comment and provide feedback on project products through two virtual workshops. Additionally, three pilot actions are implemented in three countries to test, evaluate and upgrade communications products.

Information and results are disseminated among stakeholders and the public on an ongoing basis. Sharing of results and communication are facilitated through the web site, social media tools and the “EAGLE Stakeholder Platform.” EAGLE electronically publishes its recommendations for improving the education, training and communication processes related to ionizing radiation. EAGLE holds a final International Stakeholder Conference with members of academia, operators’ regulators, authorities, medical sector, health organizations, consumers,

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different associations, traditional media, new media, emergency management and the public to exchange experience, methods, and tools developed throughout the project. The event publicizes project results and gathers feedback from stakeholders on employing these tools to better support European citizens' understanding of ionizing radiation.

EAGLE has also a Stakeholder Representatives Group (SRG) and a Stakeholder Advisory Board (SAB). The SRG is a consultation body of representatives from information sources, channels, and receivers from across project countries. The SRG was launched at the first conference "Let's Communicate about Ionizing Radiation" held in Paris, France on 26 November 2013. Subsequently, through virtual workshops and other means the SRG will reflect on the project working documents and results, and provide feedback regarding their relevance and usefulness in practice. The SRG also comment on the communication approach, on the envisaged project objectives and their impact on all stakeholder groups as well as on the dissemination of results. The EAGLE Stakeholder Advisory Board is formed of a range of stakeholders and will help to ensure that the project's approach is tailored to the diversity of stakeholders involved in communication processes.

The composition of the EAGLE grant consortium is as follows:

Coordinator: SCK-CEN - Studiecentrum Voor Kernenergie

Partner 2: ARAO - Agencija za Radioaktivne Otpadke

Partner 3 : IRSN - Institut de Radioprotection et de Sûreté Nucleaire

Partner 4: Regia Autonoma pentru Activitati Nucleare Drobeta tr. Severin ra Sucursala Cercetari Nucleare Pitesti - INR

Partner 5: Institut Symlog

Partner 6: Institut Jozef Stefan

Partner 7: Instytut Chemii i Techniki Jadrowej

Partner 8: Universitatea Politehnica din Bucuresti

Partner 9: Regional Environmental Center for Central and Eastern Europe – REC

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List of Acronyms

AB – Advisory Board

EAGLE – Enhancing education, training, communication processes for informed behaviours and decision making related ionizing radiation risk

ETI – Education, Training, Information

IR – ionizing radiation

SSH – Social Sciences and Humanities

SRA – Strategic Research Agenda

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Executive summary

The RICOMET 2016 Conference 'Risk perception, communication and ethics of exposures to ionizing radiation' was the last public event of the EAGLE project taking place from 1 – 3 of June 2016 in Bucharest, Romania. It was the opportunity in which almost 100 participants have been contributing through presentations, discussions, exchange of opinions and suggestions. The final results of the EAGLE project will be developed by taking into account the recommendations not only from the EAGLE stakeholder network but also from other projects like OPERRA, PLATENSO and CONCERT and involved participants including HORIZON 2020 projects participating at the conference, for instance the project HONEST.

The RICOMET 2016 conference also gave the possibility for the presentations of the ionizing radiation research and investigations in different European countries and provided the occasion for discussions and exchange of views among the participants. The EAGLE, PLATENSO, OPERRA and CONCERT projects have confirmed the importance of stakeholder involvement in the governance of ionizing radiation risks. In order that strategic research agendas most effectively address research needs and expectations at all levels and for all actors, the RICOMET Conference highlighted that better mechanisms to understand and include stakeholder concerns at the national level need to be developed.

More opportunities for dialogue among natural scientists, researchers in social sciences and humanities, civil society organizations, and other stakeholders, such as provided by the RICOMET conference, should be created. In order to better focus ionizing radiation research, the Conference recommended that interactions with, and experience exchange among platforms and projects, are essential.

To enhance and promote SSH research in the radiation protection field, and to maintain and share the specific knowledge and expertise developed so far, a need was expressed for the establishment of: SSH research within the Strategic Research Agendas of technical radiological protection platform; and SSH networking activities. These should be self-sustainable after the completion of the projects participating at the RICOMET conference.

