

***Managing the complexity of societal needs
in a nuclear emergency situation:
towards further experts collaboration
for the “enlightened protection of populations”***

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NERIS Workshop 2015

*State-of-the-art and needs for further research for
emergency and recovery preparedness and response*

Milan, 29 April 2015

Context

PREPARE European Research Project

WP6-Information and Public Participation

WP6.1-Emergency & post-emergency expertise networks interactions

Partners:

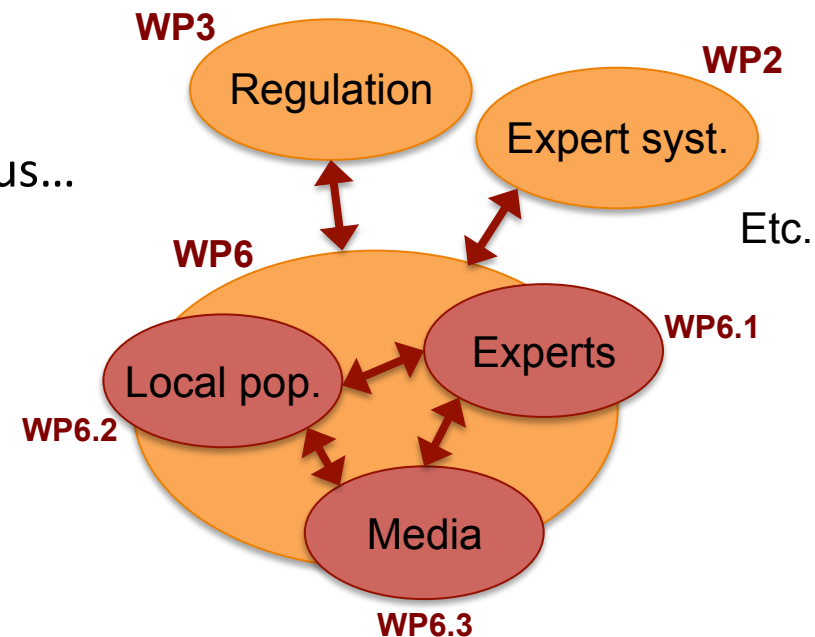
Coordination: ***EnerWebWatch/Coopaname (France)***
with support of WISE-Paris (France)

Participants: ***Norwegian Radiation Protection Authority (Norway)***
Universidad Politecnica de Madrid (Spain)
Mutadis Consultants (France)
***IST-ID - Associacao do Instituto Superior Tecnico
para Investigacao e Desenvolvimento (Portugal)***

