

Resilience criteria for rebuilding dignified living conditions after a nuclear accident

Concepts and exercise method

Training Course

Use of uncertain information by decision makers at the various levels
within the

decision making process and its communication

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Stéphane Baudé (Mutadis, France)
stephane.baude@mutadis.fr



Objectives of this lecture

- Reflect on the way local actors are confronted to complexity and uncertainty in an emergency and post-emergency situation
- Present the method for this afternoon workshop

Complexity of emergency and post-emergency situations from the point of view of local actors



Key features of emergency & post-emergency situations (1/2)

- Local populations face the **maximum level of complexity** as their day-to-day life is disrupted. Post-accident situations also question the future of families and the relationships between generations.
- People and families **face the post-accident situation as a whole**: the different economic, environmental, health, social and family issues that arise are not separable. Post-accident situations also strongly question the future of families and the relationships between generations.
- Upper levels of decisions are expected to bring support, information, expertise and means, but **many decisions and actions stay in the hands of local actors**

Key features of emergency & post-emergency situations (2/2)

- Irremediably disruptive situation for the populations concerned, which **affects all the dimensions of their life** (health, economic, social, environmental, human ...)
- Managing such situations involve political choices that go **far beyond the technical application of radiation protection principles**



An essential role of local people and communities

- Sustainability of ways of life is heavily jeopardised by a nuclear accident in the short, but also mid- and long term
- The **capacity of autonomy and action of local people and communities** is key in an emergency and post-emergency context to rebuild dignified and sustainable living conditions
- Public access to relevant and trustworthy information (from the point of view of the affected people) is a major challenge in a context of disruption of information flows
- Public participation is crucial both to ensure people's protection and to enable the construction of a dignified life after the accident (which requires a capacity of people to assess health risks)
- The **practical conditions for the exercise of these rights to information and participation** should be considered, in particular as regards dosimetry, health monitoring and healthcare

Information and participation of populations in the emergency phase

- Article 5.1.c) of the Aarhus Convention requires immediate dissemination to affected populations of any information held by public authorities likely to contribute to their protection
- Information is subject to strong tensions: immediate desire to protect oneself and to protect oneself, uncertainties about the situation, varying trust in different sources, potentially failing institutional circuits while informal circuits are potentially subject to rumour, possible temptation of public authorities to retain information
- Local populations and citizen initiatives are also a source of information.
- Return of experience of Fukushima shows that local actors are active players even in the emergency phase

- All decision-makers face uncertainty – but not in the same way → need to consider not only uncertainties but ***situations of uncertainty*** :
 - *who* is uncertain?
 - about *what*?
 - in which *context*?
 - in relation to what *decision*?
 - *How* is it uncertain?
- Taking into account the interdependence of decision pathways, uncertainty depends on who is looking at the situation: what is an uncertainty for one actor can be a decision for another actor

How to take into account complexity and uncertainty from the point of view of local population ?

- Uncertainty does not exist in itself but in relation to given actors in a decision-making position, including local actors
- Complexity: all dimensions of life are affected
- Legitimacy of people to access information and make their own choices
- Need to take into account the political and democratic dimensions of the response to such situations
- Views focused solely on radioactivity do not allow the complexity and uncertainties faced by local actors to be taken into account

2 opposite visions of post-accident situation leading to the same shortcomings

“(Re)normalization”

- Return to (new) normality is possible
- Radiological thresholds determine situations acceptable a priori
- Under these thresholds, people should resume a normal life
- Any form of contestation is considered as irrational “phobia” of radiation

Rejection of any form of life in contaminated territories

- Any form and level of exposition to radiation resulting from the accident is a danger to avoid
- The only free and reasonable choice is resettlement in a totally uncontaminated environment
- Considering life in a contaminated territory is a form of alienation
- Supporting people wishing to stay equals supporting forced retention of people in contamination

Those 2 visions are screening essential elements:

- Complexity of actual accident & post-accident situations
- Legitimacy & dignity of people to access info and make their choices
- Politic & democratic dimensions of the response to such situations

Why speaking about dignified living conditions in a post-accident situation?

