2015 IAEA Report on Fukushima - Remarks

Heinz Smital, **nuclear** physicist at Greenpeace

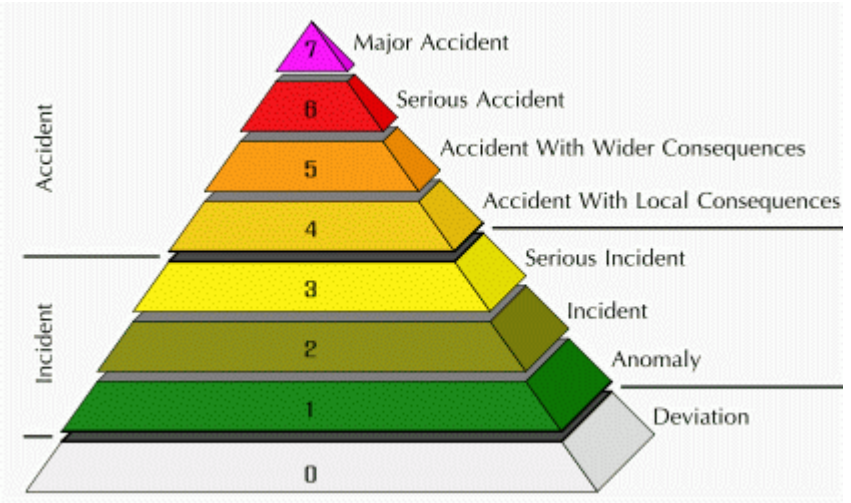
2015 IAEA Report on Fukushima - Remarks

In 2011:

IAEA – INES: (I-131 equivalent)

7	>	50.000 TBq
6	>	5.000 TBq
5	>	500 TBq

INES 7 Greenpeace 25.03.2011
IAEA 12.04.2011



IAEA: "with such a release, stochastic health effects over a wide area, perhaps involving more than one country, are expected"

TEPCO: 500.000 TBq (only I-131, to add Cs-139 40x 10.000 TBq)

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Evacuation of people:

Only 16% of Fukushima residents knew of emergency declaration (12.3.)

40% were not informed or did not compile with the guidance by end of April (30 km zone)

Residents of the town of Okuma, where the Fukushima No. 1 nuclear power plant is located, evacuate on the morning of March 12, 2011. (Asahi Shimbun file photo)

https://ajw.asahi.com/article/0311disaster/fukushima/AJ201512190021

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24.02.2016

Frankfurter Allgemeine
Wirtschaft

Donnerstag, 25. Februar 2016

Reaktorhavarie

Tepco informierte zu spät über Kernschmelze in Fukushima

Tepco, Betreiber des Katastrophenreaktors von Fukushima, hat fünf Jahre nach dem Unglück eingestanden, zu spät über die Kernschmelze informiert zu haben.

25.02.2016, von PATRICK WELTER, TOKIO

Vorwurf der Verschleierung

14.03.2011 major meltdown (unit 1 and 3)
15.03.2011 also unit 2
Only 2 months later

IAEA was blind or down playing ?

2015 IAEA Report on Fukushima - Remarks

Radiation and Health

Source term:

The quantification and characterization of the source term of the accident of Fukushima NPP proved to be difficult.

Radiation does estimates:

… have a high level of uncertainty
(monitoring stations not functioning)

Estimated collective dose is still significant

collective effective dose: 48000 man sieverts (80 yr)
collective absorbed dose to the thyriod: 112000 man gray

IAEA conclusion: “no discernable health effects”

without knowing radiation dose

2015 IAEA Report on Fukushima - Remarks

Radiation and Health

IAEA acknowledges the importance of ´stakeholder involvement`
but ignores the reality in Fukushima prefecture

