

HELI COUNTRY PROJECTS

- Water quality and access. In Jordan, alternative options for water efficiency and intersectoral allocation are being examined in light of their potential effects on health, the natural environment and economic development.
- Health, environment and development implications of agricultural policies. Work in Thailand examines how agrochemical use can be managed to protect the health of farmers, consumers and the environment. In Uganda, livestock policies are being assessed with a view to maximizing productivity, while minimizing risks from pesticide contamination and vector-borne diseases.
- Further country projects are proposed on: sustainable transport systems that minimize traffic injuries, air pollution and greenhouse gas emissions while promoting physical activity; on healthy and environmentally sound household energy solutions; and on comprehensive approaches to sanitation.



Health impact assessment Every year, thousands of environmental impact assessments are conducted on new infrastructure and economic development projects around the world. However, the human health impacts are not always considered explicitly or following critical decisions. To address this issue, WHO has been involved in the refinement and promotion of Health

Impact Assessment (HIA) processes and tools. HIA is a tool that allows health issues to be taken into account when key decisions are being made about development. It offers policy-makers and stakeholders a systematic framework for evaluating the potential or actual impact of a policy on a defined population, whether the issue in question is a project such as a new highway or dam, or a debate on whether energy development should be based on coal or natural gas. HIA draws on both qualitative and quantitative information, and has an explicit focus on equity and social justice. It considers the views of all stakeholders, offering an avenue for broader participation in decision-making (www.who.int/entity/hia/en).

Risk communication Effective communication is a key ingredient of any successful health and environment policy. As a basis for sound policy development, decision-makers need to engage in constructive dialogue with the public and with stakeholders about health and environmental risk factors in a process that considers diverse points of view and inspires public trust. Increasingly, WHO is conscious that the manner in which health and environmental risk factors are presented by policy-makers and discussed and debated in the public arena is a critical component of the policy development process. Integral to the development of policy-oriented tools and programmes are communications, advocacy and web-based tools that provide the knowledge upon which policy-makers and the public can consider issues and act.

Millennium Development Goal monitoring In the context of the collective United Nations and global effort for achieving the MDGs, WHO has been assigned the task of monitoring progress on one of the key environmental risk factors to health, namely indoor air pollution from cooking and heating with solid fuels. Regular monitoring of the percentage of households using solid fuels at the country level will reflect the progress in development and poverty reduction, and at the same time serve as an indicator for progress in population health (<http://www.who.int/indoorair/mdg/en/>).

Children's Environmental Health Indicators WHO is providing leadership on the development and implementation of the Global Initiative on Children's Environmental Health Indicators (CEHI), launched at the World Summit on Sustainable Development in 2002. CEHI are aimed at improving the assessment of children's environmental health, monitoring the effects of interventions to improve children's health in relation to the environment and reporting on the state of children's environmental health.

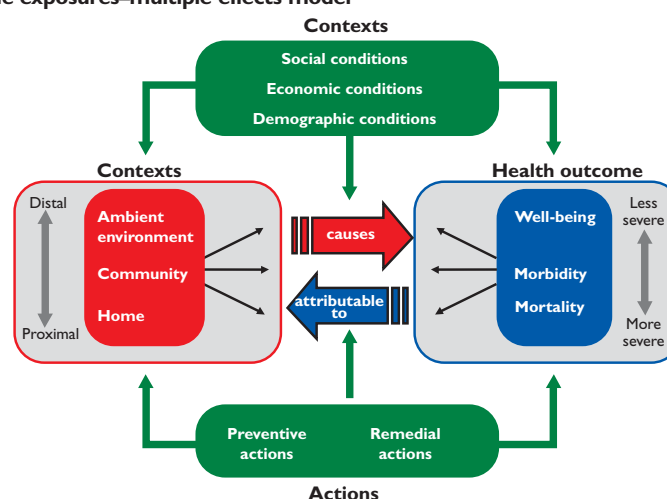
CHILDREN'S ENVIRONMENTAL HEALTH INDICATORS

Children's environmental health indicators (CEHI) provide key information on environmental threats to children's health over time. They also help to identify who is most affected by environmental threats, e.g. children living in a specific region or with a specific socioeconomic background. Children's environmental health indicators can thus motivate policy-makers to act. Ultimately, the collection and reporting of such indicators will make an essential contribution towards reducing the environmental burden of disease in children and consequently towards reducing child mortality (Millennium Development Goal 4).

