Recommendations

While the linkages between children and the environment have been acknowledged at the international level, including in Agenda 21 and the 1990 Programme of Action of the World Summit for Children (see box 1), sustained progress can only be made if individuals strive together for concerted action. Governments, the United Nations system, civil society and the private sector need to work together to foster intersectoral cooperation at all levels to promote safe environments for children. If at each level of action, policies and strategies are tailored to specific realities and are designed to complement each other, real and cost-effective synergies will be achieved.

To follow up the information offered in the previous chapters with a call to action, this chapter presents a set of broad recommendations to stimulate discussion and intensify action.
Local Initiatives

Community participation and actions at the local and household level are critical because this is where children’s health and well-being are first and directly influenced by environmental problems. A safe immediate environment for children depends largely on how well communities and families can manage problems, such as a lack of safe drinking water, unsanitary excreta and refuse disposal, smoky indoor air, crowded living spaces and degraded natural resources.

At this level, environmental health interventions must be very specific, concrete and results-oriented. In addition to the examples of possible local initiatives that were included in chapter 3, below are several suggestions that can be taken by communities and those supporting them in local and national governments, regional partnerships, international organizations and civil society.

At the local level there is a need to:

- Build community capacity (namely, municipalities) to sustainably manage local resources, particularly the essential resources of drinking water and fuel wood. In practical terms, community environmental management aimed at preventing diarrhoeal diseases, malaria and acute respiratory infections (ARIs) – three of the primary child killers – involve actions which inhibit, interrupt, and reduce the generation, transmission, and exposure to disease agents. Examples of possible community- and household-level interventions for reducing incidences of these diseases can be found in table 5.

- Support community-based environmental care in partnership with local NGOs. Activities such as planting trees, vegetable gardening, protecting water sources, building sanitary latrines, recycling and composting domestic wastes, terracing slopes, etc. can both improve local environmental quality and directly benefit children and families.
Recommendations

Community participation and actions at the local and household level are critical since this is where children's health and well-being are first and directly influenced by environmental problems.
Table 5: Matrix of Possible Community- and Household-Level Interventions for Reducing Incidences of Diarrhoea, Malaria and ARIs

<table>
<thead>
<tr>
<th>Preventing diarrhoeal disease</th>
<th>Preventing malaria</th>
<th>Preventing ARIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhibit generation of disease agents</td>
<td>Interrupt transmission of disease agents</td>
<td>Reduce exposure to disease agents</td>
</tr>
<tr>
<td>◼ Proper maintenance of water supplies</td>
<td>◼ Protection of drinking water</td>
<td>◼ Purification of drinking water</td>
</tr>
<tr>
<td>◼ Protection of food supply</td>
<td>◼ Disposal of contaminated food</td>
<td>◼ Proper cooking time and temperature</td>
</tr>
<tr>
<td>◼ Proper food storage</td>
<td>◼ H and washing</td>
<td>◼ Proper infant feeding practices</td>
</tr>
<tr>
<td>◼ Excreta disposal</td>
<td>◼ Reduction of solid waste</td>
<td>◼ Personal protection, e.g. wearing shoes</td>
</tr>
<tr>
<td>◼ Application of larvicide</td>
<td>◼ Corralling livestock to limit transmission</td>
<td>◼ Vector diversion</td>
</tr>
<tr>
<td>◼ Reduction of breeding sites</td>
<td>◼ Reduction of fly breeding sites</td>
<td>◼ Residual spraying</td>
</tr>
<tr>
<td>◼ Appropriate agricultural practices</td>
<td>◼ Surveillance/early treatment to reduce disease reservoir</td>
<td>◼ Domestic protection, e.g. screening</td>
</tr>
<tr>
<td>◼ Proper maintenance of water supplies</td>
<td>◼ Improvement in household ventilation</td>
<td>◼ Personal protection, e.g. bed nets, protective clothes, repellents</td>
</tr>
<tr>
<td>◼ Use of alternative clean energy and fuels</td>
<td>◼ Use of efficient, vented household stoves</td>
<td>◼ Reduction of activity on high pollution days</td>
</tr>
<tr>
<td>◼ Reduction of burning of solid waste</td>
<td>◼ Street sweeping</td>
<td>◼ Transfer of cooking fires outdoors</td>
</tr>
<tr>
<td>◼ Reduction of agricultural burning</td>
<td>◼ Keep children away from smoky stoves</td>
<td></td>
</tr>
</tbody>
</table>
Recommendations

- Promote hygiene awareness and education for a sustainable future using formal and informal channels. Hygiene education can help family members and children establish hygienic behaviour so as to block or at least reduce harmful environmental agents – particularly biological ones – from entering a child's body. Environmental education, if tailored to local situations, will increase mothers’ and children's knowledge and ability to protect themselves from environmental hazards. In rural developing areas where literacy rates are usually low, hygiene education and environmental education can be combined and integrated into literacy efforts.

