

“The Right to be Responsible”

Ethical reflections on risk assessment in post-nuclear accident situations.

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1

Ethical issues of concern in post-nuclear accident situations

1 Ethical issues of concern in post-nuclear accident situations

- The moral responsibility of those who are 'accountable' for the accident
 - towards society as a whole**
 - to acknowledge accountability and moral responsibility
 - to take up responsibility for accident management
 - to communicate in a fair and transparent way about the accident
 - towards the affected**
 - the priority of protection, restoration, compensation
 - involvement of the affected in making sense of protection, restoration and compensation

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 - towards the affected**
 - the priority of protection, restoration, compensation
 - involvement of the affected in making sense of protection, restoration and compensation
 - The question of who is accountable
- The possibility of a future-oriented fair method for (nuclear) energy governance in the aftermath of the accident

2

The idea of fair energy governance
as a meaningful framework for post-nuclear accident ethics

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- Post-nuclear accident ethics need to be considered from the general ethical perspective on energy governance as such.
- The **question of accountability for the accident** and the **issue of responsibility in follow-up** cannot be meaningfully approached if isolated from the question of why and how **the factual possibility of the accident** was created in the first place.
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- ↳ That last question of course refers to accountability with respect to the introduction of nuclear energy.
- The meaningful framework for post-nuclear accident ethics is therefore
- ↳ the framework of the ethics of justification of nuclear energy as such;
- ↳ which, in its turn needs to be considered within the framework of the ethics of energy governance.

Which of course does not mean that every post-nuclear accident aspect needs to be considered from the perspective of energy governance.

3

The idea of fair energy governance

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Energy governance is a 'complex social problem' with risk as its central

concern



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What we can agree on: setting policy priorities right to minimise adverse impact on health and the environment now and in the future

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What we can agree on: setting policy priorities right to minimise adverse impact on health and the environment now and in the future

1

Minimise energy consumption
(Maximise energy savings)

2

Develop and use renewables
in a deliberate and participatory approach

3

Confront nuclear and fossil fuels in a **deliberative risk governance approach** that enables/enforces **fairness** in the way we make sense of the **promises of capacities** and the **acceptability of risks** of energy technologies

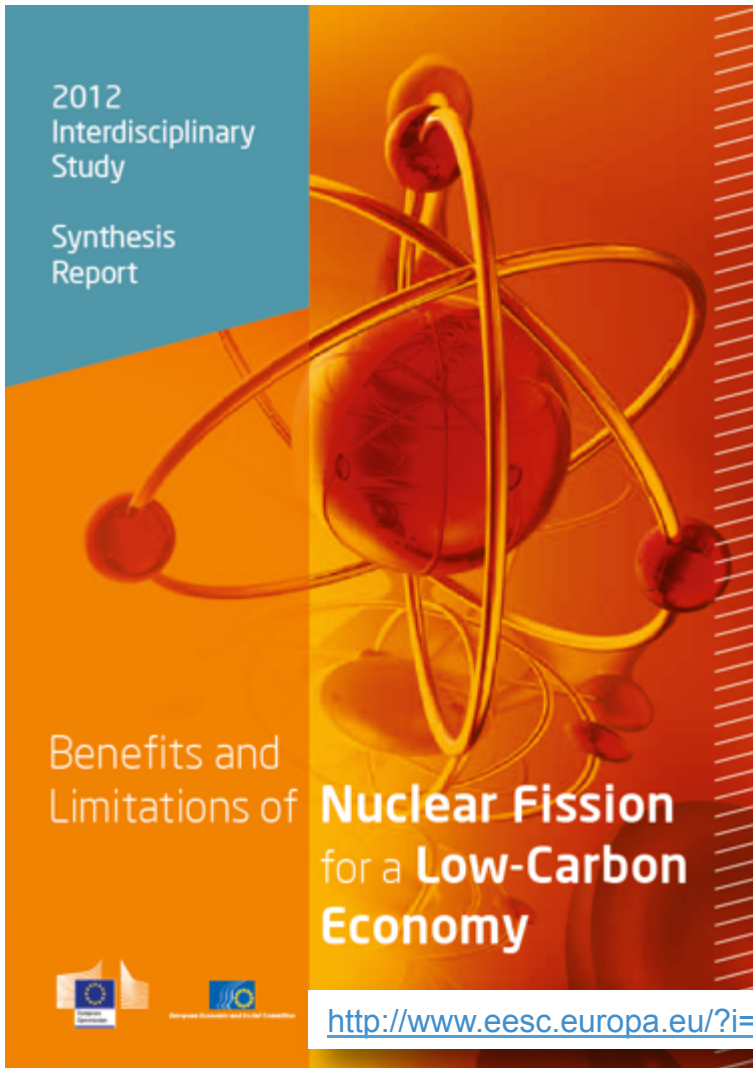
4

Dealing with risk: between knowledge and fairness

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2012
Interdisciplinary
Study

Synthesis
Report

Topical socio-economic reports / expert viewpoints

[...]

