World Health Organization

REGIONAL OFFICE FOR Europe

Climate Change and Health – Training Resources for Capacity Building: Review of the First Draft

Expert meeting
Bonn, Germany, 5-6 March, 2013

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Meeting Report

ABSTRACT

To respond to and anticipate Member States' needs for capacity building in the area of climate change and health, the WHO Regional Office for Europe has developed a draft training toolkit for environment and health professionals. The meeting in Bonn was held in order to: a) review and revise the draft training toolkit (concept, structure, training approach, facilitators' manual and example training materials); b) contribute to amending the training material; and c) exchange information and experiences of participants. The meeting was attended by experts in climate change and human health with training experience in this field. The results of this meeting will be an essential element in the concept development phase of the training toolkit. The meeting was co-sponsored by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

Keywords

Capacity building
Climate change
Environment and public health
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Training

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Introduction

At the 61st World Health Assembly, 193 WHO Member States adopted a resolution on climate change and health calling for intensified action to strengthen adaptation policies and plans[1]. The WHO workplan on climate change and health for 2008–2013 frames WHO action for this period[2]. At the regional level, the European Regional Framework for Action was welcomed in the 2010 Parma Declaration on Environment and Health[3] and the "Commitment to act" was endorsed. The Declaration of the 5th Ministerial Conference on Environment and Health in Parma, 2010, emphasizes these important elements and commits "to protecting health and well-being, natural resources and ecosystems and to promoting health equity, health security and healthy environments in a changing climate".

The Framework suggests objectives and actions that require adaptation to the needs and specificities of each country, and the specification of roles and responsibilities, as well as the commitment of adequate resources (national health impact assessments; adaptation plans and strategy developments; trends in climate change, environment and health indicators; case studies of best practices and health co-benefits; pilot project funding and research opportunities; effectiveness of adaptation and mitigation measures).

To respond to and to anticipate capacity building needs in WHO European Member States in the area of climate change and health, the WHO Regional Office for Europe has developed a draft training toolkit for environment and health professionals. The finalized toolkit will provide Member States with information on potential health risks of climate change, the required conditions for adaptation or mitigation, and policy options. It will thus support the implementation of the Parma Commitments.

This expert meeting was therefore organized to:

a) review and revise the draft training toolkit (concept, structure, training approach, facilitators' manual and example training materials);
b) contribute to amending the training material;
c) exchange information and experiences of participants.

This meeting has been organized by the climate change, green health services and sustainable development programme of the WHO Regional Office for Europe and was held in Bonn on 5–6 March, 2013. The meeting was co-sponsored by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

The meeting was opened by Bettina Menne, WHO European Centre for Environment and Health in Bonn, and Björn Ingendahl from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. It was attended by 16 scientists, staff from WHO headquarters, the Regional Office and WHO Country Offices, as well as experts from the European Centre for Disease Prevention and Control (ECDC) and the European Environment Agency (EEA). The

[1] WHO, 2008
[2] WHO, 2009
[3] WHO Regional Office for Europe (2010). Protecting health in an environment challenged by climate change: European Regional Framework for Action, Parma, Italy (available at: http://www.euro.who.int/__data/assets/pdf_file/0005/95882/Parma_EH_Conf_edoc06rev1.pdf; accessed 13 March 2013)

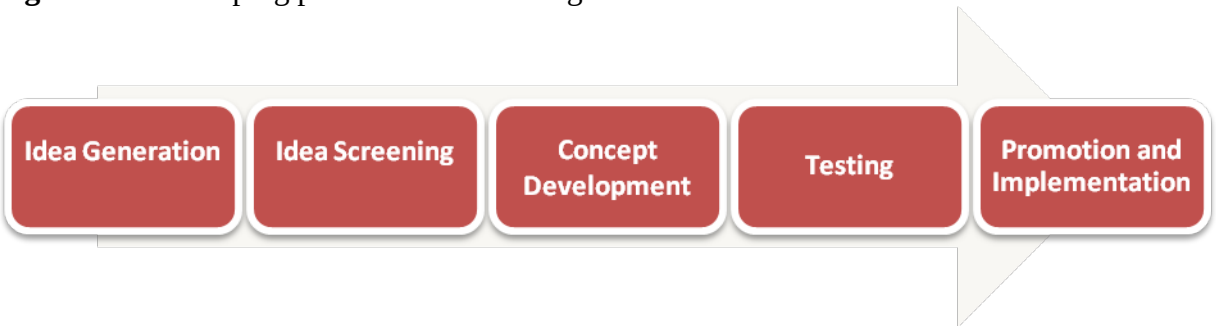
meeting was co-chaired by Antonio Navarra and Bettina Menne. The rapporteur of the meeting was Franziska Matthies. A list of meeting participants is available in Annex I.