Project Framework

→ The role of experts

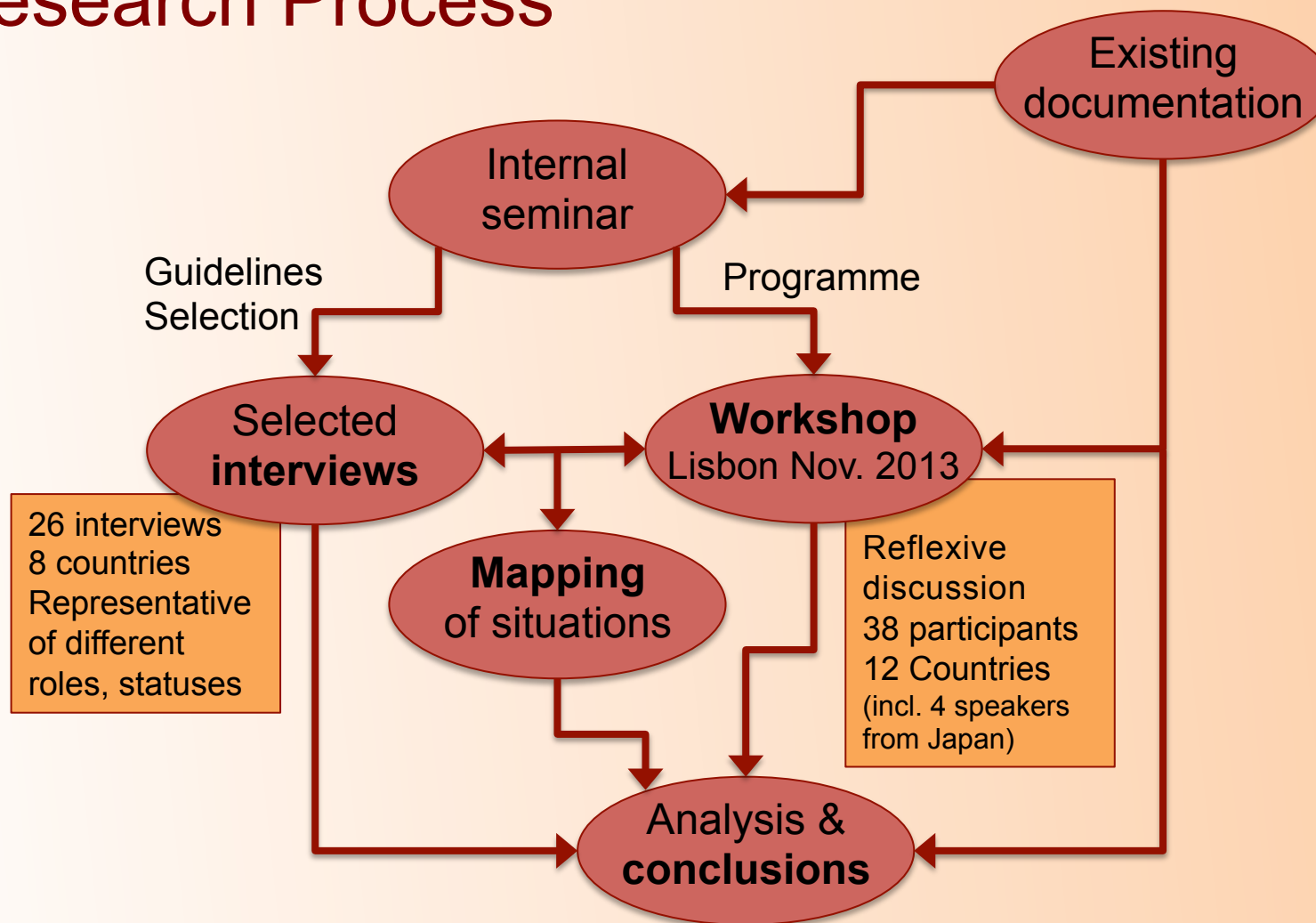
- Shift from the usual **external** focus...
 - experts need relevant & reliable information to provide expertise
 - experts feel a need for increased awareness of public and media
- ... to a specific **internal** focus
 - How do a large number of experts act or interact to fulfill the needs



→ The experts = a group which stands between

- the **complexity** of the emergency / post-emergency situation
- and the **complexity** of the societal needs in that situation

Research Process



Background Discussion

→ The relativism and diversity of “experts”:

- Experts are not necessarily scientists but people who develop a capacity to express knowledgeable views in a refutable way
- Experts are not self-declared but acknowledged by social processes

→ A common role although not a community:

- The experts involved form various formal or informal groups, and also include isolated individuals
- They do not form a social group but share a single sociological role

→ A collective responsibility to confront complexity:

