

What research tells us: Stakeholder engagement for SMRs based on CATAPULT, ECOSENS, and ANSELMUS findings

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on behalf of the social sciences and humanities researchers involved in the projects



Economic and Social Considerations for the Future of Nuclear Energy in Society



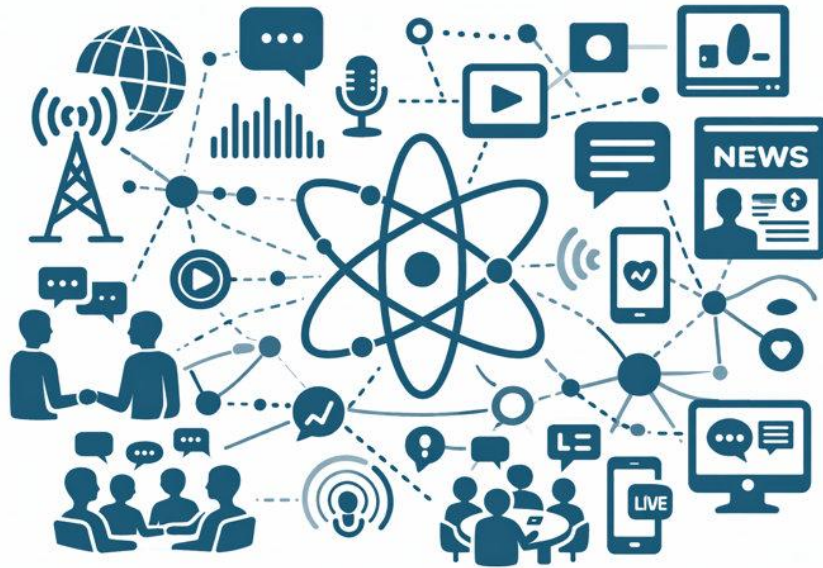
Brussels, SMR's Stakeholder Forum, 27. January 2026

Not only (potential) technical performance, but also trust, emotions, and the wider social context:

- **Performance expectancy:** Belief that the technology will deliver benefits (e.g., low-carbon energy, energy security, independence);
- **Effort expectancy:** How easy the technology and related information are to understand;
- **Social influence:** Trust in experts, institutions, and peers;
- **Facilitating conditions:** Presence of supportive governance – fair process, regulation, and communication & engagement;
- **Risk perception** (dread; familiarity and understanding; controllability, voluntariness, trust in institutions, equity, and catastrophic potential)

What shapes public support for new nuclear technology e.g. SMRs?

Communication implications :



Prioritize credibility & trust — use trusted scientific/research institutions; explain who makes decisions and how

Support risk & technology literacy — accessible, factual explanations; start from fundamentals;

Address uncertainties;

Avoid overpromising;

Avoid polarization — no partisan messaging; avoid overly positive framing;

Clearly communicate benefits & risks—with proper context

Link communication with participation — early, meaningful engagement; clarify how public input is used, especially in EIA process

Low awareness (many have never heard of SMRs; limited basic understanding)

Fragmented knowledge (designs, risks, benefits, development status uncertain)

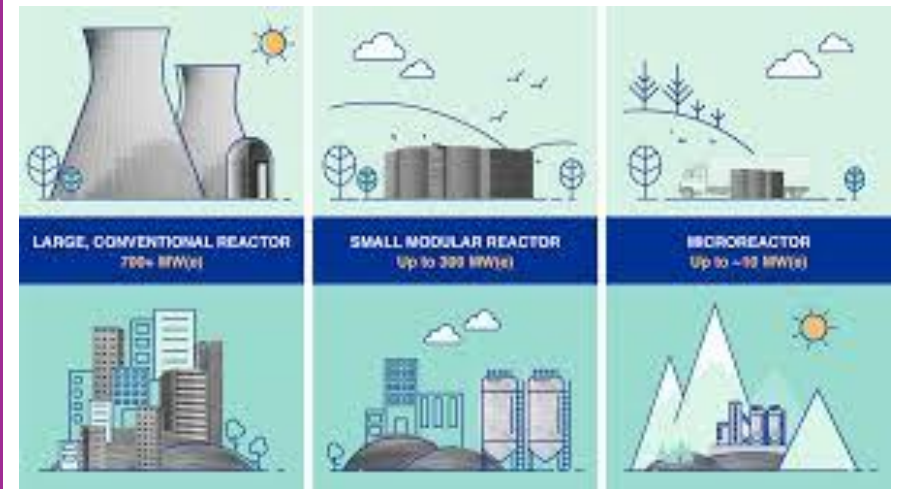
Limited understanding of EIA (what EIAs assess; decision-making; role of public input)

High uncertainty context (no operational SMRs in Europe; diverse concepts; Independence from foreign industry)

Not disinterest (demand for independent, factual information; interest in active involvement!)