A model for CEH indicators

On the basis of the Driving forces - Pressures - State - Effects - Actions (DPSEEA) framework WHO developed a conceptual model for the definition, collection and reporting of CEHI. The multiple exposures-multiple effects (MEME) model reflects the complex interrelationships between the environmental risks children face and their health outcomes: health effects can often be traced back to many different environmental exposures; likewise, exposure to one particular environmental risk can often lead to a wide range of health effects. Both exposures and health outcomes — as well as the associations between them — are affected by contextual conditions such as social, economic or demographic factors. Actions can be targeted at either preventing exposures or mitigating health outcomes. Based on this model, five main groups of diseases affecting child mortality and morbidity were selected — perinatal disease, acute respiratory infections, diarrhoea, vector-borne diseases and injuries — and indicators were developed for each of these major child killers.

Multiple exposures-multiple effects model



Source: *Making a difference — indicators to improve children's environmental health*. Geneva, World Health Organization, 2003.

Regional indicator pilot projects

CEHI is conducting regional indicator pilot projects in Africa, Europe, Latin America and the Caribbean, the Middle East and North America. WHO coordinates this work with numerous partners, including nongovernmental organizations, governments and international organizations, building on already-existing information and exploring opportunities for the collection of new data. As part of this initiative, regions and individual countries develop their own set of indicators most appropriate to the national health and environmental conditions. Based on these priorities, countries initiate a system of collecting indicators and reporting on the state of children's environmental health.

Also available in this series

- Energy and health
- Environmental change and health
- Occupational health

For further information visit

http://www.who.int/quantifying_ehimpacts/en/
www.who.int/heli/en • www.who.int/ceh/en



World Health
Organization

Avenue Appia 20 • 1211 Geneva 27 • Switzerland
www.who.int

© World Health Organization • All rights reserved • WHO/SDE/OEH/05.02

www.paprika-annex.com

Photo credits: Nigel Bruce, ITDG and World Health Organization

SCIENCE, TOOLS AND POLICIES

WHAT DO WE KNOW? WHAT CAN WE DO?



World Health
Organization

OCCUPATIONAL
AND ENVIRONMENTAL
HEALTH

HEALTH AND ENVIRONMENT
WHAT DO WE KNOW? WHAT CAN WE DO?

ISSUES

About one quarter of the total burden of disease is attributed to environmental and occupational factors.¹ Much of this toll of death and disease is concentrated in developing countries and among poor and vulnerable populations, and is preventable using existing environmental health tools and policy measures. Yet, a variety of factors hinder or prevent effective action. These include: a lack of effective and well-articulated policies and political commitment; lack of communication on effective local action; lack of coordination among the diverse sectors involved; a focus on short-term political and economic interests; and a lack of evidence about important environment and health links. For all of these reasons, translating scientific knowledge into action, particularly in developing countries, has proven difficult. In addressing such issues, WHO aims to facilitate sound decision-making that protects populations from environmental risks and to assist countries in protecting health through safer environments.

CHALLENGES

A range of challenges have been identified. They include:

- **Complexity of the links between environmental risks and health.** Some of these links are well-documented, whereas others are still at the stage of basic research, and their impact on the health of populations is not known. Of the one quarter of the disease burden generally attributed to environmental factors, only a small proportion of cases can be directly related to exposure to a specific environmental risk factor²—due to a variety of problems inherent in measurement and in the collection of data on environmental health, as well as the long lag time between exposure and the emergence of disease.
- **Evidence gap in developing countries.** Far more information on the links between the environment and health is collected in industrialized countries, although the majority of the impacts of the environment on health occur in developing countries. In developed countries, the level of pollution is only a fraction of that in developing countries, and little is known about the costs or effectiveness of interventions in developing countries where such information is most needed. This problem is exacerbated by the “10/90 gap”, i.e. only 10% of funding is targeted at those health problems that account for 90% of the global health burden.
- **Need for multisectoral involvement and an integrated approach.** To address issues such as air pollution, water safety, indoor air pollution or climate change in a sustainable and comprehensive way, many sectors within a country need to become involved. Policies and practices regarding health, environment, infrastructure and economic development need to be considered in an integrated manner, so that positive synergies can be generated among the various sectors.
- **Issues of equity.** The health impacts of development in sectors such as energy, water and transport are generally borne by groups who have little say in how policy is formulated, creating serious problems of equity. For example, when the sanitation infrastructure is poor, the negative impacts on health, the environment and economic activity may be felt at the household level, as well as by fisheries, and the water and recreational sectors.
- **Economic, demographic and policy environment.** Market liberalization, population growth, conflicts and short-term political interests put pressure on, and compete with, already scarce public funds and may fail to encourage investments aiming at health protection.
- **Vulnerable populations.** Certain population subgroups are more vulnerable to health risks than others. These include children, pregnant women, the elderly, low-income groups and people with poor health status. Children are of particular concern. More than 3 million children die each year before reaching 5 years of age due to poor environmental conditions. Such deaths are mainly preventable. It has become vitally important, therefore, to raise awareness not only in the health sector, but also in fields such as energy, transport, land-use development, industry and agriculture, by the provision of relevant information on the likely health consequences of decisions that affect the environment. Not only health professionals, but also all other stakeholders, must be given the means of evaluating and influencing policies on a diverse range of environmental factors that have an impact on health. A proactive