Therefore, the EAGLE and RICOMET coordination activity related to ionizing radiation would will serve as a basis for proposal of establishment of new European Platform for the integration of Social Sciences and Humanities (SSH) in research related to Ionizing Radiation (IR). The proposal development is coordinated by the committee from the founding members and will be further discussed within Oxford Radiation Protection Week.

As a result of the RICOMET 2016 conference also the special conference declaration is under development with common position of participation projects and which will be sent to all relevant stakeholders across the Europe. It will emphasize that more opportunities for dialogue among natural scientists, researchers in social sciences and humanities, civil society organisations, and other stakeholders should be created, also within the European research programmes in the frame of EURATOM and the need for SSH network activity in the field of ionizing radiation.

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1. Introduction

According to the Description of work (DoW) within EAGLE project a final project conference was foreseen:

International Stakeholder/ Final Conference

Based on the experiences and lessons learnt during the implementation of pilot actions, the Communication Recommendations will be upgraded into a final version and prepared as electronic publication. At the conclusion of the project an International Stakeholder Conference will be organized. The event will be aimed not only to publicise the project results and especially the upgraded/tested version of the Communication Recommendations, but especially to get feedback from stakeholders on how they can use these results in bridging the gap between the communication attempts and the understanding of ionizing radiation risks by European Citizens. The Conference will have panel presentations and thematic sessions. REC and SCK•CEN will be the main organizers, while all other partners will cooperate.

The final project conference was organised in a way that, apart from project partners, it would attract a number of relevant stakeholders. Relevant stakeholders in general sense are all actors in EAGLE project who are (or could be) affected by the project, who can influence the project, or just have an interest in participating in it. Within the EAGLE project stakeholder groups are very broad: members of information sources, channels and receivers, which in fact include whole societies. For that reason, different stakeholders from all project countries were invited to the event, including representatives from information sources (like nuclear industry, national radioactive waste management organisation, regulatory bodies, and medical implementers), media and civil society.

The EAGLE project final conference also took advantage of the previous conference in 2015, entitled RICOMET - Risk perception, communication and ethics of exposures to ionizing radiation, and was a continuation of the idea to organise an event in which more related projects could present the work, progress and challenges for the future to enable a space for critical mass of participants which perform research and investigations in the topics related to ionizing radiation.

2. The program and arrangements

Based on negative lesson learned from the virtual workshop and based on success of the first international conference – RICOMET 2015, the organisation team with support from other projects partners decided to organise the final EAGLE project conference as a second RICOMET conference – RICOMET 2016. Similar as last year, the conference connects four EU projects in order to reach as much stakeholders as possible and to create synergies even for period after project lifetime. The conference, was initiated by the EAGLE coordination project and this time organized under the auspices of following projects:

- **EAGLE:** Enhancing Education, Training And Communication Processes For Informed Behaviours And Decision-Making Related To Ionizing Radiation Risks
- **OPERRA:** Open Project for the European Radiation Research Area
- **CONCERT:** European Joint Programme for the Integration of Radiation Protection Research
- **PLATENSO:** Platform for Enhanced Societal Research related to nuclear energy in Central and Eastern Europe

The Second International Conference on Risk Perception, Communication and Ethics of Exposures to Ionizing Radiation were held from 1st to 3rd of June 2016 in Bucharest, Romania.

RICOMET 2016 intended to continue the dialogue started by RICOMET 2015 on social, societal and ethical issues, as well as encourage stakeholder and public participation in nuclear science, technology, applications and innovations.

The **focal points** of this year's conference were:

- Presentation of the results from project EAGLE and discussion on future perspectives with relevant recommendations,
- Presentation of the results from project PLATENSO and discussion on challenges related to social, societal and humanities of nuclear energy,
- Integration of social sciences and humanities in radiation protection research with implication for practice,
- Policy making related to different applications of ionizing radiation.

Social science and humanities met technical platform representatives such as NERIS, EURADOS, ER-ALLIANCE and MELODI to discuss a trans-disciplinary approach to future research in the radiation protection field. Policy decision makers was given the opportunity to engage in dialogues with various stakeholders including experts and representatives of informed civil society.

The dialogue between the various stakeholders was facilitated and guided towards the goal of an improved radiological risk governance.

