

Prof. Frederic Boudier



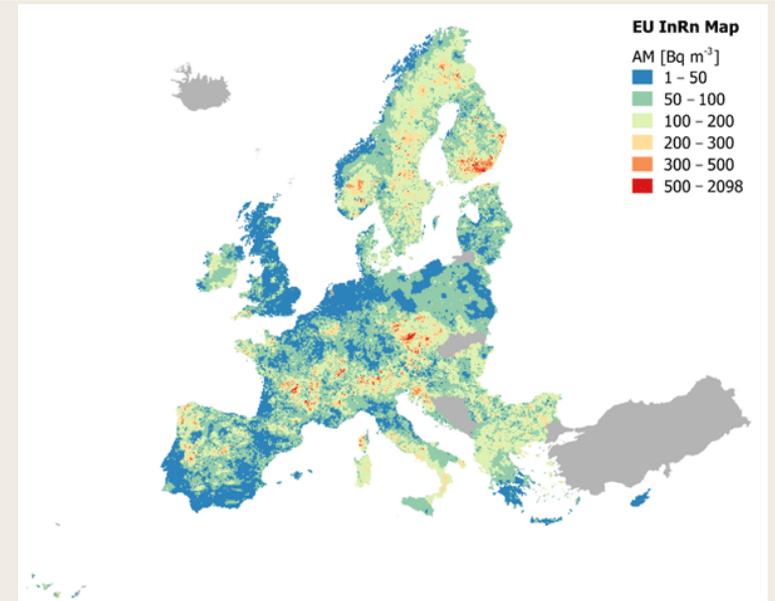
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The quest for evidence-informed risk communication on radon and the Potsdam manifesto

The Need for Social Science in Radon Risk Communication
Lund University, 24 March 2021

Today's talk

- ▶ What is risk communication?
- ▶ Risk Perception/ communication of radon: are we doing a good job?
- ▶ Science-informed suggestions to build more effective risk communication



Based on *The Potsdam Radon Communication Manifesto*

Bouder F., Perko T., Lofstedt R., Renn O., Rossmann C., Hevey D., Siegrist M., Ringer W., Pözl-Viol C., Dowdall A., Fojtíková I., Barazza F., Hoffmann B., Lutz A., Hurst S., Reifenhäuser C.

What is risk communication?

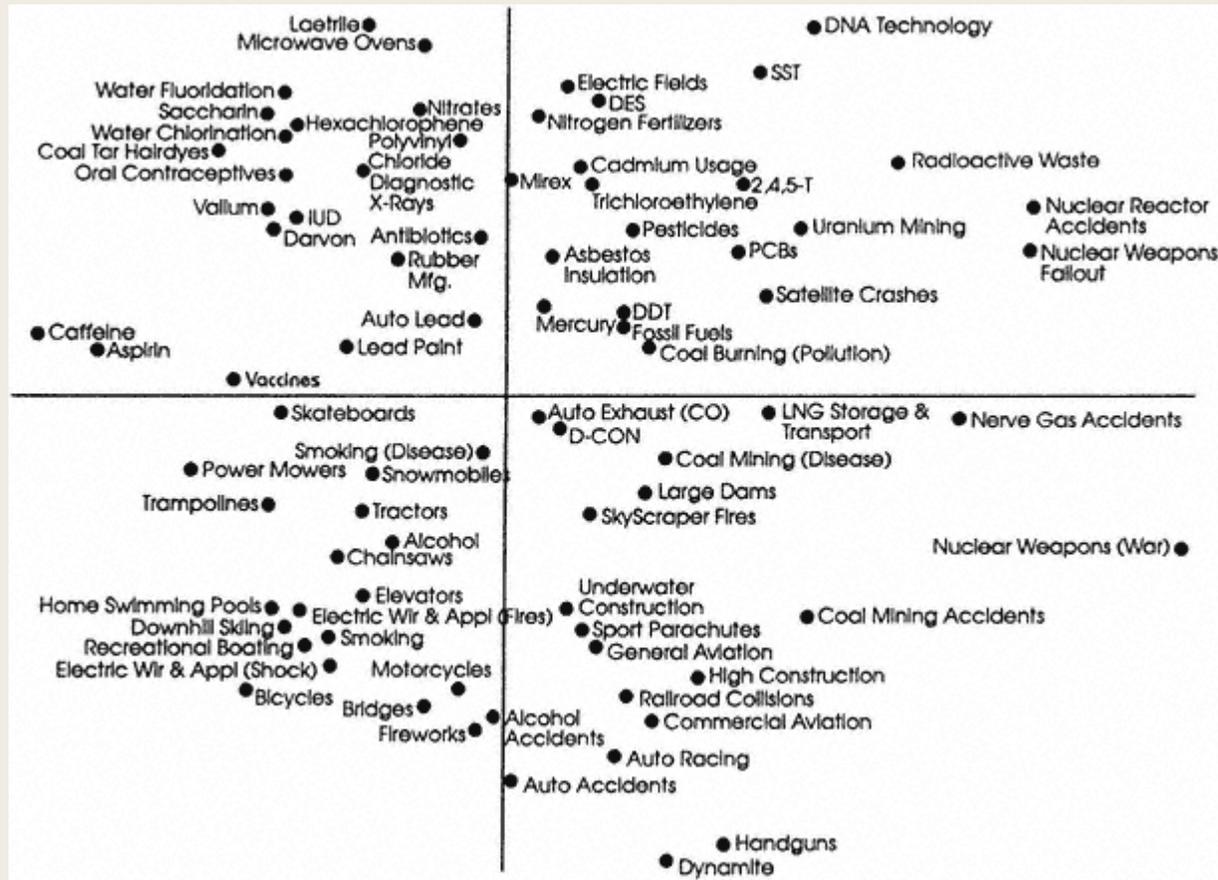
Fischhoff (2011): “Term of art used for situations when people need good information to make sound choices. It is distinguished from public affairs (or public relations) by its commitment to accuracy and its avoidance of spin”.

