

Evaluation on communication about the differences between “hazard” and “risk”

BfR Project Description, 8 May 2009

In scientific risk assessment the terms “hazard” and “risk” describe very different concepts. The term “hazard” characterises the potential of a substance or a situation to cause an adverse effect when an organism, system or a (sub-)population is exposed to that substance or situation. In contrast, the term “risk” describes the probability of an adverse effect on an organism, system or a (sub-)population when exposed to a substance or situation under specific conditions. In line with these definitions, information about a “hazard” means something different from information about a “risk”. The way these terms are understood varies from scientific discipline to scientific discipline and this repeatedly leads to misunderstandings between the stakeholders involved in the risk communication process. This project aims to make these differences clearer so as to render risk communication more effective for the stakeholders.

Project management agency

BfR

Department: Risk Communication

Unit: Risk research, perception, early detection, impact assessment

Co-operation partner

Jülich Research Centre, MUT-INB

Project term

08/2005-08/2006

Funding agency

BfR

This project was to help clarify the following questions:

- What are the differences in the use of the terms “hazard” and “risk” in the various related scientific disciplines?
- How should the information from the risk assessments be passed on to stakeholders?
- What knowledge prerequisites are required of stakeholders in order for them to be able to distinguish the two concepts “hazard” and “risk”?
- What information must be conveyed and how must it be conveyed in order to ensure that these concepts are understood correctly?

The first part of the project provided comprehensive explanations of the terms “hazard” and “risk” and discussed them in the scientific context. Particular attention was paid to aspects which result for risk communication from the distinction between the different communication concepts of “hazard” and “risk”. The next step was to look at the latest scientific findings on “hazard” communication and “risk” communication, and at relevant aspects of risk perception and communication. The next step was to analyse previous BfR communication practices using selected examples. This was followed by several workshops with BfR experts and stakeholders from other public institutions with a view to jointly discussing the problems of the differing use of the two concepts and to promoting mutual understanding. An empirical online survey with interested consumers (users of the BfR website) was then conducted in order to determine whether and, if so, how lay persons distinguish between “hazard” and

“risk”. The findings clearly show that this distinction is scarcely important at all for lay persons unless their attention was drawn to differences in use. The project was rounded off by the evaluation of findings for the purposes of developing management recommendations for future BfR risk communication.

One central result of the project was the recommendation that risk communication should be oriented more towards the target groups.

The final report is available and has been published in the *BfR-Wissenschaftsreihe 2/2009*. This publication can be accessed on the Internet on http://www.bfr.bund.de/cm/238/evaluierung_der_kommunikation_ueber_die_unterschiede_zwischen_risk_und_hazard.pdf