HEALTHY ENVIRONMENT, HEALTHY PEOPLE

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DISCLAIMER

HEALTHY ENVIRONMENT, HEALTHY PEOPLE

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Executive Summary

The 2030 Agenda for Sustainable Development highlights critical links between development, the environment, human well-being and the full enjoyment of a wide range of human rights, including the rights to life, health, food, water and sanitation. This report summarizes for Governments, policy makers and stakeholders the evidence of the linkages between environmental quality and human health and well-being,[a] but also points to the broader drivers of these linkages, including inequality, unplanned urbanization, migration, unhealthy and wasteful lifestyles, and unsustainable consumption and production patterns.

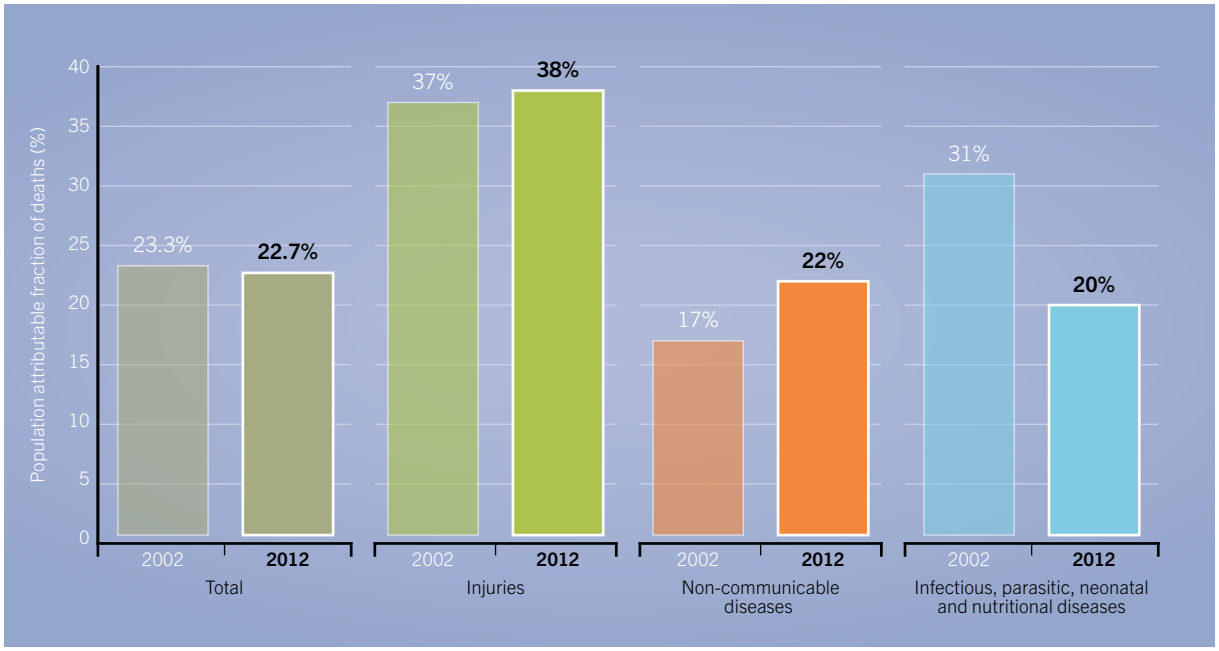
Progress in a range of environmental sectors has yielded improvements in health outcomes with substantial economic, financial and social gains in the last decades. The world has met the Millennium Development Goal target of halving the proportion of people without access to improved sources of water, five years ahead of schedule. The successful phase-out of nearly 100 ozone-depleting substances means that up to 2 million cases of skin cancer and many millions of eye cataracts may be prevented each year by 2030 thanks to the healing of the ozone layer.

