



# The interaction of the European Radioecology Alliance with Social Sciences and Humanities

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## Link between SSH and ALLIANCE

- Where results of assessment/modelling need to be turned into useful input for the stakeholders.
  - At the level of fundamental research (can our science reply to some fundamental requests by society and how?).
  - 'Problem formulation' – e.g. what do people value, how do we as scientific community can reply to this?
- There is a space between scientists and society that needs to be covered, that's where SSH can help.

## Credibility concerns

- Uncertainties and lack of predictive power in risk assessments are major contributors to the public's (reduced) credibility of radiological sciences, and a major driver for additional research to enhance knowledge.
  - Credibility of assessment models is particularly important because their predictions are often key constituents in decisions to be made
- There is uncertainty which can reduce credibility and we can use help from SSH in communicating uncertainties' sage.

## Decision support

- Management decisions should be, in part, scientifically based.
- Ideally, general public needs to trust decision makers. E.g. the divergent opinions on effects of Chernobyl accident on wildlife in the Chernobyl exclusion zone do not enhance public confidence and understanding.

→ How could SSH help in this debate when faced with divergent opinions?

→ SSH could help direct our research or research method so that the relevance for the public and other stakeholders would increase and the research outcome would be more accepted.

## Communication

- SSH could help in developing systems of how we could better communicate our results to stakeholders.
- SSH could assist in proper communication and elimination of prejudices and biases.

## Integration of frameworks – man vs environment

- Methodologies for human and environmental assessments differ and risk assessment frameworks are not fully complementary in terms of how they are conducted which may cause difficulties for operators, stakeholders and regulators.
- Integration of the two radiation protection systems may offer significant benefits on many levels.

→ Can SSH help to define importance of integration to stakeholders?

## Integration of frameworks – radiation and other stressors

- Risk assessment framework was first proposed for chemicals. Reinforcing the consistency between frameworks for chemicals and radiation, facilitates the mutual understanding between assessors and exchange/ mutualisation of methods and tools. In turn, this will help to facilitate stakeholders' understanding of risk from various sources, including radiation.
- Risk from radiation is never considered as one of the many stressors but is always dealt via a separate framework.

→ Can SSH help put radiological risk into context with other stressors'?

## Multicriteria analysis

- In situations requiring decisions to be taken dealing with radioactive contamination, multiple criteria to be considered in decision taking
  - The acceptance of stakeholders and the public at large is at least as important as scientific and technological criteria
  - Multi-criteria analysis combines quantitative and qualitative factors and to guide the decision process towards a satisfactory solution.
  - Decision Support Systems → visible “face” of radioecology and constitute an important interface between radioecological research and stakeholders.
- SSH have a crucial role here to include the societal factor into the decision process and strengthen the interfacing.





# Translating screening values for wildlife protection

	IAEA 1992	UNSCEAR 1996-2008	ICRP 2008	ERICA 2006	PROTECT 2008
<b><i>Terrestrial</i></b>					
<b>Plants</b>	400	400		10	70
			Reference Pine tree 4-40		
			Reference Wild grass 40-400		
<b>Animals</b>	40	40		10	
<i>Mammals</i>					2
			Reference Deer 4-40		
			Reference Rat 4-40		
<i>Birds</i>					2
			Reference Duck 4-40		
<i>Invertebrates</i>					200
			Reference Bee 400-4000		
			Reference Earthworm 400-4000		
<b><i>Aquatic</i></b>					
	400	400		10	10
<b>Freshwater organisms</b>					
<i>Macrophytes</i>					200
<i>Algae</i>					200
<i>Benthic invertebrates</i>					200
			Reference Frog 40-400		
<i>Fish</i>					2
			Reference Trout 40-400	10	
<b>Marine organisms</b>					
			Reference Brown Seaweed 400-4000		
			Reference Crab 400-4000		
			Reference Flatfish 40-400		

## Involvement of social sciences and humanities

- Generally involvement over platforms (there are specific links)
- Involvement over platforms
  - E.g. SSH involvement in decision support for nuclear new-built, waste disposal, ... (SNE-TP, IGD-TP, NUGENIA)