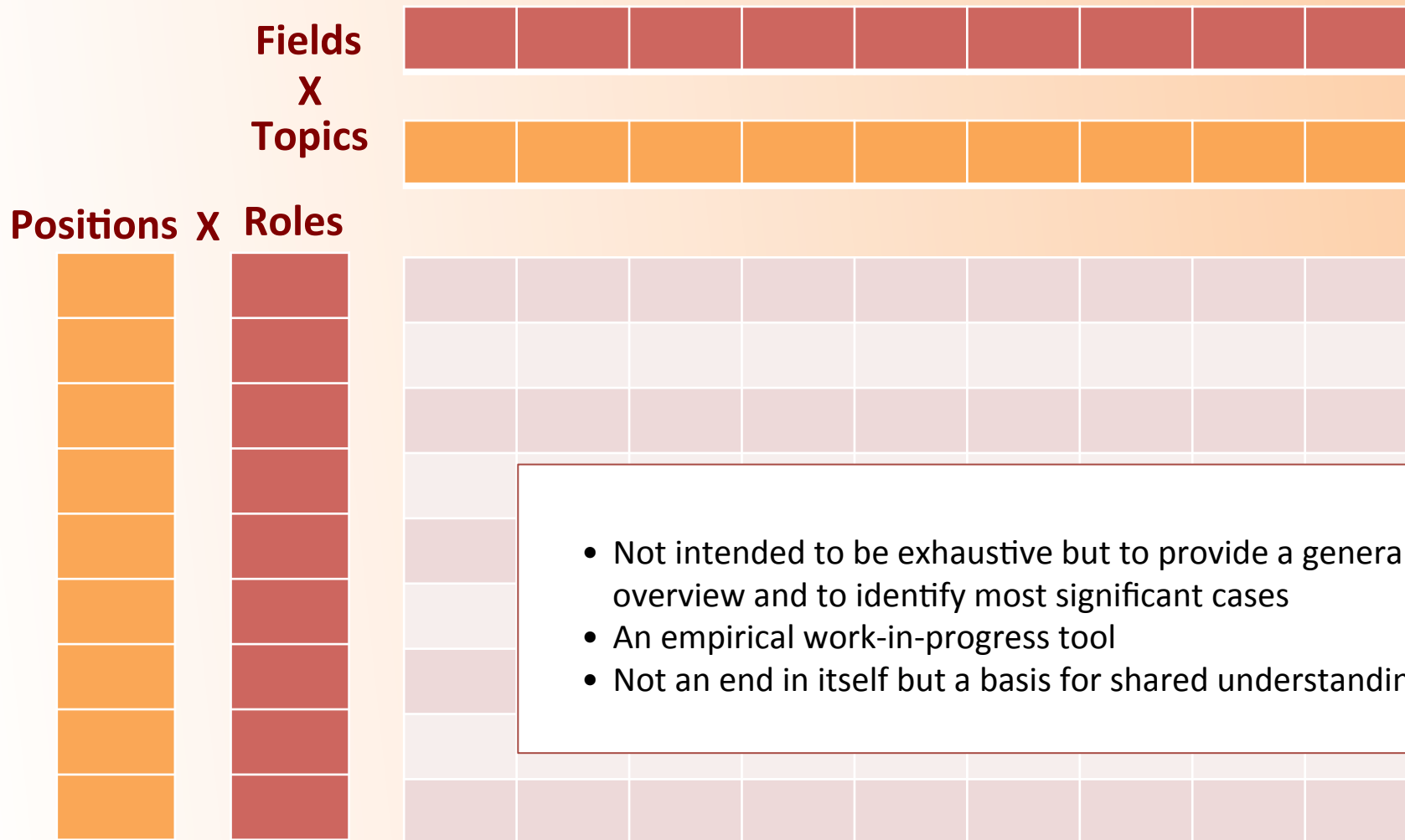
- The experts, in their diversity, share the responsibility to collectively fulfill that role (help society to manage complexity)
- They have to deal with uncertainty and their diversity of views

Mapping: Experts in Situations

→ Situations of interaction:

- Experts are faced with various demands on various issues
- These could be defined as **elementary “situations” of interaction** with society, which are characterized by:
 - the kind of expert involved
 - the nature of expertise being asked
 - the competencies required
 - the specific issue(s) being discussed
- It seems important to analyse and understand the range of such “situations” as they happen in the course of a nuclear emergency
- Therefore the idea to develop a “mapping” of these situations

Matrix of Situations



- Not intended to be exhaustive but to provide a general overview and to identify most significant cases
- An empirical work-in-progress tool
- Not an end in itself but a basis for shared understanding

Social Positions

➔ Attachment to an organisation:

- Institutional experts, from public bodies and the industry
- Academic experts (universities...)
- Non institutional experts (independent consultancy, NGOs, or even simple trained citizens...)