link between health and the environment must be forged during the initial stages of policy being shaped — and not only after diseases emerge. Most of all, decision-makers, civil society, scientists and other stakeholders need scientific information and tools that answer simple questions such as:

- How many people become ill from exposure to specific environmental risks?
- What can be done to prevent these cases?
- How much does it cost?

Fostering the collection of evidence and supporting its effective use in policy-making is central to WHO activities in the environmental health arena.

WHO'S APPROACH TO FILLING THE
KNOWLEDGE-ACTION GAP

WHO synthesizes the best available scientific evidence on environment and health to report on trends, develops standards for acceptable levels of risk and provides guidance to professionals who need to make science relevant to policy actions. In addition, WHO is developing approaches and tools to support the more effective use of scientific information: by supporting multisectoral and multi-stakeholder dialogue and decision-making, and addressing the needs of vulnerable groups such as children. In all its activities, WHO aims to create better bridges between science and action.

MAKING THE SCIENCE RELEVANT

Scientific evidence provides the basis upon which key environmental risks to health may be identified and assessed, priorities set and actions taken. WHO facilitates the global synthesis of the scientific evidence that is useful for making decisions that lead to action; the setting of standards and guidelines based on such evidence; and the development of practical assessment and policy tools to identify risks, impacts and effective solutions. Some of the specific activities are described below.

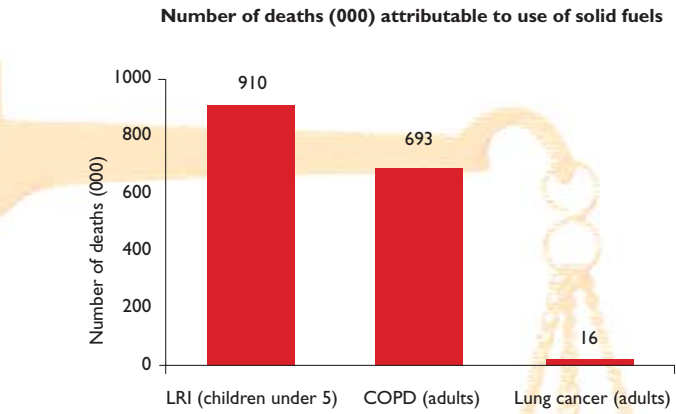
Synthesis of the evidence base WHO facilitates the global synthesis of evidence into data sets and databases that are relevant points of reference on the issues at the country, regional and international levels. For example, WHO has recently conducted the World Health Survey, a household survey covering more than 70 countries and 150 000 households and individuals. This survey has collected valuable information on health status, socioeconomic status and environmental risks related to occupation. It will yield important information on a number of issues, including MDG (Millennium Development Goals) monitoring of solid fuel use, and quantitative links between use of solid fuels or occupation with various health outcomes that have as yet been poorly documented.

