

Involvement of French stakeholders in the decision-making process in the context of uncertainties -Presentation of the results-

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I Overall organisation of the French panel:

- Panel gathering **decision makers involved at the national and local levels**;
- **2 meetings in 2018** respectively dedicated to the **emergency** and the **transition** phases;
- Discussions on 2 protective actions: **evacuation and temporary relocation** of the population & **food restrictions** (consumption/distribution);
- **1 meeting in June 2019** dedicated to the elaboration of **guidelines and recommendations**.



| Identification of the panel's issues

- **50 questions** raised from discussions on evacuation/relocation;
30 questions raised from discussions on food restrictions.
- **Analysis** of the questions to identify the **main types of uncertainties** regarding the **topics** (evacuation/relocation & food restrictions) and the **phases**.

| Analysis of the uncertainties

- Based on the **classification of S. French et al.** in *The Various Meaning of Uncertainties*

EXTERNAL UNCERTAINTIES

Refer to uncertainties associated with the **production of information** (physical randomness, modelling, errors in calculations, etc.)

INTERNAL UNCERTAINTIES

Directly linked to the **use of information** to take decision and **the way how decisions are formulated, disseminated and understood** (reaction of decision-makers, social reactions, economic impacts, etc.)

MAIN UNCERTAINTIES RAISED BY THE FRENCH PANEL

EXTERNAL UNCERTAINTIES

Stochastic, epistemological, judgmental,
computational, modelling uncertainties

INTERNAL UNCERTAINTIES

Implementation of the decision
& Governance

Social & Human issues – Behaviours and
reactions

Economic and other side-effects

TRANSVERSAL UNCERTAINTIES

Evolution of the situation

Communication issues, What information and
support of information?

FOCUS ON EXTERNAL UNCERTAINTIES

EXTERNAL UNCERTAINTIES

Stochastic, epistemological, judgmental, computational, modelling uncertainties

'What is the level of reliability of the probability maps?'

'What is the level of reliability of the measurements? What is the level of conservatism?'

'How do you consider the meteorological forecast?'



- External uncertainties **don't constitute real brakes** for decision makers;
- **Decisions are made**, whether the information is gained by these types of uncertainties or not.

INTERNAL UNCERTAINTIES

Implementation of the decision & Governance

Social & Human issues – Behaviours and reactions

Economic and other side-effects

TRANSVERSAL UNCERTAINTIES

Evolution of the situation

Communication issues, What information and support of information?

FOCUS ON INTERNAL UNCERTAINTIES (1/2)

EXTERNAL UNCERTAINTIES

Stochastic, epistemological, computational, modelling

'Should we consider other criteria (geographic, socio-economic) in the decision?'

'Will this zoning for food restrictions be modified by higher authorities considering lobbies or social pressure?'

'What is the best timing to take decision? Is it when the model's results are available or should we wait for the field measurements?'

INTERNAL UNCERTAINTIES

Implementation of the decision & Governance

'Will our strategy for evacuation, dedicated at local level, be validated by national authorities?'

Social & Human issues – behaviours and reactions

economic and other side-effects

TRANSVERSAL UNCERTAINTIES

Evolution of the situation

Communication issues, What information and support of information?

- Given their **political/geopolitical weight**, decisions taken by local decision makers during emergency and after might be superseded at higher levels;
- Place and room of manoeuvre of local decision makers** (mayors, prefects) facing an emergency situation is a real challenge.



FOCUS ON INTERNAL UNCERTAINTIES (2/2)



- Economic uncertainties have been raised during debates dedicated to the **transition phase**;
- During the emergency phase, **room for flexibility and consideration to the potential evolution** should be given to the decisions to limit consequences thereafter.

INTERNAL UNCERTAINTIES

Implementation of the decision
& Governance

'What to do if the bus drivers use their right to withdrawal?'

Social & Human issues – Behaviours and reactions

'To what extent does the population understand and respect the evacuation procedures and the doctrine?'

'How to avoid stigmatization of the relocated individuals?'

Economic and other side-effects

'What will be the socio-economic impacts on the affected territories?'

'What about the brand damage/loss for the products and for the affected territories?'