- Efforts of local actors to recreate sustainable living conditions (in or outside contaminated territories) mix protection and self-protection, economic sustainability and human & ethical dimensions
- Concept of *dignified living conditions* as
 - A way to grasp together material dimensions (including health & radiation protection) as well as social, human and ethical dimensions
 - A way to overcome the shortcomings of both normalisation and rejection approach
 - A possible common objective for both policy-makers and local actors

Resilience criteria : dimensions of dignified living conditions



Resilience criteria – dimensions of dignified living conditions

**Environment enabling the
effective satisfaction of the
essential needs**

**Integrity and effective personal
capacity to act**

**Effective ability to build
meaning and access reliable,
trustworthy & true
information**

**Effective capacity to act with
others**



Symbolic & spiritual resources

**Effective capacity to act on &
benefit from one's political
environment**

**Territorial & cultural rooting of
people and communities**

Integrity and effective personal capacity to act

- A person's capacity of action is not a given but are built through a “pathway of recognition” of these capacities by the person, the others, and the institutions (P. Ricoeur).
- The person's capacities, integrity and autonomy are developing at the crossroads of the intrinsic potential of the person, its interactions with others (including common action), and the institutional, legal, political, social and material framework in which the person lives.
- In an emergency and post-emergency situation, taking this into account supposes to recognise the capacity and autonomy of action of affected people and their capacity to make their own choices according to their own stakes, context, constraints and resources.
- This does not mean that emergency and post-emergency response should rely essentially on local actors. At the contrary, this requires a political and institutional framework that supports the development of their capacity to face complexity and develop their actions in a view of acting with people rather than acting only for them and substituting to them.

Integrity and effective personal capacity to act (examples)

- In Chernobyl-affected territories of Belarus, villagers declared to sociologists investigating their living conditions: “radioactivity has become our new master”, thus attesting a great loss of autonomy due to the radiological situations and to post-accident policies where they were not recognised some autonomy and which constrained their possibilities of choices according to contamination criteria.
- In various contexts of long-lasting contamination by radionuclides or chemicals, some farmers did not want to only apply the authorities recommendations, and spontaneously took the initiative to make experimental culture of various crops in order to test if they would be able to grow products complying to the standards (and sometimes non-contaminated products).

Environment enabling the satisfaction of essential needs, capacitation

- Based on the concept of capability The capacity of the people to satisfy their essential needs depends not only on the formal rights that are granted to them by the legal and institutional system, but also on the actual conditions in which these rights are exercised or not (A. Sen)
- In the same logic, this capability depends not only on the resources to which the person has access. It also depends on its actual ability to mobilize and use these resources (which implies the person is mobilized alone or in relation to others), to resort to them in order to accomplish things, to find satisfaction and access to a form of dignity.
- Capabilities are effective at the crossroads of the capacity of people and of a favourable context for their deployment (this context being composed of institutional and legal frameworks, social practices, technical systems, material and economic infrastructure, ...).
- This capability approach is intended to be deployed in all the basic needs.

Environment enabling the satisfaction of essential needs, capacitation (examples)

- Authorities may simply provide information through official canals. However, deploying strategies to reach out to populations and verify that particular population groups are actually informed and in position to make their choices in their own context takes into account the variety of situations of population groups.
- Access to non-contaminated food can be problematic for families who rely on self-production for feeding due to economic or cultural reasons. In a context of long-lasting chemical contamination in the French Antilles, public authorities informed the populations through media, but also made enquiries to identify families which are producing food in their gardens for their own consumption and built specific arrangements to enable them to continue self-production while being protected from contamination.

- No dignified life can be built without access to relationships with others, to forms of solidarity and trust. This dimension is particularly necessary in contexts where disruptive elements occur which will generally have the effect of isolating people, cutting them off from the social dimension of their existence. Reconstructing an ability to interact with others is crucial.
- It is a characteristic of social systems based on trust to have the capacity to build responses adapted to complex situations and also to seize all the possibilities associated with this complexity (N. Luhmann). Humans build social responses to complex problems as a dimension of their freedom.
- This encompasses access to a relationship with others (e.g. not being stigmatised, conservation of social links as resources, ...), ability of groups of actors to identify together a common good and cooperate to reach it, conditions for trust building, capacity to cooperate both with people with proximity links and with distant actors that may provide help and support

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Effective ability to act with others (examples)

- After the Fukushima accident, some mayors take benefit of the capacity of citizens to make measurements. They made available measurement devices for the citizens and proposed them to measure the environment of the city and share the data. The aggregated data was shown on a map publicly available and this proved an efficient way of spotting hot spots of high contamination in the city.
- After the Fukushima accident, various measurement laboratories were set up at the initiative of citizens in Japan. This was made possible by the connection between groups of citizens (or already structured NGOs), experts and researchers, and sometimes local authorities.