- Increase attention to family-level activities in children's environmental health projects. In most cases, simple and low-cost options exist for parents to take action aimed at lessening environmental risks to their young children.

- Support and build the capacity of parents - both mothers and fathers - in fulfilling their responsibility for providing quality care to their children. Parents should have easy access to up-to-date and correct information on childcare, including children's environmental health issues. There is a need to ensure that adequate care is provided to disadvantaged children in a family, such as a girl child who often experiences gender discrimination or a disabled child.

Note: This chart lists environmental health contributions to an integrated approach to child and maternal health. Other components not mentioned include immunizations, oral rehydration, breastfeeding, safe delivery, birth spacing, micronutrients, and prompt diagnosis and treatment.

Encourage and support children and youth to participate in local environmental management activities, including identifying and monitoring environmental problems and how they relate to livelihoods and taking action to combat specific threats. Environmental education through informal and formal channels can significantly enhance life skills of children. It provides children with environmental knowledge and engenders respect for the world and their role and responsibilities in it (see box 11).

At the national level, the key is to increase understanding of how to mainstream environmental considerations and to recognize and exploit the interlinkages and synergies between environmental issues and child-focused interventions. There is also a need to fill the substantial gaps that exist in the information and thus the understanding of children’s environmental health issues, both through increased and better coordinated research and data collection and through the development and monitoring of indicators to assess progress made in this field.

While many of the recommendations for action at the international and regional levels may also be relevant to national circumstances, certain issues demand specific national level response, for example, to:

- Increase understanding that child health, growth and development depends at least as much on the control of root environmental causes of poor health as on clinical responses to disease. Such understanding should lead to an enhanced preventive aspect in national policies regarding children’s health.

- Develop national laws and regulations for the early detection of environmental diseases and increase nations’ capacities to implement and uphold them.
Recommendations

**Box 11: Top Environmental Trends Among Young People**

Young people from all over the world who contributed to *Pachamama: Our Earth – Our Future* (UNEP, Peace Child International, UNICEF & UNESCO, 1999) were asked to list their top 10 positive trends and top 10 negative ones:

**Top 10 Positive Emerging Trends**
- Increased recycling
- More reforestation
- Greater animal protection
- More use of solar energy
- Water conservation
- Higher environmental awareness
- More measures against pollution
- More power to NGOs
- More natural food products
- More protection of rainforests

**Top 10 Negative Emerging Trends**
- Increased pollution
- More deforestation
- Intensified hunting of animals
- More air pollution
- Widening ozone hole
- Worse water pollution
- Water scarcity
- More toxic waste
- Over-population
- Increased amounts of rubbish

Strengthen intersectoral coordination and cooperation among government departments. Especially, there is a need to reconcile health and environment as prime elements of sustainable development programmes. (See box 12.)

Put children at the centre of sustainable development agendas. In the context of children’s environmental health, this means that national policy and regulation systems need to take into account the special rights and vulnerabilities of children in terms of environmental risk factors. It also means that government spending on child protection, including environmental safety, should be accorded a high priority. Some specific action points may include:

- Refine current risk assessment methods to better evaluate specific exposure pathways and dose-response characteristics of children when setting protective standards, so as to ensure early detection of diseases;
- Improve monitoring and assessment of children’s health and the environment to expand the knowledge base;
- Expand national education curricula to include education for a sustainable future, which integrates environmental and hygiene education.

Develop functional voluntary partnerships between communities, schoolteachers, environmental and public health NGOs, scientific and academic communities, and local and national governments. Partnering with civil society helps to ensure success through sharing of information and follow-up activities.

Empower and educate health/environment professionals to ensure a better recognition of environmental health problems affecting children. Incorporate children’s environmental health issues into the teaching curricula of medical and clinical toxicology university courses.
Recommendations

Government spending on child protection, including environmental safety, should be accorded a high priority.
Give special policy attention to disadvantaged children, who are generally closer and more vulnerable to environmental hazards. These children may include girls, working children, homeless children, orphans, disabled children, children displaced by armed conflicts, children living in extreme poverty, children of urban slums, children affected by HIV/AIDS, and children caught in violence, sexual abuse or drug use.

