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# RISK COMMUNICATION: DEALING WITH THE SPECTRUM OF ENVIRONMENT AND HEALTH RISKS IN EUROPE

## Report on a Consultation

Ulm
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# Abstract

Improved communication of environment and health risks is required to improve their management in the European Region. Accordingly, a WHO consultation was convened to review the role of and opportunities for risk communication, to identify areas for future collaborative research and dissemination of ideas, to develop methods and techniques, and to advise on the creation of a Region-wide network for risk communication. The participants recommended that such a network be based on WHO collaborating centres and that it develop a code of practice on risk communication. The network should also form the basis for a regional infrastructure for risk management. This infrastructure should provide for: training programmes, harmonized criteria for the collection and transmission of data on environment and health risks, guidelines for public involvement and the support of research.

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In the light of the European Charter on Environment and Health, the WHO Regional Office for Europe is exploring ways of strengthening international mechanisms for assessing potential hazards to health associated with the environment, and of developing guidance on policies and strategies for their control. It is now clearly recognized that there is a need to consider the role of health risk assessment and risk communication in meeting the principles of the European Charter, which stress the need for an informed public to participate in the risk management and decision-making process. In addition, there is a need to consider the regional implications of the approach taken by the Netherlands Government in its National Environmental Survey and Plan. This demonstrates the wide range of intersectoral problems, potential solutions and costs, and the estimated range of health effects that required the immediate development and implementation of short-term and long-term environmental policy for a single densely populated country.

In April 1990, a series of sessions on risk communication and public participation, co-sponsored by the Regional Office and the WHO collaborating centre for risk management in chemical safety at the International Institute for Scientific Cooperation, Günzburg, Germany, took place at the biannual meeting of the Society for Risk Analysis Europe. A central recommendation from these sessions was that an expert group meeting on risk communication and public participation should be held in Europe by the end of 1990. Such a meeting should (a) address the need for an authoritative review of the role of and opportunities for risk communication; (b) identify potential areas for further work in collaborative research and dissemination of ideas; (c) develop appropriate methods and techniques for communication on environmental and health risks in Europe; and (d) provide advice on the creation of a Region-wide network for environmental health risk communication.

Accordingly, the Consultation on Risk Communication: Dealing with the Spectrum of Environment and Health Risks in Europe was convened in Ulm, Germany, from 28 to 30 November 1990, under the sponsorship of the German Federal Ministry of Health. It was co-organized by the WHO collaborating centre for risk management in chemical safety, with the assistance of the Environmental Risk Assessment Unit at the School of Environmental Sciences, University of East Anglia, Norwich, United Kingdom.

The Consultation was attended by 16 experts from 9 Member States, a representative of the Commission of the European Communities and 2 members of the Regional Office staff. Dr G. Bengtsson was elected Chairperson and Professor R. Kemp Rapporteur. Dr K. King, Dr S. Biefang and Dr C. Mays acted as session vice-presidents.

## Discussion

The initial session was devoted to the uses of knowledge and ignorance. It focused mainly on theories of risk communication, the tension between various experts, the use and misuse of experts in the manipulation of public opinion, administrative decision-making and the need for a formal code of practice. The second session of "concern for Europe's tomorrow" reviewed the safety policy of the Netherlands and the differences that could be expected between parts of the Region. The session on individual risk management verus societal risk management concentrated on the development of a model involving "differential" risk communication, comparing the detailed similarities and differences of the problem for two related but dissimilar risks (household radon and Chernobyl fallout). In particular, it was pointed out that the details of effective communication depend on a three-dimensional

matrix of characteristics describing the magnitude of the risk, the degree of knowledge or uncertainty about the process and magnitude of risk involved, and the nature of the risk in its natural context and as perceived by the different parties in the communication process. Great emphasis was placed on the need for non-numerate risk descriptions and the acceptance of the place for non-traditional types of risk assessment and communication. The final session focused on the needs for creating closer contact between researchers in the field and establishing a risk communication network in the European Region. (The sequence of risk perception, risk assessment, risk evaluation and decision-making is referred to as risk management.)

## Conclusions and recommendations

Risk communication: the uses of knowledge and ignorance

1. There is a continuing need for case studies on risk communication.

2. It is necessary to acknowledge that risk communication involves both rights and obligations of the generator, the communicator and the receiver of information on environment and health.

3. The details of communication depend on the scale (local, national, regional or global) or absolute or comparative level of risk.

4. It is necessary to develop a code of practice for environmental health risk communication.

5. The Regional Office should aid in the establishment of a European network on risk communication, based on WHO collaborating centres and the establishment of national focal points to identify individual participants and organizations for the network. The prime aims of the network would include developing a code of practice,

encouraging further activities that examine the role of risk communication for coping with "expert" and "public" knowledge and ignorance, and disseminating the results of these activities.

6. The code of practice for the European network should consider the following:

(a) the role of the expert and the need for all individuals and organizations party to the communication process to declare their financial and professional interests;

(b) the specific requirements for maintaining scientific integrity while granting legitimacy to alternative views, particularly when communicating uncertainty to the public and communicating the "opportunity cost" of alternative competing risk management strategies in relevant and meaningful terms; and

(c) the need, in responding to public concern, for awareness that:

- public views may have valid reasons to differ from expert views when risk perceptions are both rational and shared;

- public views may be unduly influenced by misinformation or ignorance;

- members of the public may have predetermined views or different reasons for individual or collective participation in the decision-making process; and

- the public may be unaware of the opportunity costs associated with public policy decisions.

