World Health Organization

# HEALTHY ENVIRONMENTS FOR HEALTHIER POPULATIONS: WHY DO THEY MATTER, AND WHAT CAN WE DO?

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Cover photo: People cycling on car free day.

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# CONTENTS

Solar panels providing renewable energy.

# INTRODUCTION

Known avoidable environmental risks to health cause at least **12.6 million deaths** every year, and account for about one quarter of the global burden of disease (2016 data) *(1)*. Air pollution alone causes about 7 million deaths a year, placing it among the top global risks to health *(2)*. Global environmental challenges are on the rise, including climate change, rapid urbanization and increased resistance to drugs.

Human influences on the environment continue to grow. Many of the resulting risks are **continuously generating disease and injuries**, impacting our quality of life, reducing our productivity, and weighing on our health systems. The broad subscription to the **sustainable development agenda** provides a clear signal that the world expects greater cohesion between people and the planet, with benefits for health and **health equity**. More sustainable ways of functioning go hand in hand with creating healthier and more sustainable environments, with enhanced focus on **prevention** through action on the root causes of disease.

The weight of evidence clearly shows the need for immediate preventive action on environment-related health impacts. Many solutions have shown notable success, and both near- and long-term returns to society are high.

**"This document highlights examples of key action to be taken by the global health community, relevant sectors and other key actors to ensure a healthy environment for disease prevention and safety for all people. We aim to mobilize key partners and supporters around these issues, increase the level of ambition and multiply actions to obtain results."**

Dr Maria Neira
Director, Health, Environment and Climate Change
World Health Organization

## Purpose and structure of the document

This document aims to provide the rationale for action to improve health through healthy environments, and an overview of key actions to take. It aims to support policy-makers and others who can influence health determinants to navigate through the various environmental health areas. These actors can thus obtain a brief overview of preventive, intersectoral action in this area to achieve sustainable health gains and reduce health care costs. The document provides an initial overview and overall policy directions, and refers to more detailed information for the next steps.

This document is structured as follows. For each topic, a brief overview is provided of the main health impacts caused by environmental factors, key actions to create healthier environments, and WHO support to countries and communities. Part I covers key environmental risks to health, such as air pollution or inadequate water supply; Part II describes the main settings for implementing action, such as workplaces or cities. To facilitate the implementation of health-protective measures across sectors, the Health in All Policies framework is presented. The topics were selected to capture the most relevant actions for health improvement, which are of global relevance, and on which we have sufficient information on impacts and actions required.

At the end of each topic, a list of sectoral policies interacting with the topic is presented. Although not exhaustive, these examples highlight where cooperation with other sectors may be required to sustainably reduce risks to health. For example, it may not be possible to achieve clean air without cooperating with the energy sector on cleaner energy solutions, the transport sector on healthy and sustainable transport solutions, or the agriculture sector to take measures to stop burning crop waste. Additional sectors to those cited may be relevant, such as education, which is pertinent to many health and environment areas.

Data provided in this document refer to the year 2016 unless stated otherwise.


Modern public transport reduces air pollution and $CO_2$ emissions.

# ABOUT THIS DOCUMENT

**This document highlights examples of key actions to be taken to ensure a healthy environment for disease prevention and safety for all people.**

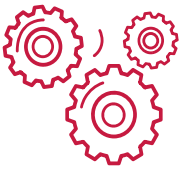
## In this document, 12 key topics are addressed

1. Ambient air pollution
2. Household air pollution
3. Water
4. Sanitation and hygiene
5. Chemical safety
6. Radiation
7. Climate change
8. Environmental health in emergencies
9. Workplaces
10. Cities
11. Housing
12. Health care facilities

## For each section

1. There is a brief overview of the main health impacts caused by environmental factors

2. Key actions to create healthier communities are outlined



3. An outline of WHO support to countries and communities is given

# KEY MESSAGES

## BURDEN OF ENVIRONMENT-RELATED DISEASE

### Healthier environments

**23%**

Globally, 23% of all deaths could be prevented through healthier environments.[1]

### Pneumonia

**45%**

45% of all pneumonia deaths in children less than 5 years old are caused by the **household use of solid fuels** and kerosene paired with polluting cookstoves.

### Air pollution

**1/8**

About one in eight deaths can be attributable to **air pollution**, mainly from noncommunicable diseases.

### Cities

**70%**

By 2050, 70% of people will live in **cities**, which concentrate many environmental risks to health.

### Contaminated water

**2 billion**

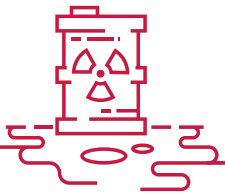
At least 2 billion people drink **faecally contaminated water**.

