

Foreword

Threats to human health and well-being arising in or transmitted through the environment are a matter of growing concern to the international scientific community, to the general public, and to the governments which traditionally look to scientists for advice. There are at least three important reasons for this growing concern:

1. The application of rapid advances in science and technology to the control and manipulation of the environment is creating new hazards, often as inadvertent side effects of economic development.
2. Refinement of measurement techniques and the expansion of environmental monitoring networks are revealing the existence of hazards which may have been present for some time but which were previously undetected.
3. There is a growing public awareness of environmental hazards resulting from adverse experiences and the attention focused upon them by the media.

The processes through which human society at the individual, family, community, national and international levels seeks to assess and comprehend the significance of environmental threats are imperfectly understood. It is sometimes assumed that scientific research followed by the release of information on the threats themselves, together with monitoring of environmental conditions, will lead to appropriate decisions. Recent experience indicates that this is not consistently the case. Therefore, in the establishment of its mid-term programme, SCOPE established a project to investigate some relevant aspects of environmental information and policy. Under the title of the Communication of Environmental Information and Societal Assessment and Response, an activity has been organized for the purpose of examining the present state-of-the-art with respect to coping with environmental risks. A workshop was organized at the Holcomb Research Institute in Butler University, Indianapolis, Indiana with the support of the Holcomb Institute in August, 1973. The workshop was entitled '*International Research on Societal Response to Scientific Information About Man-Made Environmental Hazards.*' Several recommendations were made for future directions which might be undertaken as part of SCOPE Project 7.

Subsequently one of these recommendations, namely to study the process of environmental risk assessment, was supported by the United Nations Environment Programme and the Electric Power Research Institute of Palo Alto, California. Professor Robert W. Kates of Clark University, Worcester, Massachusetts was asked to undertake a study on comparative risk assessment and to this end a workshop was held at Woods Hole, Massachusetts from March 31st to April 4th, 1975 under the title '*Comparative Risk Assessment of Environmental Hazards in an International Context.*' A report on this workshop is available from Professor Kates.

Drawing on the background papers of the workshop and the discussions that took place, Professor Kates has now prepared a report entitled '*Risk Assessment of Environmental Hazard.*'

This report reviews the wide field of risk assessment as it has developed in recent years. The report will be of value to the international scientific community and to environmental managers and administrators. More importantly, it is a first step in the process of systematizing and organizing the knowledge that we now have of ways in which risks are and might be assessed. It provides a basis for further investigation and points to specific areas of research which need to be undertaken if humankind is to develop a more rational approach to coping with the threats arising in the environment.

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