The regional perspective

7. The standardization of methodology used in quantitative risk assessment and the harmonization of health and safety information are imperative to identify priorities for risk management activities throughout the Region. Definitions of criteria for determining levels of acceptable, tolerable and unacceptable risks and for setting priorities have to take into consideration: the current health, environmental and economic situation, the cultural context, existing institutions and their activities in risk management and the changing knowledge, attitudes and behaviour of the public.

8. Merely giving the right information (according to the perception of the risk communicator) does not ensure that the demands and health concerns of the public are met. Increased mediation is obviously needed between expert knowledge and the behaviour of the public.

9. The Regional Office for Europe should create an infrastructure for risk management, particularly in the countries of central and eastern Europe. It should be based on the proposed European network on risk communication and built with the help of WHO collaborating centres and national focal points in the Member States. This infrastructure should provide for:

- the development of training programmes in risk management, including risk assessment and risk communication techniques (these should include such priority areas as negotiation methods and strategies for groups polarized over risk issues, such as civil authorities and citizens' groups, and the training of community resource people to act as mediators between experts and citizens contemplating major life decisions in a risk context);

- the harmonization of criteria and standards for the collection and transmission of data on environment and health hazards (as provided by the environmental health information system for Europe currently under development);

- guidelines for public involvement in the risk management process; and

- the support of multisectoral and interdisciplinary research by universities or other scientific institutions, particularly in the countries of central and eastern Europe.

10. In the spirit of the European Charter and with the aid of the proposed network, the Regional Office should encourage public involvement in the risk management process by:

- helping to ensure that Member States develop legislation that respects the individual right to know; and

- proposing acceptable standards and guidelines for risk communication and public participation, and encouraging their use.

Risk management by individuals, groups and government

11. It is considered necessary that the Regional Office ensure that its activities in environment and health risk management and communication are appropriate and that its conceptions of risk remain sensitive to the needs of the people and countries of the Region. A plurality of risk definitions must be recognized, and will require that attention be paid to decentralized risk analysis and to processes of confrontation between established authorities and other voices. This will prove

particularly important in developing disaster preparedness, since disaster produces unanticipated needs that must be quickly taken into account.

12. The Regional Office should recognize that the content and process of risk communication depend on the context, and should encourage risk communication to refer to the spectrum of environment and health risks in the Region, even when addressing single issues.

13. Further meetings should be organized to explore the models (for example, quantitative and qualitative, formal and intuitive) used by different actors to set risk action priorities, beyond the strictly quantitative models used by experts, and to further the exploration of risk management by individuals, groups and governments. This exploration should involve encouraging the definition of terms and bringing to bear a wide range of examples.

14. The Regional Office programme on risk communication and management should:

- try to support more cross-cultural research and exchange of data on risk perception;

- encourage empirical research on innovative methods of setting risk action priorities, such as cost-benefit analysis, and alternative and decentralized risk analysis and communication; and

- facilitate the creation of risk communication opportunities for various actors to express their definitions of risk problems and solutions.

15. The Regional Office should encourage the development of innovative (for example, social) indicators that could be used to evaluate the impact of risk and disaster management, to assess priorities and to allocate resources.

16. A handbook for risk communicators should be developed that includes the proposed code of practice for the European network on risk communication and draws on current social and psychological hypotheses in the field of risk studies, in addition to the more usual range of technical issues. To this end, existing definitions of societal risk should be listed and their utility examined and evaluated.

# Annex 1

## WORKING PAPERS[a]

| | |
|---|---|
| ICP/PCS 020/A/5 | Risk and rationality: approaches to the management of ignorance about environmental health risks, by M. Thomson |
| ICP/PCS 020/A/6 | Experts at play: child safety in playgrounds, by D. Ball |
| ICP/PCS 020/A/7 | Levels of risk communication, by P. Wiedemann |
| ICP/PCS 020/A/8 | Dealing with risks: the external safety policy in the Netherlands, by A. Muyselaar |
| ICP/PCS 020/A/9 | Opportunities and demands for health and safety risk information, by K. King |
| ICP/PCS 020/A/10 | Italian/Mediterranean perspectives, by G.A. Zapponi |
| ICP/PCS 020/A/11 | Problems in the provision of health and safety advice to a public at risk, by G. Bengtsson |

[a] Copies are available from the Toxicology and Food Safety unit, WHO Regional Office for Europe, 8 Scherfigsvej, DK-2100 Copenhagen O.

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| ICP/PCS 020/A/12 | Societal approaches - the potential for economic policy instruments and the role of risk benefit analysis, by R. Kemp |
| ICP/PCS 020/A/13 | Individual responses - the role of direct action over health risk information, by R. Rvasi |
| ICP/PCS 020/A/14 | A critique of institutional approaches, by A. Liberattori |
| ICP/PCS 020/A/15 | A psychological perspective, by C. Mays |
| ICP/PCS 020/A/16 | Direct action in eastern Europe, by K. Farago |

# Annex 2

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