But challenges remain. In 2012, an estimated 12.6 million deaths globally were attributable to the environment. The air we breathe, the food we eat, the water we drink, and the ecosystems which sustain us are estimated to be responsible for 23 per cent of all deaths worldwide. A shift away from infectious, parasitic and nutritional diseases, owing to a higher share of people having access to safe water and sanitation, to non-communicable diseases is evident (figure ES1). The higher prevalence of non-communicable diseases is attributable to exposure to chemicals, poor air quality and unhealthy lifestyles. While the environmental effects on health represent 23 per cent of deaths globally, the figure increases to 26 per cent for children under 5 years and to 25 per cent for adults between the ages of 50 and 75. The difference in total impact is 2 percentage points higher for men (22.8 per cent) than women (20.6 per cent), mostly as a result of occupational injuries, the employed percentage of men being globally about 50 per cent higher than that of women.

From a geographical perspective (figure ES2), the highest proportion of deaths attributable to the environment compared to total number of deaths occurs in South-East Asia and in the Western Pacific (respectively 28 per cent and 27 per cent of the total burden). Sub-Saharan Africa (23 per cent of deaths attributable to the environment) is the only region where the burden of infectious, parasitic and nutritional diseases is higher than that of non-communicable diseases, but non-communicable diseases are on the rise, exposing this region to both burdens.

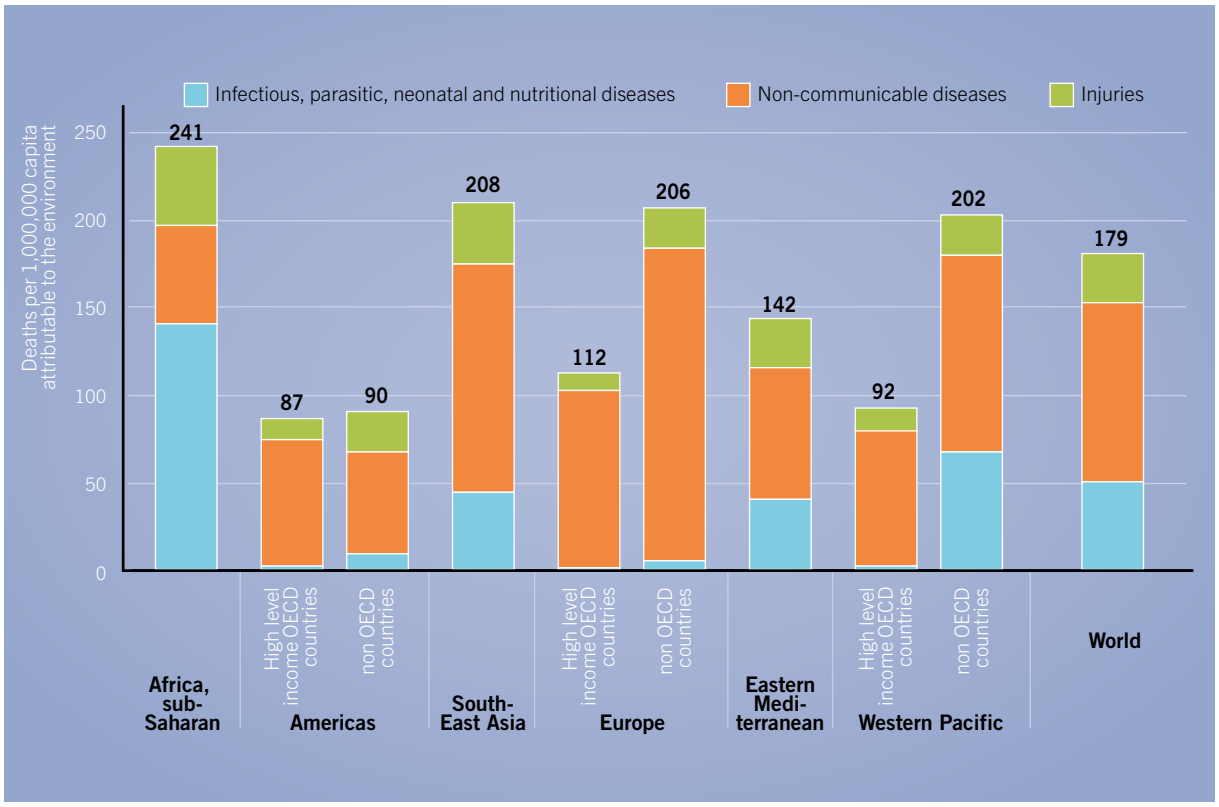
a This report uses the broader WHO definition of health as "the state of complete physical, mental and social well-being and not merely the absence of disease".

