

ALLIANCE and the SRA

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Founding Members:



Subscribing Members



Helmholtz Zentrum münchen
Deutsches Forschungszentrum für Gesundheit und Umwelt



www.star-radioecology.org
www.radioecology-exchange.org

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The ALLIANCE

The European Radioecology Alliance Association – the “ALLIANCE”

- **Founded** in 2009
- **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



Objectives of the ALLIANCE

- Coordinate and promote research in Radioecology
- Act as a Research Platform
 - Definition of Priorities
 - Definition of Research Programmes and Resources
 - Assessment of results obtained
 - Promotion and Communication
- Make its information public
- Act as partner in future EU funding mechanisms:
Horizon 2020

A major tool, the strategic research agenda

- Within the objectives of the ALLIANCE:
 - Develop a **long term vision** on the needs and implementation of Radioecology (decades)
 - **Sustainable** after FP7 projects
- Adequate **processes** for defining long term needs and short term priorities are vital
- An adequate **SRA is an important tool**
 - Usefulness for science and society
 - Shared by stakeholders and researchers
 - Realistic from an operational and scientific point of view

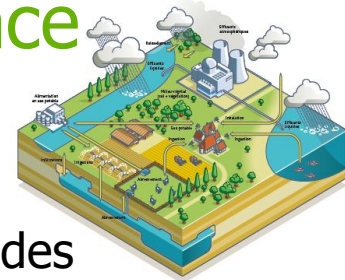
Interaction with the radiation protection community

 **NERIS**

 **MELODI**

 **EURADOS**

Ch1 Predict human and wildlife exposure in a robust way by quantifying key processes that influence radionuclide transfers and exposure



1. Identify and mathematically represent key processes that make significant contributions to environmental transfers of radionuclides and resultant exposures of humans and wildlife

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2. Acquire the data necessary for parameterisation of key processes controlling the transfer of radionuclides

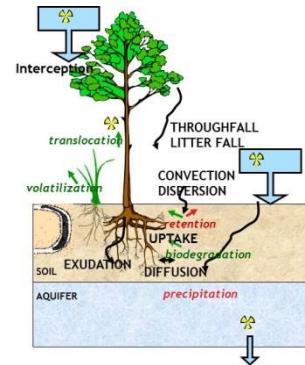
NERIS

3. Develop transfer and exposure models that incorporate physical, chemical and biological interactions, and enable predictions to be made spatially and temporally

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EURADOS

4. Represent radionuclide transfer and exposure at a landscape or global environmental level with indication of associated uncertainty

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EURADOS



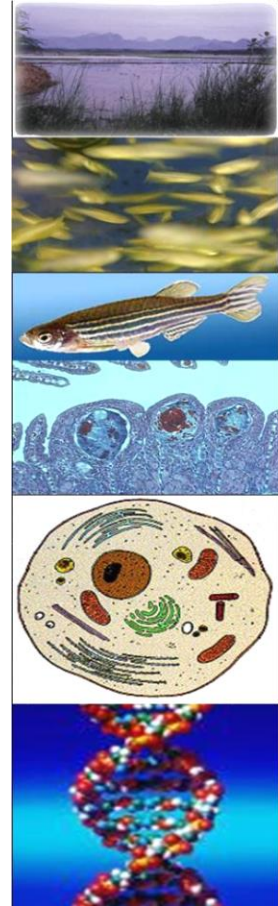
- **Food chain modelling after a nuclear accident:** Improvement of radioecological models used in DSS, with inclusion of agricultural practice/production and dietary habits for different regions and with focus on both short and long-term post-accidental situations

- **Marine radioecology:** Consolidate or develop prediction tools to characterize and model transport, transfers, fate and radiation exposure for man and marine wildlife of accidental releases of radioactivity to the marine environment







Ch2 Determine ecological consequences under realistic exposure conditions



1. Establish processes link radiation induced effects in wildlife from molecular to individual levels of biological complexity
2. Determine what causes intraspecies and interspecies differences in radiosensitivity
3. Understand the interactions between ionising radiation effects and other co-stressors
4. Identify the mechanisms underlying multigenerational responses to long-term ecologically relevant exposures



Ch3 Improve human and environmental protection by integrating radioecology

-  1. Integrate uncertainty and variability from transfer modelling, exposure assessment, and effects characterisation into risk characterisation
-  2. Integrate human and environmental protection frameworks
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 3. Integrate risk assessment frameworks for ionising radiation and chemicals
-  4. Provide a multi-criteria perspective in support of optimised decision making
-  6. Integrate decision support systems

