A line dividing people's lives

Ethos in Fukushima
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Second Asian Workshop
on
the Ethical Dimensions of the System of Radiological Protection
Three lines dividing people’s lives after the disaster

1) Line by geographical distance: the zone within **30 km** or the outer

2) Line by decontamination requirement: Air dose rate **0.23 μSv/hour**
   = annual dose **1 mSv/year**

3) Line by food contamination: Less than detection limit: **N.D.** or not
1) A Line by distance:
the zone within 30 km or the outer

- **11 Mar** 2011 14:46
  The earthquake

- **12 Mar**: 20 km radius evacuation order by the Government

- **13 Mar**: Iwaki city northern area (within 20-30 km radius) voluntary evacuation request by Iwaki city mayor

- **15 Mar**: 20-30 km radius indoor sheltering order

1)-B What the line by distance had brought?

- As once entry restricted, people had doubts about safety of the area “Dangerous zone”

- At the time of lifting restriction, people required a proof of “Safety”
2)-A Air dose rate and annual dose
0.23 μSv/h = 1 mSv/year

- August 2011: “The Act on Special Measures concerning the Handling of Radioactive Pollution” was enacted

MoE concept
As “long-term goal”, reduce “additional exposure dose” to “1 mSv/year”
To specify decontamination area, this value have been converted to air dose rate 0.23 μSv/h
2)-B  MoE Criterion 0.23 μSv/h

\[
1000\mu Sv/\text{year} = \left[ (0.19) \times \{(8 \times 1) + (16 \times 0.4)\} \right] \times 365
\]

ICSA: Intensive Contamination Survey Area
2)-C How people received this criterion?

- Places exceed 0.23 μSv/h are **DANGEROUS**: e.g. “I don’t return to my house until it gets lower than 0.23.”

  “Hills exceed 0.23, so I won’t enter.”

- If getting more than 1 mSv/year it affects to **FUTURE HEALTH**: e.g. “Even it is OK now, we will get cancer in future, won’t we?”
2) D Our life space changed drastically

- Suddenly dangerous zones creep into daily life
- People started limiting their actions and lifestyles by themselves
- Strong mistrust and complaints to authorities which leave them idly
3) -A Line by N.D. – foodstuff limit value –

(1) **17 Mar 2011**: Tentative limit value
   (based on annual limit 5 mSv)

(2) **1 Apr 2012**: New limit value
   (based on annual limit 1 mSv)
3)-B  Mistrust for standards itself

“The limit was tightened in such a short time. The first standard must have been wrong; they were labeling something dangerous as safe.”

The mistrust originally existed was strengthened by this change

“All standards set by the government cannot be trusted.”

People tried to find safety in "N.D.” whatever it meant
What the mistrust for standards had brought?

- Can’t trust any standards: “The lower, the safer”

- In every action in daily life it is needed to make a decision: “Dangerous or Safe”
  Everywhere we had usually visited, everything we had usually eaten... are they really safe?
Practices in Suetsugi district
Where is Suetsugi district?
How many people are there?

100 plus households, about 400 people (April 2014)
27-28 km away from the NPP

12 March – 22 April 2011
Designated as indoor sheltering zone;
residents were requested to evacuate,
almost all residents had been evacuated
Air dose rate / soil quality measured maps compiled by volunteers in Suetsugi district, Autumn 2011 – March 2012
Grasping external exposure as whole district community

Grasp exposure in each one’s life space and in community-level
Distribution of external exposure as district community

Graph made by Dr Makoto Miyazaki, Fukushima Medical University
Foodstuff measurement day at the community center

Measurement day on 3 March 2015
Confirm one’s diet and foodstuff measurement

Community-wide whole body counter measurement

1st June 2013
124 person
2nd October 2013
34
3rd July 2014
39
Survey result at WBC measurement

Have you been eating local foodstuff since the accident?

Knowing diet and measurement result of the community strongly helped to understand one’s own diet and measurement result.
Summary of practices in Suetsugi (1)

1) Dose rate / soil quality actually measured map enabled to rethink the line “within 30 km radius = dangerous”

2) Individual external exposure measurement enabled to rethink the line “life cohabiting with any point exceeds 0.23 μSv/h is dangerous”

3) Internal exposure measurement and foodstuff monitoring enabled to rethink the line "anything not 'ND' is dangerous"
Summary of practices in Suetsugi (2)

- Measure one’s own everyday things and discuss the results – “Measure and Discuss”
- This is the starting point to find a grip on the "lines" that have been imprinted onto our lives
- By contemplating the meaning of “lines”, people can restore confidence in standards - trust for our society
Measurements redefine the meaning of lines

How much does this “line” or “standard” mean to my life?

Through data sharing – discussion

How much does it mean to our life, in other words, to our society?
Some “lines” can not be resolved by the “measure and discuss” approach

- Lines as administrative division link to administrative actions, e.g. compensation
  - Administrative actions do not link to voluntary measurement

- Labels from outsiders can not be changed
  - Assumptions like “that place is dangerous” can not be reversed
Lessons learned (1)

- As every single “line” is drawn, it has huge impact on each person’s life
  - A "line" has the power to tear apart someone's life or the fabric of community
- However, the government believes that it is its mission to draw "lines"
  - Often the government does not consider the full extent of the social impact and the effect on individual lives
Lessons learned (2)

- What is a line which is “appropriate” and “necessary” for society?
  How to draw a line that will minimize people’s pain?

- We need to think beforehand, in advance to future accident