

Preface

This report has been prepared for the WHO/UNEP/ILO International Programme on Chemical Safety by the following experts: Linda Birnbaum, US Environmental Protection Agency, USA; Terri Damstra, International Programme on Chemical Safety, USA; Jim Hart, Danish Veterinary and Food Administration, Denmark; Steve Hedtke, US Environmental Protection Agency, USA; Robert Kröes, The Netherlands; Robert MacPhail, US Environmental Protection Agency, USA; Erminio Marafante, Joint Research Centre, Italy; Wayne Munns, US Environmental Protection Agency, USA; Peter Ross, Institute of Ocean Sciences, Canada; Larry Reiter, US Environmental Protection Agency, USA; Jun Sekizawa, National Institute of Health Sciences, Japan; Glenn Suter, US Environmental Protection Agency, USA; Glen Van Der Kraak, University of Guelph, Canada; Gil Veith, US Environmental Protection Agency, USA; Theo Vermeire, National Institute of Public Health and the Environment, The Netherlands; and Michael Waters, US Environmental Protection Agency, USA.

Historically, human health and environmental risk assessment methodologies have generally developed independently. Regulatory agencies often use a chemical-by-chemical approach, focusing on a single media, a single source, and a single toxic endpoint. Many international and national organizations have expressed a need for an integrated, holistic approach to risk assessment that addresses real life situations of multichemical, multimedia, multiroute, and multispecies exposures. In response to this need, the International Programme on Chemical Safety (IPCS) convened a group of international scientific experts to develop approaches for integrated risk assessment.

In April 1998, IPCS convened an IPCS/OECD/EPA Scoping Meeting on Integrated Approaches to Human Health and Environmental Risk Assessment, in conjunction with a US EPA national symposium on Extrapolation in Human Health and Ecological Risk Assessment. A number of potential activities/issues related to integrated risk assessment were identified at this scoping meeting. In November 1998, a follow-up planning meeting was convened by IPCS to further identify mechanisms and approaches for integrated risk assessment. That planning meeting

agreed on a working definition of integrated risk assessment, developed a preliminary generic framework for integrated risk assessment, and proposed that a number of case studies be developed to evaluate the framework. IPCS convened a Framework Sub-Group meeting in July 1999 to review and revise the draft generic framework, and to develop criteria for identification of case studies and guidance for how the case studies would be developed. A meeting to further evaluate possible case study demonstrations of the generic framework was held in November 1999 and four case studies were chosen and their format/content finalized in July 2000. An international workshop was convened in April 2001 to evaluate the framework and demonstrate the benefits of integration using the four case studies.

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