RETURN POLICY AFTER FUKUSHIMA

UNDER SCIENTIFIC CONTROVERSIES

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Photo: TEPCO (2011)
Four years on after Fukushima

- 120,000 evacuees (2014)
  - 80,000 are from Evacuation Zones
  - 40,000 are from outside: « self-evacuees »

- Different compensation payments to evacuees according to zones

- Tensions and divides within affected communities

- Return encouraged by the government and municipalities to the areas they judge « safe »

- Ignoring the existence of scientific controversies, No real consultations with stakeholders
Initial Evacuation Zones (2011)

Specific Spots Recommended for Evacuation

Earthquake

<table>
<thead>
<tr>
<th>Date</th>
<th>Distance</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/03</td>
<td>2km radius</td>
<td>Evacuation</td>
</tr>
<tr>
<td></td>
<td>3km radius</td>
<td>Evacuation</td>
</tr>
<tr>
<td>12/03</td>
<td>10km radius</td>
<td>Evacuation</td>
</tr>
<tr>
<td></td>
<td>20km radius</td>
<td>Evacuation</td>
</tr>
<tr>
<td>15/03</td>
<td>20–30km</td>
<td>Shelter indoors</td>
</tr>
<tr>
<td>22/04</td>
<td>20–30km</td>
<td>Shelter indoors or Evacuation by own means</td>
</tr>
<tr>
<td></td>
<td>Areas with more than 20mSv per year</td>
<td>Evacuation within 1 month</td>
</tr>
<tr>
<td>16/06</td>
<td>Spots with more than 20mSv per year</td>
<td>Recommended for Evacuation</td>
</tr>
</tbody>
</table>

Source: METI
Revised Evacuation Zone (2012–)

<table>
<thead>
<tr>
<th>Radiation Level</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Less than 20 mSv/y</td>
</tr>
<tr>
<td>Yellow</td>
<td>Between 20-50 mSv/y</td>
</tr>
<tr>
<td>Red</td>
<td>More than 50 mSv/y</td>
</tr>
</tbody>
</table>
Radiation Contour Map (11 September 2011) (by Professor Yukio Hayakawa, Gunma University)
International Guidelines for IDPs

Fukushima evacuees = Internally Displaced Persons (IDPs)

- IDPs have rights to make an informed and voluntary decision on durable solutions to their displacement:
  
  Return, Local Integration, Resettlement

- Under no circumstances should IDPs be encouraged or compelled to return or relocate to areas where their life, safety, liberty or health would be at risk.

Case study: Naraha town

- Situated within 20km from the crippled Daiichi station
- The entire town was evacuated following the accident
- The opinion survey conducted in 2014 showed:
  - Only 8% of the population wished to return
  - 60% were undecided or do not wish to return
- Despite this, the government lifted the evacuation order in Sep 2015.

Source: Naraha town et al., 2014.
Main reasons for non-return

- Radiological risks (ambient radiation dose, contamination of water, temporal storage of waste...)
  - Scientific controversies on « low-dose »
  - Lost trust toward the authorities

- Long-term risk from the crippled nuclear station (continuous incidents from cleanup activities, future decommissioning activities, ISF...)

- Lack of social infrastructures (schools, clinics, supermarkets...etc.)

- Do not want to return alone
  - Lost « communities »
« Temporary » housing : 4 years later ...
Temporary Storage of Decontamination Waste
Post accidental management and the loss of trust

- “Under the context where trust is lost toward the government and nuclear operator, risk analysis of experts would not be listened to (by the population)”

- “Both the government and nuclear power plants operators had made a mistake of saying “safe” for the activity which inherently has risks. This was the fundamental cause of damaged public relations. We should not repeat the same mistake”

http://www.enecho.meti.go.jp/committee/council/basic_policy_subcommittee
Loss of trust: elements

− «safety myth» (Sato, 2015): no nuclear accident
− Late disclosure of information on radiaological measurements (SPEEDY system) (Sugawara, 2015)
− A globally *reassuring* risks communication
  ▣ «no risks below 100 mSv»
  ▣ The *denial* of the existing controversy on «low doses»
20 mSv/year threshold: a contested decision that triggers public outcry (also from experts)

We demand the following:

Retraction of the “20mSv/y” standard for children. Disclosure of the names of experts, who deemed “20mSv/y” for children to be safe.

Green Action, Greenpeace Japan, Citizens' Nuclear Information Center, Citizens Against Fukushima Aging Nuclear Power Plants (Fukuro-no-Kai), Osaka Citizens Against the Mihama, Oi, and Takahama Nuclear Power Plants (Mihama-no-Kai), Friends of the Earth Japan

*The then-Special Advisor to the Cabinet, Toshiso KOSAKO, Professor of University of Tokyo, resigned from the post in protest against the threshold of 20mSv/year to be applied for children, 29 March 2011
In such a case of uncertainty, no threshold could be thoroughly justified. But we are still accountable for the one we choose.

From the interview with an official responsible for the post accidental management in Japan (Oct 2013)
The emergence of a counter expertise
Conclusion and research questions

- When Public expertise is not trustworthy: what is the role and specific legitimacy(s) of «counter expertise»
- Trustworthiness of public expert in charge of giving advice after a nuclear catastrophe:
- How to make decisions when there are controversies?
- What is the role of science?
  - «powerless science» for risks regulation (Boudia and Jas, 2014)?
  - If a smaller role of science, which one? What other sources of legitimacy for dramatic decisions?