

Ethical Dimension of Risk Communication: Insights from a Transdisciplinary Workshop

*PhD-Project 4.1 (ESR 11) of Johanna Ickert, University of Plymouth
Supervisor: Prof. Dr. Iain Stewart / Dr. Martha Blassnigg †2015*

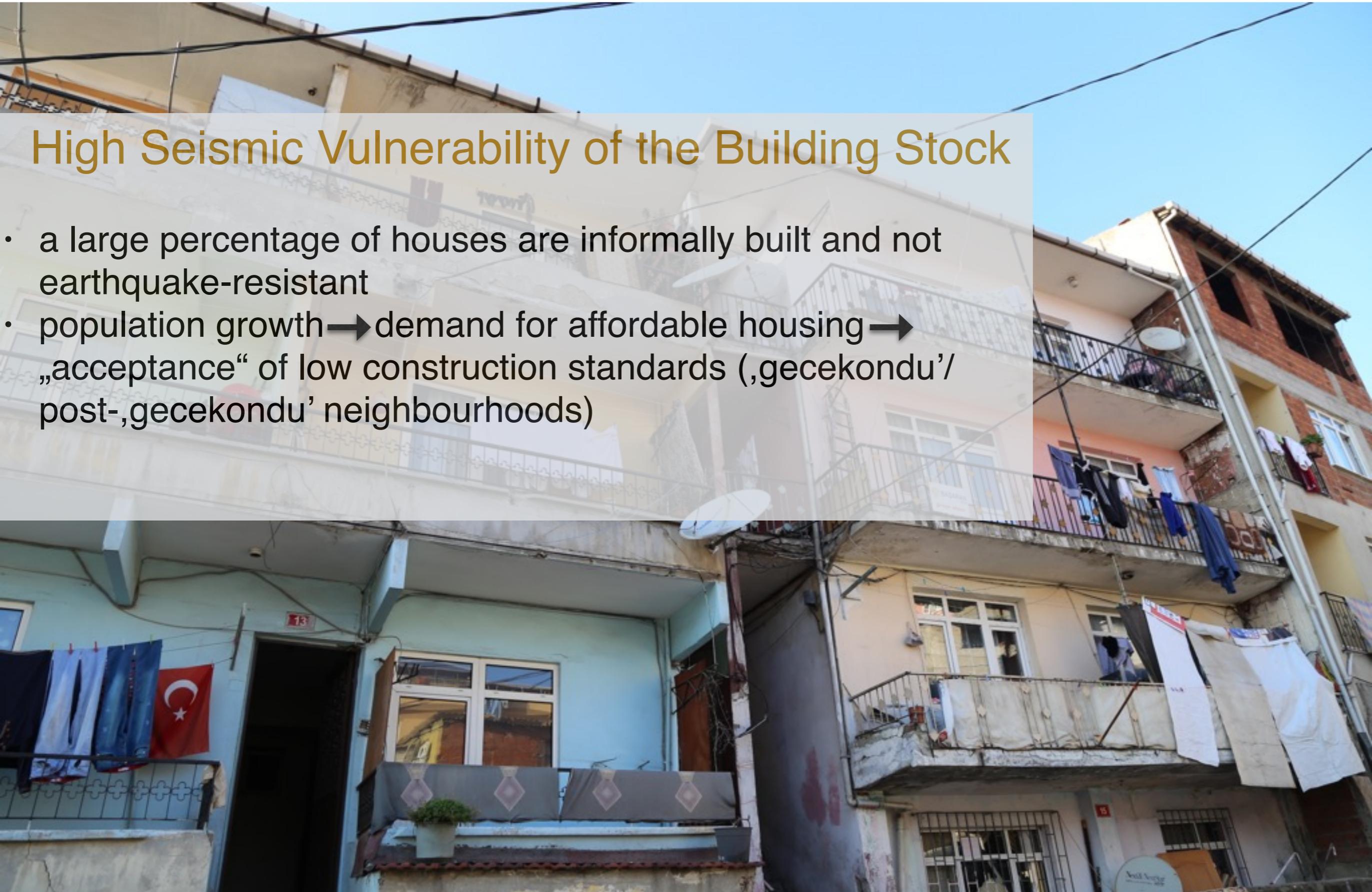
The Problem: Seismic Risk in Istanbul

- megacity of 14 million inhabitants
- one of the highest seismic vulnerabilities in the world
- high probability of an $M_w \geq 7$ earthquake in the next decade or so, due to its proximity to the North Anatolian Fault



High Seismic Vulnerability of the Building Stock

- a large percentage of houses are informally built and not earthquake-resistant
- population growth → demand for affordable housing → „acceptance“ of low construction standards (,gecekondu’/ post-,gecekondu’ neighbourhoods)





Urban Renewal Programme

- large-scale retrofitting and construction projects
- enactment of two far-reaching laws (no.5366 and no.6306)
- large-scale resettlements of poor inhabitants, new „satellite-cities“
- ➔ measures increase the seismic safety of the building stock, but provoke public dissent („gentrification“ reproach)





The strong politicization of seismic risk mitigation impacts

- a) the public perception of seismic risk communication
- b) the willingness of inhabitants to take individual precautionary actions





In this politicized context,
current „top-down“ communication approaches are
likely to be *ineffectual*



Risk Communication (RC) - *Theoretical Findings*

- 1. little or no correlation between the provision of geoscience information about seismic hazards and the adaptive changes in individual or community behavior that would reduce risk (Slovic, 2000; Lichtenstein and Slovic, 2006; Solberg et al., 2010; Fischhoff, 2012; Kasperson, 2014)
- 2. risk adjustment is strongly linked to notions of responsibility, ownership and trust in relevant experts (Wachinger et al., 2013; Green, 2012; Joffe et al., 2013)
- 3. high motivation for preparedness actions is given when average people share with each other what they have done to get prepared (Wood 2014)