➤ FDA Risk Communication Advisory Committee (2015):

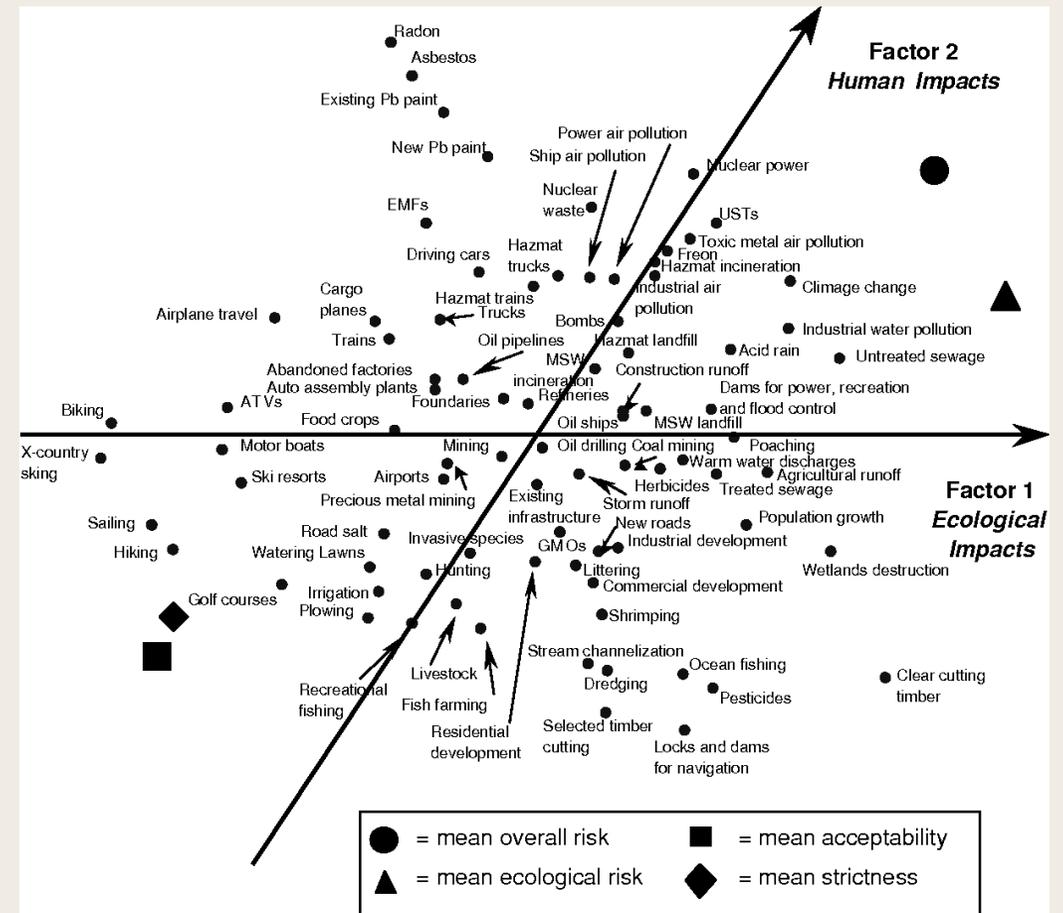
[...]Interactively sharing risk and benefit information with the public to enable people to make informed independent judgments’.