Organization of the meeting

The development of the toolkit had followed a series of iterations (see Fig. 1).

1. Idea generation:
    a) first a scoping exercise had been carried out on the training needs in selected European Member States;
    b) a draft content list had been developed.
2. Idea screening:
    a) search of world-wide literature (peer reviewed and grey) for available training material and resources.
3. Concept development:
    a) the scope, content and modules as well as first-order draft training material was developed;
    b) first workshop took place to revise the concept and content; the expert consultation was an essential element of the concept development phase of the training toolkit.

Fig. 1: The developing process of the training toolkit



To revise the concept and content, the material was sent to meeting participants two weeks prior to the meeting, through a password protected web site. The participants received a series of questions to revise the commentary process (see Table 1). Based on these questions, the title, scope, learning objectives, organization, content, etc. were discussed at the meeting.

Table 1: Guiding questions to help structure the discussions and contributions

1. Does the product clearly state its goals and objectives?
2. Are the intended target users appropriate?
3. Are the learning objectives clearly defined?
4. Is the format (trainer's manual, lectures, exercises, case studies) the most appropriate?
5. Is the content (timetable and proposed lectures) the most suitable for the target audience?
6. Does evidence support the approach chosen?
7. Does the document reflect and address the situation in all Member States of the WHO European Region in a balanced way (relevance, strength, credibility, difficulty)?
8. Are the basic sections (block 1 and 2, module 1.1 and module 2.1 and others that are under preparation) adequate?
9. Are the lectures and exercises the most appropriate?
10. Is the crosscutting of exercises and case studies appropriate?
11. Which experts from other relevant areas do you suggest to contact?
12. Which other information sources and literature should be included in the development of the product?
13. Are the suggested reading sources the most updated?
14. What is your general assessment regarding clarity and form of the document?
15. Are there any additional areas you would like to address or comments you would like to include?
16. Do you have any other general comments?
17. How can you contribute?
18. What could become the main strengths of the product?
19. And how can we get there?
20. How could this product best be made available through the WHO (web site, if so, how; IP considerations; practicalities; distance learning, other)?

Results of the meeting discussion

This session reports the consensus and suggestions for improvement debated at the meeting.

Title of the toolkit

A new title was suggested:
"Training resources for climate change and health"

Aim of the toolkit

The slightly re-formulated overall aim of the training course was suggested:
"Support the development of climate change and health strategies and action plans by providing scientific, technical, methodological and practical background information and training."

Suggested scope of the toolkit

Participants suggested the training resource to:

- be demand-driven and evidence-based;
- reflect and accommodate local needs;
- be focused on practical action;
- provide a series of options to offer balanced information for decision-makers and technical training for health sector professionals;
- collect existing training materials in one place;
- facilitate the adaptation planning process and implementation.

Target audiences

The suggested target audiences for the facilitators' manual as well as for the actual training were reviewed and defined as follows:

A) The trainers/facilitators:
- officials from health and environmental agencies/organizations, public health professionals and academics
- training coordinators
- technical staff at WHO country offices
- facilitators/trainers

B) The trainees
- Anyone with responsibility or interest in health aspects of climate change and responses to it, particularly:
  - policy-makers
  - public health officials
  - environment and health professionals
  - scientists
  - media and communication officers
  - representatives of other sectors (i.e. housing, transport, meteorological services)
  - others in accordance with country-specific needs.

In general, some target groups were more clearly defined, such as mid-level decision-makers (e.g. directors of departments and others, such as academics, were included). While certain target audiences were excluded (e.g. front-line/high-level decision-makers, ministers, but also low-level practitioners). Training methods and format will need to be adjusted according to the needs of respective target audiences.