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The organising team was established to take care about organisational and content related activities. Main tasks were covered by Chair of the Organising Committee, Daniela Diaconu, RATEN ICN, Romania, dr. Tanja Perko, Belgian Nuclear Research Centre (SCK-CEN), Belgium Chair of the Scientific Program Committee, and Ms. Blanka Koron, Regional Environmental Centre (REC), Slovenia - Head of the Conference Secretariat.

The webpage was created (<http://ricomet2016.sckcen.be/>) in order to support organisation of the event and to cover publicity needs. Additionally, the information was also spread by engaged projects channels as well as published on relevant platforms. Furthermore, the invitation to the conference was sent out to more than 2300 e-mail stakeholder addresses in February 2016. The online registration was open till end of May.

Almost 100 persons from all over the world attended the conference. List of participant is available at the end of the document as Appendix 3 as part of the Book of Abstracts.

There were papers collected related to public communication, risk perception and ethics in the field of all nuclear applications (e.g. industry, medicine, security), natural radioactivity (e.g. radon) and radiological protection (in nuclear and radiological emergency management, low doses, communicating uncertainty, mass media communication, public understanding of ionizing radiation, EU research needs in the fields ...). Some papers were presented as oral presentation, in addition also poster presentations with short introduction were enabled. Focus was on research papers, review of different approaches, policy oriented papers, nuclear governance, and emergency management.

Received papers, agenda, list of participant and list of contributors were published in the RICOMET 2016 Book of Abstracts.

Public presentations from all participants are available on conference web-page <http://ricomet2016.sckcen.be/>.

3. Overview of the RICOMET 2016

The programme of the three-day RICOMET 2016 conference was divided in several plenaries, pre –meetings, discussion groups, round table and poster presentation.

After welcome words by Daniela Diaconu, INR, Chair of the organising committee; Ioan Ursu, ANCSI, National Authority for Scientific Research and Innovation, Romania; and by project coordinators of CONCERT, Thomas Jung, BFS, Germany; OPERRA, Jean-Rene Jourdain, IRSN, France; PLATENSO, Kjell Andersson, KARITA Research, Sweden and EAGLE, Tanja Perko, SCK•CEN, Belgium, the nomination of “The RICOMET declaration committee” was announced by EAGLE Advisory Board member, Edward Lazo, OECD-NEA, France. To participants was introduced the corner for collecting SSH ideas - “My ideas for Social Sciences and Humanities (SSH) Strategic Research Agenda (SRA)”, where they posted their ideas, comments, etc. during the conference.

After welcome words, the EC representative Ms Magdalena Gadomska presented European Commission view on EURATOM Research and Training Programme.

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In the second plenary the results and future perspectives of FP7 EAGLE was presented by WP leaders in following topics: how to improve communication and coordination of information sources related to ionizing radiation; recommendations and guidelines for developing media relations for communication about ionizing radiation; guide for good practices for public communication, education, training and information; and collected solutions for improved risk governance in the field of IR.

The discussion was continued in three parallel reflection workshops aiming to get reflected input from participants on given presentations and achieve an agreement for the EAGLE final deliverables and recommendations. First workshop group discussed how to improve communication and coordination of information sources, the second group reflect recommendations and guidelines for developing media communication and the third group of participants discussed about guides for good practices for public communication, education, training and information.

Summary of the reflection workshops and conclusions from each workshop were presented at the plenary to all participants. The results of the EAGLE project highlight the large gaps between the public's appraisal and the intentions of those who are providing information on IR risk. Mutual learning by all stakeholders is therefore required. Communication about ionizing radiation is still too much seen as a one - directional transfer of information from a source to a receiver. On the one hand, communication by users of IR is mainly inspired by the idea that the general public should be 'educated' by 'explaining them the facts' and by assisting people to 'better understand' nuclear technology. On the other hand, citizens miss the recognition by the technical experts of being a competent stakeholder. Journalists require faster and more transparent communication about ionizing radiation and are very reluctant to communicate with public relations representatives. They appeal for experts to be trained for media communication. New media speed up, decentralize and diversify information provision while offering platforms for direct citizen participation, expression and feedback.