TRANSVERSAL UNCERTAINTIES

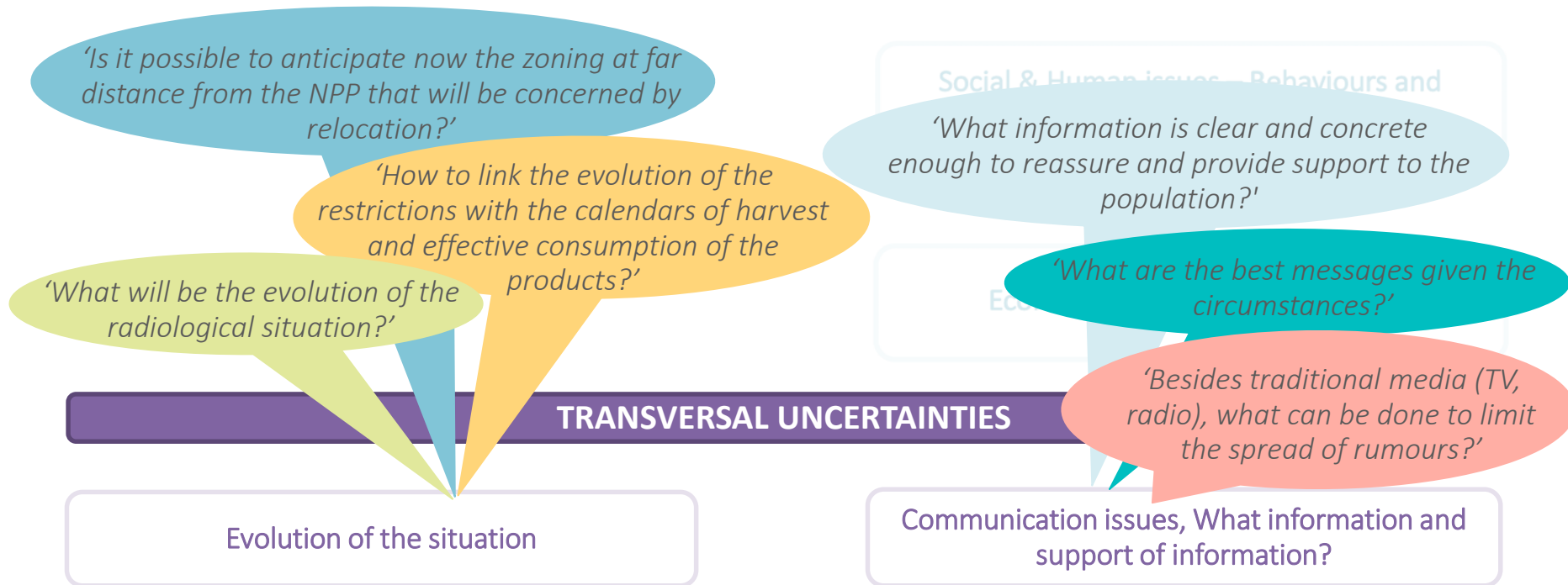
Evolution of the situation

Communication issues, What information and support of information?

FOCUS ON TRANSVERSAL UNCERTAINTIES



- The **temporal dimension** (evolution of zoning over time) is confirmed as very useful for decision-makers;
- Need to have elements allowing to **anticipate the evolution of the situation** and to **assess the influence and effectiveness of the decisions**;
- Communication about decisions taken or about to be taken is a **major lever of success for the management of the situation**.