➔ Other criteria:

- Experts in the country / neighbouring / far away countries
- Local / national / international
- With reputation / new to the field
- etc.

Roles of Expertise

➔ Various social roles:

- Understand the phenomena
- Characterize and assess
- Modelling and forecasting
- Explain and communicate
- Provide advice for decisions
- Alert on wrong developments
- Criticize decisions being made

➔ At various levels:

- Interactions with decision makers, stakeholders, journalists, local populations, individuals...
- Direct or indirect interactions, etc.

The roles to be played could fit or contradict with the requirements attached to the status or the capacity of experts involved

Competencies

→ Competencies needed:

- Nuclear safety
- Radioprotection, health physics
- Geophysics (geology, seismology...)
- Ecology, environmental sciences
- Civilian protection
- Social sciences (socio, psychology...)
- Economics, energy policy, agriculture...

→ Other factors:

- Broad, systemic / very specialized
- Training to interactions involved
- Experience of similar situations...

Issues raised

→ Main themes:

- Nuclear situation / developments
- Radiological situation / devpts
- Decisions / protect populations
- Reasons for the accident
- Socio-economic consequences

→ Detailed topics:

- Generic or specific
- Expected or unexpected
- Various level of relevance
- Context dependent
- Developing in social dynamics (controversies, media picked...)

The issues to be addressed and the context could fit or contradict with the competencies of the experts involved

Trust

- Nuclear power has never been a value-neutral technology
- The role of experts in managing nuclear emergency and post-emergency situations depends on the level of trust of society
- Experts, as a whole, should and can share a collective sense of responsibility for creating the conditions of this trust
- Trust should be considered here as a systemic notion
- Trustworthiness of information is not the level of trust of one actor towards a given source, but the result of the interactions between the different experts and information providers
- Interactions that experts build together and their understanding by society as a “common good” are therefore key
- The interactions amongst experts are not only about contents, but also involve personal respect or contempt

Networking

- Better practices in networking, sharing of information and assessment tools between experts is key for them to deliver relevant answers accordingly to the real time needs of populations
- ➔ **Existing situation:**
 - Very dependent on existing formal and informal networks
 - These are very various and have their own agenda
 - Spontaneous forms of networking emerge to fill perceived gaps
 - Strong differences in access to information, decision making
- ➔ **Field for improvement:**
 - Develop information flows / interactions in a more systemic way
 - Build better shared tools to be used for assessment and decision
 - Prepare for effective networking involving the diversity of experts

Conclusion

- The experts, in their broad diversity, share the responsibility to deal with the complexity of a nuclear emergency and post-emergency situation in a way that fits the complexity of societal needs
- They should and can share a common goal of **enlightened protection of populations**
- A “mapping” of the situations of interaction of the experts with society helps both to develop a better (and better shared) understanding of the variety and relevance of these interactions
- Interactions amongst experts are not only about contents, but also involve personal values, and personal respect or contempt
- Therefore better experts networking is not only about smoother practices, but also about building mutual recognition and exchanges between experts of various position and origin

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Thank you for your attention!