- 4. communities and neighborhoods have a high ability to learn from disasters and to develop efficient and sustainable mitigation measures (Voss, 2014)
- 5. linking the scientific and local knowledge bases in dialogue-based formats heightens the impact of science communication (Arvai, 2014; Dietz 2013)

How can geoscientists effectively share their knowledge with at-risk communities in politicized contexts?

A Transdisciplinary Communication Workshop in Urban Renewal-Neighbourhoods



Zeytinburnu



Okmeydani

Methodological Approach

1. Field-Based Narrative Interviews and Round-Table Discussions
2. Focus Group-Discussions

Insights from a Dialogue-Approach to Risk Communication

1. Focus of risk communication lies on quantifiable values; important but intangible values at risk often remain unconsidered



“They destroyed all of what was here. This is a former pastoral bath house, it is built into the foundations of the new building. [...] They just pulled it down to build a minaret, which has nothing to do with the old one. [...] These are just disneyland fakes of the originals.”

„You know...before the „real“ earthquake, we experience a social and cultural earthquake.“

„Why don´t they rely on the knowledge of our ancestors. The wooden houses are very resistant.“

„I think the Urban Transformation decreases the solidarity. But during the disaster, the most necessary thing is solidarity.“

Insights from a Dialogue-Approach to Risk Communication

2. Need for „actionable“ approaches and methods, that enhance mutual learning



Researcher: Do you feel prepared for an earthquake?

Neighborhood Representative: There is no preparation. That is for sure. For example, for the rescue just after an earthquake we would need free spaces. But they are building high-rises and private clubs on evacuation areas...

„It is a constant repetition of the same: It is going to be big. It is going to be destructive. But what can we DO about it?“

„Please come to us with your suggestions and let's think together what can be done.“

“There weren't any plans made in cooperation with the public. There is no exchange, no learning. Only interest and seeking for acceptance.”