The EAGLE project identified several areas for further improvements of communication about ionizing radiation:

- i.) EAGLE consortium members recognized the need to establish a strong network of academics and professionals in the form of a **European Platform for the integration of Social Sciences and Humanities (SSH) in research related to Ionizing Radiation (IR)**. This aligns with the call for transdisciplinary and inclusive research related to ionizing radiation and the ongoing process of development of a Strategic Research Agenda for Social Sciences and Humanities in radiation protection.
- ii.) Public opinion research related to ionizing radiation in EU is mainly focused on attitudes towards nuclear energy and omits other applications or challenges of IR. EAGLE suggests identifying the actual impacts of IR in everyday life and focusing on meaningful issues for the public.
- iii.) Societal communication about IR risks has become more complex, extensive and multi-directional. EAGLE suggests that more attention should be given to joint learning and participative problem-solving.

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- iv.) EAGLE identified the need for institutions to adapt by including specialized personnel, new practices and new policies related to communication and public involvement.
- v.) The ideal of communication about radiological risks is to support the stakeholders to make informed decisions and to establish two-way communication and joint problem solving. To be able to take an informed decision, people need a certain level of issue understanding. Research shows that communication related to IR will not trigger enough attention to be heard or recalled by people with low levels of knowledge; consequently, they will not be able to engage in the decision-making processes. From this point of view, teachers in schools and other people involved in education programs hold an important role in communication about IR.
- vi.) EAGLE highlighted that all IR fields, medical, industrial and nuclear energy applications of ionizing radiation research, would benefit from participatory nuclear risk governance. This would include, among other things, enabling citizens to weigh on nuclear research policy by setting priorities and inputting values.
- vii.) EAGLE calls for integration of social and ethical aspects into core scientific and nuclear research and development.

During the all the days the poster where hanged in the lobby in front of the main conference room, but also each poster was presentations orally in short to the participant in plenary. The poster arrangement enabled participants an active interaction also during the breaks. Presented were 11 posters with following titles:

- Biological dosimetry in Europe is it necessary according to emergency responding authorities?
- Low dose of radiation risk in Polish media space and in Polish Nuclear Energy Program versus recently updated results of INWORKS
- The utility of the concept of mental models related to ionizing radiation in the process of the Polish nuclear power program (PNPP) development
- Socio-economic impact and perception analysis of the nuclear power plant Programme in Poland
- Value frames of nuclear technology acceptance
- Developing a research strategy on nuclear related social, societal and governance issues in Hungary
- Strategic aspects of the social research in the development of the Romanian nuclear sector
- Local partnerships: achieving stakeholder consensus on short-lived waste disposal in Belgium
- Citizen-based radiation measurement in Europe: supporting informed decisions regarding radiation exposure for emergencies as well as in daily life
- NUCLEU2020 – A network of H2020 National Contact Points (NCP)
- Civil society involvement in public information about nuclear activities in Romania

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The third plenary offered to the participant's insight into FP7 PLATENSO results and future perspective. Presented were a status of SSH research on nuclear energy; PLATENSO network and Virtual Information Centre and developed strategies and scenarios which were and introduction to the moderated open discussion.

In the afternoon of the first day 5 parallel sessions were held on research in the field of radiation protection and social sciences and humanities related to ionizing radiation. In session one four presentations addressed integration of social sciences and humanities in radiation protection research; all discussions were moderated. Session two addressed issue of rising education, training and communication about ionizing radiation, meanwhile in third session they presented and discussed the societal ethical and economic aspects of nuclear emergencies. Decision making and nuclear policy was the topic of the fourth session. How to address stakeholders and public engagement in decision related to nuclear technologies was presented and discussed in fifth session.

In the late afternoon, EAGLE Advisory Board Meeting (AB) with Management Committee was held with aim to obtain the feedback and recommendation from AB members.

The whole second day of the conference was dedicated to integration of social sciences and humanities in radiation protection research, with implications for practice. In the morning the plenary was about what, why and how of integrating social sciences and humanities into radiation protection research, presented were the science, values and societal response by examples of RP decision making where social sciences and humanities (SSH) could help. Additionally, an overview on how strategic research agendas were created in different platforms was shared with participants. From the EU H2020 CONCERT project the process of developing the Strategic Research Agenda (SRA) for SSH was presented.

