The World Health Organization (WHO) has been working on a program promoting children's health and the environment, and contributing education, training, management and treatment for healthier children for over a decade. The program has and is addressing different chemical safety activities, with a special focus on the vulnerability of children to chemicals in the environment. Many of these activities have been undertaken in conjunction with colleagues in the Department of Public Health and Environment as well as other programs in WHO (e.g., Child and Adolescent Health, Food Safety, Violence and Injury Prevention, Reproductive Health and Research). The numerous activities on children's health and the environment (CEH) have also been conducted in collaboration with WHO regional and country offices, WHO Collaborating Centres, other UN agencies, academia and non-governmental organizations (NGOs) including the International Paediatric Association, the International Society of Doctors for the Environment, the World Association of Family Doctors, and the International Network on Children's Health Environment and Safety, among others.

The following is a brief summary of the WHO Children’s Health and the Environment activities during 2010:

**Capacity building and information dissemination**

A wide variety of activities on Children’s Health and the Environment were conducted by WHO during 2010 including training workshops and a consultation meeting in various geographical regions with the energetic and motivated participation of scientists, health care and environmental professions, community leaders, and international organizations and non-governmental organizations from developing and industrialized countries in the Americas, Asia, Africa, Europe, and the Western Pacific.
WHO convened a meeting of the WHO Working Group on the Training Package for the Health Sector on Children’s Environmental Health in Cardiff, Wales in January 2010 that was attended by experts from 10 countries. Drafts of new training modules to be included in the Training Package for the Health Sector were provided and discussed, and experiences in using the modules and discussion for future plans were conducted.

WHO participated in a consultation meeting on the development of a strategy for strengthening the engagement of the health sector in the Strategic Approach to International Chemicals Management (SAICM) in February, 2010. The meeting was organized by the SAICM Secretariat, hosted by the Ministry of Health of the Republic of Slovenia, and attended by people from the health sector involved in work on chemicals. In the meeting, information about Children’s Health and Environment was provided by WHO.

WHO participated in the Fifth Ministerial Conference on Environment and Health (Parma, Italy 10-12 March 2010), which focused on child health in a changing world.

WHO presented initiatives on Children’s Health and the Environment to the representatives of the Iowa Department of Public Health and Drake University on 19 March 2010 in Geneva.

WHO participated in a Children’s Health and the Environment training workshop for pediatricians held in Ankara, Turkey in April, 2010 immediately before the International Pediatric Association (IPA) Standing Committee Meeting. WHO raised awareness among the pediatricians about the links between children’s health and the environment.

WHO participated in a Pre-Congress Workshop on Children’s Health and the Environment organized by the Kenya Paediatric Association in Mombasa, Kenya in April, 2010 immediately before the Kenya Paediatric Association Annual Scientific Conference. The WHO manual *Children’s Health and the Environment* was distributed to attendees.


WHO organized a Pre-Congress Workshop on Children’s Health and the Environment immediately prior to the International Congress of Paediatrics in Johannesburg, South Africa in August 2010. About 100 health providers, many from the African countries, participated. Presentations included updated information about chemicals for doctors and described methods of conducting surveillance for common childhood poisonings, including paraffin poisonings.

WHO presented at the meeting of the European Environmental Mutagenesis Society on "Cancer Susceptibility with a Focus on Children" in Oslo, Norway on 15-17 September, 2010.


WHO presented and raised awareness about Children’s Health and the Environment issues in the context of visits to Geneva of students from Boston University (February and September 2010).


WHO participated in the WHO International Workshop on Housing, Health and Climate Change on 13-15 October 2010 in Geneva.

WHO presented at the joint meeting of the Centers for Children's Environmental Health and Disease Prevention Research and the Pediatric Environmental Health Specialty Units (PEHSUs), "Protecting Children's Health for a Lifetime: Environmental Health Research Meets Clinical Practice and Public Policy." held in Washington, DC on 17-18 October 2010.
WHO organized a side event focusing on Child Health and the Environment at the Second Inter-Ministerial Conference in Luanda, Angola in November, 2010, reaffirming the political commitment made by Ministers at the Libreville Conference in 2008 towards sustainable development in the African region. Descriptions of children's unique vulnerability to hazards in the environment, and information about prevention of paraffin (kerosene) poisoning among children under 5 years of age were presented.

WHO prepared a special set of information materials for the health sector on the influence of the environment on reproduction, pregnancy and fertility.

Assessment, Data Collection, Guidance and Awareness Raising Activities

- A document for policymakers and health professionals about childhood lead poisoning was finalized in 2010. In this context, during 2010 WHO helped lead the partnership on eliminating lead in paints and work towards eliminating lead-related paediatric conditions.

- A document for policymakers and health professionals entitled Children's Exposure to Mercury Compounds was finalized in 2010 to support the initiative to negotiate a legally-binding Convention to reduce mercury exposures that has been launched by the United Nations Environment Programme (UNEP).

- A document on the structure, role and responsibilities of Children's Environmental Health Units was finalized in 2010.

- In partnership with UNEP, WHO finalized a new booklet Healthy Children in Healthy Environments that addressed actions to promote CEH. This was an updated version of the 2003 booklet Children in the New Millennium. The new booklet Healthy Children in Healthy Environments was translated into 2 other UN languages (Spanish and French) during 2010.