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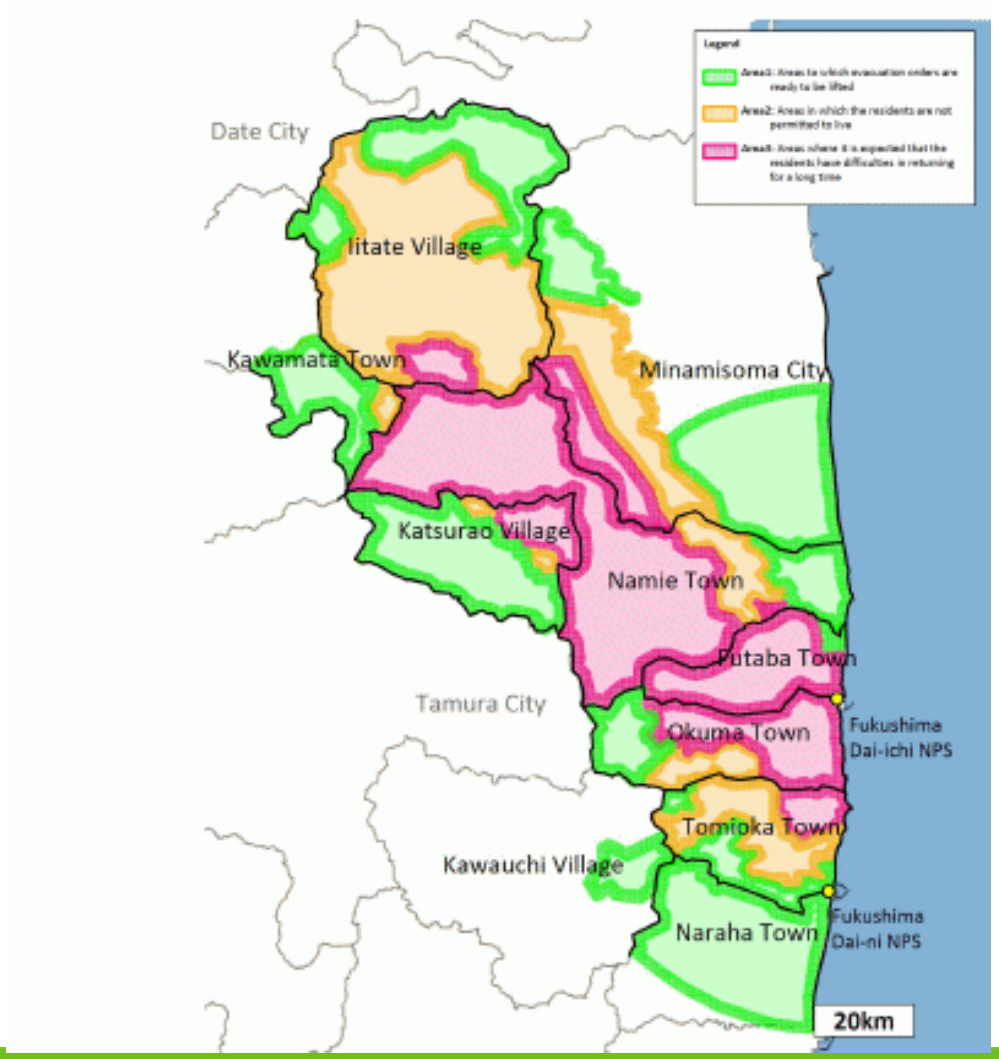
Radiation and Health