Insights from a Dialogue-Approach to Risk Communication

3. Role and Responsibility of Geoscientists



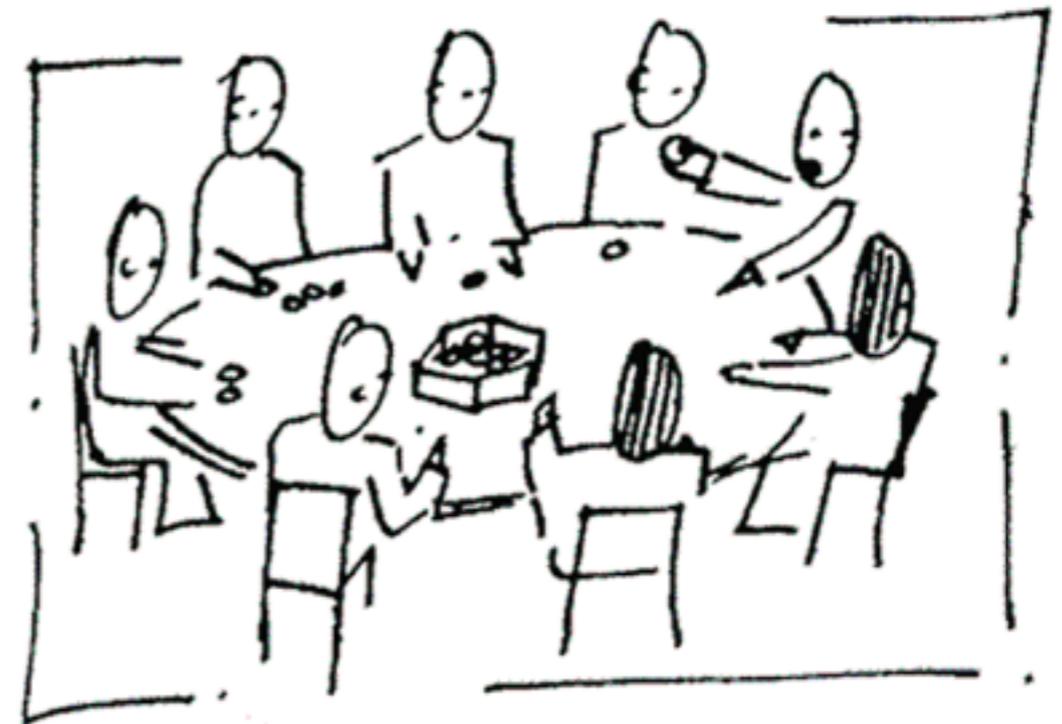
Researcher: It seems as if you don't have a lot of faith in the government, but do you have a lot of faith in scientists?

Neighborhood Representative: Of course, why shouldn't we trust scientists? Of course there are differences between universities and universities, scientists and scientists. Of course we are aware of that, but there is also something that we can call "common sense". Scientist are also citizens. They should collaborate with us. As scientists. As citizens.

Inhabitant: „I think scientists scientist should inform us correctly and in a transparent way so that we can learn and prepare for an earthquake. But this requires a healthy democracy and good media. And I am not so sure about if we still have this.“

Constraints of Dialogue-Based Approaches

- * knowledge transfer to relevant decision-makers and journalists is the common practice, citizen-dialogue is rather unfamiliar
- * fear of going beyond the role as „objective experts“ due to perceived or actual advocacy positions
- * insufficient experience and methodological skills in order to respond to the sociocultural complexity of risk
- * lack of institutional support for these engagements
- * dialogue-based approaches remain „private decisions“
- * challenging, undirected, time- and resource-consuming dialogue-approaches mostly incompatible with a scientific career („publish or perish“)



