



Third NERIS Workshop

“State of the art and Needs for further research for emergency and recovery preparedness and response”

17-19 May 2017, Lisbon, Portugal

Programme

Hosted by Instituto Superior Técnico



Day 1 - Wednesday 17 May 2017

13.30 – 16.30

NERIS GENERAL ASSEMBLY

NERIS Workshop Registration

Day 2 - Thursday 18 May 2017

8.30 – 9.00

NERIS Workshop Registration

9.00 – 9.30

NERIS Workshop Opening Ceremony

Chair: João Oliveira Martins, Pedro Vaz and Thierry Schneider

Welcome and Introduction

J. O. Martins¹ and Pedro Vaz²

¹APA, Agência Portuguesa do Ambiente (Portugal) – Local Organizer

²IST, Instituto Superior Técnico (Portugal) – Local Organizer

The main challenges of the NERIS Platform

Thierry Schneider – CEPN (France) – President of NERIS

The NERIS Strategic Research Agenda: Status and Perspectives

J. Camps¹, T. Schneider², W. Raskob³ and the NERIS R&D Committee

¹SCK-CEN, Belgian Nuclear Research Centre (Belgium)

²CEPN (France)

³KIT, Karlsruhe Institute of Technology (Germany)

9.30 - 10.30

Session 1: Challenges in countermeasures and countermeasure strategies in emergency & recovery, decision support & disaster informatics.

Chair: Mário Capucho dos Reis & Milagros Montero

Crisis Management Yesterday and Now – Societal Changes in Challenges related to Decision-Making and Protective Measures

Ø. G. Selnaes, I. M. Eikermann, A. Liland – NRPA, Norwegian Radiation Protection Authority (Norway)

An investigation of the effectiveness of sheltering versus evacuation

J. Sherwood¹, K. Mortimer¹, T. Charnock¹, S. Haywood¹, T. Hamburger², F. Gering²

¹PHE, Public Health England (United Kingdom)

²BfS, Federal Office for Radiation Protection (Germany)

A Case Study of the Use of ERMIN in Portugal After a Radiological Emergency Scenario

P. Marques Nunes, L. Portugal, F. Cardoso, M. Farto, J. O. Martins – APA, Agência Portuguesa do Ambiente (Portugal)

10.30 - 11.00

Coffee Break

Day 2 - Thursday 18 May 2017

11.00 – 11.45 **Session 1 (con't): Challenges in countermeasures and countermeasure strategies in emergency & recovery, decision support & disaster informatics.**

Chair: *Mário Capucho dos Reis & Milagros Montero*

Short presentation of topics covered at the latest ARGOS User Group Meetings in Tallinn and Copenhagen

J. Pehrsson – PDC-ARGOS (Denmark)

Countermeasures on agricultural areas after the Chernobyl and Fukushima accident

V. Durand and G. Mathieu – IRSN, French Institute for Radiological Protection and Nuclear Safety (France)

Countermeasures in agriculture in emergency and long-term phases of the accident at the Chernobyl nuclear power plant. Experience of Belarus

V. Averin – Gomel State University (Belarus)

11.45 – 12.15 **Discussion: Session 1**

12.15 – 12.45 **Session 2: Challenges in radiological impact assessments during all phases of nuclear/radiological events**

Chair: *Antony Bexon & Florian Gering*

Radiological impact assessment as basis for a review of protection strategies in Germany

F. Gering, T. Hamburger, G. Heinrich, S. Schantz, H. Walter, M. Werner, Y. Yevdin, N. Zander – BfS, Federal Office for Radiation Protection (Germany)

Rapid prediction of haematological acute radiation syndrome in radiation injury patients using peripheral blood cell counts

M. Port¹, B. Pieper¹, T. Knie¹, H. Dörr¹, A. Ganser², D. Graessle^{1,3}, V. Meineke¹ and M. Abend¹

¹*Bundeswehr Institute of Radiobiology (Germany)*

²*Hannover Medical School (Germany)*

³*Radiation Medicine Research Group of the Faculty of Medicine, Ulm University and WHO Liaison Institute for Radiation Emergency Preparedness (Germany)*

12.45 – 13.00 **Presentation of Posters related to Session 2**

Chair: *Eduardo Gallego*

13.00 – 14.00 **Lunch**

Day 2 - Thursday 18 May 2017

14.00 – 15.00

Session 2 (con't): Challenges in radiological impact assessments during all phases of nuclear/radiological events