Learning objectives

The learning objectives of the overall training programme were only slightly modified from the suggested list of objectives:

After having participated in the entire training, participants will be able to:

- *describe the pathways on how climate change affects health;*
- *describe the projections of climate change and its links and effects on human health;*
- *describe the role health professionals can play to prevent adverse impacts;*
- *develop and carry out health impact, vulnerability and adaptive capacity assessment in relation to climate change;*
- *translate results of the assessment into adaptation needs and options;*
- *develop a climate change and health adaptation strategy and national/subnational health action plans; and*
- *pilot and evaluate the implementation of health adaptation strategies and health action plans in volunteering WHO European Member States at national or regional level.*
- *engage stakeholders and other sectors; and*
- *recognize, promote and integrate health co-benefits of mitigation measures in the health sector and in other sectors; and*

Training approach and methodology

While the first-order draft contains a mixture of lectures and participatory training approaches, offering a mix of training and facilitated group work and discussion, two overall approaches were suggested to be further developed:

- a problem-based learning approach, and
- a stratification of sessions into the levels “basic”, “why” and “how”.

“Basic” lectures can serve to set the scene and to define the problem. “Why” lectures provide the evidence for action which can be used by decision-makers to support justification of decisions for action. “Why” lectures could be designed a in a short and precise way. They should be conceptual and sophisticated and can be targeted towards a broad audience indicating directions to be pursued.

“How” lectures, exercises or case studies give the opportunity to become familiar with methods and the use of tools and processes. “How” lectures can be used to train participants how to practically design and implement a health adaptation strategy (“planners”). Questions like “Has anyone already done this?” “What are examples from other sectors?” “Which alliances are important or possible?” may be answered through case studies and examples.

“Why” and “How” sessions can potentially be offered in the mornings and afternoons. This may allow policy-makers to join in the mornings only. Alternatively, the stratification also allows a horizontal design of tailored sessions for specific target audiences (e.g. a series of “why” sessions for policy-makers). This would only require a minimum of adjustments of the current draft.

A problem-based learning approach would need to be additionally developed.

Structure of the toolkit

The two blocks and their suggested modules and structure were discussed in plenary as well as in working groups. The current structure (block one “the basics of climate change and health and the impact assessment” and block two “developing an adaptation plan”) was welcomed, however a series of suggestions for improvement were made.

The following options should be offered to the users:

a) a loose collection of training modules which can be freely assembled according to the needs of the user (the 'IKEA' model);
b) a prepared two-week programme that can be adjusted by the user to a limited extent;
c) a basic and an advanced course.

The modular programme includes basic to advanced content in a wiki-style format that was further elaborated and described in the following sections below. In adjusted programmes, modules can vary in length of time (e.g. from half a day to three days).

The participants assembled two different training options: (1) module one: a PBL[1] approach, and (2) module two: building on the why and how. The suggested programmes as shown in Annex 2 are two of many possible options. Each of the two approaches could be used for basic and advanced training.

A mix of levels could represent:

- generic awareness raising,
- available tools,
- specific adaptation plans,

and an innovative structure of the toolkit could allow for:

- use of a wiki-like format where participants/readers can navigate through training materials using hyperlinks;
- multiple entry points for participants;
- use of new technology (e.g. computer based).

Potentially, each module on a specific block within the structure of "basic", "why" and "how" could be organized according to appraisal, implementation, evaluation and communication. A matrix that illustrates which modules can be of interest and importance, for which target audience can support the design of a tailored training course for a specific target audience. This matrix may need to be established after all modules are designed.

Contents

Certain topics were suggested to be excluded (e.g. complex information of academic interest or complex technical details; equations) or to be moved, for those who are interested, into an advanced training module or to technical annexes. Additional suggestions included to:

- focus on adaptation;
- use case studies and problem-based approaches;
- start from the current known vulnerability and existing measures to identify needs and options for focusing and strengthening.

A dual approach would consider public health measures and measures from other sectors, both to cover mitigation and adaptation.

Identified gaps

Topics identified as missing were:

- the global dimension and the global political developments;
- more link to National Adaptation Plans (NAPs);

[1] Planbureau voor de Leefomgeving (Netherlands Environmental Assessment Agency)

- communication and awareness raising;
- how to connect to media;
- involvment other sectors;
- mental health issues;
- food safety and security;
- mitigation.

