

Towards renewed forms of civil society engagement in nuclear issues

Lessons from European research projects: SITEX, SITEX II, PREPARE, ECCSSafe and CATHyMARA

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Various EU research on relations between civil society, regulation, science, expertise

- SITEX I & II (Sustainable network for Independent Technical EXpertise of radioactive waste disposal):
 - Works on interactions between TSOs and civil society,
 - Role of civil society in research governance,
 - Role of civil society / safety & safety culture
- PREPARE: emergency and post-emergency response as a co-transition process including civil society and local actors
- ECCSSafe: Exploring contribution of civil society to safety
- CAThyMARA (Child & Adult Thyroid Monitoring After Reactor Accident)
 - Internal contamination assessment as a sociotechnical activity
 - Role of civil society in the research process (workshop)
 - Citizen-based measurements
- And a lot more...

Nuclear activities as socio-technical activities

- Nuclear activities are managed through a complex sociotechnical system combining technological artefacts, scientific constructions, human beings, social and cultural constructions & natural entities
- Different research works (Latour, Callon, Barthes & Lascoumes, Morin, Le Coze), stress that the intrinsic complexity of interactions
 - Entail complex causality relationships rather than simple ones,
 - Require to consider altogether the technical, natural and human dimensions in order to understand such systems
- Luhmann: 1) Actual management of complex sociotechnical systems = articulation between the actual system & its representation.
2) Trust as a way to manage complexity
- Kinsella: 1) Risks of obsolescence associated to dynamics of compartmentalisation and fragmentation, which compromise the capacity of complex systems to adapt to changes & ruptures.
2) Necessity to set up '*transboundary conversations*' to prevent obsolescence. Civil society facilitates such "conversations"

Co-evolution of expertise and society since the 1990's

- General trend towards reinforced information and participation of the public to decision-making processes in hazardous activities, in particular in the nuclear field
- Aarhus Convention (1998)
- Various processes organising interactions between civil society, experts, authorities and other stakeholders in ways that goes beyond stakeholder involvement: local partnerships in RWM, Asse II mine, GRNC, French Post-accident committee, ...
- A co-evolution process between expert institutions and civil society through experimentation of new modes of interaction
- Civil society as a contributor to safety (IEAE INSAG-20, OECD Guidance on Safety Performance Indicators, ECCSSafe, SITEX, IRSN vision of civil society as a 4th pillar of safety)
- Moving from an acceptability perspective to a quality perspective

Respective roles of TSOs and civil society

■ Roles of civil society:

- Stretching regulators and operators, identifying undetected problems
- Pushing to take into account new dimensions and issues
- Contributing to reframing the considered issues in a relevant way for both civil society and experts
- Contributing to the quality of decisions and expertise (sometimes by taking part to the expertise process itself, e.g. GRNC, GEP Mines)
- Acting as an additional layer of quality insurance
- Improving transparency
- Develop skills and become empowered

■ Roles of TSOs:

- Initiating or implementing of interaction processes
- Bringing elements of information and expertise
- Supporting investigations carried out by civil society actors
- Sometimes (e.g. Asse II), TSOs are stakeholders within a multi-s.h. group
- Develop pluralistic expertise processes
- Supporting CS empowerment & capacity building

Civil society and safety culture

- Safety culture is a framework to coordinate the various actors engaged in a hazardous activity around a common overriding goal of safety.
- Usual definitions of safety culture essentially focus on organisations (e.g. energy company, regulator, TSO), their management, policies and practices. → *Corporate safety culture*
- A more systemic view on safety culture seems necessary in current times characterized by the development of horizontal exchanges and networks, multiple subcontracting, multi-level governance schemes, and increasingly complex interactions going through and beyond the limits of formal organisations and including non-institutional actors (NGOs, independent experts...)
- *Societal safety culture* : set of values, references, through which the different actors (including civil society) can assess together the degree of assurance that the safety objective is reached

Taking the sociotechnical perspective seriously

- Taking civil society on board inside expertise processes
 - Co-framing the issues
 - “Unboxing” the expertise process: from implicit assumptions & hypothesis to explicit & discussable ones
 - Cooperative production of knowledge
 - Specific skills, procedures, ... to develop for experts & CSOs
 - How can TSOs contribute to the development of the capacity of civil society to contribute to the quality of decisions and expertise?

- Civil society as research partners
 - Including not only social sciences but also citizen science in the research process and in research governance
 - Identifying “complex research themes” mingling social and technical dimensions to be investigated jointly by “hard” and social scientists WITH civil society actors

Towards renewed roles of civil society in research governance ?