Figure ES1 Trend in the proportion of deaths attributable to the environment by disease group, 2002 – 2012



Source: Annette Prüss-Üstün and others, Preventing disease through healthy environments: A global assessment of the burden of disease from environmental risks, WHO (2016).

Figure ES2 Deaths per capita attributable to the environment, by region and disease group, 2012



Annette Prüss-Üstün and others, Preventing disease through healthy environments: A global assessment of the burden of disease from environmental risks, WHO (2016).

The number of deaths attributable to the environment represents 22 per cent of the total number of deaths in the Eastern Mediterranean region, respectively 11 per cent and 15 per cent in the Organization for Economic Cooperation and Development (OECD) and non-OECD member countries of the Americas region, and 15 per cent in Europe.

These estimates, however, do not take into account the effects of emerging global environmental changes, which risk reversing decades of progress in health and development through the combined effects of climate change, biodiversity loss and the degradation of the natural systems that support all life.

Box ES1 The diseases with the highest preventable disease burden from environmental risks, in disability adjusted life-years:

1. **DIARRHOEAL DISEASES:** 57 per cent because of environmental risks, 57 million years life lost or lived with disability due to poor water, sanitation, hygiene.

2. **UNINTENTIONAL INJURIES (other than road traffic):** 50 per cent because of environmental risks, 74 million years life lost or lived with disability because of occupational risks and poor home and community safety.

3. **ASTHMA:** 44 per cent due to environmental risks, 11 million years life lost or lived with disability because of air pollution, second-hand tobacco smoke, indoor mould and dampness, and occupational asthmagens.

4. **MALARIA:** 42 per cent due to environmental risks, 23 million years life lost or lived with disability because of poor waste, water and environmental management.

5. **ROAD TRAFFIC INJURIES:** 39 per cent due to environmental risks, 31 million years life lost or lived with disability because of poor road design, traffic system environments, poor land-use planning.

6. **LOWER RESPIRATORY INFECTIONS:** 35 per cent due to environmental risks, 51 million years life lost or lived with disability as a result of household and ambient air pollution, second-hand tobacco smoke.

7. **CHRONIC OBSTRUCTIVE PULMONARY DISEASE:** 35 per cent due to environmental risks – 32 million years life lost or lived with disability because of household air pollution, and workers' exposure.

8. **CARDIOVASCULAR DISEASES:** 30 per cent due to environmental risks, 119 million years life lost or lived with disability because of household and ambient air pollution, second hand tobacco-smoke, exposure to chemicals.

9. **CANCERS:** 20 per cent due to environmental risks, 49 million years life lost or lived with disability because of air pollution, management of chemicals, radiation and poor workers' protection.

10. **MUSCULOSKELETAL DISEASES:** 20 per cent due to environmental risks, 23 million years life lost or lived with disability because of occupational stressors, poor work postures, prolonged sitting, carrying water and solid fuels for household needs.

Source: Annette Prüss-Üstün and others, Preventing disease through healthy environments: A global assessment of the burden of disease from environmental risks, WHO (2016).

A CLEAR NEXUS EXISTS BETWEEN ENVIRONMENTAL QUALITY AND HEALTH

Air pollution is the world's largest single environmental risk to health: some 7 million people across the world die each year as a result of everyday exposure to poor air quality. Who is affected depends on exposure and occupation. In some countries, simply preparing a meal is a major risk to health because of indoor air pollution with 4.3 million deaths attributed to household air pollution arising from cooking with solid fuels. Exposure is particularly high among women and young children, who spend the most time near the domestic hearth. Children, the old and those with low immunity are especially vulnerable. Lack of access to clean water and sanitation causes 58 per cent of cases of diarrhoeal diseases in low and middle-income countries. Unsafe water, inadequate sanitation or insufficient hygiene result in 3.5 million deaths worldwide, representing 25 per cent of the deaths of children younger than 14. The 50 biggest active dumpsites affect the daily lives of 64 million people. Some 107,000 people die annually from exposure to asbestos and 654,000 died from exposure to lead in 2010. Since the first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in 1995, 606,000 lives have been lost and 4.1 billion people have been injured, left homeless or in need of emergency assistance as a result of weather-related disasters.