Capacity of people to build meaning, orient themselves and access reliable, solid and true information

- Post-accident situations are often characterized by a collapse of trust in institutions which generates a chronic concern. It is then a question of finding the conditions for new patterns of trust starting from new references (to actors considered worthy of confidence) or from different mechanisms.
- Access to reliable and trustworthy information means access to an information that supports the particular process of the actor sorting out his own situation in his own context and brings useful information for him to make his own decisions. This can include self-production of information.
- Trustworthiness of information is not only linked with the qualities of who talks, but is also a systemic result (PREPARE). If different experts put forward contradictory pieces of information, argue and disqualify each other, this may result in a general disqualification of information. Conversely, these experts having constructive exchanges may result in the identification of what is solid ground and what is more discussable.

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Capacity of people to build meaning, orient themselves and access reliable, solid and true information (examples)

- After Fukushima, in a context of strong distrust vis-à-vis public authorities, people looked for information from independent researchers, or even foreign institutions. Social media have been an important source of information.
- In the ETHOS project in Belarus, experts went to one contaminated village with an approach of support to local initiatives. The idea was, rather to produce expert discourse saying what should or should not be done (which had already been done by the public authorities), to start from the questions and concerns of the villagers (is it safe in my home? How can I get clean milk for my children? How can we produce clean meat or potatoes to eat and sell? ...). On the basis of these questions, project groups were set up mixing villagers and experts, and processes of iterative investigations produced tailor-made information fit to the villager's needs

Ability of people to act on and benefit from their institutional and political environment

- Continuity of institutions is important in the face of serious disruptive events. Conversely, the collapse of institutions and their discredit produces disarray.
- The resource represented by an institutional and political framework is conditioned by the capacity of the people to influence this institutional framework, so that it is able to constitute an environment favourable to their development and their development (Aarhus Convention).
- In the context of emergency and post-emergency management, it is frequently observed that public policies set themselves the objectives of bringing the living standards of the affected people back into conformity without taking into account the dimension of dignity of the people, represented by their capacity to act by themselves, with others, and thus also without taking into account their views on the priorities to be taken into account in public policy.

Ability of people to act on and benefit from their institutional and political environment (examples)

- Identification of hotspots or of high contamination in zones that were not identified as contaminated may lead to adapt the zoning.
- In the ETHOS project in Belarus, investigations conducted by inhabitants of a village with experts have led to identify that the high contamination of several flocks of cows was due to the kolkhoze (public collective farm) having appropriated two “improved” (e.g. cleaned) pastures. Confronted with that, the kolkhoze made available two new improved pastures to the villagers, greatly improving the radiological quality of the milk of the flocks.

Territorial rooting of persons and communities

- This criterion is based on the understanding of a human being incarnated in a living and natural environment, which is not "aboveground" but which, on the contrary, finds its fulfilment in a fruitful relationship of heritage, in various ways, with a territory, from which human beings derive, at least for a part, the means of their sustenance, and in which they build a benevolent and grateful relationship with their natural and living environment (P. Descola).
- In a post-accident context, this criterion leads to restoring the conditions of a relationship of people with their environment that is not dominated by use restrictions associated with the existence of risk. This leads to imagine and develop new forms of life, new uses of spaces and amenities that put people in a position to mobilize the resources of their territorial context taking into account its new characteristics.

Territorial rooting of persons and communities (examples)

- In the Japanese context, connection to local nature is an important element in the quality of life.
- The cultural importance of some practices, types of food or places for some local communities can lead to specific efforts to safeguard them (sometimes to the cost of some adaptation), which would otherwise not been deployed.