To provide some practical insights how to integrate the SSH the moderated round table discussion with management representatives of the MELODI (Multidisciplinary European Low Dose Initiative), ALLIANCE (European Radioecology Alliance), NERIS (European Platform on preparedness for nuclear and radiological emergency response and recovery) and EURADOS (European Radiation Dosimetry Group) platforms about integration of SSH in their domain was held. The next focus was to broaden and deepen search of SRA for SSH in radiation protection with presentation of the potential and the challenge to expanding technical democracy as well as culture, practice and justification: Issues for the humanities/social sciences in medical radiation protection. Intrigued participants were then invited to participate at open space workshops to collect the input for SRA in SSH in Radiation protection, collected inputs from several groups were then briefly presented to all participants.

The second day agenda was concluded with presentation of the proposal for a Platform for social sciences and humanities in research related to ionizing radiation by founding members in order to collect the response and idea from the public.

On the third day the main idea was to move from the conceptual work closer to policy and decision making. In moderated morning discussion the representatives of the MELODI, ALLIANCE, NERIS and EURADOS reflected the responses from the workshops. The following

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plenary address if can civil society directly influence decision making and policy. Representative from Nuclear Transparency Watch presented citizen control over nuclear safety and policy. Good practice how ANCCLI changes the game in French nuclear accident preparedness with new model for civil society engagement in governance of ionizing radiation risk was presented. Additionally, former president of Slovenian parliament explained his perspective of policy actor in ionizing radiation risk policies. The section was concluded with idea of new history of nuclear energy in its interaction with civil society. The participants were then provoked by question if civil society can directly influence decision making and policy, e.g. where and how can those outside the usual shape of authority can shape the policies and decisions; where and even how must they be shaped by society and how can SSH research support this actions.

In light of RICOMET 2015 results its declaration was presented and was openly discussed what should be the declaration for RICOMET 2016. The ideas, comments and proposals collected during the conference were presented by the declaration committee. It was agreed that all conference projects will signed the RICOMET 2016 declaration on behalf of the projects' partners.

As nowadays one of the hottest topic is a terrorism, also the last session was dedicated to radiological terrorism as when can ionizing radiation invade the public space. In case of bombs, which are public behavioural intentions and information needs. Presented was also how important is to share the goal of minimising harm to the public with right communication, therefore presented where journalists' recommendations to the authorities.

The three-day conference where concluded by short reflections on the main topics on the last days and with conclusions that such common events are needed and that it would be great if the third RICOMET would be organised.

4. Conclusions

Through the conference related communication, the interested public was broadly informed about all aspects of the EAGLE project. The project partners gained the stakeholders' further feedback related to substantial questions and issues that are dealt with in the project. Contacts and working relations were stimulated with many stakeholders and also with other relevant EU project partners, and with EC experts. The EAGLE stakeholder network was again given opportunity to propose and suggest further inputs for the elaboration of all final results of the project.

The conference outputs will be used by EAGLE partners to finalize the reports related to the recommendations of new approaches in education and useful training and information instruments, as well as to foster dialogues among different stakeholder categories to examine needs and solutions aiming to bridge the gap in the public understanding of these topics (which is the main aim of EAGLE project).

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Apart to that the conference also gave the opportunity for the presentations of the ionizing radiation research and investigations in different European countries and provided the occasion for discussions and exchange of views among the participants. The news results on various social science and humanities research related to ionizing radiation would also serve as a basis for proposal of establishment of new European Platform for the integration of Social Sciences and Humanities (SSH) in research related to Ionizing Radiation (IR). The proposal development is coordinated by the committee from the founding members and will be further discussed within Oxford Radiation Protection Week.

As a result of the RICOMET 2016 conference also the special conference declaration is under development with common position of participation projects and which will be sent to all relevant stakeholders across the Europe. It will emphasize that more opportunities for dialogue among natural scientists, researchers in social sciences and humanities, civil society organisations, and other stakeholders should be created, also within the European research programmes in the frame of EURATOM.

5. Recommendations

General:

- More opportunities for dialogue among natural scientists, researchers in social sciences and humanities, civil society organisations, and other stakeholders, such as provided by the RICOMET conference, should be created.
- In order to better focus ionizing radiation research, the Conference recommended that interactions with, and experience exchange among platforms and projects, are essential.
- To enhance and promote SSH research in the radiation protection field, and to maintain and share the specific knowledge and expertise developed so far, a need was expressed for the establishment of: SSH research within the Strategic Research Agendas of technical radiological protection platform; and SSH networking activities. These should be self-sustainable after the completion of the projects participating at the RICOMET conference.