- WHO drafted a summary of the WHO Environmental Health Criteria document (EHC 237) “Principles for Evaluating Health Risks in Children Associated With Exposure to Chemicals".
WHO prepared a draft document describing the 30 year partnership of scientific collaboration between the US National Institute of Environmental Health Sciences and WHO.

The publication “A Guide to Undertaking a Birth Cohort Study” was discussed with the Organisation for Economic Co-operation and Development (OECD) at the 46th joint meeting of the Chemicals Committee and the Working Party on Chemicals, Pesticides and Biotechnology in Paris on November 17, 2010.

Promotion of Collaborative Research among Scientists in Developing and Industrialized Countries

WHO continued a longstanding agreement with the US National Institute of Environmental Health Sciences (NIEHS) to collaborate on health issues of high concern to both the NIEHS and WHO, especially on the promotion of collaborative research and children's environmental health issues. WHO met with NIEHS during June 2010 in Research Triangle Park, North Carolina to discuss building on the achievements of ongoing projects, ensuring that these products contribute to the protection of global environmental health.

WHO Collaborating Centers and Networks

WHO promoted collaborative research networks among scientists and institutions worldwide to support research programmes on children’s health and the environment, technical cooperation, information dissemination, and training activities on emerging children’s environmental health issues at the country, regional, and global levels.

WHO Collaborating Centres in Children's Environmental Health helped WHO carry out many activities. These Centres enabled professionals from different parts of the world to synergize resources and jointly develop and implement the global children's environmental health agenda for action. WHO previously designated three WHO Collaborating Centres, and designated two new Collaborating Centres in 2010, as follows:

**Pilot collaborative research projects**

Pilot collaborative research projects conducted by the WHO Collaborating Centres mentioned above are addressing priority research issues including: children’s health and the environment; persistent toxic substances, persistent organic pollutants, endocrine disrupting chemicals; gene-environment interactions, toxico-genomics, biomarkers; and improved risk assessment methodologies.

These pilot studies are tackling inter-regional environmental health problems such as:

- Environmental health issues in vulnerable groups in Latin America;
- Collaborative projects on arsenic and child health in Southeast Asia;
- Childhood asthma and other respiratory diseases in Southeast Asia;
- The impact of air pollutants on children's health and development in Eastern Europe.
**Long term cohort studies on children’s health and the environment**

WHO continued a longstanding effort to promote long term cohort studies on children's health and the environment. Several countries in which initiatives were undertaken (e.g. Japan, Korea, Thailand, South Africa, Chile, China, Brazil) were in regular contact with WHO and with some of the WHO Collaborating Centres in Children's Environmental Health.

WHO met with Professor Jean Golding and Karen Birmingham (University of Bristol, UK) in January 2010 to discuss coordination and harmonization of long term cohort studies on children’s health and the environment.

WHO served on the advisory body of the European cohort study initiative (*New Generis*).

The International Childhood Cancer Cohort Consortium (I4C), in which WHO participates, uses evidence from prospective children’s cohort studies around the world for the prevention of childhood cancer. WHO participated in monthly conference calls.

**International collaborative research promotion**

International collaborative research promotion has been a major WHO priority area for over 10 years. Activities were carried on through workshops, training sessions, and international meetings to foster the development of research partnerships between investigators from developing parts of the world and those from industrialized countries.

**Follow up to 3rd WHO International Conference on Children’s Health and the Environment.**

The 3rd WHO International Conference on Children’s Health and the Environment was held in the Republic of Korea (7-10 June 2009) in collaboration with the Korean Ministry of Health and of Social Welfare and Family Planning. The conference concluded with the presentation of The Busan Pledge for Action – a pledge to promote the protection of children’s environmental health. The Busan Pledge for Action was sent as background material for the Fifth Ministerial Conference on Environment and Health (Parma, Italy 10-12 March 2010), which focused on child health in a changing world.
A WHO Global Plan of Action for Children’s Health and the Environment was drafted after the conference. It was circulated widely to WHO Regional Offices, WHO Collaborating Centres on CEH, UNEP, UNICEF and many other agencies. The final version of the plan of action was released in 2010 to all major stakeholders and funders in CEH to embark with WHO on concrete actions for healthier environments for healthier children.

**Gene-Environment Interactions, Biomarkers, Vulnerable Populations**


**Persistent Toxic Substances, Persistent Organic Pollutants, and Endocrine Disrupting Chemicals**

- WHO finalized a booklet for health care professionals on Persistent Organic Pollutants Impact on Child Health in 2010.

- WHO developed, with contributors from the University of Turku (Finland) and Rigshospitalet (Denmark) a draft document "Possible developmental early effects of endocrine disrupters on child health".

- WHO and the United Nations Environment Programme (UNEP) held a planning meeting to update the 2002 Global Assessment of the State-of-the-Science of Endocrine Disruptors on 22 June 2010 in Geneva, hosted by UNEP. A second planning meeting was convened jointly by WHO and UNEP in Stockholm in November 2010. The major focus of these meetings was to discuss the objectives, scope, structure and format of an update document, in the light of new scientific evidence published on the potential adverse health effects from exposure to chemicals through endocrine-mediated mechanisms.
WHO Publications on Children’s Health and the Environment