Chair: Antony Bexon & Florian Gering

Region-specific parametrisation of Spanish Mediterranean areas to reduce the uncertainties in the management of the long-term rehabilitation

C. Trueba, M. Montero – CIEMAT (Spain)

Towards Inverse Source Term Estimation using Big Data Technologies

S. Andronopoulos, I.A. Klampanos, A. Davvetas, C. Pappas, A. Ikononopoulos and V. Karkaletsis – National Centre for Scientific Research 'Demokritos' (Greece)

European nuclear Risk Mapping by Kernel Density Estimation applied to air mass trajectories

M. A. Hernández Ceballos, L. De Felice, M. De Cort – Joint Research Centre, Nuclear Safety and Security directorate, Radioactivity Environmental Monitoring Group (European Commission)

UPCAST – Unified Platform for CBRN Accident/Attack Scenario Management

Francisco Moitinho de Almeida et al - TEKEVER, Óbidos, Portugal

15.00 – 15.30

Discussion on Session 2

15.30 – 16.00

Coffee & Posters of Session 2

16.00 – 17.30

Session 3: Uncertainty handling issues for emergency and recovery

Chair: Spyros Andronopoulos & Wolfgang Raskob

Coping with uncertainties: The new research project CONFIDENCE

W. Raskob¹, O. Isnard², C. Woda³, N. A. Beresford⁴, M. Montero⁵, C. Turcanu⁶, T. Müller¹, T. Duranova⁷

¹KIT, Karlsruhe Institute of Technology (Germany)

²IRSN, French Institute for Radiological Protection and Nuclear Safety (France)

³HMGU, Helmholtz Zentrum München – German Research Center for Environmental Health (Germany)

⁴NERC, Centre for Ecology & Hydrology (United-Kingdom)

⁵CIEMAT, Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (Spain)

⁶SCK·CEN, Belgian Nuclear Research Centre (Belgium)

⁷VUJE (Slovak Republic)

The new European Research Project TERRITORIES

M. Simon-Cornu – IRSN, French Institute for Radiological Protection and Nuclear Safety (France)

Handling Uncertainty in the Threat and Early Phases

S. Haywood, N. Argyris, S. French, M. Hort, J.Q. Smith – PHE, Public Health England (United Kingdom)

16.00 – 17.30
(...)

Building a dataset for near-range validation of dose rate estimations from atmospheric dispersion calculations

J. Camps¹, C. Gueibe¹, G. Olyslaegers¹, F. Menneson² and M. Sonck²

¹*SCK•CEN, Belgian Nuclear Research Centre (Belgium)*

²*FANC-AFCN, Federal Agency for Nuclear Control*

Nordic research on uncertainty of atmospheric dispersion prediction for nuclear emergency preparedness

Jens Havskov Sørensen et al. – DMI, Danish Meteorological Institute (Denmark)

Uncertainty quantification of atmospheric transport modelling of radionuclides

P. De Meutter, J. Camps, A. Delcloo, P. Termonia

¹*SCK•CEN, Belgian Nuclear Research Centre (Belgium)*

²*Royal Meteorological Institute of Belgium (Belgium)*

³*Department of Physics and Astronomy (Belgium)*

17.30 – 18.00

Discussion: Session 3

20.00 – 23.00

Workshop Dinner

Day 3 - Friday 19 May 2017

9.00 – 10.30

Session 4: Challenges in setting-up a holistic framework for preparedness for emergency response & recovery

Chair: *Pascal Croüail & Joao Oliveira Martins*

Facing a challenging path toward a holistic framework for EPR&R

M. C. Cantone, I. Veronese – University of Milan (Italy)

Ethical considerations on the empowerment of people living in contaminated areas after a nuclear accident

F. Rollinger et al. – IRSN, French Institute for Radiological Protection and Nuclear Safety (France)

Investigating social, ethical and communicational aspects of uncertainty management in emergency and post-accident situations- a multi-disciplinary approach in the CONFIDENCE project

C. Turcanu et al. – SCK•CEN, Belgian Nuclear Research Centre (Belgium)

Enhancing CBRN first response in the framework of the CBRN Centres of Excellence initiative: the case of South-East and Eastern Europe region

K. van der Meer, A. Nagy et al. – SCK•CEN, Belgian Nuclear Research Centre (Belgium)

Considerations about the protection of emergency and recovery responders in affected areas

J-F. Lecomte et al. – IRSN, French Institute for Radiological Protection and Nuclear Safety (France)

10.30 – 10.45

Presentation of Posters related to Session 4 & 5

Chair: *Catrinel Turcanu*

10.45 – 11.15

Coffee & Posters of Sessions 4 & 5

11.15 – 12.15

Session 5: Stakeholder involvement and engagement in emergency and recovery

Chair: *Deborah Oughton and Tatiana Duranova*

Citizen's measurements: their role in radiation protection and emergency preparedness and response - the pros and the cons

J. Hulka, I. Cespirova, P. Kuca – SURO, National Radiation Protection Institute (Czech Republic)

Politics, populism and radiation risk: learning from Japan's anti-nuclear movement

M. Takahashi – University of Cambridge (United Kingdom)

Day 3 - Friday 19 May 2017

11.15 – 12.15
(...)