Recommendations related to the communication, education and training research in the field of ionizing radiation:

INFORMATION AND COMMUNICATION RESEARCH
TO SUPPORT INFORMED SOCIETAL DECISION-MAKING
TO BE INCLUDED IN A FUTURE EUROPEAN RESEARCH AGENDA

Perception and understanding of ionizing radiation risks

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- Use and perception of technical information and risk estimates in communication with various publics (lay people, experts, informed civil society):
 - Communication and perception of scientific uncertainties related to low doses;
 - Relationship between dose limits and risk perception and the role of confidence and trust.
- Perception of radiological risks from low doses of radiation (cultural differences, normal & emergency situations, uncertainties);
- Narratives related to ionizing radiation in nowadays society;
- Understanding of ionizing radiation concepts by different stakeholders (patients, local population, ...), for medical exposure, industrial applications and natural radiation;
- Factors affecting emotions associated to radioactivity and role of social environment;
- Communication and risk perception of radiation protection in medicine.
- Communication about health effects of low doses of ionizing radiation and related uncertainties.

Stakeholder involvement

- Improved participatory practices in radiation protection R&D;
- Public involvement methods, reaching towards involvement of citizens at a large scale, including local communities, teachers, students, mothers, volunteers;
- Mutual-learning processes;
- Know-how and practices enabling informed decision-making for lay citizens;
- Case studies of (un)successful / stakeholder engagement in the field of radiation protection;
- Local knowledge and preparedness;
- Citizen science initiatives and citizen engagement opportunities (e.g. public involvement in monitoring of radioactivity in a contaminated environment as well as in daily life);
- Doctor-patient communication about ionizing radiation risks;
- Improved patients' understanding of medical exposure to ionizing radiation and informed decision-making.

Ethics of risk communication

- Ethical basis and values underpinning risk communication;
- The meaning of independency in risk communication;
- Impact of developments in information technology, e.g. privacy and “relationship ethics”.

New mass and social media:

- Influence on the understanding of complex concepts and the perception of radiological risks by lay people;
- Use of social media in emergency preparedness and response (public behaviours, mechanisms for acquiring information, drivers of social trust).
- Use of new media for citizen science.

Emergency management situations

- Psychological consequences of emergency management decisions;
- Use of risk communication to mitigate psychological stress;
- Factors affecting trustworthiness and effectiveness of information;
- Risk communication and stakeholder involvement in post-accident recovery;
- Socio-psychological aspects of medical follow-up (e.g. impact on risk perception or the level of satisfaction);
- The meaning and use of mass media communication before, during and after a nuclear emergency.
- Socio-economic aspects of pre-distribution of iodine tablets in different EU countries.

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- Socio-psychological aspects of thyroid measurement campaigns as response to and recovery after nuclear emergencies.

Public information

- Use of state of the art knowledge from mental models and other socio-psychological research with focus on low doses of radiation;
- Information needs concerning various applications of ionizing radiation and cross-country comparisons;
- Ionizing radiation in daily life presented and communicated in mass media including radon;
- Framing/counter framing of nuclear technologies and applications of ionizing radiation (e.g. in the medical field) with focus on low doses radiation;
- Quantitative and qualitative differences in media reporting about radiation protection and longitudinal studies.

Communication and stakeholder involvement for specific situations

- Societal concerns and risk communication related to decommissioning, NORM pollution and remediation;
- Societal constraints and solutions related to stakeholder engagement in low dose radiation risk governance.
- Interaction between mass media, public opinion and elites on radiation protection and nuclear energy policy.

ADDITIONAL INFORMATION AND COMMUNICATION RESEARCH TO SUPPORT INFORMED SOCIETAL DECISION-MAKING

DERIVED FROM SRA'S OF RADIATION PROTECTION PLATFORMS

EURADOS – radiation dosimetry

Vision 2: Improved radiation risk estimates deduced from epidemiological cohorts

1 Explore exposure pathways not yet considered or validated

- *Not only radiation protection but also social and psychological aspects*
- *Identify other stakeholders where more accurate dose assessments would be needed (e.g. frequent flyers? orthodontic practices)*
- *Building trust in dose assessments, e.g. with workers and people affected after Fukushima (transparency, inclusiveness ... - goes beyond scientific accuracy)*
- *Explaining detection limits and uncertainties to lay people*