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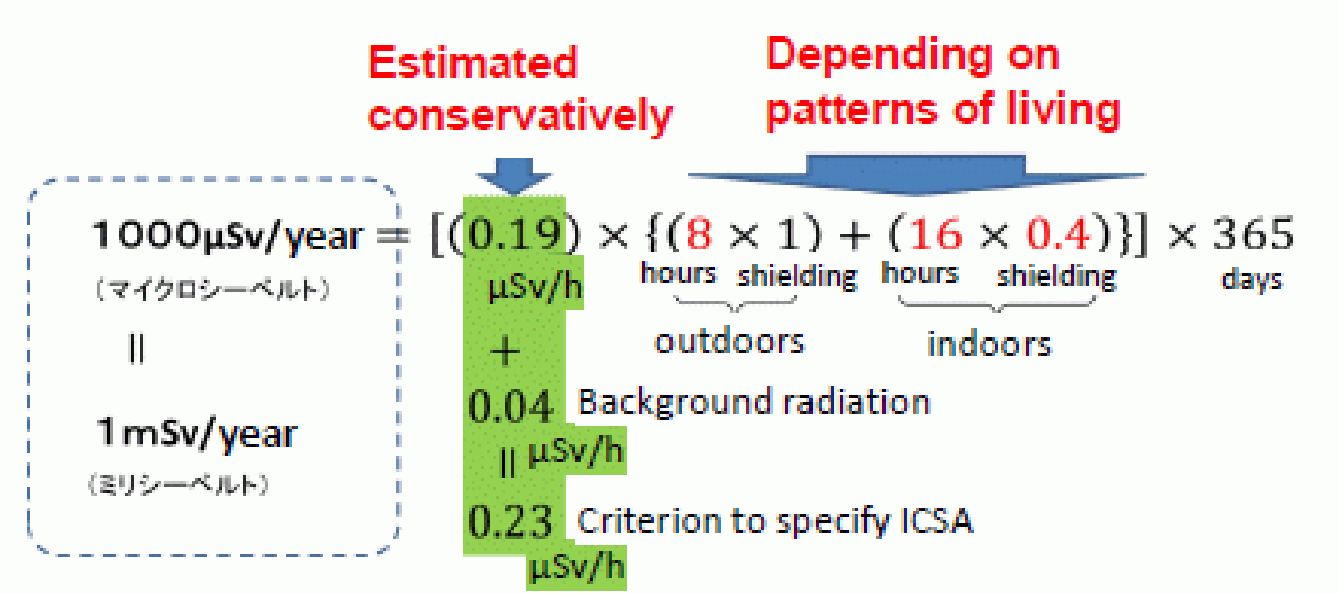
Radiation and Health

1 mSv / yr (add) effective dose is the target for decontamination work

0.23 µSv/h



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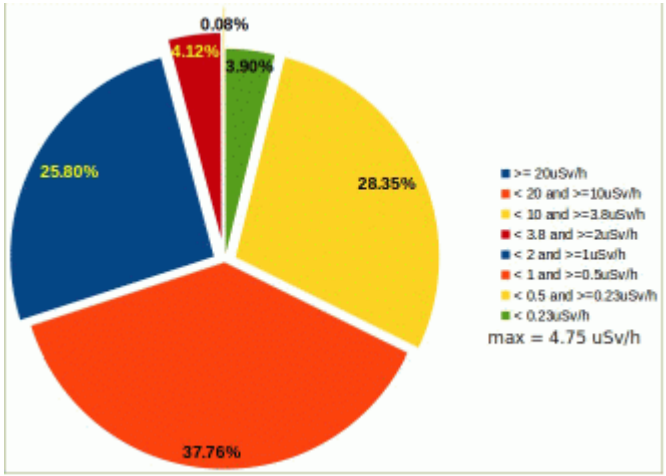
Radiation and Health