General Introduction of the European Research Project SHAMISEN

E. Cardis et al. – ISGlobal (Spain)

Lessons learned from Living Conditions and Health Status of Populations living in affected territories after the Chernobyl and Fukushima accidents – European Research Project SHAMISEN.

M. Maître et al. – CEPN (France)

Recommendations for preparedness and health surveillance of populations affected by a radiation accident - Conclusions from the SHAMISEN Project

D. Oughton et al. – NMBU (Norway)

12.15 – 12.45

Discussion: Session 5

12.45 – 13.30

General Discussion

Chair: *Thierry Schneider & Johan Camps*

Presentation and discussion of the group findings on NERIS SRA update – Round Table and NERIS Roadmap

Workshop Close

13.30 – 14.30

Lunch

14.30 – 17.30
(can close earlier if appropriate)

14.30 – 16.30

WG ConGoo meeting

14.30 – 17.30

CONFIDENCE meeting

List of Posters (1/2)

EURATOM Programme, NUCL-EU 2020

S. Guedes Vaz – Horizon 2020 National Contact Point (NCP) – EURATOM

Session 2: Challenges in radiological impact assessments during all phases of nuclear/radiological events

ENEA fast internal contamination monitoring methodology for nuclear emergencies

I. Vilardi, G. Antonacci, P. Battisti, C.-M. Castellani, I. Giardina, G. Iurlaro, L. Sperandio – ENEA, Radiation Protection Institute, Italian National Agency for New Technologies, Energy and Sustainable Economic Development (Italy)

Monitoring strategies to assist dose modelling in the first year after a nuclear accident

Ch. Gueibe, T. Al Mahaini, F. F. Perez, L. Sweeck and J. Camps – SCK-CEN, Belgian Nuclear Research Centre (Belgium)

On Air-Borne Monitoring

J. Paridaens, G. Olyslaegers and J. Camps – SCK-CEN, Belgian Nuclear Research Centre (Belgium)

A Big Data Architecture for Learning-Based Source Term Estimation

Iraklis A. Klampanos, A. Davvetas, C. Pappas, S. Andronopoulos, A. Ikononopoulos and V. Karkaletsis – National Centre for Scientific Research 'Demokritos' (Greece)

Establishing gene expression for early and high-throughput prediction of the hematological acute radiation syndrome

M. Majewski¹, F. Herodin², M. Valente², M. Drouet², A. Lamkowski¹, M. Port¹ and M. Abend¹

¹Bundeswehr Institute of Radiobiology (Germany)

²Institut de Recherche Biomédicale des Armées (France)

Radioactivity Environmental Monitoring Measurements Evaluation and Dose Assessment for Radiation protection purpose in routine and emergency situations

G. Iurlaro¹, M. De Cort², E. Fantuzzi¹, M. Marin Ferrer³

¹ENEA, Radiation Protection Institute

²EC-JRC Nuclear Safety & Security, Knowledge for Nuclear Safety, Security & Safeguards

³EC-JRC Space, Security & Migration, Disaster Risk Management

Session 4: Challenges in setting-up a holistic framework for preparedness for emergency response & recovery

Mobile based Application for Radiological Emergency Trainings

A. Nagy, M. Mulders, J. Camps – SCK-CEN, Belgian Nuclear Research Centre (Belgium)

A semantic information service to support resilience after a nuclear accident

Antonin Segault, F. Tajariol and Ioan Roxin – University of Franche-Comté (France)

List of Posters (2/2)

Session 5: Stakeholder involvement and engagement in emergency and recovery

Four years of dialogue for the rehabilitation of living conditions in the area contaminated by the Fukushima accident

F. Rollinger¹, V. Marchal¹, J. Lochard² and R. Ando³

¹IRSN, French Institute for Radiological Protection and Nuclear Safety (France)

²Nagasaki University (Japan)

³Ethos in Fukushima (Japan)