

# Children's Health and Environment

## INSTRUCTIONS FOR THE USE OF THE WHO TRAINING PACKAGE FOR THE HEALTH SECTOR

**Interventions for Healthy Environments  
Public Health and Environment  
World Health Organization  
[www.who.int/ceh](http://www.who.int/ceh)**

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## Preamble

The environment in which children live, grow, play and learn has an impact on their health. Numerous health and development problems can be attributed to exposure to contaminated water, poor sanitation, indoor and outdoor smoke, rampant disease vectors such as disease-carrying mosquitoes, and also to the unsafe use, storage and disposal of chemicals. New, emerging problems may also arise as children are exposed to poorly tested chemicals or persistent pollutants, or as they are exposed to problems linked to urbanization trends and global climate change. WHO estimates that over 40% of the global burden of disease attributed to environmental threats falls on children below five years of age, who account for only about 10% of the world's population.

Health professionals are in a key position to identify children at risk and take action. Front line health care professionals should be equipped to recognize and assess children's surroundings in order to uncover potential physical, chemical and biological hazards and to provide guidance to their patients and communities on how to avoid or reduce exposure, and promote healthy environments for healthy children.

Paediatricians, family doctors, nurses, primary health care workers and other health care professionals should be trained on the relationships between children's health and the environment through the use of harmonized training materials, adaptable to the specific needs of countries and professional groups.

### **Through this training package, health care professionals in the "front line" will:**

- Be able to recognize and assess diseases linked to, or triggered by environmental factors
- Gain an increased understanding about the influence of "old" and "new" environmental factors on children's health
- Be able to provide improved quality of diagnosis and management for environmentally-related health and developmental effects.
- Be able to discuss and provide advice on environmental risks with patients, parents, educators, the media and other health professionals
- Enhance the potential for research on children's health and development
- Acquire advocacy skills for sensitizing decision-makers about high priority issues for action

## Background

A growing body of evidence shows that environmental risk factors have an impact on the health and development of fetus, infants, children and adolescents and on their future. It is estimated that more than one fourth of the global disease burden is due to modifiable environmental factors, and that in children, this proportion raises to one third of the global pediatrics disease burden (WHO, Preventing disease through healthy environments, 2006). In response to the training and information needs expressed by countries and NGOs, WHO has developed materials to be used by the health and environmental sectors in order to build their capacities in the area of children's health and the environment.

Efforts undertaken by WHO in close partnership with a team of experienced professionals from over 15 countries, and organizations such as the International Pediatric Association (IPA) and other NGOs have led to the development and preparation of the Training Package. This initiative was made possible thanks to the financial support provided by the United States Environment Protection Agency (USEPA) Office of Children's Health Protection, that also made available useful data, graphics and text for the modules. Additional support was also provided by the UK

Department of Health.

These materials are aimed at enabling health and other professionals dealing with children and adolescents' health to recognize, prevent, assess and manage diseases linked to, or triggered by the different environmental exposures discussed in each module.

- The Bangkok Statement (March 2002, Bangkok, Thailand) issued by participants at the First WHO International Conference on CEH urges WHO to *promote the recognition, assessment and study of environmental factors that have an impact on the health and development of children. More specifically, to incorporate children's environmental health into the training of health care professionals and to promote the use of the Pediatric Environmental History (Area 2: Health and Research).*
- At the IFCS Forum IV meeting (November 2003, Bangkok, Thailand) participants recognized that children represent the future of our societies, that they require safe environments in order to reach their full potential as individuals and contributing members of these societies, and that different sectors in society should be informed and trained on the recognition of the adverse effects posed by chemicals.
- The Children's Health and Environment Action Plan for Europe (CEHAPE) approved by European Ministers of health and environment in June 2004 asks for collaboration to ensure its implementation by developing and providing training opportunities and materials and promoting the incorporation of child health and environment issues in the training curricula of child and adolescent health professionals.
- At the II International Conference "Healthy Environment, Healthy Children: Increasing Knowledge and Taking Action" (November 2005, Buenos Aires, Argentina), a *Commitment for Action* was issued, through which the participants of the conference agreed to promote the development of environmental pediatrics, and risk assessment methods that take account of children as a special risk group.
- At the Third WHO International Conference on Children's Health and the Environment in Busan, Republic of Korea (June 2009), the "Busan Pledge" called for action to address children's environmental health and asked WHO to facilitate the development of a global plan of action to improve children's environmental health and regularly monitor and report on its progress.

