



Environment and Health

Poor environmental conditions and poor health are often closely linked. Up to one-third of the global burden of disease can be attributed to negative environmental indicators, such as polluted water and air.

Promotion of environmental health requires protection of people and their surroundings from harmful exposure to microorganisms and pollutants in water, air, soil and food.

Did you know?

- Waterborne diseases continue to be a major cause of illness and death in many less developed nations, where more than one billion people drink unsafe water.
- Over 5 million people die each year from water-related diseases, 3 million from diarrhoea and 2 million from malaria.
- Environmental quality is a key factor in determining whether a child survives the first years of life, and strongly influences the child's subsequent physical and mental development.
- Acute respiratory infections, diarrhoeal diseases and malaria account for approximately 40 % of deaths in children under 5.
- Allergic conditions have increased fourfold over the last 20 years. 1 in 3 adults will develop an allergy at some time. 4 out of 10 school children have at least one allergy. 1 in 5 children have asthma.
- Simple hand washing with soap cut in half the rate of diarrhoea among refugee children in Pakistan.

The Issues

Discharges from industry, factories, and sewage outfalls can contaminate our waterways, air and soil. Food grown in such conditions can also be contaminated or of poor quality leading to food poisoning and malnutrition.

Water pollution

Sewage discharges, animal waste from pastures, seepage from septic tanks, livestock wading and defecating directly in streams are a common cause of **microbial water contamination** and pose a disease risk to people. Almost all gastrointestinal infections like Diarrhoea, Cholera, Poliomyelitis, and Typhoid spread through drinking water, polluted by specific microorganisms, or contaminated food or objects.

The use of pesticides and fertilizers in intensive agriculture can affect the **surface and groundwater quality**. For instance, high nitrate concentrations in the drinking water of the local population can cause illness, such as the "blue baby syndrome" (Methemoglobinemia) in bottle-fed infants.

Unprotected or stagnant water provides breeding grounds for mosquitos and other vectors, which transmit diseases such as Malaria, Elephantiasis and Dengue Fever. It can also provide a reservoir for *vibrio cholerae* (the cause of

cholera) and other bacteria.

Air pollution

Many of the world's households use biomass (crop residues, wood and dung) for cooking and heating in inefficient stoves without proper ventilation. It is estimated that 2 million people, mainly poor women and children, die every year as a result of exposure to indoor air pollution.

Local air pollution also poses a health hazard in many large cities. In sensitive people the exposure to diesel exhaust can trigger an allergic response. As the climate gets warmer, allergens such as pollen flood the air, interacting with urban pollutants like ozone and add to an already growing epidemic of asthma.

Untreated or dumped waste

Organic waste left to rot on the streets poses a serious health risk as it attracts rats and other disease carriers.

Landfills and dumpsites produce toxic leachate when rainwater and other liquids pick up heavy metals and decomposing organic wastes. Uncollected leachate can contaminate our water and soil. Many chemicals, such as heavy metals, have a tendency to accumulate in sediments, organic matter, plants or fish.

Take action for healthy conditions!

There are regional differences in the way human health is threatened by environmental degradation. Communities in many parts of Central and South America, Central Africa and Asia are highly vulnerable to water- and vector-borne diseases. Air pollution threatens large urban areas and mega-cities. People in developed countries are more vulnerable to exposure to toxic chemicals.

Taking action to reduce environmental threats can make a major contribution to people's health.

Prevent water-borne diseases

- Collect drinking water in clean containers and store it in covered containers to prevent contamination.
- Treat water (boil, filter, disinfect) when its quality is in doubt.
- Cover rainwater tanks to avoid creating a breeding habitat for insects.
- Cover wells to protect them from pollution and pathogens.
- Clean stormwater drains, canals and effluent pipes on a regular basis, so that heavy rain does not lead to flooding of wastewater.

Prevent respiratory diseases

- Where possible cook with cleaner fuels, such as solar energy or gas.
- If wood is used, ensure there is a properly working chimney to funnel the smoke outside.
- Antioxidants, such as vitamins A, E and C, may prevent the effects that air pollution has on allergic inflammation.
- Create roof gardens to keep buildings cool and insulate to keep heat from leaking saves energy and improves air quality.
- Use public transport or choose vehicles that rely less on fossil fuels or that burn them more efficiently (i.e. converter, hybrid).

Improve hygiene and sanitation

- Wash hands with soap before food preparation, before meals and after using the toilet.
- Follow the WHO "Five Keys to Safer Food" to reduce the risk of food borne disease: keep clean; separate raw and cooked; cook thoroughly; keep food at safe temperatures; and use safe water and raw materials.
- Compost your organic waste or maintain a worm farm instead of throwing it out as garbage.
- Treat wastewater adequately, e.g. establish settling ponds.
- Design and maintain latrines to contain excreta properly, so that water and soil are not contaminated and flies cannot carry germs from it to food.
- Clean up markets, as they often have slippery and dirty floors. Pay attention to unhygienic conditions around cooked food areas, littering, dirty walls and feathers and faeces from live poultry.
- Clean up gutters, garbage dumps and other places considered habitats of the larvae of disease carrying insects.
- Educate children on hygiene to raise awareness about the link between a healthy environment, a healthy body and ultimately a healthy community!



Member projects

Clean Up Volta in **Ghana** have a mosquito control project that has significantly reduced malaria since its inception in 2001.

In **Peru** Non Nibopotati have introduced public toilets that use a composting system to ensure human waste is disposed of in a hygienic and environmentally friendly way.

The Good Thinkers Organisation for Human Development in Kasur, **Pakistan**, holds seminars to raise awareness of the health threats caused by air and water pollution, and poor waste disposal methods.

Further Information

Clean Up the World

www.cleanuptheworld.org

Clean Up Australia

www.cleanup.com.au

Children in the New Millennium,
Environmental Impact on Health

www.unep.org/ceh

Healthy Environments for Children
Alliance

www.who.int/heca

International Healthy Cities
Foundation

www.healthycities.org/

Pan American Health Organization:

www.paho.org

WaterAid

www.wateraid.org.uk

World Health Organisation

www.who.int

Each year on April 7th, the world celebrates World Health Day.

Document last updated May 2008