**Regional Partnerships**

Most of the recommendations put forth in the next section for the international level also apply at the regional level. There are, however, two points that retain specific regional relevance, which are highlighted below. At the regional level there is a need to:

- Develop coordinated regional approaches to children's environmental health issues. Nations in a particular region often face similar environmental threats and many are both multi-causal and transboundary in nature. Likewise, children from countries within a region often face similar social and economic situations. Therefore, countries can benefit substantially from regional consultations and collaboration where they can exchange ideas and best practices and replicate measures to effectively mitigate environmental threats to the health of their populations. Regional consultations are also vital to fashion policy responses to specific environmental threats that are plaguing a particular area beyond any one national border (see box 13).

- Pay special attention to regional priority environmental problems that most afflict children of the region. Children of different regions often face unique environmental threats, which should not be neglected while dealing with high-profile global issues. The lack of safe drinking water and basic sanitation facilities, for instance, is perhaps the most dismal environmental condition endured by the majority of Asian and African children.
Recommendations

Box 12: An Initiative to Protect Children’s Environmental Health

In 1997, the United States Environmental Protection Agency established the Office of Children's Health Protection (OCHP) to implement their commitment to protect children from environmental health hazards. OCHP’s mission is to make the protection of children’s health a fundamental goal of public health and environmental protection in the United States. This is enabling multi-agency cooperation within the federal government and in collaboration with the NGO community and has resulted in varied efforts, such as:

- The Food and Quality Protection Act, passed unanimously by Congress to protect children from microbial contamination;
- The Asthma Strategy, a multiple agency effort to address asthma and the environment;
- The Lead Strategy, also a multiple agency effort to address the problem of children with higher than advisable blood lead levels;
- Outreach and education efforts;
- Research centres and the research agenda devoted to children's environmental health issues; and
- Paediatric environmental health specialty units

Source: The United States Environmental Protection Agency: http://www.epa.gov/children
In 1999 a major ministerial conference was held on environment and health in Europe under the auspices of WHO, which produced the London Declaration on Action in Partnership. It marked a new commitment to action in partnership for improving the environment and health in the 21st century. The ministers and representatives of the European Member States committed “to develop policies and implement actions to provide children with a safe environment, including during prenatal and postnatal development, towards the highest attainable level of health.”

In June 2000, the North American Commission on Environmental Cooperation Council (comprised of the top environmental officials from Canada, Mexico and USA) passed a council resolution on children’s health and the environment. The resolution commits the Parties to develop a cooperative agenda to protect children from environmental threats, and, among other activities, calls for the formation of an Expert Advisory Board to provide advice to the council on these matters.

In 2001 in Kuala Lumpur, South-East Asian nations met to negotiate an agreement designed to prevent a repeat of the forest fires and their devastating haze that beset the region in 1997 and 1998 and caused significant health problems. Regionally integrated approaches such as these, engineered around the concept of prevention, can significantly help to reduce environmental health threats to children.

In collaboration with several governmental and international organizations, WHO organized an international conference entitled Environmental Threats to the Health of Children: Hazards and Vulnerability held in Bangkok, Thailand in March 2002. The scope
International Support

In the past decade, several international agreements (see box 1) have recognized the link between children’s well-being and the protection of the environment. Despite this, there is a need to bring children’s environmental health, growth, and development issues to the forefront of the international agenda and translate these declarations into concrete action (see box 14). At the international level there is a need to, among other things:

- Ensure that children’s rights as well as their special vulnerabilities are systematically taken into account in discussions and negotiations on environmental issues. Such recognition needs to generate more specific policy decisions and actions directed to children’s particular needs.

- Fully recognize the important role of environmental protection in child survival, development and protection. Global efforts for children need to adopt the concept of protecting the child’s environment and to strengthen and
integrate into their child-related programmes appropriate environmental interventions that will improve a child's immediate environment.

- Further develop international environmental law that will safeguard children's health, growth and development from environmental risk factors. The existing and rapidly expanding body of international environmental conventions and protocols play a key role in addressing the most pressing global environmental challenges, which threaten human health including that of children. Commitments need to be honoured and implementation needs to be accelerated.