“Risk governance:

What is an acceptable level of (nuclear) risk for the public at large?”

Benefits and
Limitations of

Nuclear Fission
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Economy



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“Risk governance:

What is an acceptable level of (nuclear) risk for the public at large?”

my answer:

There exists no objective (scientific, economic, social, political or philosophical) rationale for the determination of the acceptable level of nuclear risk for the public at large.

An acceptable nuclear risk is simply a risk that an informed democratic society justifies as acceptable.

Nuclear Fission
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What is an 'acceptable risk'?

- risk justification



- Technocracy is still among us

it may have good intentions,
it doesn't rule as such,
but it functions at the service of politics.

4 Dealing with risk: between knowledge and fairness
What is an 'acceptable risk'?

do we need **calculation**
to support **informed consent**?



do we need **informed consent**
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The assessment of what is an acceptable risk for society is not a matter of science; it is a matter of justice

- A risk is not a mathematical formula; it is a potential harm that
 - you cannot completely know and
 - you cannot fully control

- Acceptable risk?

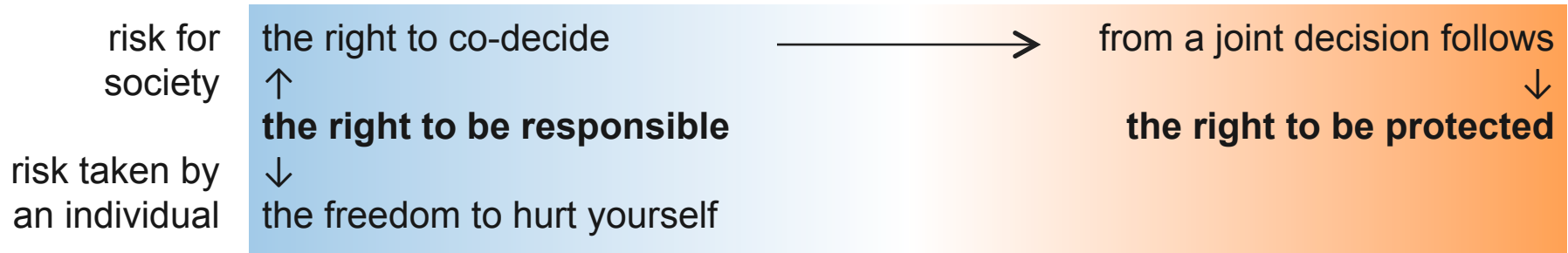
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Fairness: the **possibility of self-determination** ensured by 'the right to be responsible'



- For a collective risk, 'the right to be responsible' = 'the right to co-decide'
Enabling this right is a principle of justice

5

Fair and effective risk assessment: seeking trust by method instead of proof

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- No scientific, societal, cultural or political authority can determine alone what would be an acceptable nuclear risk.
- Good science and engineering, open and transparent communication and the 'promises' of a responsible safety and security culture are necessary conditions but can never generate societal trust in themselves.

The reason is that there will always be essential factors beyond full control: nature, time, human error, misuse of technology

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Which implies that one always has to deal with **incomplete and speculative knowledge** and **value pluralism**

- ↳ Fair risk governance is risk governance **of which the method of knowledge generation and decision making is trusted as fair** by society
 - ↳ When the method of risk governance is **trusted as fair** by society, that risk governance **has also the potential to be effective**, as the decision making will be trusted as fair also with those who would have preferred another outcome (the 'democracy principle')
- Is this form of fair risk governance possible in the society of today?

6

An ethics of method to fairly deal with the complexity of social challenges

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The global social challenges we face today are ultimately complex



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Taking this complexity serious, the idea is that the traditional governing modes of international politics, representative democracy, the market and science are not longer able to grasp the complexity of these global social challenges.