Comments on specific topics were:

- climate change: consider the time and scale dimension; discuss dealing with uncertainty;
- geographical dimension: global versus regional (European);
- international effects on European health;
- clarification on terminology;
- early warning and disasters: put emphasis on preparedness;
- health impacts from climate change: include socioeconomic conditions;
- climate change and respiratory diseases: include dust-storms;
- climate change and allergens (pollen): this topic is not so policy relevant as there are not many public health measures to be used; urban planning and land use change could have strong influence;
- mechanisms for constant updates of evidence.

Updating

The importance of the training material being kept up-to-date has been pointed out in the discussions. The offered materials of the training programme will be updated in the process of finalization. A strategy for intermittent updating of the material, background data, literature, examples and case studies will have to be set up. Experts also emphasized the advantages of using well established facts and data compared to very newly published facts and figures which have not yet been discussed or tested in the scientific community. Tentatively, a newly established Science Committee will assist in evaluating performance against planned outcomes.

Training of facilitators

Training of facilitators does not necessarily transfer technical knowledge and skills, but knowledge and skills on training approaches, methods and tools together with technical background information on how the brain works and how adults learn.

Possible facilitators:

- national professionals,
- experts from institutes of public health,
- academics.

It was suggested to establish a permanent pool of experts who are available to run the training. A roster of experts can be useful where they can register, and WHO Collaborating Centres may contribute to the trainings as facilitators as well. One training course for facilitators could be organized centrally in the WHO European Centre for Environment and Health in Bonn. Availability of funding for training of facilitators and trainers needs to be explored for 2014.

Adaptation to local level needs

As the courses will need to be adapted to local situations, it was suggested that the material developed by WHO would include a section on how material can be adapted. Training could be adapted to fit the requirements of the health components of National Adaptation Programmes of Action (NAPAs). The translation of the training material into Russian, as well as the use of existing training material in Russian, needs to be considered.

Contributions

Contributions from meeting participants and identified experts are encouraged and welcome. Details will need to be discussed and agreed upon on an individual basis. Particularly, contributions for identified gaps and needs for improvement or change are important. Important gaps and issues may have been missed or overlooked, either during the discussion or during note taking. Therefore, contributions on topics not mentioned below or during the meeting are also welcome.

Guidance for contributions in terms of a) learning objectives; b) training approach; c) specific target audience; and d) length (e.g. number of slides or duration of session) and ratio between contents, exercises and notes is appreciated.

<u>Other information and material to be compiled and included:</u>

- glossary/definition of terms
- collection of adaptation tools for countries with high-density data and for countries with low-density data (can be longer than the list of tools actually presented and used during the training programme)
- fact sheets on activities in other sectors (examples from WHO headquarters in Geneva)
- differentiation between contact hours and reading hours (may not be applicable for non-academic courses when additional reading is optional and not part of an assessment)

Intellectual property rights: experts' authorship will be acknowledged in the facilitators' manual (and respective training materials) either by listing respective experts as authors, co-authors or contributors. Copyright for any figures, tables, graphs or pictures will be requested from the original publication source.

Testing

The first test of specific elements of the training programme (one topic or one exercise) is planned for the 25th Conference of the International Society for Environmental Epidemiology (ISEE) in Basel, Switzerland, in August 2013. A four-hour sample session can be run for interested participants. A respective application has been submitted to the organizing committee and has been accepted.

Uzbekistan: The piloting of training for health managers in Uzbekistan has already been agreed between the WHO Country Office and the Ministry of Health in Uzbekistan. Testing can be started from November 2013. The pilot training can be organized as part of the Global Environment Facility (GEF) project in the country. The following issues have to be discussed and considered when planning the pilot training in Uzbekistan: translation of the training

materials, training of facilitators (especially if problem-based learning will be tested); definition of what exactly is envisaged to be tested.

Climate change and health: short course within the Masters of Humanitarian Studies offered by the Liverpool School of Tropical Medicine (to be discussed).

A digest of the material for decision-makers.

Format and dissemination strategy

It may be advisable to explore publishing documents and data in a new way (such as on USB sticks, QR codes), teaching platforms as CDs may not be the format of the future. Moving towards an electronic tool, good examples may be helpful. As an example, Antonio Navarro demonstrated briefly an eBook on climate change. It included movies, multiple choice tests, animations with and without audio, enlargements and pop-ups within pictures and maps. For the creation of an eBook, the developed PowerPoint presentations together with the notes may be useful to start with.