Quantification of health impacts from environmental risks at population level (environmental burden of disease) WHO has an extensive and ongoing programme for the development of methods for quantifying the health impacts of key environmental risk factors at the country, regional and global levels. These assessment methods, involving synthesis of evidence gleaned from scientific literature and expert opinion, can form the basis for identifying and setting local and global priorities for action on environmental health, and targeting the areas of greatest need. WHO's main activity in this area is the development of guidance and toolkits to assist countries in conducting their own quantification of population health impacts (burden of disease). These rapid assessments can be conducted on the basis of locally-collected data and may help policy-makers to identify the most significant environmental threats to health at the national and subnational levels. Such assessments can also quantify the burden of disease that would be preventable with appropriate action. WHO has already developed guidance on the environmental burden of disease for more than 10 major environmental and occupational risk factors. Simple tools accompanying the guides, such as spreadsheets, ensure easy application of the methods (http://www.who.int/quantifying_ehimpacts/en/). In addition to guidance for countries, WHO is developing global and regional estimates of disease attributable to environmental causes. Such assessments provide an overview of the magnitude of the health impacts stratified by risk factor, disease, region, gender and age group.

ENVIRONMENTAL BURDEN OF DISEASE: LINKING
SCIENCE TO DECISION-MAKING

Given the wide array of health risks facing people today, action must be targeted and priorities set. To do that, however, it is critical first to know how many deaths and how much disease is associated with a particular environmental health risk — for example from contaminated water supplies, indoor air pollution from solid fuel use or risk of injury at the workplace. It is also important to know how many deaths or cases of disease could be avoided or prevented through policy action.

Typically, population health impacts are quantified in terms of the number of deaths, cases of illness or disability, or loss of disability-adjusted life years (DALYs). As an example, the effects of exposure to indoor smoke from solid fuels in terms of deaths worldwide in 2000 is shown below.



LRI: Lower respiratory infections
COPD: Chronic obstructive respiratory disease
Source: World Health Organization. *World Health Report 2002*. Geneva, World Health Organization, 2002.

BRIDGING THE SCIENCE-ACTION GAP

WHO develops tools, guidance and advocacy information specifically designed to assist stakeholders and decision-makers in understanding the issues and the available evidence, and applying that evidence to the decisions that they face. Tools and guidance have been developed for: assessment of health impacts; improved monitoring of trends; review of best practice solutions implemented elsewhere; economic analysis of health impacts; and conduct of multi-stakeholder dialogue. In addition, WHO advocates policies that have been well-documented as leading to a significant improvement in health, e.g. the use of improved stoves to reduce indoor air pollution in poor countries. And WHO supports policy-makers, civil society and other stakeholders in considering the evidence, articulating new policies and finding the means to implement them, e.g. through new legislation, action plans, regulations and community action. Examples of activities in the policy arena are given below.

Health and Environment Linkages Initiative The Health and Environment Linkages Initiative (HELI) fosters intersectoral assessment, dialogue and action on key cross-cutting issues relevant to environment and health. This global initiative was launched by the Government of Canada at the 2002 World Summit on Sustainable Development, in Johannesburg, South Africa, and is being implemented together with WHO, the United Nations Environment Programme (UNEP), the Environment Protection Agency (EPA) and various governments participating in pilot studies.

HEALTH AND ENVIRONMENT LINKAGES INITIATIVE (HELI)

- HELI is a global effort led by WHO and UNEP to promote and facilitate action in developing countries to reduce environmental threats to human health, and support sustainable development objectives. HELI supports a more coherent approach to valuing the services that ecosystems provide to human health as part of decision-making processes. Activities include:
- Projects at country level bringing together diverse government and civil society sectors to assess and recommend integrated policies on environment and health issues.
 - Guidance on better use of impact assessment and economic valuation to enhance decision-making on the environment and health.
 - Improving access to policy-relevant knowledge, resources, and tools using electronic media and printed materials, in priority areas. These include: water quality, availability and sanitation; water-related vector-borne diseases; quality of ambient and indoor air; toxic substances and global environmental change.
 - Capacity building for policy action at the local, national and regional levels by means of technical workshops and interactive events involving policy-makers, scientists and the public.

¹ World Health Organization. *Health and environment in sustainable development*. Geneva, World Health Organization, 1997.
² World Health Organization. *World Health Report 2002*. Geneva, World Health Organization, 2002.
³ *The 10/90 report on health research 2001–2002*. Geneva, Global Forum for Health Research, 2002.

我们的产品



大数据平台

国内宏观经济数据库

国际经济合作数据库

行业分析数据库

条约法规平台

国际条约数据库

国外法规数据库

即时信息平台

云报告平台

预览已结束，完整报告链接和二维码

https://www.yunbaogao.cn/report/index/report?reportId=5_