Recommendations of the ALERT-Group



- * maintaining the value and integrity of disciplinary knowledge (sound science)
AND responding to specific socio-cultural contexts
- * more integrated and actionable modes of communication and methodological skill-development
- * training focused on storytelling, visualization and social media etc.
AND on researchers' ability for "story-listening" / mutual learning
- * Integration of field-provoked communication workshops, community-centred participatory knowledge exchanges and self-reflection on disciplinary practices and paradigms



References

- Árvai, J. and Rivers, L.: Effective risk communication, Routledge, 2013.
- Bernard, H. (2006) Research methods in anthropology: Qualitative and Quantitative Approaches. 4th Ed. Lanham: Alta Mira Press.
- Bourdieu, P. and Wacquant, L. (1996). Reflexive Anthropologie. Frankfurt am Main: Suhrkamp.
- Dietz, T. (2013). Bringing values and deliberation to science communication. Proceedings of the National Academy of Sciences, 110(Supplement_3), pp.14081-14087.
- Egner, H., Schorch, M. and Voss, M. (2014). Learning and Calamities. Hoboken: Taylor and Francis.
- Erdik, M. and Durukal, E. (2007). Earthquake risk and its mitigation in Istanbul. Nat Hazards, 44(2), pp.181-197.
- Fischhoff, B.: Risk analysis and human behavior, Earthscan, Abingdon, Oxon., 2012.
- Green, R. (2012). Unauthorised development and seismic hazard vulnerability: a study of squatters and engineers in Istanbul, Turkey. Disasters, 32(3), pp.358-376.
- Hoffman, S. and Oliver-Smith, A. (2002). Catastrophe & culture. Santa Fe, NM: School of American Research Press.
- Islam, T. (2005). Outside the core: gentrification in Istanbul. In: Atkinson, R. and Bridge, G. ed. Gentrification in a Global Context. The new urban colonialism. London: Routledge, pp. 121-136.
- Joffe, H., Rossetto, T., Solberg, C. and O'Connor, C.: Social Representations of Earthquakes: A Study of People Living in Three Highly Seismic Areas, EARTHQ SPECTRA, 29(2), 367-397, doi:10.1193/1.4000138, 2013.
- Kaspersen, R.: Four questions for risk communication, Journal of Risk Research, 17(10), 1233-1239, doi:10.1080/13669877.2014.900207, 2014.
- Latour, B. (2004). Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern. Critical Inquiry, 30(2), pp.225-248.
- Nowotny, H. (2004). "The Potential of Transdisciplinarity." In H. Dunin-Woyseth and L. Merete Nielsen (eds.), Discussing Transdisciplinarity: Making Profession and the New Mode of Knowledge Production: The Nordic Reader 4 (pp. 10-18). Oslo: AHO.
- Renn, O. (2014). Towards a Socio-Ecological Foundation for Environmental Risk Research. In: Lockie, S., Sonnenfeld, D. and Fisher, D. ed. Routledge International Handbook of Social and Environmental Change. London: Routledge/Taylor & Francis Group, pp. 207-220.
- Scheufele, D.A. (2014) Science communication as political communication. Proceedings of the National Academy of Sciences, 111(Supplement_4), pp. 13585-13592.
- Slovic, P.: What does it mean to know a cumulative risk? Adolescents' perceptions of short-term and long-term consequences of smoking, Journal of Behavioral Decision Making, 13(2), 259-266, doi:10.1002/(sici)1099-0771(200004/06)13:2<259::aid-bdm336>3.3.co;2-y, 2000.
- Solberg, C., Rossetto, T. and Joffe, H.: The social psychology of seismic hazard adjustment: re-evaluating the international literature, NAT HAZARD EARTH SYS, 10(8), 1663-1677, doi:10.5194/nhess-10-1663-2010, 2010.
- Wachinger, G., Renn, O., Begg, C. and Kuhlicke, C.: The Risk Perception Paradox-Implications for Governance and Communication of Natural Hazards, RISK ANAL, 33(6), 1049-1065, doi:10.1111/j.1539-6924.2012.01942.x, 2013.