2 Advance retrospective dosimetry for exposure pathways already considered

- *Socio-psychological burden from (not)accurate dose assessments*
- *Communication with affected people in particular communication of uncertainties*
- *Ethical aspects of data privacy and data sharing*
- *Developing interview protocols following state-of-the-art social science methodologies and considering respondents' needs, concerns and expectations*

Vision 3: Efficient dose assessment in case of radiological emergencies

1 Identify and characterise new markers of exposure

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- *Perception and communication of risks and uncertainties associated to doses and dose assessments*
- *Guidelines for communication of doses to affected people, taking into account specific cultural aspects*
- *Psychological support for people subjected to dose assessments*
- *Citizens involvement in radioactivity measurements: collaboration of scientists with civil society for establishing tools or instruments for radioactivity monitoring for citizens (e.g. dose rates, food); protocols for data visualisation; protocols for validation of doses measured by the public; mutual learning.*

2 Quantify doses after accidental internal contamination

- *Addressing socio-psychological and communication aspects of thyroid measurements, e.g. in waiting rooms*

Vision 4: Integrated personalised dosimetry in medical applications

- *Integrating patient input in technology design (value sensitive design) (e.g. anxiety, comfort)*
- *Input for develop smart technologies which are responsive to patients' needs and individual characteristics*
- *Communication between doctors, technical experts and patients*
- *Awareness of medical doctors on dosimetric aspects of therapy modalities*
- *Observational study on the use of technology developed in EURADOS*

Vision 5: Improved radiation protection of workers and the public

1 Develop accurate and on-line personal dosimetry for workers

- *Visualisation of results of on-line dosimeters used by individuals and workers in various radiation fields*
- *Observation of actual use of dosimeters*
- *Perception of radiological risk in occupational exposure and link to actual dose of dosimeters and related safety behaviour*

2 Include nuclide-specific information in environmental monitoring

- *Mapping expectations of decision-makers, civil society and citizens on environmental monitoring*

ALLIANCE - radioecology

- Communication of assessments' results in a credible and objective way to the public, including assumptions, knowledge gaps and resulting uncertainties;
- Increasing trust in scientific research by addressing knowledge and data gaps that are of concern to society;
- Involving stakeholders in the discussion on how radioecological research affects decisions on remediation techniques or land use restrictions;
- Accounting for risk communication issues in the development of decision support tools, especially user interfaces;
- Public reflection and concerns regarding the impact of contamination in the abiotic environment;

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CARPE-M – medical applications of ionizing radiation

- Improved transparency and communication about risk and benefits of ionizing radiation applied in medical sector;
- Stakeholder engagement in the medical sector;
- Values applied in ethics and justification for the patient or layman through public participation;
- Mutual learning processes to overcome the communication gap.

NERIS – nuclear and radiological preparedness, response and recovery

Assessment & communication of uncertainties

- Communicating uncertainty, and related legal, social and ethical aspects.
- Low radiation doses after incidents and accidents

Robust decision-making

- Organising multilevel governance frameworks that facilitate stakeholder engagement at multiple levels;
- Facilitating stakeholder engagement in the perspective of the Aarhus Convention;
- Use of technical tools to support decisions and to facilitate open-ended debate with and among stakeholders.

Countermeasure strategy preparedness

- Social dimensions of efficiency and sustainability of countermeasures;
- Information and participation of local stakeholders;
- Conditions for countermeasures to preserve resilience of local and regional communities;
- Conditions for developing solidarity between national and local communities.
- Socio-political-economic aspects of predistribution of iodine tablets.

Monitoring strategies

- Conditions and means for integrating inputs from experts and publics in monitoring strategies;
- Conditions for trustworthy and reliable engagement of both experts and non-experts;
- Integration of uncertainty management in monitoring strategies;
- Citizens' involvement in monitoring of radioactivity in the environment.

MELODI – radiobiology

- Communication about low radiation doses and improved personal decision making under uncertainty;
- Developing know-how and practices enabling people to make their own choices or decisions;
- Tools for communication about low doses for different types of stakeholders;
- Improved participatory practices in decisions related to low doses due to industrial, medical or accidental applications;
- Communicating the limits of science, pointing out that science cannot resolve all questions (epistemology);
- Communication of scientific uncertainty, especially for low dose ionizing radiation.