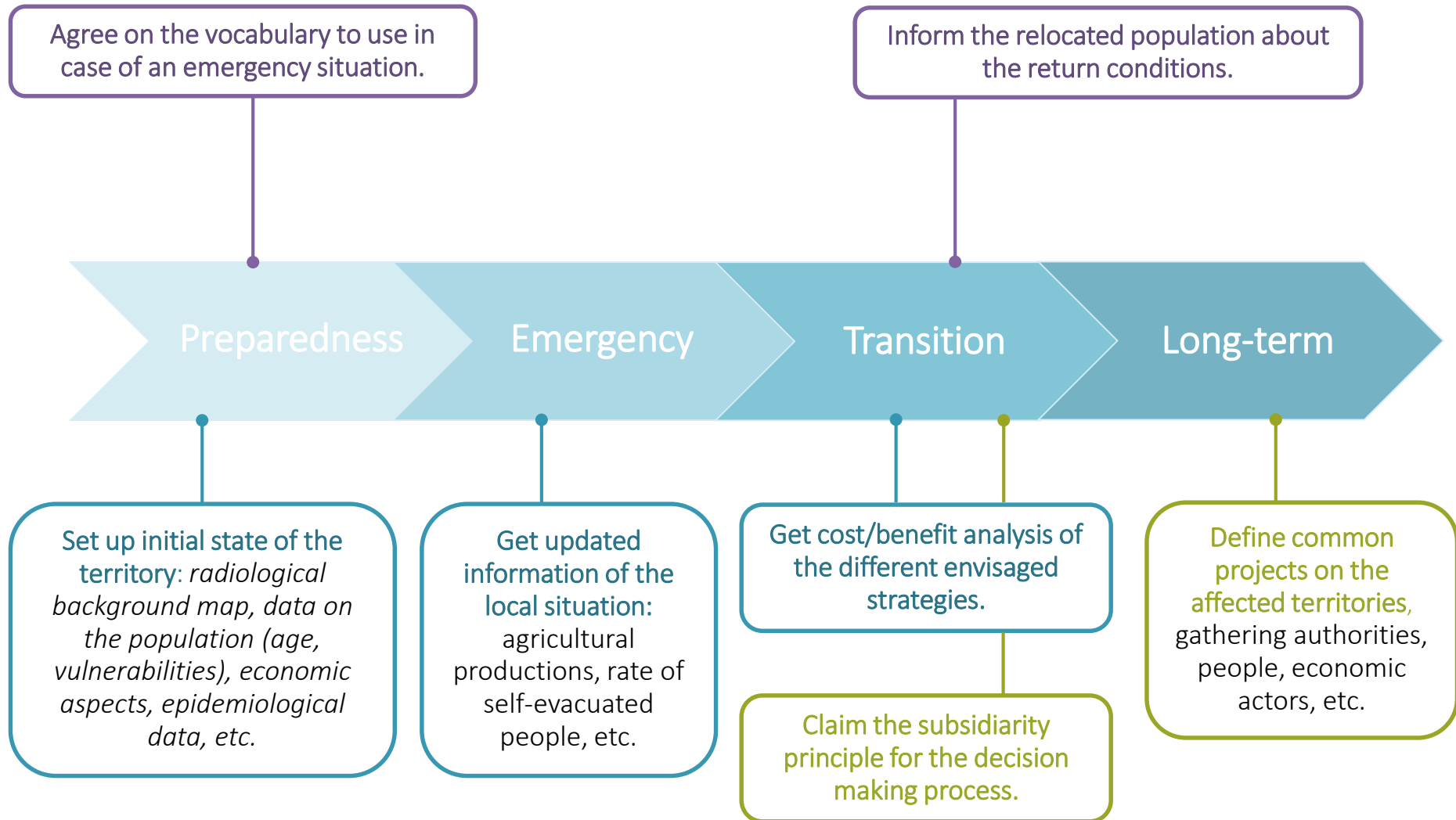


Organisation of the last panel meeting

- Recommendations to **improve the decision-making process regarding the various identified uncertainties** (governance, social and human issues, economic aspects, etc.);
- Confronted with the uncertainties raised during the 2 panel meetings, participants were asked to propose recommendations **to be implemented from preparedness to long-term phases**.



SOME PROPOSALS OF RECOMMENDATIONS (to be further analysed)



- | Among the French panel, a consensus on the fact that:
- The **transition from emergency to post-accident phases is a challenging period** (for all decision-makers);
 - There is a need to **ensure that information related to the local situation** (population, agricultural production, economic issues) **is available** because it is **considered at every stage** of the decision-making process;
 - **Coherent and pedagogical messages** understandable by the population should be prepared in advance;
 - There is a need to **involve all relevant stakeholders** at both national and local levels, starting from the preparedness phase;
 - The post-accident doctrine should be applied in a **flexible way**.



Next steps: Further analysis of the French panel's recommendations to be part of the CONFIDENCE WP4 guidelines.

Thank you for your attention!

