

ALLIANCE: from SRA to roadmap

Frank Hardeman & Hildegard Vandenhoove

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Founding Members:



Subscribing Members



www.star-radioecology.org

www.radioecology-exchange.org

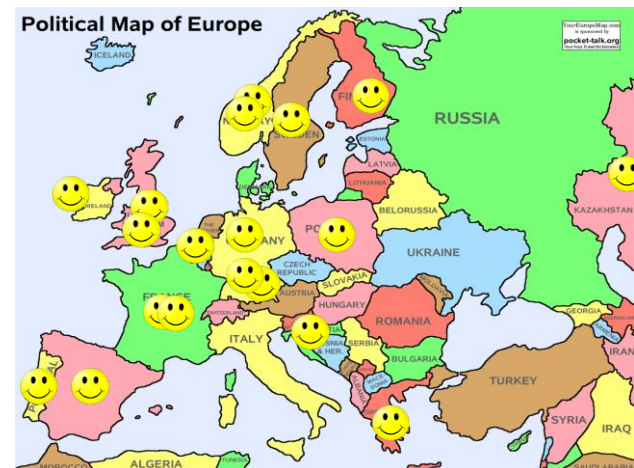
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ALLIANCE

- Integrated in the European Radiation Protection Scene and beyond
- From SRA to roadmap
- Towards H2020

The ALLIANCE

- **Mission** - Integrate research and infrastructure to maintain and enhance radioecological competences and addresses scientific and educational challenges in assessing the impact of radioactive substances on humans and environment
- 8 founding members, **20 partners** from 14 countries



Our Members

Founding Members



Subscribing Members



HelmholtzZentrum münchen
Deutsches Forschungszentrum für Gesundheit und Umwelt



Interaction with others

- The ALLIANCE is one of the 4 radiological protection research platforms existing in Europe (NERIS, MELODI, EURADOS). As such the ALLIANCE has fruitful and regular interactions with those associations



- NERIS (Emergency preparedness and response)
- MELODI (Low dose research)
- EURADOS (Person's dosimetry)
- Active cooperation with other associations
 - IUR (MoU), EUTERP, IRPA



- Contacts and interactions with many others: ICRP, IAEA, UNSCEAR, NCORE,....:



Memorandum of Understanding with MELODI, NERIS and EURADOS

Signature of the MoU between ALLIANCE, MELODI, NERIS and EURADOS
(Brussels, 5 December 2013)



From left to right: Frank Hardeman (ALLIANCE); Thierry Schneider (NERIS), Jacques Repussard (MELODI), Filip Vanhavere (EURADOS)

MoU with 4 Pillar Associations in Radiation Protection Research

- Decide to cooperate ... in order to promote the integration and efficiency of European research and scientific education and training in the field of radiation protection.
- Elaboration of a joint radiation protection research roadmap committee and various joint working groups.
- Responsibility for administration of open calls within FP7.
- Mutual observers during General Assembly meetings of the four associations.
- Openness to other associations with similar interests.

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Memorandum of Understanding with IUR

- The IUR and the Alliance have agreed to cooperate
 - to promote a common strategy and the implementation plans for research
 - to conduct joint activities
 - to promote and conduct sound research in all aspects of environmental radioactivity and radioecology
 - to promote exchange of information
 - to author joint publications and presentations in the domains of activity they share.
- Includes radiation ecology and biology, environmental monitoring, radioecological aspects of (post-) emergency preparedness, ecological risk assessment, ecotoxicology, environmental health physics, tracer studies and microbiology and biotechnology.

The Strategic Research Agenda: a Joint Effort with Radioecology European Projects

- STAR: STrategy for Allied Radioecolog
 - www.star-radioecology.org
 - Network of Excellence
 - 2011 – 2015
 - Coordinator: IRSN
- COMET: COordination and iMplementation of a pan European instrumenI for Radioecology
 - www.comet-radioecology.org
 - 2013 – 2017
 - Coordinator: SCK•CEN



COMET objectives

COMET overall objective: strengthen the pan-European research initiative in radioecology by:

- Developing innovative mechanisms for joint programming and implementation (JPI) for radioecological research
- Initiating innovative research on key needs jointly identified by the radioecology community and the (post) emergency management (NERIS) and low-dose research communities (MELODI), and strongly engage with collaborators from countries where major nuclear accidents have occurred.
- Develop strong mechanisms for knowledge exchange and dissemination to enhance and maintain European capacity, competence and skills in radioecology.