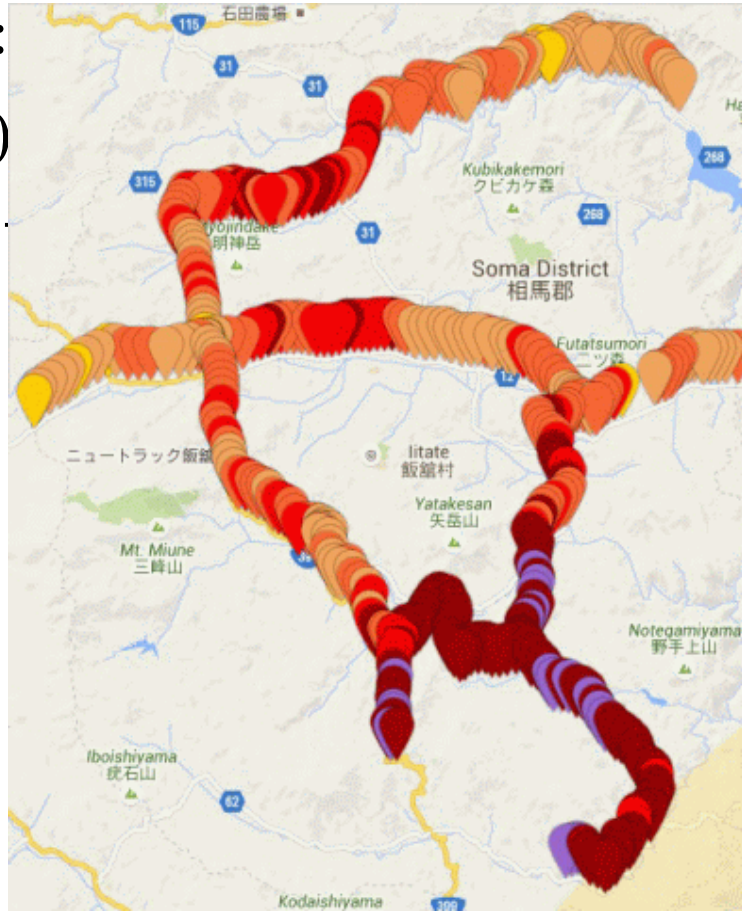
Radiation in Iitate (2015/04/07 Greenpeace):

11757 points outside car at 20km/h 1m (high)



only 4% meet limi

uSv/h	no. of points	% of points	mSv/y (japan govt)
no. points >=0.23	11299	96%	>= 1 mSv/y
no. points >=0.5	7966	68%	>= 3 mSv/y
no. points >=1	3526	30%	>= 5 mSv/y
no. points >=2	493	4%	>= 10 mSv/y
no. points >=3.8	9	0%	>= 20 mSv/y
no. points >=10	0	0%	>= 52 mSv/y
no. points >=20	0	0%	>= 105 mSv/y



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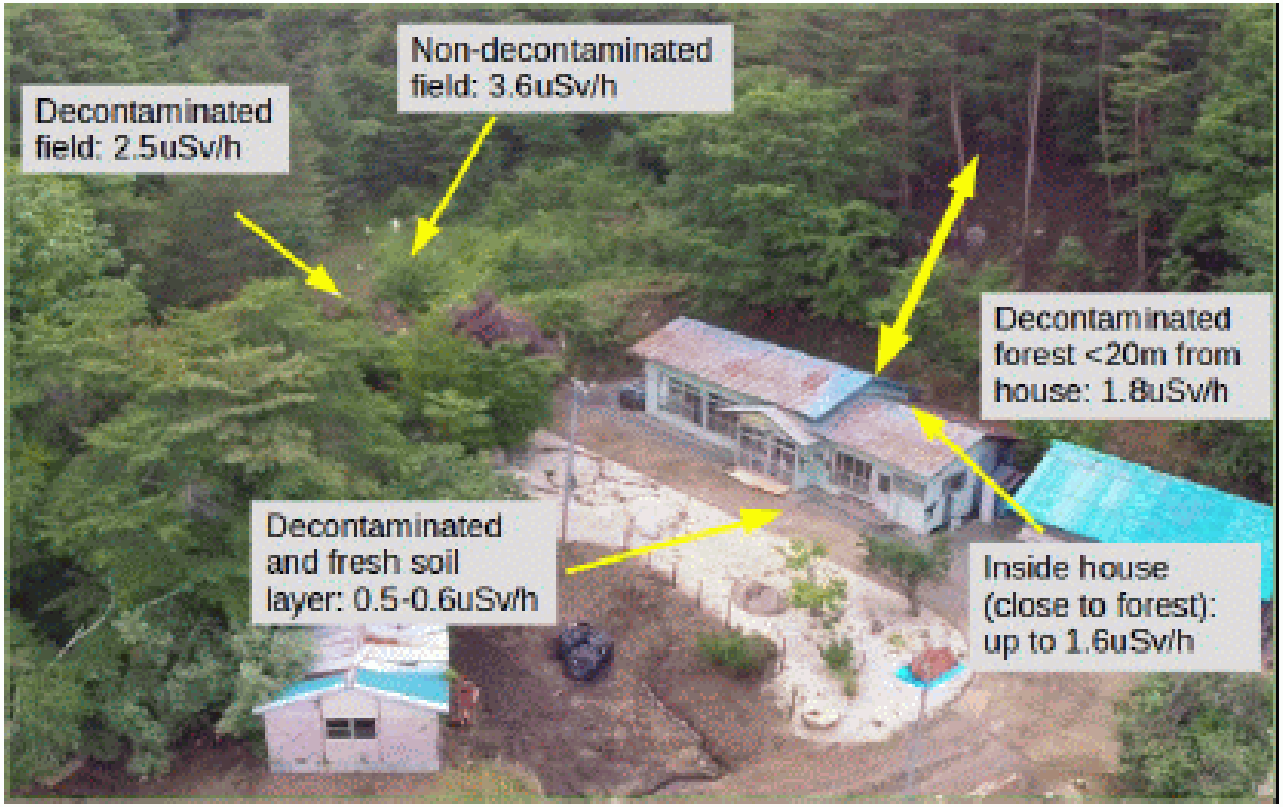
Radiation and Health



