UN researchers highlight the need to develop better ways to measure the impacts of climate change on children’s health. They suggest more attention be given to impact analysis of different social groups and ages, as well as nutrition.

There is existing evidence that children are particularly vulnerable to climate change, especially in developing countries. Little research, however, has been done to measure the specific impacts on children’s health, particularly in developing countries where children are disproportionately prone to health problems, including those caused by the impacts of climate change.

The new review of literature published up until 2009 summarises what is currently understood about global climate change and its link to child health.

Between 1990 and 2000, 66.5 million children were affected each year by natural disasters such as floods, droughts and extreme heat and cold. Research indicated that children are more likely to die during floods and suffer from pneumonia and diarrhoea during droughts. Safe water and sanitation is associated with physical growth and learning ability, while unsafe water and poor sanitation has been associated with increased infection.

Climate change may increase pollutants such as nitrogen dioxide, ozone and particulate matter (PM), which have been linked to increases in allergic diseases and asthma, especially among children. Children’s lungs are particularly vulnerable as they are not fully developed and children tend to spend more time outside. Fatal diseases, such as malaria and dengue fever, are sensitive to climate and children are more susceptible to these because of lower immunity. The World Health Organisation (WHO) indicated that 75 per cent of malaria deaths occur in children under 5 years.

One of the major consequences of climate change will be lack of food. The relationship between disease and malnutrition goes both ways: disease has an impact on nutrition and under-nutrition increases the risk of disease. Furthermore, unsafe water, disease and malnutrition will be exacerbated by migration caused by climate change.

The review highlighted several gaps in our knowledge of this area. Indicators of children’s environmental health (CEH) need to be developed to measure the impacts of climate change on health and develop policy. Five categories have been identified: physical injuries, food and water-borne diseases (diarrhoea), respiratory diseases, vector-borne diseases (vectors are typically arthropods, such as mosquitoes and ticks) and perinatal diseases (conditions which affect babies around the time of birth).

The study calls for the additional inclusion of malnutrition as a CEH indicator. It suggests governments assess existing health information, identify gaps and use effective CEH indicators once they have been tested. The study also proposes that CEH indicators be integrated into school and education.


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Theme(s): Climate change and energy, Environment and health