In response to these and many other international recommendations and commitments, WHO is leading the preparation of the "Training Package for the Health Sector" as a tool to increase the capacity of "front line" health care professionals dealing with children's health issues and also that of other professionals concerned with environmental issues and child and adolescents' health.

## Why should the health care sector be trained in CEH?

Trained and well-informed health care professionals will improve their capacity to diagnose, prevent and manage pediatric diseases linked to the environment. The specific benefits they will gain include:

- (a) an increased understanding of both, the beneficial and adverse influences of environmental factors on children's health, development and well being,
- (b) the ability to recognize signs, symptoms and diseases linked to or triggered by existing and new, emerging environmental risk factors,

(c) the capacity to undertake a comprehensive Pediatric Environmental Exposure History, and to record, report and publish the cases and experience collected,

(d) the ability to identify knowledge gaps, and to plan and undertake research activities to populate these,

(e) knowledge on how to identify and access information sources on pediatric environmental threats and the environment (e.g. clinical, toxicological, environmental, other),

(f) an increased capacity to discuss environmental risks with patients, parents, educators and the media, providing understandable, concise information about potential threats and risk-reduction strategies,

(g) good advocacy skills for approaching and sensitizing decision-makers about high priority issues requiring urgent action, including policy-making (and updating); and

(h) the capacity to further disseminate the information obtained and experience gained, through the implementation of training events in their own settings.

As a result, well-trained professionals will become “champions” on the protection of children’s environmental health.

## Objectives

The training package aims at converting health care professionals into practitioners and decision-makers able to take actions based on sound knowledge and good understanding of environmental influences on children’s health. Trained health care professionals will become leaders in promoting preventive actions - and healthy environments for children.

Although the training package attempts to cover general issues that are applicable to different situations throughout the world, it is recommended that it is tailored to local situations and needs.

## Appendices

It is recommended that the training modules are used in conjunction with the following tools (all are available from [http://www.who.int/ceh/capacity/training\\_modules/en/index.html](http://www.who.int/ceh/capacity/training_modules/en/index.html)):

- **Appendix 1:** Survey: Assessing Child Environmental Health awareness for Health Professionals
- **Appendix 2:** Model of Workshop Evaluation Form
- **Appendix 3:** Example of Post Workshop Knowledge Evaluation

## Using the Training Modules

The "Training Package for the Health Sector" contains approximately 30 modules available as PDFs at [www.who.int/ceh/capacity/trainpackage/en/index.htm](http://www.who.int/ceh/capacity/trainpackage/en/index.htm) with PowerPoint versions available by request. The themes were selected by a working group of international experts on children's health and the environment, and through consultation with different organizations. The modules address general environmental health issues, specific threats, health outcomes and actions.

- Every module contains a "pool" of slides (30 to 90), from where presenters will be able to select the most relevant ones. It is very important to use only those slides that are relevant to the needs of the audience and to avoid using all the slides available without previous preparation. A set of notes in each slide clarifies concepts and provides the relevant complementary information and references.
- "Children are not little adults" and "Why children?" are general introductions to the subject and should be the first ones to be presented in order to "set the scene". Then, present the technical modules that address the specific risks selected, once they were adapted to the audience. Although modules complement one another, each module is self-contained and can be taught independently, as necessary.
- The trainer may follow the outline provided in the initial slides (that announces the training objectives) and use a number of slides selected from the set available. In some instances, trainers may add local (or other) information augmenting the content in the modules. However, it is strongly recommended to keep the presentations reduced to 20 or so slides for each 30 to 45 minutes' session in order to facilitate questions and discussions.
- Local references and information, pictures and statistics should be included in the presentations in order to address the specific issues in the area or country and the needs of the audience.
- It is important to disseminate the information provided in the notes section (but avoid "reading" the slides or notes, as this may prove to be too long and tiresome for the audience).
- Make sure that enough time is allowed for discussion at the end of the presentations, so as to allow the audience to ask questions as well as to contribute with their knowledge and experience.
- After each presentation, make sure that the audience will be able to identify the main CEH needs and set up priorities for action and for eventual communication to decision-makers.
- Case studies are very useful in involving the audience into thinking about specific environmental issues and the best way to address them. Trainees should be encouraged to present them, discuss past experiences and review lessons learned. (e.g. afternoon sessions following the morning module presentations).
- A training sub package on "Reproductive health and environment" is also available and aimed at reproductive health professionals (e.g. doctors, midwives, nurses). It provides information on how the environment may relate to the reproductive system, functions and processes at all stages of life and can be used to train health professionals to contribute to a better reproductive health care and to promote community education. This sub package was supported by the US Environmental Protection Agency (USEPA) Office of Children's Health Protection and the UK Department of Health.