“With respect to environmental hazards, like radon, there is **great potential for improvement of risk communication programmes** so that the general public is aware of the risks. It is recommended that: more advice be provided at a local level (eg from environmental health officers); explicit **warnings** are used to convince people to act; **risk comparisons** are used which people can relate to; the action to be taken is notified; alternative information is given to different groups; listing of more information is given” (Euratom/East Anglia 1991).

Perception vs. seriousness



Slovic, 1987



Willis et al. 2005

Risk Perception drivers

People view risks differently

Fischhoff, Slovic, Lichtenstein etc.

- Natural-Technological
- Voluntary-Involuntary
- Familiar-Non Familiar
- Control-Non Control
- High frequency/Low consequences vs. Low frequency/high consequences
- Children/ No children
- Reproduction

Risk perception and radon (1)

Fischhoff et al. 1979; Weinstein et al. 1989; Fisher and Sjöberg 1990; Guimond and Page 1992; Bostrom et al. 1992:

- 1- Radon is not easily perceptible (colourless, odourless, tasteless)
- 2- A person's individual home is perceived as safe
- 3- Radon is seen as a voluntary risk
- 4- Cancer caused by a multiple of reasons. Often difficult to isolate radon
- 5- Chronic rather than acute risk
- 6- Risk not evenly spread- higher and lower risk areas
- 7- Radon seen as natural hazard

Risk Perception and radon (2)

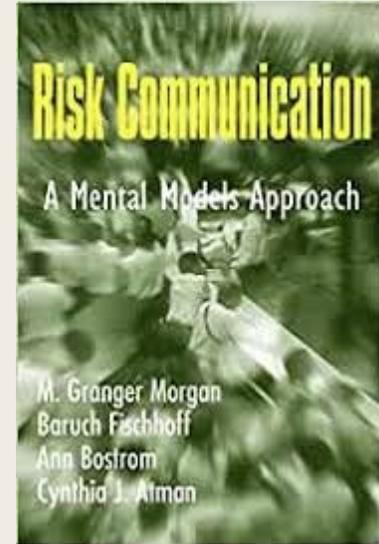
- **Natural**-Technological
- **Voluntary**-Involuntary
- **Familiar**-Non Familiar
- **Control**-Non Control
- **High frequency/Low consequences** vs. Low frequency/high consequences
- Children/ **No children**
- Reproduction- **No**

Radon risk Communication

Science-based :

Applying the mental model approach

(Morgan et al. 1992) to design effective risk communications



Europe? – Example of Sweden (Löfstedt 2019):

1. Little knowledge of risk communication science
2. Heavy reliance on communication consultants
3. Campaign-focused: rushed time frame and no long-term communication
4. Over-reliance on websites

Applying Risk Communication science (Renn and Benighaus 2013) to radon comm.

1. Science-based communication
2. Re-frame as “Indoor air pollution”
3. Leadership and engagement
4. Inclusive, coherent and consistent communications
5. Sustain communication over time
6. Use interactive tools
7. Dedicated training programmes
8. Support Social Science research



Journal of Risk Research

ISSN: 1366-9877 (Print) 1466-4461 (Online) Journal homepage: <https://www.tandfonline.com/loi/rjrr20>

The Potsdam radon communication manifesto

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To cite this article: F. Boudier, T. Perko, R. Lofstedt, O. Renn, C. Rossmann, D. Hevey, M. Siegrist, W. Ringer, C. Pözl-Viol, A. Dowdall, I. Fojtiková, F. Barazza, B. Hoffmann, A. Lutz, S. Hurst & C. Reifenhäuser (2019): The Potsdam radon communication manifesto, Journal of Risk Research, DOI: [10.1080/13669877.2019.1691858](https://doi.org/10.1080/13669877.2019.1691858)

To link to this article: <https://doi.org/10.1080/13669877.2019.1691858>

 Published online: 26 Nov 2019.