Platforms, which can help to disseminate the product and can be easily included:

- CLIMATE-ADAPT information platform: http://climate-adapt.eea.europa.eu/
- information platform of WHO (to be designed):
- United Nations training platform on climate change: http://www.uncclearn.org
- IFMSA: International Federation of Medical Students Associations: http://www.ifmsa.org/
- Incling.com: saves material in the cloud; works via the internet, however requires good internet connection.

For several of these options, how these can be implemented according to WHO rules and procedures will have to be explored and clarified.

The following publicity events were suggested:

- *Global conference on climate change in Geneva (October 2013):* presentations on tools and methods; voluntary testing in Member States
- *Launch: UNFCCC in Poland November 2013*
- The official launch of the training toolkit is planned for the side-event on methods and tools at the United Nations Framework Convention on Climate Change, Conferences of the Parties 19 (UNFCCC COP 19) in Warsaw, Poland, in November 2013.
- *International Journal of Environmental Research and Public Health – Special Issue "Climate change and human health":* Guest editor Jan Semenza informed participants about this special issue and encouraged submission of articles, including on capacity building and training in the area of climate change and health. Deadline for manuscript submission is 15 October 2013.

A strategy for dissemination can be developed with these elements. Designing a leaflet or flyer could be considered.

Other issues

The following issues were raised as important to explore:

- accreditation for credits or certificates on a national level (e.g. through ministries of health, medical associations, universities) might be considered
- What are the indicators to measure the success of the training toolkit/resource (e.g. number of participants, number of strategies developed and implemented)?
- Follow-up: how has the training been used (e.g. one year later)?

Conclusions

The meeting concluded with highlighting the following next steps and timelines:

- March 2013: results of the expert meeting disseminated (informal meeting report);
- Mid-April 2013: WHO sends adjusted trainers' manual with the proposed, structure, and content to all participants;
- April 2013: request of contributions to experts – see Annex 3 (to be further discussed one by one based on the new structure);
- May to July 2013: integration of materials and new training toolkit draft;
- July–August 2013: Small scientific expert team to revise the scientific accuracy of the material;
- August 2013: first pilot testing (of parts) at ISEE conference in Basel, Switzerland;
- September–October 2013: finalization of the resource manual;
- November 2013: launch at UNFCCC COP 19 in Poland.

Annex 1

LIST OF PARTICIPANTS

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Annex 2

Innovative structure of the toolkit

Table 1: Programme for block 1: vulnerability and impact assessment

Climate change & health: principles	**Global and local priorities**	**Health impact assessment**	**Scenarios and tools, etc.**	**Costs and benefits**
Introduction to aim and objectives, participants' connection to course	**Lecture: Global and local priorities** Collective topics	**Lecture: How to do health impacts**	**Lecture: scenarios, tools, etc.**	**Lecture: how to calculate costs & benefits**
Lecture: Principles general introduction to climate change (Europe and global)	Problem-based approach: What is the problem, now and 2030?	Problem-based approach: What do we need to do? (broad-brush) (risks)	Problem-based approach: Agencies & sectors	Problem-based approach: What works? How to get change?
Lecture: Principles Health impacts (introduction) (Why?)				
Group exercise: Participants' experience, perspectives on climate change and health)	Problem-based approach: Putting in some numbers (6-0-Ma...)	Problem-based approach: What do we need to do? (reduce greenhouse gas)	Problem-based approach: What evidence is needed to convince colleagues? (role play?)	Problem-based approach: Write–up on what we have learned
		Problem-based approach: How to integrate needed actions	Problem-based approach: Numbers to $	**Lecture & notes: worked case study**