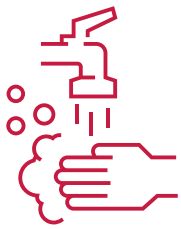
**Cholera**, usually transmitted though faecally contaminated water or food, affects 47 countries, with about 2.9 million cases reported annually.

### Chemicals

**1.6M**

More than 1.6 million deaths per year are caused by **chemicals** in the air, in consumer products, at the workplace, or in water or soil. Most of these deaths result from chronic exposure.





### Hand washing

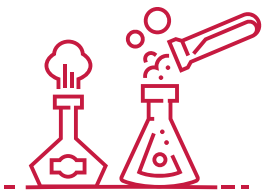
**26%**

Only 26% of people **wash their hands** after toilet use.

### Diarrhoea

**829 000**

**Inadequate water, sanitation and hygiene** cause 829 000 preventable deaths from diarrhoeal disease per year, including 297 000 preventable deaths of children aged 5 years and under.



### Climate change

**Climate change** is increasing the number of people that are affected by floods, exposed to heatwaves, or at risk from vector-borne diseases such as dengue. Health facilities are becoming dysfunctional after extreme weather events, and climate change-related migration is increasing.

[1] Estimates based on a combination of comparative risk assessments, evidence synthesis, epidemiological calculations and expert evaluation. Note that most of the data in this section are for 2016.

# STRATEGIES TO COMBAT ENVIRONMENT-RELATED DISEASE

## Primary prevention

**1.**

Scale up primary prevention to act on environmental determinants as an integral part of disease programmes, including through safely managed water and sanitation, improved hygiene, good household and ambient air quality, protection from radiation, safely managed chemicals, adequate housing, and limited climate and ecosystem change.

## Cross-sectoral action

**2.**

Critically engage in cross-sectoral action for systematic consideration of health in sectoral policies, with the aim of achieving efficient transport systems, opting for sustainable energy options and their affordable access, ensuring safe and healthy workplaces, and planning for health-supportive land-use.

## Capacity-building

**3.**

Build capacity of the health sector to steer the creation of healthier environments.

## Political will

**4.**

Build support at the highest political levels by implementing adequate governance mechanisms and scaled-up communication systems, thus creating a demand for healthier environments.

## Monitoring risks

**5.**

Monitor key risks to health and interventions to orient future action.

# WHO ACTIONS

- **Leadership:** provide leadership on environmental health matters and define policy positions, coordinate global and regional policy processes, and catalyse action for environmental health protection.
- **Capacity-building:** build capacity of and strengthen the health sector with knowledge and tools (for example Health in All Policies, health impact assessments) to engage with other sectors and provide leadership in health matters, and guide policies with health relevance.
- **Monitoring:** guide, define and monitor exposure, health indicators and interventions to measure results and help track attainment of the Sustainable Development Goals (SDGs).
- **Knowledge generation:** ensure knowledge generation and synthesis, and provide evidence-based guidelines on health impacts of sustainable strategies, technologies and interventions.
- **Emergency response:** provide timely and effective response to environmental health emergencies.

# AMBIENT AIR POLLUTION

Air pollution is mainly caused by combustion of fuels and wastes, industrial activities, and also natural dusts. It consists of fine particles and harmful gases. Ambient air pollution is currently the greatest environmental risk to health, causing mainly cardiovascular and respiratory diseases. It is widespread and affects almost all countries. Many solutions exist to reduce air pollution, including cleaner energy, transport, and agriculture options. Individuals can also contribute by using less motorized transport and consuming less energy.

People walk on pedestrian street in heavy smog.

# KEY RISKS TO HEALTH

## Poor air quality

Vehicle exhaust, industrial emissions and power production, smoke from cooking and heating with unclean technologies and fuels, agricultural practices, waste burning and wildfires all contribute to poor air quality.

**4.2 M**

Around 4.2 million deaths occur each year *(2)* as a consequence of ambient air pollution, mainly from noncommunicable diseases.

**90%**

Over 90% of people live in places where the air is unhealthy to breathe *(2)*.

## OF THE 4.2 MILLION DEATHS (2016):

**38%**

were due to heart disease (1 598 000 deaths) *(2)*

**20%**

were due to stroke (832 000 deaths) *(2)*

**43%**

were due to chronic obstructive pulmonary disease (18%; 780 000 deaths), pneumonia (18%; 772 000 deaths) and lung cancer (6%; 264 000 deaths) *(2)*

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions to counteract air pollution depend on local conditions, and include the following *(3)*:

**1.**

## Energy

Conserve energy, use energy-efficient solutions and transition away from fossil fuel combustion for energy production.