The real problem: obsolete but strategically maintained governing modes that hinder the possibility of intellectual solidarity

- Representative democracy

The working of representative democracy, inspired by the ideology of 'organised conflict' and practiced through elections and party politics, tends to stimulate

- strategic simplification of issues (to match party ideologies)
- populism and political self-protection.
- strategic uses of science in political decision making ('science shopping')

The result of this politics of power is polarisation rather than conciliation.

- International politics

The proclaimed central value of nation state sovereignty and international strategic economic interests obstruct governance of issues that require the global as the context of concern.

The real problem: obsolete but strategically maintained governing modes that hinder the possibility of intellectual solidarity

- The market

A free and competitive market is not able to determine its own ethics, in the sense that its internal market logic is unable to

- prevent conflicts of interest with politics,
- determine the limits to economic growth
- deal with the justification of controversial products, services or practices,
- rule out labour exploitation,
- prevent environmental pollution,
- justify the usefulness of financial speculation,
- determine the correct 'use' of animals (as food, as test material)
- care for the needs of next generations.

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The real problem: obsolete but strategically maintained governing modes that hinder the possibility of intellectual solidarity

■ Science

- We know that the practice of scientific research is influenced by
 - the market
 - political programmes (research funding opportunities, custom-made research)
 - competition, ideology, 'self-organised' quality control
- Science is itself a social actor in socio-economic and socio-political dynamics

however The influence of politics and the market on science, in combination with an enduring spirit of positivism from out of the academy, tends to stimulate

- knowledge brokerage, (delivering knowledge in the 'right form' to the user)
- tailor-made scientific consultancy
- political 'science shopping'
- thin rationalisations of the 'knowledge economy'

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Trust by method implies responsibilities for everyone concerned

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Trust by method implies responsibilities for everyone concerned

→ fostering **reflexivity** as an **ethical attitude** (an **ethical ‘experience’**)

with respect to

the own position, interests, hopes, hypotheses, believes and concerns, and this in any formal role or social position (as scientist, politician, manager, mandatory, medical doctor, citizen, civil society representative, activist, citizen).

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- organise **intellectual confrontation** with respect to the ratio’s we use
 - to defend our interests, hopes, hypotheses, believes and concerns
 - to relativise our uncertainties and doubts;

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 - act responsible towards the next generations by giving them ‘the right to be responsible’ themselves.

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An ethics of method to fairly deal with the complexity of social challenges
The need for new practical forms of democracy, research and education

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The need for new practical forms of democracy, research and education

- reflexivity as an ethical attitude and intellectual solidarity as a joint ethical commitment **motivate and give meaning to** new practical forms of democracy, research and education:
- **inclusive democratic deliberation** as a collective learning process, bottom-up, connecting the local and the global;
 - **transdisciplinary and inclusive research**, seeking synergy between expert knowledge and local indigenous knowledge;
 - **education** inspired by **plurality** and with a focus on **developing an ethical sense** and the **capability of critical contextual thinking**.
- ↘ We don't need to wait for a utopian reform of society. These new forms of democracy, research and education **are possible today**.

7

Societal trust: the challenge for science in radiological risk assessment

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The production of credible hypotheses

- Confronted with the need to deal with incomplete and speculative knowledge and value pluralism, **the challenge of science** in risk governance is not the production of credible proofs, it **is the production of credible hypotheses**.
- ↳ The challenge is there as well
 - with respect to the issue of justification of risk-inherent energy technologies in energy governance
 - as with respect to issues of protection, restoration and compensation in crisis situations.