TRANSVERSAL ISSUES TO BE INCLUDED IN SSH SRA

- Trans-disciplinary dialogue bringing together natural scientists, engineers, social scientists and researchers in the humanities;

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- Stakeholders' involvement in research and research prioritisation.

RESEARCH RELATED IDEAS collected by participants

Participants of the conference directly expressed need and interest in research related ionizing radiation in the following fields: public understanding of science, citizens journalism, science journalism, influence of new media in trust relationship as well as risk perception, media agenda setting, public understanding of basic concepts in radiation protection, stakeholders engagement and risk governance in all life cycle (from uranium mining to decommissioning), ethical aspects related to communication, psychological effects of communication and to apply cross –cultural comparisons in all these aspects. In addition, a strong need for communication research as well as decision-making research in medical applications of ionizing radiation was stressed, with focus on doctor-patient communication. Moreover, they expressed a necessity for establishing media science centres in order to improve public understanding of ionizing radiation issues.

The participants regularly stressed that the social science and humanities related to ionizing radiation (SSH IR) Network should be established to stimulate the integration of social sciences and humanities (SSH) in research, practice and policy related to ionizing radiation exposure situations (e.g. low dose risk, radioecology, emergency preparedness and response, dosimetry, medical applications, waste management, nuclear safety, NORM, site remediation etc.), and stimulating the interaction of relevant actors in order to reach a shared vision.

The SSH IR network should elaborate a strategic perspective for research needs to be integrated in the Strategic Research Agenda (SRA) of the existing European Platforms for Radiation Protection Research based on the principles of transdisciplinary and inclusiveness, defining research directions and priorities for SSH and for the integration of SSH with natural sciences and technology for better policy and practice related to ionizing radiation situations. These SSH IR strategic perspectives for research needs should be developed in coordination with the existing platforms in the field. Therefore, the strategic perspectives for research needs for SSH research related to ionizing radiation should be available with integration of related topics and in response to the demands at different levels: citizens, policy makers and implementers.

Appendixes

1. App.: Invitation to the Conference- RICOMET

RICOMET 2016

Risk perception, communication and ethics of exposures to ionising radiation

Dear,

We would like to invite you to participate in the international conference RICOMET 2016 held the 1st to the 3rd of June at the Caro Hotel, Bucharest, Romania.

The conference intends to continue the dialogue started by [RICOMET 2015](#) on social and ethical issues, as well as encourage stakeholders and public participation in nuclear science, technology and innovation.

We will focus in particular on creating a strategic research agenda on social sciences and humanities in radiation protection, as well as policy making related to different applications of ionizing radiation.

Early bird registration for the conference is open now until the 4th of April via the [link](#) below. Abstracts may be submitted until the 31st of March via email, eagle_secretariat@rec-lj.si

For further information, visit our [website](#) or contact us via email, tperko@sckcen.be

We hope to see you in Romania!

Yours sincerely,

Dr. Daniela Diaconu, Institute for Nuclear Research, Romania

Chair of the Organising Committee and

Dr. Tanja Perko, Belgian Nuclear Research Centre (SCK-CEN), Belgium;

Chair of the Scientific Program Committee

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20/22

(D-N°:4.11) – **Report from final project conference – RICOMET 2016**

Dissemination level: **PU**

Date of issue of this report: **30/06/2016**



FOCAL POINTS

WHEN/ WHERE

1st to 3rd of June 2016

[Hotel Caro](#), Bucharest, Romania

Creating a Strategic Research Agenda on Social Sciences and Humanities in Radiation Protection

Policy making related to different applications of ionizing radiation.

Early bird registration is possible from February 10 2016 till April 4 2016.

Abstract submission is open from February 10 2016 till March 31 2016.

The conference is organized under the auspices of the four EU projects:



Enhancing Education, Training And Communication Processes For Informed Behaviours And Decision-Making Related To Ionizing Radiation Risks



European Joint Programme for the Integration of Radiation Protection Research

EAGLE



Open Project for the European Radiation Research Area



Building a platform for enhanced societal research related to nuclear energy in Central and Eastern Europe

2. App.: Presentation of the International Conference- RICOMET

Please visit official web-site: <http://ricomet2016.sckcen.be/>

3. App.: Book of abstract (incl. Programme, Abstracts, List of Contributors and List of participants)

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