High-risk occupations include agriculture, mining and construction – often with a relatively high proportion of children, youth or migrant workers who have substantially higher rates of fatalities and exposure to chemicals and injuries. Vulnerable groups also include those living in poverty and those at greater risk owing to certain occupations, livelihoods and locations. Widespread land and coastal degradation greatly exacerbates the effects of extreme weather, destroys livelihoods and food security, threatens health and well-being, and subsequently even forces people into migration. The social and economic groups that are vulnerable to these environmental impacts often also suggest an environmental injustice at play, as the rich reap benefits from the activities that create the degradation and it is the poor and vulnerable groups who are most affected.

Climate change is acknowledged as a major health risk multiplier, with existing effects that are expected to increasingly affect human health, including through negative changes to land, oceans, biodiversity and access to freshwater, and the increasing frequency and higher impact of natural disasters. Cautious estimates from the World Health Organization (WHO) under a medium-high emissions scenario indicate that 250,000 additional deaths could potentially occur each year between 2030 and 2050 as a result of climate change. It may also lower the national quality of dietary intakes and worsen obesity. Environmental degradation is estimated to cause 174–234 times as many premature deaths as occur in conflicts annually. Mental health issues also rank amongst the ten largest non-fatal threats in most countries.

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The degradation of ecosystems also entails major health-related consequences. Microplastics and nanoplastics in marine ecosystems may not be biodegradable, as they can sink to the ocean floor where they are not exposed to the sunshine required for biodegradation. Excessive nutrients in fresh and coastal receiving waters from land-based activity leads to eutrophication, negatively affecting ecosystems, and freshwater and marine resource productivity, thereby having a negative impact on food security, livelihoods and health. Zoonotic diseases, linked to ecosystem disruption, such as avian influenza, Rift Valley fever and Ebola, have also become the source of major pandemics.

The outbreak of Zika, for example, is potentially exacerbated as a result of inadequate waste collection and management – the proliferation of tyres, plastics, cans, etc., in which water collects and which serve as breeding sites for the Aedes aegypti mosquito. Important ecosystem services are lost such as pollination, natural pest control and access to herbal and traditional medicines important for large shares of the world's population. Furthermore, many of these ecosystems are also carbon sinks.

Figure ES3 Examples of multiple benefits of inclusive green policies

	Environmental Benefits	Health Benefits	Economic Benefits
Transport Tight standards to reduce sulphur in fuels	Reduction in acid rain phenomena, thus lesser forest and crop damages, and lesser acidification of soils	Reduced incidence of diseases such as cardiovascular and respiratory, cancer and adverse reproductive outcomes	As a comparison, eliminating lead in gasoline on a global scale have been estimated at approximately 4% of global GDP.
Agriculture Integrated landscape management	Conservation of biodiversity and critical ecosystem services, hydropower generation, improved water quality and quantity	Reduced incidence of diseases associated with poor water quality (e.g. diarrhoeal, etc.) and/or with poor personal hygiene	Reduced health costs from water related diseases. Reduced water and sanitation costs due to improved water shed management.
Cities Increase vegetation and green spaces	Improved air quality, reduced heat island impacts, lessened storm-water flooding, intercepted pollutants	Improved human resilience to extreme weather conditions; reduced levels of stress and mental health benefits; increased outdoor physical and recreational activities and thus reduced obesity	Increased property value, reduced air conditioning costs.
Energy Clean energy supply and energy	Improved air quality	Reduced air pollution related diseases (e.g. respiratory ones)	Doubling of the share of renewable energy by 2030 would bring a global 1.1% GDP increase and 24 million