Farmhouse South east Iitate, Greenpeace investigation July 2015 (c) Greenpeace

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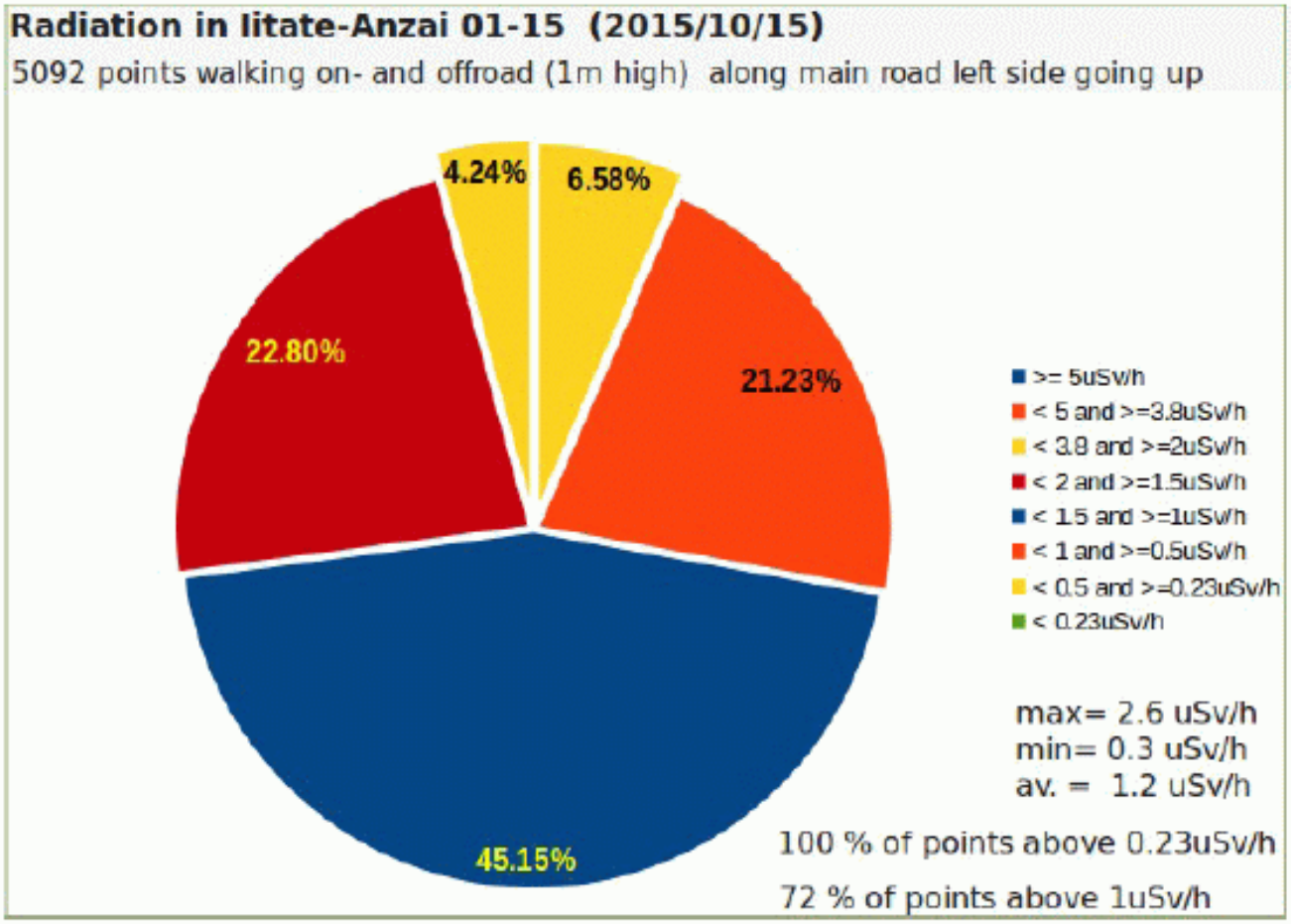
Radiation and Health