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JOURNAL OF RISK RESEARCH
<https://doi.org/10.1080/13669877.2019.1691858>

 **Routledge**
Taylor & Francis Group

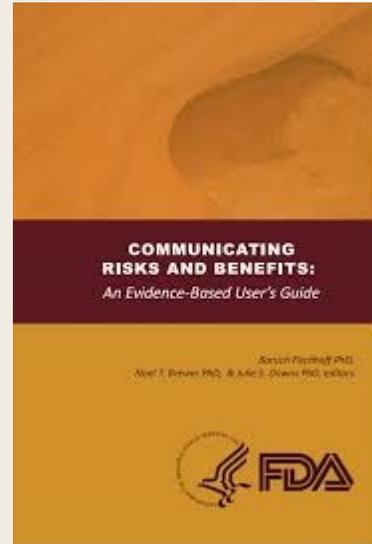
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The Potsdam radon communication manifesto

F. Boudier^a, T. Perko^b, R. Lofstedt^c, O. Renn^d, C. Rossmann^e, D. Hevey^f, M. Siegrist^g, W. Ringer^h, C. Pözl-Violⁱ, A. Dowdall^j, I. Fojtiková^k, F. Barazza^l, B. Hoffmann^m, A. Lutzⁿ, S. Hurst^o & C. Reifenhäuser^p

1. Science-based communication

- ❑ Risk communication should be based on **accurate scientific data** not gut feelings
- ❑ Alliance of scientists from natural and social sciences
- ❑ Link to in-house assessors and managers
- ❑ Take stock of public perception, motivations, expectations and concerns



2. Radon as “Indoor air pollution”

Reframe from “natural radioactive gas” to “indoor air pollution”. People care about living in a safe environment and need to be made aware that their homes are not entirely safe



Link to other pollution and health campaigns (cancer strategies, anti-tobacco, sustainability, energy saving etc.)

3. Leadership and engagement



- Government must take a more active role, not wait for third parties to raise the issue
- Develop joint action plans
- Policy makers should directly engage with radon experts, academia, and researchers
- They should refrain from outsourcing their communications to PR agencies

4. Inclusive, coherent and consistent communications



- Include a range of radon stakeholders and civil society representatives
- Inform people at risk to perform measurements
- Liaison across policy areas (Labour, Health etc.)
- Liaison across levels of government
- Agree on what constitutes a negligible, tolerable and unacceptable level of risk (e.g. 100 Bq/m³ or 300Bq/m³) across jurisdictions

5. Sustain Communication over time

- ❑ To make a lasting impact communicators must sustain and repeat their messages and campaigns
- ❑ Key yearly events – e.g. Europe Radon Day- useful but not enough.
- ❑ Engagement with key players – e.g. indoor air quality community
- ❑ Communications actions and campaigns must be systematically measured
- ❑ Lessons must be shared



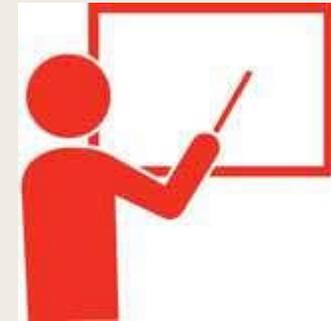
6. Use interactive tools

- ❑ Maps are popular and draw people's attention despite their imperfections
- ❑ Maps need to be truly interactive
- ❑ Maps need to be accurate to support individual decisions (e.g. avoid highlighting entire regions as high risk/low risk)
- ❑ Visual tools such as Apps may be used



7. Dedicated training programmes

- ❑ Training to engage with interested parties at a deeper level
- ❑ Well-trained communicators may become “ambassadors” and “multipliers”
- ❑ Particular focus on the building/ construction industry
- ❑ Science labs and summer schools, especially in areas where the problem is acute
- ❑ Basics of risk communication in the curriculums or/and workshops for radon experts



8. Support Social Science Research

Today research to support and develop evidence-based radon communication programmes is scarce

- ❑ National action programmes needed to research interaction between radon risk managers and society
- ❑ Research priorities: perceptions and behaviour, psychological barriers, media content, media knowledge gaps
- ❑ Identify how government can support research networks – e.g. data sharing and collaboration

Thank you!

frederic.bouder@uis.no