Table 2: Programme for block 2: development of an adaptation strategy

Basic	**B1 Definition of the problem: why do we need an adaptation strategy?** - high level overview - evidence (national vulnerability assessment) - costs and benefits	**B2 Definition of the problem: Extreme events – damage and risk prevention** - what kind of events - vulnerability assessments - specific national examples	**B3 Definition of the problem: Noncommunicable diseases: air pollution and respiratory and cardio-vascular diseases**	**B4 Definition of the problem: Communicable diseases** - what they are - why it matters - current burden of disease - emerging diseases and re-emerging diseases	**B5 Definition of the problem: A comprehensive health adaptation strategy and its evaluation** - components that are included
Why?	**W1a Taking a strategic approach to adaptation** - links to UNFCCC reporting - a process - defining/clarifying objectives - issues specific to climate change	**W2a Early warning systems for extreme weather events...** - high and low income country examples - effectiveness of warning systems within current constraints	**W3a Climate change and air-borne diseases** - high and low income country examples - effectiveness of warning systems within current constraints	**W4a** **- vector-borne diseases** **- surveillance and control**	**W5a Adaptation plans: modes of implementation** - distribution of responsibility among agencies - realistic timetable
	W1b Developing an adaptation - establishing governance and leadership - defining the vision	**W2b Emergency planning: general components**	**W3b Air pollution and climate change** - cardiovascular disease - (indoor)?	**W4b** **- water-borne diseases** **- surveillance and control**	**W5b Adaptation plans:** - monitoring and evaluation

	W1c Exercises e.g. agree on a vision and objectives	**W2c Public health measures to reduce health effects** - from e.g. heat, floods, extreme cold spells - International Health Regulations	**W3c Air pollution and climate change: cross-sectoral and long-term approaches** - co-benefits - harms - sectors including transport, built environment, land use, etc.	**W4c** **- food safety & security** **- surveillance & control**	**W5c Adaptation plans:** - funding/costing and financing
<u>How?</u>	**H1a Identifying elements of the plan** a) exercise on collaboration – intersectoral.... b) developing a stakeholder plan c) advocacy and communication	**H2a Case study on extreme weather events, e.g.** a) flood b) heat wave c) cold d) fire e)... f) drought tools available?	**H3a Available tools** - WHO air quality management	**H4a Available tools** - overview and how to use them - WHO water management - WHO food safety - etc.	**H5a Case study** *elements of an action plan*
	H1b Costing and benefits of adaptation - how to? Where it has been done *Framework of action plan development*	**H2b Case study on extreme weather events:** *elements of an action plan*	**H3b Case study** e.g. - transport interventions - dust storms - diesel cars and air quality *elements of an action plan*	**H4b Case study** *elements of an action plan*	**H5b Evaluation of the training** (optional)

Annex 3: Provisional list of potential additional contributors (to be completed)

Module	Part	Contributors
Working with scenario tools	Exercise(s)	Antonio Navara (tbc), Kris Ebi (tbc)
Assessing adaptive capacity	Add to lecture; exercise	Paul Wilkinson (tbc)
Health co-benefits	Contribute to lecture; exercise	Paul Wilkinson (tbc), Natalie Roebels, Matthias Braubach, etc
Methods and tools for policy impact assessment		Marco Martuzzi (tbc), Carlos Dora (tbc)
Process and outcome evaluation		Graham Bickler (tbc)
Aeroallergens and air pollution	Lecture and exercise	Antonis Analitis, Sotiris Vardoulakis
Environmental sustainability System approach to sustainable health care	Adjustments of lecture; exercise; case studies	James Mackenzie
Extreme weather events		Tim O'Dempsey, Walter Ammann (tbc), Gerald Rockenschaub, Ute Enderlein
Communicable diseases		Jan Semenza (tbc), Mikhail Ejov, Elisabeth Lindgren (tbc), Frances Schaffner, Institute Pasteur, Liverpool and Swiss Tropical, etc
Mental health		To be identified
Food safety and food security		Hilde Kruse (tbc)
Communication and advocacy		Cristiana Salvi (tbc)
Background data	For horizontal exercise	Thomas Krafft (tbc)
Health professionals		Fiona Adshead (tbc)
Sustainable development.	.....	Fiona Adshead (tbc).

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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WHOLIS number
Original: English

To respond to and anticipate Member States' needs for capacity building in the area of climate change and health, the WHO Regional Office for Europe has developed a draft training toolkit for environment and health professionals. The meeting in Bonn was held in order to: a) review and revise the draft training toolkit (concept, structure, training approach, facilitators' manual and example training materials); b) contribute to amending the training material; and c) exchange information and experiences of participants. The meeting was attended by experts in climate change and human health with training experience in this field. The results of this meeting will be an essential element in the concept development phase of the training toolkit. The meeting was cosponsored by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

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