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Radiation and Health

Dose badges (glas) (Materialprüfungsamt NRW)

Dosimeter Nr.	Messort	Dosis* in **mSv** mit Messunsicherheit, k = 2
13002113	Japan, Iitate, Mr. Anzai's House inside	**4,35 +/- 1,27**
13002114	Japan, Ganbe-Dam at spring	**24,28 +/- 7,04**

Expositionszeit von: 03.07.2015 bis: 28.10.2015 Expositionszeit: 117 Tage

Dose inside the house (bathroom): 13,2 mSv /yr
forest Ganbe-Dam: 75,4 mSv /yr

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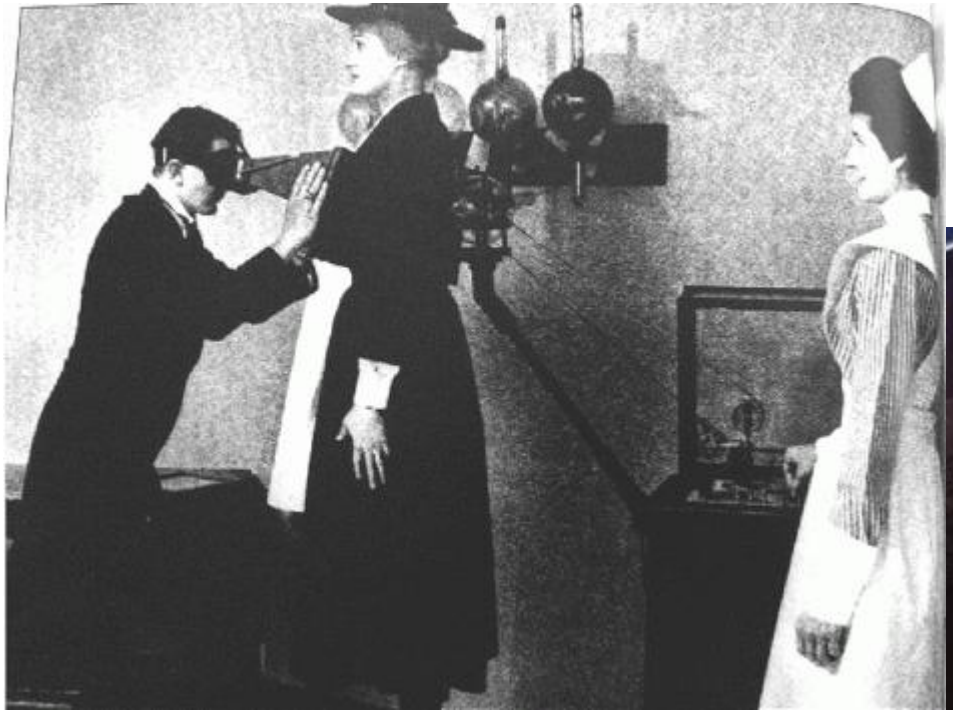
Radiation and Health

10 mSv = 100 X-Ray (chest X-ray with 100 µSv)



X-ray twice a week for everybody back in 1920?