There is a concerning mismatch in the information. (size, costs, deployment time, EU scientific/technological capacity)

What do publics know about SMRs?



- **Safety and risks** (accidents, external threats, emergency preparedness)
- Radioactive **waste** and long-term **management responsibilities**
- **Costs and timelines**, including risk of delays and overruns
- Role of SMRs in the energy system and mix (climate benefits, energy security, **comparison with other options**)
- Clear explanations of the technology, including **what “small” actually means in practice**
- The publics **understand change** in R&D happens, they understand that this is a process; be transparent about it.

What information publics and stakeholders want?



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Implications for practice –

Engage and partner!

USE PARTICIPATORY TOOLS

For each engagement evaluate:

- design integrity,
- sound deliberation,
- impact and
- clear evidence on impact



Sociopolitical constraints in current SMR R&D, EIA and potential deployment

SMR proponents focus on **promoting and educating**, rather than genuinely engaging with publics and stakeholders.

Stakeholder processes often serve as **box-ticking**, with social research findings overlooked.

Participatory approaches are rarely used, limiting real public influence.

The **same small stakeholder circle** is repeatedly consulted, while others are excluded.

Social science expertise is poorly integrated, with declining capacity in key institutions.



Social sciences and Humanities in ionising radiation REsearch



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Effective integration of social sciences and humanities in ionising radiation R&I

Guidelines



Prepared by:

European Platform for Social Sciences and Humanities in Ionising Radiation Research



STRATEGIC RESEARCH AGENDA FOR THE SHARE PLATFORM FOR SOCIAL SCIENCES AND HUMANITIES RESEARCH RELATING TO IONISING RADIATION

October 2020

1. INTRODUCTION

This document elaborates on priorities for Social Sciences and Humanities (SSH) research on ionising radiation. It covers a broad range of issues and areas relating to the presence of, exposure to, and/or the various uses of ionising radiation (of natural or human-induced origin) in society and the environment.

1. The aim of the Strategic Research Agenda (SRA) is to contribute to the improvement of the radiological protection system and the governance of radiological risks and applications of ionising radiation by coordinating SSH research, supporting specialist, as well as transdisciplinary education and training, enhancing stakeholder involvement, knowledge management and sharing, and identifying gaps in SSH state of the art across disciplines. Enabling SSH research to play a fuller and stronger role through a coordinated SRA mechanism will ensure that societal perspectives on research, policy and practice related to ionising radiation are acknowledged and accounted for.

This document extends an initial version of the Strategic Research Agenda for SSH¹ by adopting a more holistic view on radiological protection to include all civil applications (industrial, medical, energy) of ionising radiations, and situations characterised by the presence of radioactive materials. Hence, it broadens the scope of research to include topics previously not addressed in detail, e.g. nuclear energy and its governance, radioactive waste management, or advanced nuclear technologies. We also build on the achievements and recommendations of recent European projects and incorporate input from a broad range of stakeholders.

Adopting the principles first described in the initial version of the SRA¹, the underpinning tenets that inform the research agenda and priorities are that:

- SSH should support existing and future research, policy and practice, in all areas relating to radiological risks and applications of ionising radiation, to better take into account the concerns, values, expectations and needs of a wider range of stakeholders, including citizens;
- SSH research should be coordinated, shared and integrated into existing scientific and technical research and development (R&D) on ionising radiation or its applications; hence, collaboration with European research platforms, research groups and relevant associations must be an integral component of the agenda;
- Research and innovation relating to ionising radiation and its applications should be conceived of as transdisciplinary and inclusive, integrating science, citizens' and other stakeholders' inputs from the start;
- Social sciences and humanities research on ionising radiation should integrate insights from other application fields (notably health, safety and environmental risk management), as well as from recent methodological evolutions in SSH, and societal changes in general.

¹ Preks, T., Van Oudenhoven, M., Turcanu, C., Palz'Yvel, C., Oughton, D., et al. 2019. Towards a strategic research agenda for social sciences and humanities in radiological protection. *Journal of Radiological Protection*, 39(3), p.766

RICONOMET

The European platform

To stimulate the integration of social sciences and humanities in research, practice and policy related to ionizing radiation (43 members):

→ Diversity of disciplines and research contexts

→ Key strategic research agenda

→ Sharing and networking on research calls and opportunities

→ Advocating for SSH in ionizing radiation research

→ Offering a space for mutual learning and exchange

→ Organizing events

