

IOMC

INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS
A cooperative agreement among FAO, ILO, UNEP, UNIDO, UNITAR, WHO and OECD



**World Health
Organization**

RISK ASSESSMENT

MANUAL

for the Public Health
Management of
Chemical Incidents

EMERGENCY PLANNING

MANUAL

for the Public Health
Management of
Chemical Incidents

This publication was developed in the IOMC context. The contents do not necessarily reflect the views or stated policies of individual IOMC Participating Organizations.

The Inter-Organisation Programme for the Sound Management of Chemicals (IOMC) was established in 1995 following recommendations made by the 1992 UN Conference on Environment and Development to strengthen co-operation and increase international co-ordination in the field of chemical safety. The participating organisations are FAO, ILO, UNEP, UNIDO, UNITAR, WHO and OECD. The World Bank and UNDP are observers. The purpose of the IOMC is to promote co-ordination of the policies and activities pursued by the Participating Organisations, jointly or separately, to achieve the sound management of chemicals in relation to human health and the environment.

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PREFACE

Chemical releases arising from technological incidents, natural disasters, and from conflict and terrorism are common. The International Federation of the Red Cross has estimated that between 1998 and 2007, there were nearly 3 200 technological disasters with approximately 100 000 people killed and nearly 2 million people affected. The production and use of chemicals is predicted to increase worldwide, and this is particularly true in developing countries and those with economies in transition where increased chemical extraction, processing and use is closely tied to economic development. An ever increasing dependency on chemicals requires the health sector to expand its traditional roles and responsibilities to be able to address the public health and medical issues associated with the use of chemicals and their health effects.

A number of important international initiatives have recently been undertaken that require countries to strengthen capacities in relation to the health aspects of chemical incidents and emergencies:

In 2005, the revised International Health Regulations (IHR (2005)) were adopted by the World Health Assembly. Entering into force in 2007, IHR (2005) is a legally binding agreement contributing to international public health security by providing a framework for the coordination of the management of events that may constitute a public health emergency of international concern, and for strengthening the capacity of all countries to detect, assess, notify and respond to public

health threats. Initially developed for certain infectious diseases, the revised IHR (2005) also covers those public health threats involving chemicals.

In 2006, the Strategic Approach for International Chemicals Management (SAICM) was adopted by the International Conference on Chemicals Management. SAICM provides a policy framework to promote chemical safety around the world, including many aspects of chemical incident prevention and preparedness. It comprises the Dubai Declaration expressing high-level political commitment to SAICM and an Overarching Policy Strategy which sets out its scope, needs, objectives, financial considerations, underlying principles and approaches and implementation and review arrangements. The Declaration and Strategy are accompanied by a Global Plan of Action that serves as a working tool and guidance document to support implementation of the SAICM.

The purpose of the *WHO Manual for the Public Health Management of Chemical Incidents* is to provide a comprehensive overview of the principles and roles of public health in the management of chemical incidents and emergencies. While this information is provided for each phase of the emergency cycle, including prevention, planning and preparedness, detection and alert, response and recovery, it is recognized that the management of chemical incidents and emergencies require a multi-disciplinary and multi-sectoral approach and that the health sector may play an influencing,

complementary or a leadership role at various stages of the management process. The target audience includes public health and environmental professionals, as well as any other person involved in the management of chemical incidents.

WHO and all those involved in the development of the publication hope that the publication will have wide application, especially in developing countries and countries with economies in transition, and that in the future the health sector will be better prepared to acknowledge and fulfil its roles and responsibilities in the management of chemical incidents and emergencies, thereby contributing to the prevention and mitigation of their health consequences.

PROCESS FOR DEVELOPMENT OF THE MANUAL

Dr K. Gutschmidt, WHO Secretariat, served as the Responsible Officer for the development of this manual including its scientific content.

An editorial group of scientific experts was convened by WHO to provide oversight, expertise, and guidance for the project and to ensure its scientific accuracy and objectivity. Editorial members included Professor G. Coleman (Director, WHO Collaborating Centre for the Public Health Management of Chemical Incidents, Cardiff, United Kingdom), Professor S. Palmer and Dr D. Russell (both Health Protection Agency, United Kingdom). The editorial group met several times in Cardiff and Geneva during 2007–2009 to define the

USA) and posted on the internet for peer-review in February 2007. In addition, a review meeting taking into account comments received was held on 23–25 April 2007, Beijing, China. The meeting was attended by Professor G. Coleman (chair), Dr A. Dewan (National Institute of Occupational Health, Ahmadabad, India), Dr Jin Yinlong (National Institute for Environmental Health and Product Safety, Beijing, China), Professor Li Dehong (National Institute for Occupational Health and Poison Control, Beijing, China), Dr D. MacIntosh (Environmental Health & Engineering, Newton, MA, USA), Dr I. Makalinao (University of the Philippines, Manila), Professor S. Palmer (Health Protection Agency, United Kingdom), Dr M. Ruijten (National Institute for Public Health and the Environment RIVM, The Netherlands), Dr D. Russell (Health Protection Agency, United Kingdom), Dr R. Soulaymani Bencheikh (Centre Anti-Poisons et de Pharmacovigilance, Rabat, Morocco), Dr W. Temple (National Poisons Center, University of Otago, Dunedin, New Zealand), Professor Ding Wenjun (Chinese Academy of Sciences, Beijing, China), Professor Zhao Xinfeng (State Environmental Protection Administration, Beijing, China), Mr M. Barud Ali (Hargheisa, Somalia), Dr Woo Zhen (China Centers for Disease Control, Beijing), Mr. J. Abrahams (Asian Disaster Preparedness Center, Pathumthani, Thailand), Dr Jinag Fanxiao (WHO Office, Beijing), Professor J. Spickett (WHO Office, Beijing), Ms J. Tempowski (WHO, Geneva), and Dr K. Gutschmidt (WHO, Geneva).

The second draft was prepared by Dr D. MacIntosh and Dr M. Ruijten (CrisisTox Consult, the Netherlands) taking into account the recommendations received from

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