Reserve

General Objectives

→ Return of experience as input:

- Empirical analysis of experiences of experts actions and interactions in the Japanese, European and potentially North-American contexts during the Fukushima crisis
- Their relations to media, citizens, citizens' organisations, etc.
- Relevant input from past experiences within EU also considered

→ Expected output:

- Formulate and investigate the relevant questions on the conditions of a society access to an efficient, reliable and trustworthy expertise
- Attempt to draw guiding principles to address them in a proper way
- Imagine relevant information tools and practice

Methodology

→ Mapping of situations:

- A "matrix" of the different situations, combining the plurality of issues and the pluralism of experts, developed through the project

→ Interviews:

- Choice of interviewees and issues in connection with the mapping
- Collect material to:
 - develop a systematic analysis on selected issues
 - raise and formulate questions on the conditions of a society access to efficient, reliable and trustworthy expertise

→ Workshop:

- Pluralistic and reflexive dialogue
- In-depth and challenging discussion of emerging questions

Definition of Experts?

→ Discussion on individuals considered as experts:

- Experts are not necessarily scientists but people who develop a capacity to express knowledgeable views in a refutable way (logical argumentation based on reliable data, etc.)
- Experts are not self-declared but acknowledged by social processes

→ Open definition:

- The reference to “expert” during emergency or post-emergency situations is empirically intended here in the wider sense of “knowledgeable person” or “person recognised as such” ranging from institutional experts, academics, non institutional scientific experts to people “spending significantly more time than the average population” on the issues raised by the emergency situation

Mapping of interactions

→ Logic of “situations”:

- Mapping of the elementary situations encountered by various experts in the complex process of delivering expertise in a nuclear emergency crisis
- Elementary situations involve some interactions with other experts, the media, the public, and the decision making process

→ Matrix of elementary “situations”:

- Not intended to be exhaustive but to provide a general overview of the complexity of interactions and to identify most significant cases
- An empirical work-in-progress tool
- Not an end in itself but a basis for shared understanding

Social Positions of Experts

→ Attachment to an organisation:

- Institutional experts, from public bodies (State administrations, authorities, public agencies...), and the industry
- Academic experts (universities...)
- Non institutional experts, from independent consultancy groups, NGOs, or even simple trained citizens...

→ Other criteria:

- Experts in the country of the accident / neighbouring countries / far away countries
- Local / national / international experts
- Experts with a reputation / new to the field
- etc.

Roles of the Expertise

→ Various social roles:

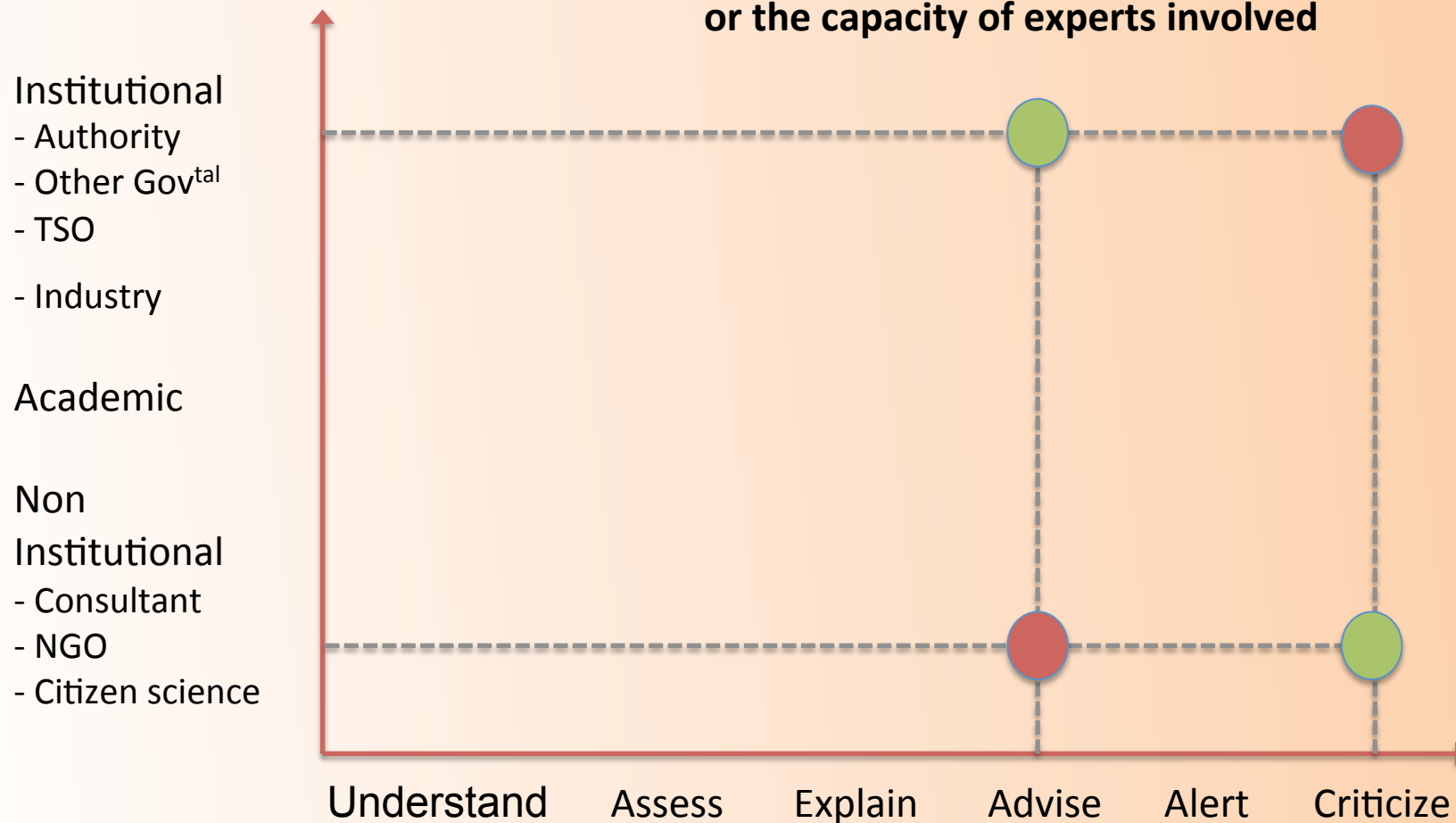
- Understand the phenomena
- Characterize and assess the seriousness of the emergency
- Modelling and forecasting the consequences
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→ At various levels:

- Interactions with decision makers, stakeholders, journalists, local populations, individuals...
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Positions X Roles

The roles to be played could fit or contradict with the requirements attached to the status or the capacity of experts involved



Fields of Competencies

→ Competencies needed:

- Nuclear safety
- Radiological protection and health physics
- Geophysics (geology, seismology, climatology...)
- Ecology, environmental sciences
- Civilian protection
- Social sciences (sociology, socio-psychology, psychology...)
- Economics, energy policy, agriculture...

→ Other factors:

- Broad and systemic / very specialized expertise
- Level of training to the interactions involved
- Return of experience of similar situations, etc.