Not for my children!

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Environmental Consequences

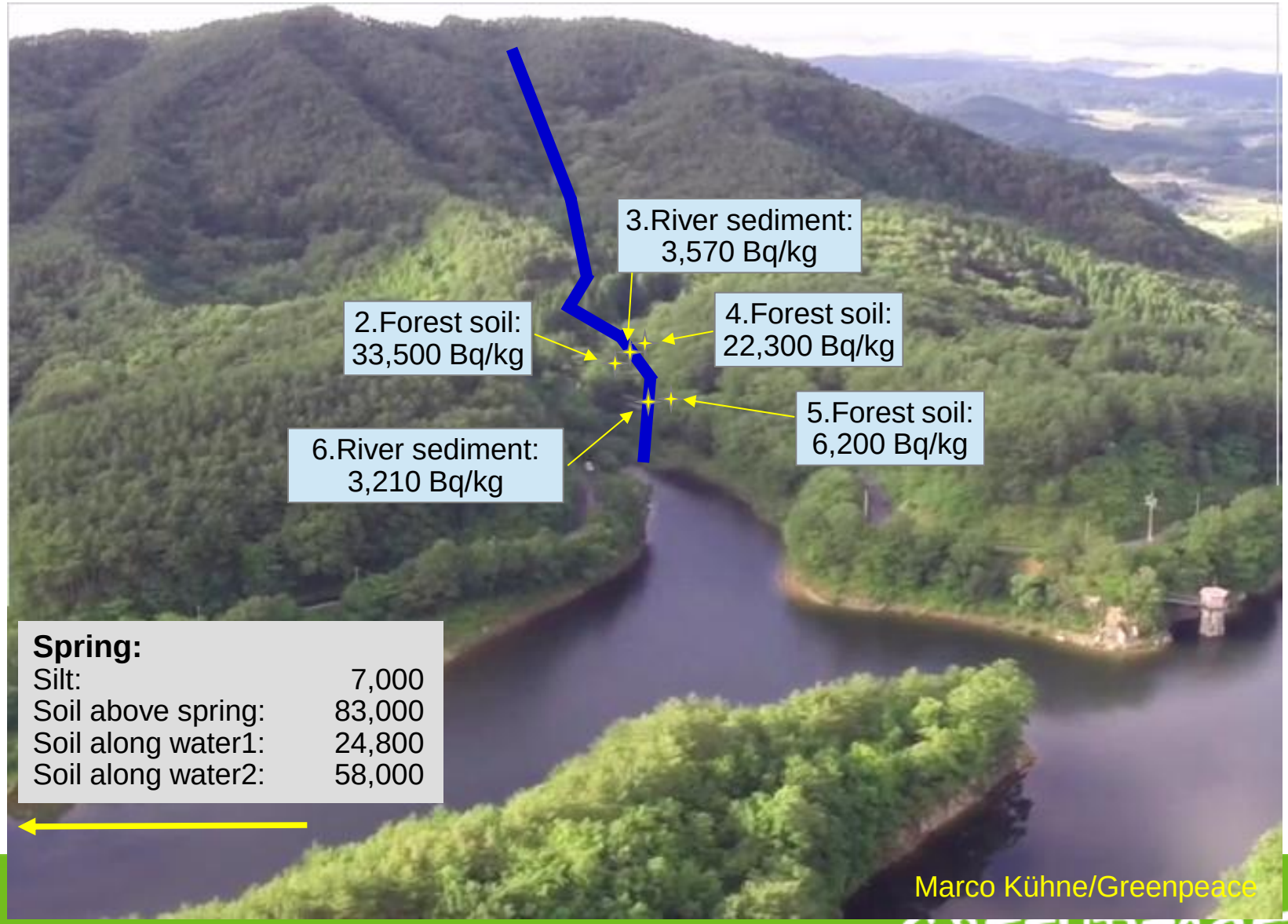
Failing to address environmental contamination

40 kBq /m2 IAEA
(stop of Castor transports
1998 nach La Hague)
100 kBq/m2 average Fukushima
555 kBq/m2 (vol. reset. Belarus)
1480 kBq/m2 (reset. Belarus)
1000 –
10000 kBq/m2 Fukushima (high)

IAEA ignore its own benchmark?