- Employ a precautionary approach in dealing with environmental issues, as this will widely be in the best interest of children and future generations. A lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

- Develop and build consensus on children's environmental health indicators. Just as basic economic indicators have been instrumental to Governments in estimating and steering the functioning of national and world economies, we need effective and user-friendly indicators to monitor and protect children from environmental health threats. Actions to protect children from environmental hazards will be, at the best, arbitrary and unsystematic until a core set of good indicators can be widely adopted. Since indicators receive media attention, they can also play a crucial role in bringing the public's focus to the issue. Most importantly, such indicators will provide a sound basis for children's environmental health policies.

- Encourage and promote national investment in early childhood care, including the improvement of home, school and community environments. The quality of the environment exerts a powerful influence on whether a child will survive his or her first years. Therefore, improv-
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...ing the local environmental conditions can be effective in reducing childhood malnutrition and disease and can ultimately break the inter-generational transmission of poverty.

- Raise awareness of various stakeholders and children’s environmental health, growth and development issues. This will involve efforts to:
  - Disseminate concise information to decision-makers and all those caring for children, which can help to stimulate feasible actions at all levels to reduce child exposure to environmental pollutants.
  - Promote, support and coordinate research, monitoring and assessment with regard to children’s special vulnerabilities to environmental degradation, in order to yield the required information for effective decision-making (at each level of competence). The knowledge gaps related to children’s environmental health are substantial.
  - Coordinate existing efforts and initiatives that specifically address children’s environmental health issues, creating coherent networks for action. Establish active partnerships among the various stakeholder groups: Governments, civil society (i.e.: non-governmental organizations, foundations, private institutions, community groups, universities, research centres, etc.) media and international organizations.
Children in the New Millennium

Box 14: Examples of International Efforts

- In 1997, UNICEF and UNEP signed a Memorandum of Understanding that facilitates cooperation primarily in terms of advocacy in areas of common concern and in scientific/technical cooperation on programme activities. The MOU also commits the two organizations to support programme implementation through the best scientific and environmental information that bears on children and child health, especially at the field level in developing countries.

- In 1999, WHO set up a Task Force for the Protection of Children's Environmental Health. The objectives are to prevent disease and disability associated with chemical and physical threats to children, taking into consideration biological risks in the environment and acknowledging the importance of social and psychosocial factors. To achieve this, the Task Force promotes activities on the identification, assessment, mitigation and prevention of, as well as communication about, environmental threats.

- In 1999, WHO and UNEP signed a Memorandum of Understanding with a view to strengthening their cooperation in the field of environmental health as an essential factor in achieving sustainable development.

- UNICEF has been supporting an international initiative on School Sanitation and Hygiene Education (SSHE) within an inter-agency effort called the FRESH framework (Focusing Resources on Effective School Health). The World Bank, UNICEF, WHO and UNESCO are among the active members of FRESH. SSHE focuses on using a life-skills approach to hygiene education, improving the sanitary and environmental conditions of schools, and providing outreach to families and communities. Improved hygiene and sanitation in schools help encourage girls to attend schools and improve the health of pupils and their ability to learn. UNICEF-supported
**Recommendations**

SSH E activities are taking place in over 40 countries across Africa, Asia, Latin America and the Caribbean.

- In September 2001, two NGOs, the Canadian Institute of Child Health and the U.S. Children's Environmental Health Network, hosted their second 'Global Forum' on children's environmental health in Washington D.C. The Global Forum focused on the special vulnerability of children and how the environment in which they live, learn, work and play impacts them. It attracted public health specialists, medical practitioners, scientific researchers, government officials, policy makers, industry, advocacy groups and community-based organizations.

**Multilateral Environmental Agreements (MEAs)**

At the international level, the rapidly expanding body of international environmental law is a key component in the international community's reservoir of policy responses to environment and health threats. MEAs can help to promote innovative policy responses and to enhance processes to address the most pressing environmental challenges that threaten human health. To date, it is estimated that there are more than 500 international treaties and agreements related to the environment. The existence of such legally binding agreements is a remarkable feat of the global community, clearly indicating a collective will and commitment to protecting the environment and, by extension, children's health. A recent example: Governments recognized that persistent organic pollutants (POPs) endanger human health globally as well as the environment from one generation to the next. Hence, they negotiated and signed the Stockholm Convention on POPs to minimize and eliminate some of the most toxic chemicals ever created in order to secure the health of future generations and the integrity of the chain of life.
While current understanding of the linkages between children and the environment has advanced considerably, we must recognize that so much more still needs to be achieved.