COMET develops roadmap with ALLIANCE

- Strategy
 - Underpinning science for an enhanced basis for fit-for-purpose human and environmental impact assessment by mechanistic modelling, improved parametrization, improved databases
- 5-year roadmap and implementation plan
 - Initiate a limited number of research activities that have been identified as priority in the radioecology SRA
- Criteria for research prioritization
 - Impact
 - Feasibility
 - Relevance → Problem solving
 - Public perception
 - Good science=novel
 - Links with NERIS, MELODI

• Atmosphere transfer processes

- Enhance understanding of transfer processes of radioactive aerosols to soil and biota
- Contribution of fog and snow events in transfer models.
- Investigate secondary emission mechanisms

• Human food chain

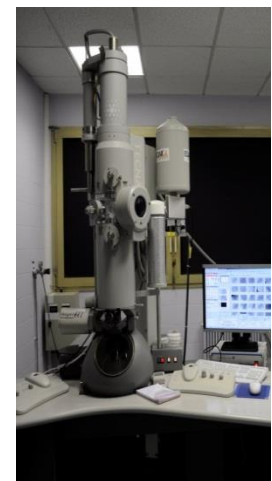
- Improve quality and completeness of radiological parameters
- Incorporate the "human-environment" into models, including the region-specific parameterisation
- Optimise model complexity

• Marine radioecology

- Improve knowledge on transfer processes for marine organisms and on marine transfers in non-equilibrium situation.
- Consolidate/develop prediction tools to model transport, transfers and radiation exposure for man and marine wildlife
- Provide dynamic models incorporating spatial and temporal processes



- **Naturally Occurring Radioactive Materials (NORM)**
 - Identify and understand the key processes relevant for radionuclide transfer under NORM site conditions
 - Develop/test tools to assess radionuclides migration in environment, their transfer into biota & human food chain
 - Optimization of remedial options or methods preventing radionuclide transfer
- **Transgenerational effects of exposure to radiation**
 - Understand contribution of genetic and epigenetic changes to propagation of effects through generations
 - Determine the molecular basis of resistance/vulnerability gained through generations
- **Intra- & inter-species differences in radiosensitivity**
 - Elucidate mechanisms explaining inter- and intra-species sensitivity
 - Identify specific molecular or cellular fingerprints as biomarkers of radiosensitivity
 - Implement powerful meta-analysis among species and exposure conditions



