

## **Non-Governmental Position Paper on Critical Needs to Address Children's Environmental Health Problems**

### **A. Children's Environmental Health: An Overview**

1. *A Threatening Environment for Children:* Globally, inadequate fresh or clean water supplies, contaminants and pollutants in the ambient air, exposures to hazardous and unsafe products and poor waste disposal practices are the major causal factors in determining the impact of environment on children's health. As these environmental factors rise, a growing body of scientific and medical evidence suggests that they are linked to many premature deaths and illnesses in children.

Experts now believe that the single largest cause of death for children globally—estimated to be nearly 5 million a year—is from acute respiratory diseases that arise from or are exacerbated by constant exposures to highly polluted indoor and outdoor air (airborne particulates, sulfur dioxide, ozone). In addition, more than 3 million children die each year from waterborne diseases caused by ingesting bacterially contaminated water.

Dramatic increases in population, technology, trade, and material goods mark the transition to a new millennium. While many of these changes have benefited children, they have also raised new concerns and created serious new health issues. New environmental factors are threatening children's health. For instance, synthetic chemical substances such as pesticides and solvents, and heavy metals such as mercury and lead in our environment can impair a child's nervous system. PCBs and dioxins disrupt the body's hormonal balance. Radiation, asbestos, and arsenic contribute to the onset of cancer.

2. *Definition of Children's Environmental Health?* Environmental health comprises those aspects of a child's life that are determined by interactions with physical, chemical, biological and social factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that may adversely affect the health of present and future generations.

3. *Children's Burden of Disease in Developing Regions:* These newly emerging environmental health threats significantly add to the current burden of diseases by affecting a child's immune system – the child's ability to fend off diseases. This is especially the case in countries in Asia, Africa and Latin America where many children are still not immunized against common childhood diseases and many do not have access to basic health care. In addition, poor children on diets deficient in vitamins, minerals, and protein are especially vulnerable to the toxic effects of chemicals, due to reduced capacities to ward off or eliminate environmental toxins from their bodies.

4. *Why are children more vulnerable than adults?* Children's body size and unique physical characteristics make them generally more vulnerable than adults to many environmental health hazards. Because their nervous, respiratory, reproductive, and immune systems are in the process of developing, children are in a dynamic, sensitive state of growth that lasts from the time in the womb through adolescence. This makes them more sensitive to environmental health hazards. In addition, their behaviors—the way they interact with their surroundings— can also put them at greater risk. Typical childhood behaviors such as eating exclusively one kind of food, crawling, digging in dirt, and putting objects in the mouth, can all lead to increased exposures to environmental contaminants.

(a) A child's first environment is the mother's womb. Many chemicals can cross the placenta and permanently damage the fetus. Damaging substances include lead, PCBs, methylmercury, and nicotine from environmental tobacco smoke.

(b) On a body-weight basis, young children drink more water, eat more food, and breathe more air than adults. The average infant's daily consumption of formula or breast milk per kilogram of body weight is equivalent to an adult male drinking 50 eight-ounce glasses of milk a day.

(c) Children spend more time outdoors than do most adults, often engaged in vigorous play. With their respiratory systems still developing, they can suffer greater exposure to and adverse impacts from air particulates and ozone. Young children also spend many hours close to the ground where they may be exposed to toxicants in dust, soil, and low-lying vapors such as radon or pesticides.

(d) Children have a longer "shelf life." The earlier in life they are exposed to environmental hazards, the more time they have to develop environmentally triggered diseases such as cancer, Parkinson's disease and other chronic illnesses.

## **B. Critical Children's Environmental Health Issues**

*1. Poverty, Malnutrition and Infectious Diseases:* Poverty, malnutrition and infectious diseases are the major cause of illness and deaths in children living in many developing regions of the world. According to the 1995 World Health Report, 12 million children under the age of five die prematurely from preventable illnesses. WHO estimates that at present 160 million children suffer from mild to severe malnutrition, while infectious diseases account for a yearly toll of 13 million deaths in children and young adults. Even in a highly affluent country like the United States, a quarter of children live in poverty, where they are hungry or malnourished and lack access to proper medical care.

*2. Air Pollution:* Exposure to unclean air has emerged as one of the most serious threats to a child's health. Respiratory diseases such as bronchitis, asthma and other chronic lung diseases are growing public health problems for children in many regions of the world. These diseases persist throughout life, affecting health, productivity and welfare. Air pollutants such as particulate matter, ozone, sulfur dioxide and oxides of nitrogen, aggravate these diseases. Experts believe that early diagnosis and proper use of antibiotics could prevent from 30% to 60% of acute respiratory-related child deaths if families in developing countries had access to proper medical care and medicines. The top ten large cities with degraded air quality for children below the age of five years are located in Mexico, China, India, Iran, Philippines and Brazil. But cities around the world are threatened by industrial pollution. In developed countries, asthma is now a growing health concern. In the United States alone it is the leading chronic disease among children, increasing from 5.8 percent in 1990 to 7.5 percent in 1995. Many believe that car exhaust, tobacco smoke, mold, house dust, and ground level ozone are key factors in the epidemic's staggering 129% increase.

