IUR International Workshop
Worldwide harmonization of radioecology networks

19-20 June 2014
La Baume, Aix en Provence - France




Objectives of the Workshop

Welcome in Aix !

Historical perspective on Radioecology evolutions

- **1950s-1985: First steps of Radioecology**
  - Pathways of radionuclides transfer to man
  - Some radiobiology on animals, plants and ecosystems (Effects of γ irradiation)

- **1986-1997: "Chernobyl" human radioprotection**
  - Transfer of radionuclides to man (^{137}Cs, ^{90}Sr, modelling, remediation)
  - Few radioecotoxicological studies on wild species and ecosystems

- **"Post-Chernobyl" third period: 1998-2010**
  - Initial decline pending to political decisions (e.g. Stone, Science, 2002)
  - Later reboost of nuclear energy (sustainable development) :
    - Transfers to man, animals, plants and ecosystems
    - Effects studies on (man), animals, plants and ecosystems to support **radioprotection of man and the environment**

Historical perspective on Radioecology evolutions

- **„Fukushima“ has opened a fourth period 2011-…**

  - Remediation, mitigation, decontamination techniques (terrestrial, aquatic, speciation)
  - Impacts on the marine ecosystem (in-sediment accumulation, long-term distribution and impact on the local marine trophic network)
  - Better understanding of the multiple stressors context (tsunami physical reshaping of the coastal area, radioactive releases to the environment, terrestrial and marine)
  - More integrated ecological risk assessment (ecological impact of long-term exposure to low doses, need for early bioindicators)
  - Tracer studies (marine streams, run-off)
  - etc…

IUR Strategy of networking

- **Coordinating and networking during the last decade**
  - Worldwide international research network in Radioecology launched in 2003 based on 2 TG work “Protection of the environment“ & “Radioecology and non-radioactive contaminants“
    - Research teams, facilities, priorities in research
  - Basis for the construction of the European Network of Excellence in Radioecology STAR (under EURATOM)
  - Federating around IUR neighbour international scientific associations/ networks **… started, to be continued…**
  - Expand to an International Observatory: centralised data registry to support environmental radiological assessment **… still to be done …**
  - Expand to international programme harmonisation **… still to be done …**

Why this Workshop ?

- Networks dealing with radioecology (exclusively or partly)
- Networks dealing with environmental radioactivity (exclusively or partly)
- Networks dealing with environmental issues of relevance
  - Governmental – non-governmental
  - International – Regional – National
  - Global – Topical (problem-oriented)

- IUR network: > 36 years old, 68 countries
  has identified the need to promote a:

Worldwide networking of these networks:
Moving towards a coordinated and harmonized development process for Radioecology

Networks represented (1)

Regional networks:

SPERA	South Pacific Environmental Radioactivity Association
ALLIANCE	European Radioecology Alliance (STAR and COMET EC-supported projects)
NCoRE	US National Center for Radioecology
Asian Network	Japan, Korea, and neighbour countries
Fukushima Univ.	Japan + international collaboration
Arctic Council	Arctic countries and regions

Networks represented (2)

Networks led by international organizations

UNSCEAR	*United Nations Scientific Committee on the effect of Atomic radiation*
IUR	International Union of Radioecology
ICRP	International Commission on Radiological Protection
IAEA	International Atomic Energy Agency
SETAC	Society for Environmental Toxicity And Chemistry
OSPAR	Oslo-Paris Convention for the protection of the marine environment of the North-East Atlantic

Problem-oriented Networks

BIOPROTA	International collaboration on biosphere research for radioactive waste disposal
Ring of Five	Low-level atmospheric contamination watch and surveillance

Workshop objectives

- **Share across all networks on-going activities of relevance, perspectives and orientations, priorities for research and expertise**

- **Initiate the development of an international framework instrument for worldwide harmonization of networks in radioecology, and for efficient global coordination**

  - optimize efficiency, avoid duplications
  - optimize efficient exploitation of existing infrastructures
  - support harmonized and coherent regulatory developments
  - help the development of well informed, balanced, and adapted consensus …
  - … whilst meeting the specificities of problem-oriented or regional objectives
  - …