# 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?

 $\rightarrow$  There is a space between scientists and society that needs to be covered, that's where SSH can help.



- 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.

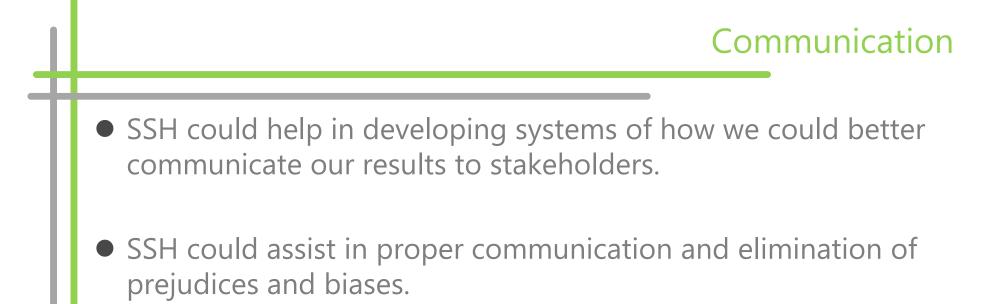


- Management decisions should be, in part, scientifically based.
- Ideally, general public needs to trust decision makers. E.g. the divergent opinions on effects of Chernobyl accident on wildlife in the Chernobyl exclusion zone do not enhance public confidence and understanding.

 $\rightarrow$ How could SSH help in this debate when faced with divergent opinions?

 $\rightarrow$  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.







#### 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.

 $\rightarrow$  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.

 $\rightarrow$  Can SSH help put radiological risk into context with other stressors'?



- 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.

 $\rightarrow$ 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

	<b>IAEA</b> 1992	<b>UNSCEAR</b> 1996-2008	<b>ICRP</b> 2008	<b>ERICA</b> 2006	<b>PROTEC</b> 2008
<u>Terrestrial</u>					10
Plants	400	400		10	70
Reference Pine tree			4-40		
Reference Wild grass			40-400		
Animals	40	40		10	
Mammals					2
Reference Deer			4-40		
Reference Rat			4-40		
Birds					2
Reference Duck			4-40		
Invertebrates			-		200
Reference Bee			400-4000		
Reference Earthworm			400-4000		
<u>Aquatic</u>	400	400		10	10
Freshwater organisms					
Macrophytes					200
Algae					200
Benthic invertebrates					200
Reference Frog			40-400		200
Fish					2
Reference Trout			40-400	10	-
Marine organisms			10 100	10	
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)