*3. Indoor Air Pollution from Cooking Fuels and Heating Sources:* Exposure to indoor air pollution is also a growing health concern in many developing regions. The World Health Organization and World Bank have found that indoor air pollution caused by cook stoves using traditional biomass fuels (wood, dung and crop residues) pose one of the largest risks to the health of children and women in developing countries. In India alone, where smoky stoves in inadequately ventilated homes are still extensively used, they account for almost half a million premature deaths a year.

4. *Water Pollution*: Microbial contaminants in water can lead to diarrhea, malnutrition and sometimes death. Waterborne diseases are the second single largest category of communicable diseases, after acute respiratory diseases, contributing to infant mortality worldwide. Two million children die from dehydration each year because of diarrheal diseases and the problem becomes most acute for children without access to clean water supplies. Among the many water-related diseases, schistosomiasis, filariasis, guinea worm and intestinal worms have major incidence in debilitation. Schistosomiasis itself is indicated as responsible for 200 million people infected and over 200,000 deaths per year.

5. *Toxics Exposure and Persistent Organic Pollutants (POPs)*: Chemical exposure is a serious concern globally. Mercury, arsenic and asbestos, contained in solvents and other materials, are increasingly linked to cancers and other diseases. Moreover, POPs are some of the world's most dangerous chemicals; they include highly toxic dioxins, PCBs and pesticides such as DDT. POPs persist in the environment and in the tissues of living organisms. Many people now carry enough POPs in their body fat to cause serious health problems, including reproductive and developmental damage, cancer and immune system disruption. Recognizing the danger to human health, 120 countries recently adopted a treaty to minimize and eliminate these chemicals.

6. *Lead*: Lead poisoning continues to be a serious health problem in developing countries, especially affecting infants and young children living in urban areas. High levels of exposure can cause severe brain damage or death, while low levels of exposure in early childhood can cause loss of cognitive and motor skills, behavioral disorders, reduced attention span and hyperactivity, and significant lowering of IQ and academic performance. In many developing countries, the largest source of childhood lead exposure is from leaded gasoline used in motor vehicles, which accounts for up to 90% of airborne lead contamination in many urban areas.

### **C. Role of International Agencies, National Governments and the Private Sector:**

1. *Government Commitments to Protect Children's Environmental Health Under the Convention for the Rights of the Child and Agenda 21*: A child's right to develop in a healthy environment is protected under the U.N. Convention on the Rights of the Child (CRC) under: *Article 6*: ...the right to life, survival and development. *Article 24*: ...the right to the highest attainable standard of health. States Parties shall take action to combat disease and malnutrition, [considering] the dangers and risks of environmental pollution. Parties shall ensure that all segments of society are informed about child health. *Article 27*: ...the right to a standard of living adequate for the child's physical, mental and social development. *Article 29*: ...the right to education directed at the development...of respect for the natural environment. Moreover, governments committed to addressing environmental health concerns in the Programme for the Further Implementation of Agenda 21 adopted in 1997, recognizing that, "protecting children from environmental health threats and infectious disease is particularly urgent since children are more susceptible than adults to those threats." These commitments require governments to develop programs and policies that recognize children's special vulnerability to unsafe chemicals and toxic substances, and to ensure that they can survive and develop at the highest attainable standard of health.

2. *International aid programs, national health policies, and community health agencies must vigorously address the environmental problems that contribute to childhood diseases*. To prevent acute respiratory and waterborne diseases children must have access to clean water supply, clean air and nutritional food. Governments and international agencies should also work to better address the newly emerging health problems, caused in part by toxic exposure, moving beyond the current trend to react to these diseases and working to prevent them.

3. *Governments should commit to mobilizing the necessary resources for increased basic, applied and epidemiological research*. To ensure access by all countries to data and information, and to

facilitate technology transfer, a global mechanism, such as an *intergovernmental panel of scientific experts*, should be established to collect and analyze linkages between the environment and children's health, development, and disease. An interactive exchange among health, environmental, and children's rights experts could lead to result in greater understanding of these linkages and in more coherent program development.

4. *There is an urgent need for broader education, awareness and training to address environmental problems that exacerbate a child's risk of contracting disease.* Donor agencies should provide increased support to local and national governments in developing countries, and to NGOs, to educate and train community leaders, health care staff, and policy makers to develop child protective standards for water, food, housing, hygiene and sanitation.

5. *Governments and international development assistance agencies should establish comprehensive Environmental Impact Assessment (EIA) guidelines* that recognize the special vulnerability of children, and support field staff in assessing the impacts of projects on children's environmental health, mitigating negative impacts and maximizing potential gains.

6. *Governments should enforce ILO standards for children and legal workplace inspections on health and safety practices.* Work related abuses affect hundreds of millions of children in the workforce, some as young as age 5. Removing children from areas with high contamination and toxic exposure can limit workplace injuries and disease.

7. *Governments should establish standards for exposure to environmental contaminants that are protective of children rather than base standards on adult tolerance levels.* This includes working to phase-out all lead additives in gasoline products, reduce air and water pollution with stricter control measures and develop effective methods for hazardous waste disposal.

**Nongovernmental Organizations Supporting This Statement Include:** The Natural Heritage Institute, Nautilus Institute for Security and Sustainable Development, Institute for Children's Environmental Health, Global Children's Health and Environment Fund, National Council for Science and the Environment, Human Rights Advocates, Physicians for Social Responsibility, J. Carlson Consulting, International Network on Children's Health, Environment, and Safety (INCHES), World Alliance for Breastfeeding Action (WABA).

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