**2.**

## Regulate emissions

Regulate emissions of industry and power generation (for example brick kilns, coal-fired power plants).

**3.**

## Transport options

Develop healthy and efficient transport options, such as rapid transit combined with walking and cycling.

**4.**

## Pedestrian and cycling infrastructure

Provide transport network space for pedestrian and cycling infrastructure.

**5.**

## Land use

Improve land use systems and promote walking and cycling, leading to reduced travel times, and move polluting sources away from people.

**6.**

## Agricultural waste incineration

Reduce agricultural waste incineration, forest fires and certain agroforestry activities (for example charcoal production).

**7.**

## Clean energy

Select clean energy options while considering health impacts and their financial implications.

# MAIN WHO ACTIONS

WHO actions on air pollution include the following:

## Road map

Promote implementation of the road map for an enhanced global response to the adverse health effects of air pollution *(4)*, including through strengthening the health sector's role with knowledge and tools, and advocating health-wise solutions in different sectors.

## Cities

Work with cities through the Urban Health Initiative.

## SDG indicators

Report on SDG indicators 3.9.1 (mortality from air pollution) and 11.6.2 (levels of fine particulate matter).

## Global knowledge platform

Operate a global knowledge platform on air pollution and health.

## Awareness campaigns

Conduct global awareness campaigns, for example the BreatheLife campaign *(5)*.

## Guidelines

Keep air quality guidelines of pollutant concentrations in the air up to date and provide technical support to countries for their implementation.

# SECTORAL POLICIES INTERACTING WITH AMBIENT AIR QUALITY

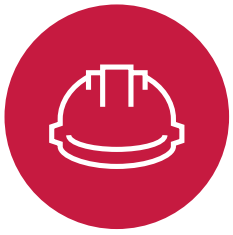
Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Industry**