- Symbolic and spiritual resources that can be mobilized to cope with a serious disruptive situation. Various scientific works (e.g. B. Cyrulnik) emphasize the importance of spiritual and symbolic, personal and community resources in the resilience processes of individuals or groups confronted with these situations.
- In a post-accident context, the decision to return to a contaminated territory (after the end of accidental discharge and after the implementation of decontamination measures) is associated with a search for the meaning of this return, which relates to the forms of historical, symbolic and identity attachment that could justify the return of a person and his family in a permanently affected territory, sometimes irremediably.

Symbolic and spiritual resources (examples)

- In the post-Chernobyl context in Norway, Sami communities relying on traditional reindeer herding were particularly affected by the contamination of their land as lichen eaten by the reindeer was concentrating radionuclides. The first approach imagined by Norwegian authorities was only taking into account the economic dimension – the idea was to let the Sami raise reindeers, which would be bought by public authorities rather than consumers. This was not enough for Sami populations, as it would have destroyed the meaning of their ways of life. A system was therefore put in place for safeguarding the Sami people and culture, mixing an adaptation of standards for reindeer meat on the Norwegian market, accepted adjustment of Sami reindeer herding practices and technical and financial support to Sami in order that the reindeer meat for their own consumption be contaminated at less than 600 Bq/kg (1/10th of the standard for the national market).

A practical exercise using dignified living conditions : this afternoon's workshop



- A practical exercise showing how to reflect about how local actors manage uncertainties with a group of stakeholders
- Using the dimensions of dignified living conditions
- Grounding on actual return of experience from Fukushima
- Based on a method used during workshop with pluralistic stakeholder groups in France, Slovakia and Portugal
- Difference with these stakeholder workshops
 - Different stakeholder group : experts rather than pluralistic stakeholder group
 - Less time – only 1 case to be discussed

- Illustrating the complexity of accident & post-accident situations with actual cases from the Fukushima context, shedding light on specific aspects
- Helping participants to imagine what would be the issues posed by an accident & post-accident situation in their context
- Helping identifying uncertainties and modes of their management
- Supporting the discussion about accident and post-accident management in the domestic context

- **1. Presentation of the case**
 - Short PowerPoint presentation to support discussion
 - More detailed elements given in the background documents received by holders previously
- **2. Working group discussion (5 to 8 participants per table + 1 facilitator and 1 secretary)**
 - Round 1 of discussion: capacity of actors to rebuild dignified living conditions
 - Round 2: how are uncertainties addressed ?
 - Round 3: what is the impact of public policies?

Round 1 of discussion: identification of actors and their questions

Questions posed to participants:

- From your point of view, what are the lessons of the case as regard the capacity of local actors to rebuild dignified living conditions ?
 - What have been the key issues at stakes for the different actors?
 - What have been the key dimensions of living conditions at stake?

Round 1 of discussion: identification of actors and their questions (method)

- 1st turn:
 - Each participant expresses, answering the questions posed in the previous slide
 - A reminder of the dimensions of dignified living conditions criteria is provided to the participants.
 - In order to make the workshop lively, discussion between participants is encouraged
 - In order to help the expression of the participants, the facilitator can successively address several dimensions of dignified living conditions relevant for the case
- 2nd turn:
 - Each participant expresses what key elements they retain from the 1st turn (about 1 minute per participant)

Round 2 of discussion: how do local actors manage uncertainty ?

- In the considered case, how are uncertainties dealt with by local actors
 - What key uncertainties local actors are confronted with in the process of rebuilding dignified living conditions ?
 - What are the resources for addressing these uncertainties ?
 - From your point of view, what are the lessons of the case as regard the capacity of local actors to deal with uncertainties while rebuilding dignified living conditions ?
- Method : 2 turns (like 1st round)

Round 3 of discussion: what impact of public policies?

- If such a situation would occur in your own territory,
 - How would it be different from the presented case in terms of uncertainties, uncertainty management and capacity of actors to act ?
How would the system of actors react ?
 - How would national policies (or regional policies if emergency/post-emergency management falls in their jurisdiction) influence the capacity of local actors to deal with the situation (including uncertainty management) and rebuild/maintain dignified living conditions?
 - How could national policies be improved to increase the capacity of local actors to rebuild/maintain dignified living conditions?
- Method : 2 turns