7 Societal trust: the challenge for science in radiological risk assessment

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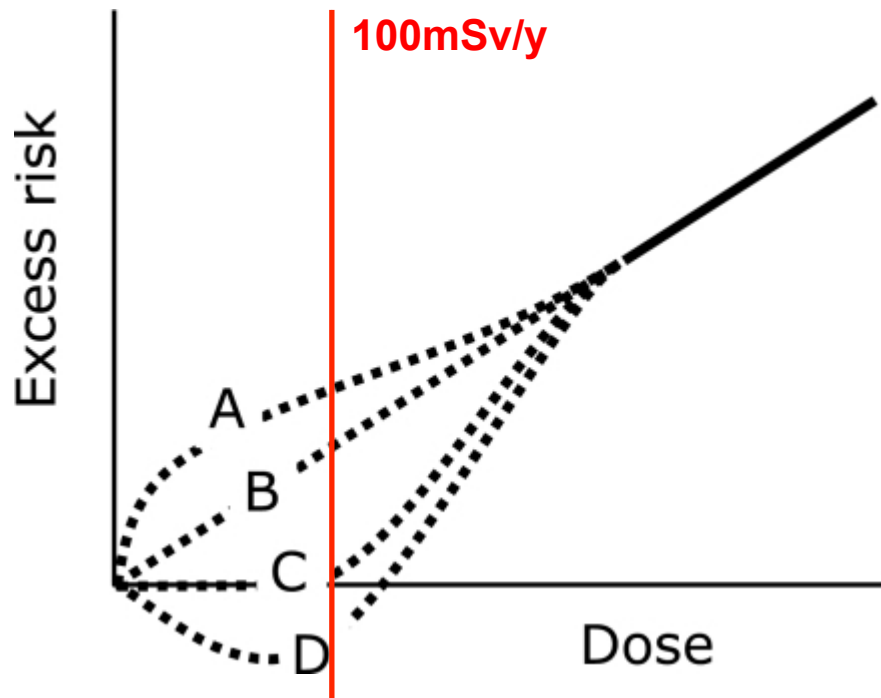
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- ↳ The challenge is there as well
 - with respect to the issue of justification of risk-inherent energy technologies in energy governance
 - as with respect to issues of protection, restoration and compensation in crisis situations.
- In the general interest of rendering hypotheses with credibility and following the principle of ‘trust by method instead of proof’ in risk governance, science has no choice but **to involve civil society in general and the (potentially) affected in particular** in producing its hypotheses.

7

Societal trust: the challenge for science in radiological risk assessment
Post-nuclear accident situations in need of intellectual solidarity – Fukushima

The issue of the so-called '100 mSv/y threshold' is an issue in urgent need of formal public intellectual confrontation between all responsible and concerned parties. There is major support for the vision that no such threshold exists and that one needs to maintain the linear relation between radiation dose and risk (relation B) based on the precautionary principle.

Who shall take the initiative to launch and organise this confrontation?



7 Societal trust: the challenge for science in radiological risk assessment
Post-nuclear accident situations in need of intellectual solidarity – Chernobyl



[World Press photo 2006]

<http://www.greenpeace.org/international/press/releases/greenpeace-wins-world-press-ph>

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Societal trust: the challenge for science in radiological risk assessment Post-nuclear accident situations in need of intellectual solidarity – Chernobyl



[World Press photo 2006]

Chernobyl is a disaster in many respects, but the hereditary link between microcephaly and radiation (microcephaly as a genetic effect) cannot be proven

<http://www.greenpeace.org/international/press/releases/greenpeace-wins-world-press-ph>



8

Conclusion: enabling 'the right to be responsible' in risk governance

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The general case or (radiological) risk assessment

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The general case or (radiological) risk assessment

- The assessment of what is an acceptable collective risk is not a matter of science; it is a matter of justice.
- Fair risk governance is risk governance of which the method of knowledge generation and decision making is trusted as fair by society.
- Trust in the method of risk governance implies and can be generated with reflexivity as an ethical attitude and intellectual solidarity as a joint ethical commitment.
- ↳ - inclusive democratic deliberation as a collective learning process
- transdisciplinarity and inclusion in research to construct credible hypotheses
- plurality and the focus on critical contextual thinking in education

are not only required as a principle of justice in risk governance, but also have the potential to generate societal trust around any decision (acceptance or rejection) on the use of nuclear technology.

- Today, we don't live in a world inspired by intellectual solidarity, but we have the capacity to put it into practice and foster it.

8 Conclusion: enabling 'the right to be responsible' in risk governance
The Fukushima post-nuclear accident situation

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- Also in post-accident conditions, radiological risk assessment remains to be complicated by knowledge-related uncertainty and value pluralism.
- Also in post-accident conditions, fair risk governance is risk governance of which the method of knowledge generation and decision making is trusted as fair by society.
- Enabling 'the right to be responsible' of the affected in making sense of protection, restoration and compensation is a principle of justice.

But inclusive post-accident policies and measures in the interest of protection, restoration and compensation always need to take into account that there was no care for 'trust by method' or thus no intellectual solidarity with the introduction of nuclear in the first place.

- The possibility of a future-oriented fair method for energy governance in the aftermath of the accident is neglected by the Japanese authorities.

It is not too late to involve the general public and those affected by the Fukushima accident in deliberation on a possible restart of nuclear energy production.