“Country life is appealing because you can drink good water and eat wild foods from the mountains. If you put limits an that, you´re not living, you are surviving.” Kazuhiro Yoshida, Namie

Ganbe dam river side



2015 IAEA Report on Fukushima - Remarks

Environmental Consequences

IAEA failing to address:

- complexity of radiological contamination (recontamination)
- Regulation to handle rad waste exeeding legal limits (general public)
- IAEA ignores own benchmark (40kBq/m2)
- IAEA ignores the measurable impact on animal life due to radiation (insects, birds – Moller, Mousseau)
- Yamamoto et.al, transuranic contamination in Iitate (Pu, Am, Cu)
- Fire risk in radioactively contaminated forests

2015 IAEA Report on Fukushima - Remarks

The failure of safety risk analysis

- The nuclear safety myth
- All the lessons learn from Chernobyl could not prevent Fukushima ac.
- Ignoring uncertainties
- IAEA failure to address current regulation in Japan
  remarks on NISA (Nuclear and Industry Safety Agency in 2011)
  are not addressed at NRA
- Limitation on probabilistic risk assessments in general
- Lower standard at NRA (no core damage frequence, nor Large Early Release Fraction)
- Underestimation of seismic (Kyushu Electric its own criteria not EQFI)
- Other external risks - Volcano

2015 IAEA Report on Fukushima - Remarks

“an authoritative, factual and balanced assessment,
adressing the causes and consequences of the accident
as well as lessons learned” IAEA Director General Amano

Greenpeace conclusion:
Uncertainties and unknowns are presented as facts,
critical evidence is ignored,
and it can in no way be considered balanced.
IAEA report does not support Fukushima victims

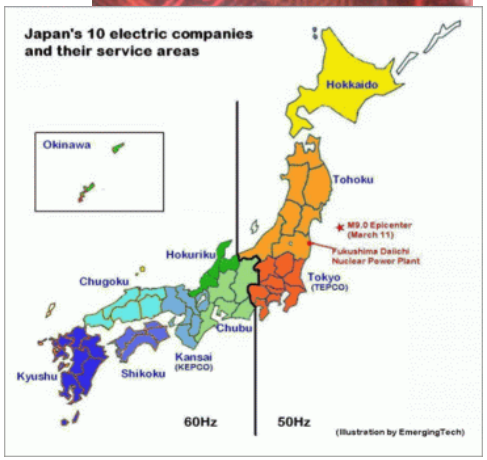
2015 IAEA Report on Fukushima - Remarks

Recommendation to IAEA

Naoto Kan – Prime Minister during the Fukushima Crises

Physicist (Technical University of Tokyo)

- Problematic of the safety myth
- Just luck that Fukushima Daini no INES 7 accident
- Just luck that not the worst case happened (evacuation of 50 million people)
- Complexity of the evacuation of 50 million people
- Need a nuclear phase-out / phase-in RE (2 years without nuclear power)



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Thank you!

Restricted Areas and Areas to Which Evacuation Orders have been Issued (as of End of June, 2013)

Ahead of the decontamination in the Special Decontamination Area, Decontamination Plans are to be elaborated taking into account the progress of rearrangement of the Restricted Areas and Deliberate Evacuation Area.

Area 1: <20mSv/yr
Evacuation orders are ready to be lifted:

Area 2: 20 – 50 mSv/yr
Areas in which residents are not permitted to live:

Area3: >50 mSv/yr
Residents will face difficulties in returning for a long time:

Restricted Area:

Deliberate Evacuation Area:

GREENPEACE

2015 IAEA Report on Fukushima - Remarks

Kawauchi compared to Iitate in Oct. 2014