

Children's Environmental Health and the Sustainable Development Goals

The United Nations has published a series of Sustainable Development Goals that provide strong targets for reducing the disease burden from environmental risks for children around the world.

Goal 1: End poverty in all its forms everywhere.

Poverty is a major determinant of ill health in children. Many environmental hazards such as unsafe water and sanitation and air pollution disproportionately affect poor children and those living in lower income countries. Adverse environmental impacts often increase poverty among families and communities through, for example, increased health-care expenditures, less childhood education and lost income. Land degradation, desertification and extreme weather events resulting from climate change can have large detrimental impacts on livelihoods and poverty.

Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

Climate change, land degradation and desertification impact food and water supplies and threaten nutrition and health, especially among children. Unsafe water, sanitation and hygiene can contribute to childhood undernutrition through repeated diarrhoeal diseases and intestinal worms. On the other hand, poor nutrition can lead to overweight and obesity already in childhood – risk factors for many chronic diseases in later life.

Goal 3: Ensure healthy lives and promote well-being for all at all ages.

Over one quarter of the global disease burden in children under five years can be attributed to the environment. The greatest potential for health gains through healthy environments can be achieved in this age group.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Inadequate sanitation facilities in schools may prevent children, particularly girls, from attending primary school. Inadequate access to safe water and energy sources through deforestation, land degradation and desertification may require children to spend substantial amounts of time fetching water and wood, which may interfere with school attendance. Children may also need to look after younger siblings who get sick due to repeated infections from poor water and sanitation or smoke from unclean fuels used for cooking or heating. Furthermore, environmental exposures that happen inside school buildings, such as to asbestos, lead, certain chemicals and mould, threaten children's health and development. Ensuring access to basic services and resources can improve nutrition – a prerequisite for productivity and learning ability.

Goal 5: Achieve gender equality and empower all women and girls.

Inadequate access to safe water and clean energy sources often requires fetching water and collecting wood over considerable distances. Often girls are considered responsible for these hard, time-consuming and even dangerous tasks. This time could instead be dedicated to education, empowerment activities or leisure time.

Goal 6: Ensure availability and sustainable management of water and sanitation for all.

Safe and adequate water, sanitation and hygiene could save more than 350 000 deaths in children under five years annually, representing 5.5% of total deaths in that age group. Inadequate sanitation, including open defecation, may contaminate water sources and environments where children live and play, and cause repeated infections which hamper their growth and nutrition. Global environmental change, population growth and water over use may put further pressure on access to safe water and adequate sanitation.

Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all.

Access to clean fuels for cooking and heating will reduce exposure to household air pollution, which caused more than 500 000 deaths in children under five years in 2012, and will also be an important step in tackling climate change and deforestation.

Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all.

Many million children worldwide are exposed to child labour and hazardous work. Ending child labour is crucial to allow these children to enjoy their childhood and realize their full potential.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Resilience, sustainable industrialization and innovation are all required to progress towards a more health-protective environment. Critical changes are needed to mitigate key environmental health risks such as climate change, air pollution and unsafe water and inadequate sanitation, which can have detrimental effects on children's health. Access to electricity and safe and appropriate water, sanitation and hygiene in households and institutions like hospitals and schools will especially benefit children's health.

Goal 10: Reduce inequality within and among countries.

Children from different socioeconomic, cultural and geographic backgrounds experience different levels of environmental risks. Improving the environment for those most affected will greatly contribute to reducing inequalities in health, access to services, income and education.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.

In a world becoming increasingly urbanized, more children now than before are living in cities. Key environmental risks include air pollution, unsafe water, sanitation, hazardous waste and road accidents. Some 92% of the world's population live in places where air pollution exceeds WHO limits. Walkable neighbourhoods promoting physical activity in childhood teaches children healthy habits and helps to avoid overweight, obesity and related chronic diseases. Climate change, land degradation and desertification threaten community resilience. Adequate housing protects children from unintentional injuries and offers them a secure place to thrive.

Goal 12: Ensure sustainable consumption and production patterns.

Sustainable consumption and production, including the management of hazardous waste, are closely linked to key environmental risks such as ambient air pollution, exposure to chemicals, and water and sanitation which can be detrimental for children's health. These are crucial to maintaining a healthy environment and planet that will meet the needs of future generations.

Goal 13: Take urgent action to combat climate change and its impacts.

Climate change is one of the major health challenges of the future and its mitigation a prerequisite for sustainable development. Climate change is related to many of the Sustainable Development Goals, affecting water resources, food production, desertification, air pollution and, therefore, human health. Children are likely to be particularly affected through increases in diarrhoea, malnutrition and vector-borne diseases.

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Sustainable use of oceans has many links with environmental determinants of health. Examples include oceans as a sustainable food resource, and the need for adequate sanitation regarding excreta management.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Forests and stable ecosystems are critical for the world's climate, food and water supplies, and protect against soil erosion and natural disasters. Deforestation, land degradation and desertification contribute to climate change, and may increase respiratory diseases through burning of solid fuels and prevalence of vector-borne diseases. Biodiversity loss further threatens food and water supplies, ecosystems and community resilience against natural disasters.

Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Inequitable access to ecosystem services, such as safe water and energy sources, and extreme weather events are potential sources of conflict, displacement, inequality and exclusion. Today about half of

the world's refugees are children. Armed conflict has escalated in many countries, putting more children at risk of displacement.

Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Both health and non-health sector actors at local and global level can and need to take joint action to effectively address environmentally-mediated causes of disease. Many alliances already exist in the field of children's environmental health which need to be strengthened and reinforced, harnessing the full range of policy tools, strategies and technologies that are already available.