Towards H2020 – OPERRA

Objectives of OPERRA

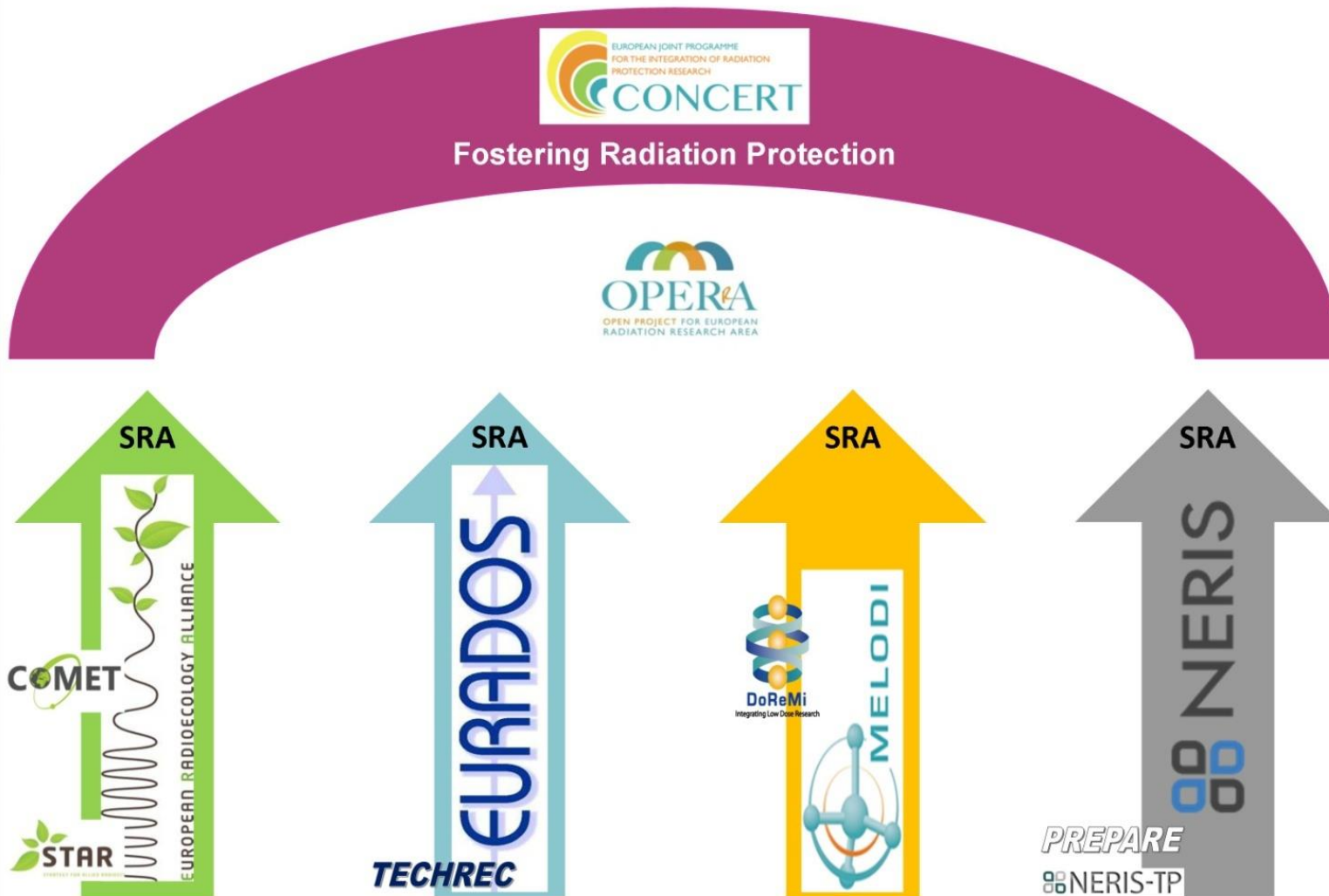
- Build up umbrella coordination structure with legal & logistical capacity to administer future calls for RP research for the EC
- MELODI Association will take lead with support of sister structures as equal partners (e.g. ALLIANCE, NERIS, EURADOS, EURAMET etc.)

OPERRA - SRA, priorities, roadmaps

- Platforms encouraged to develop and maintain own SRAs, priorities and road maps
- Beside research topics SRAs should include E&T
- Develop view on joint programming, priority setting and road map development for RPR as a whole, by building on existing SRAs from platforms and by making use of the synergisms of intra, inter and extra platform/organization discussions



H2020 - CONCERT



CONCERT

Objectives

- Bring together the elements of the European scientific communities in fields of radiation effects and risks, radioecology, nuclear emergency preparedness, dosimetry and medical
- Strengthen integrative activities
- Stimulate and foster scientific excellence
- Exchange and communicate with all stakeholders
- Foster the harmonious application of available scientific basis for radiation protection practices across Europe



SRA and roadmap

- Updated SRA, development of roadmap
- Partially integrated SRA and roadmap
 - Roadmaps/roadmap topics important since basis for CONCERT calls

CONCLUSIONS

ALLIANCE

- Well integrated in European Radiation Protection scene
- Growing number of members
- SRA supported by stakeholders
- Initiation of roadmap for radioecology together with COMET
- Well positioned in OPERRA and CONCERT (MB-member) and ready to develop SRA and roadmap (partially) common for European RP

Interested to join ALLIANCE, to contribute to roadmap and to get really involved → **JOIN US** www.er-alliance.eu