Variety of Issues

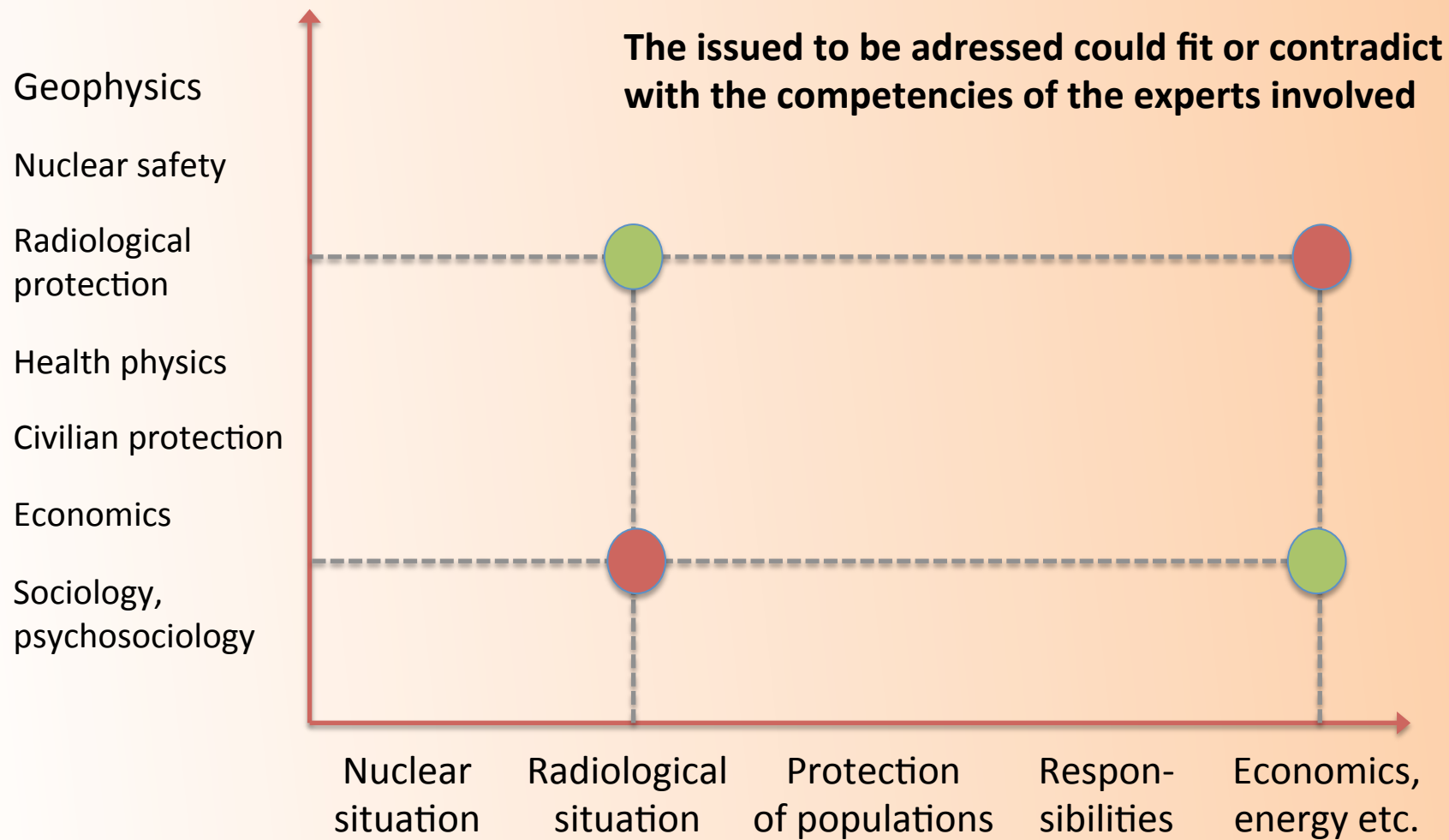
→ Main themes:

- The nuclear situation and its developments
- The radiological situation and its developments
- The decisions to be made to protect the populations
- The reasons for the accident and the chain of responsibility
- The consequences of the accident on economics, energy policy etc.

→ Detailed topics:

- Generic or specific (food contamination / marine food)
- Expected or unexpected (core melting / use of salted water)
- Various level of relevance (Fukushima radioactive fallout in Europe)
- Context dependent (e.g. the national status of energy debate)
- Developing in social dynamics (controversies, media picked...)

Competencies X Issues



Issues

- Experts preparedness issues: the ethics of public confidence, the management of complexity and the networking practices
 - Experts, as a whole, should and can share a collective sense of responsibility towards a common goal of **enlightened protection of populations**
 - Mapping the interaction situations that experts encounter in the case of a nuclear emergency can help clarifying, for themselves and the society, their role
 - The interactions amongst experts are not only about contents, but also involve personal respect or contempt
- ➔ **Three areas for further analysis: Mapping, Trust, Networking**