***Select only a few slides, with the most important information - adapt them to the needs of the audience and highlight what may later on addressed in the evaluation***

***Make sure the photographs are regionally or country-appropriate... and respect the copyrights!***

***It is crucial that the trainer prepares in advance for each lecture, reading the content and reference materials, and selecting the relevant slides.***

**To obtain the training modules please complete the Registration Form:**

[http://www.who.int/ceh/capacity/modules\\_form/en/index.html](http://www.who.int/ceh/capacity/modules_form/en/index.html)

## Checklist

### Planning the training event - A checklist for the organizers:

Identify host organization and sponsors, and discuss the contents, objectives and details of the course and how to best respond to the local needs.

Agree on the format: course? workshop?, symposia?

Agree on its duration, time and place.

Identify the participants that will most benefit from the event: educational level, sector(s) where they belong, knowledge and information needs, number of participants (ideally not more than 30 people, for an in-depth course).

Obtain political will and support at the highest levels

Calculate the costs involved (and clarify who pays what and when, ahead of time!).

Select the modules that will be used

Develop the agenda

Identify speakers: local and external experts

Organize a planning session with all presenters to review materials and their adaptation

Assign the task to presenters/trainers, stressing the need to adapt the materials to the local situation.

Ensure that the setting is appropriate and that there is enough work-place (e.g. working groups may have to be organized!).

Reserve audio-visual equipment and check it works, before the event starts.

Arrange breaks and catering.

Prepare certificates of participation ahead of time

Publicize the event - if necessary and desirable.

Inform and invite the key authorities and organizations.

Prepare and send information to trainees ahead of time

Evaluate trainee's awareness of CEH issues prior to training event (see Appendix 1: *Survey: Assessing CEH awareness for Health Professionals*, available from: [http://www.who.int/ceh/capacity/training\\_modules/en/index.html](http://www.who.int/ceh/capacity/training_modules/en/index.html) ).

At the event, display existing resources: posters, leaflets, publications, videos,

Evaluate the workshop's organization and logistics through a questionnaire (see Appendix 2: *Model of Workshop Evaluation Form*, available from: [http://www.who.int/ceh/capacity/training\\_modules/en/index.html](http://www.who.int/ceh/capacity/training_modules/en/index.html) ).

Evaluate the knowledge acquired through an anonymous test (see Appendix 3: *Example of Post Workshop Knowledge Evaluation Form*, available from: [http://www.who.int/ceh/capacity/training\\_modules/en/index.html](http://www.who.int/ceh/capacity/training_modules/en/index.html) ).

Ensure that issues raised by the anonymous test will be addressed in plenary in order to correct any errors or misconceptions.

Obtain the compromise of the trainees to implement a similar course in their own settings.

Thank speakers, donors and invited personalities in writing.

Thanks participants by email or in-writing, as convenient

Prepare a short report on the event and send it to WHO/CEH ([childrensenvhealth@who.int](mailto:childrensenvhealth@who.int))

Set up a local network that will enable to follow-up progress made, activities developed by trainees and -eventually- organize other building events.

Evaluate the impact of the course on the trainees and their settings one year later.

## Training modules

Training Modules are available in English. To obtain these, please visit:  
[http://www.who.int/ceh/capacity/training\\_modules/en/index.html](http://www.who.int/ceh/capacity/training_modules/en/index.html)

## Reporting back to WHO

After using the modules, it is a requirement to prepare a short report on the event and send it to [childrensvhealth@who.int](mailto:childrensvhealth@who.int) including the following information:

1. Number of people trained
2. Countries of trainees
3. Which modules were used
4. Evaluation of issues with the modules (e.g. clarity, complexity of slides, gaps in the subject, ...)
5. Name(s) of trainer(s)
6. Future use of the modules (if applicable)

**Good Luck!**