**Energy**

**Agriculture**

**Land use Planning**



**Labour**

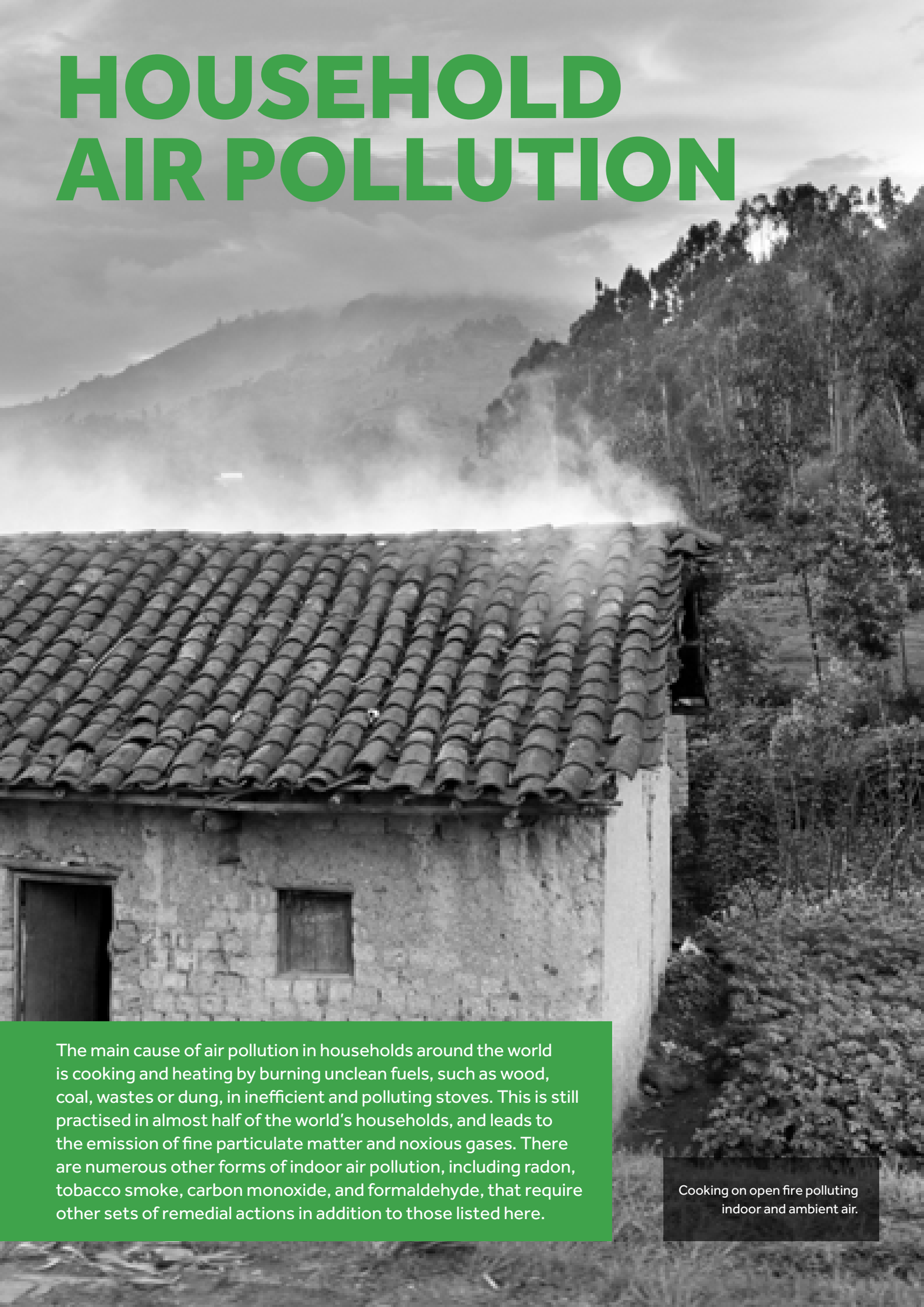
**Health**

**Transport**

**Housing**

Further information: www.who.int/health-topics/air-pollution.

# HOUSEHOLD AIR POLLUTION



The main cause of air pollution in households around the world is cooking and heating by burning unclean fuels, such as wood, coal, wastes or dung, in inefficient and polluting stoves. This is still practised in almost half of the world's households, and leads to the emission of fine particulate matter and noxious gases. There are numerous other forms of indoor air pollution, including radon, tobacco smoke, carbon monoxide, and formaldehyde, that require other sets of remedial actions in addition to those listed here.

Cooking on open fire polluting indoor and ambient air.

# KEY RISKS TO HEALTH

**3.8 M**

Around 3.8 million deaths are caused each year by smoky homes due to cooking or heating with inefficient fuels and technology combinations.

**3 B**

Some 3 billion people are still relying mainly on polluting fuels and technologies for cooking, heating and lighting, leading to high levels of household air pollution *(2)*.

## Of the 3.8 million deaths (2016):

**27%**

were due to heart disease (1 031 000 deaths) *(2)*

**18%**

were due to stroke (686 000 deaths) *(2)*

**54%**

were due to chronic obstructive pulmonary disease (20%; 763 000), pneumonia (26%; 994 000 deaths) and lung cancer *(2)*

Traditional way of making food; cooking on open fire in a rural village, near Khajuraho, India.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions to improve household air quality include the following *(6, 7)*:

## 1.
### Clean fuels
Provide access to clean fuels and technologies for all cooking, lighting and heating, as defined by the WHO guidelines for indoor air quality: household fuel combustion *(6)*.

## 2.
### Coal and kerosene
Avoid use of unprocessed coal and kerosene, and the inefficient use of solid fuels, in the household.

## 3.
### Prioritize fuels and technologies
Prioritize fuels and technologies that offer substantial health benefits during the transition to clean energy.

## 4.
### Exclusive use of clean energy
Promote the exclusive use of clean energy for all cooking, heating and lighting activities.

## 5.
### Innovations in financing
Build a larger market ecosystem for clean and modern household energy solutions through innovations in financing, and business models for household consumers, stove designers, and distributors.

## 6.
### National performance and safety standards
Develop health-based national performance and safety standards for household energy fuels and technologies.

# MAIN WHO ACTIONS

WHO actions on household air quality include the following:

## Awareness

Raise awareness on the risk of household air pollution to health, which is often underestimated.

## SDG indicators

Report on SDG indicators 3.9.1 (mortality from air pollution) and 7.1.2 (proportion of population using clean fuels and technologies).

## Guidelines for indoor air quality

Provide support to countries and other stakeholders in implementing the WHO guidelines for indoor air quality *(6, 7)* and the Clean Household Energy Solutions Toolkit (CHEST) *(8)*.

## Strategic and technical support

Provide strategic and technical support and build capacity at country and regional levels to develop and implement coordinated policies for clean household energy.

## Capacity of the health sector

Increase the capacity of the health sector to facilitate the use of clean household energy and integrate clean household energy interventions in public health programmes and campaigns.

## Household energy database

Monitor the global progress on clean fuels, as well as the health and livelihood impacts, through the WHO Household energy database *(9)* and enhanced monitoring tools.

# SECTORAL POLICIES INTERACTING WITH HOUSEHOLD AIR QUALITY

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Industry**

**Energy**

**Housing**

**Health**

Further information: www.who.int/health-topics/air-pollution.

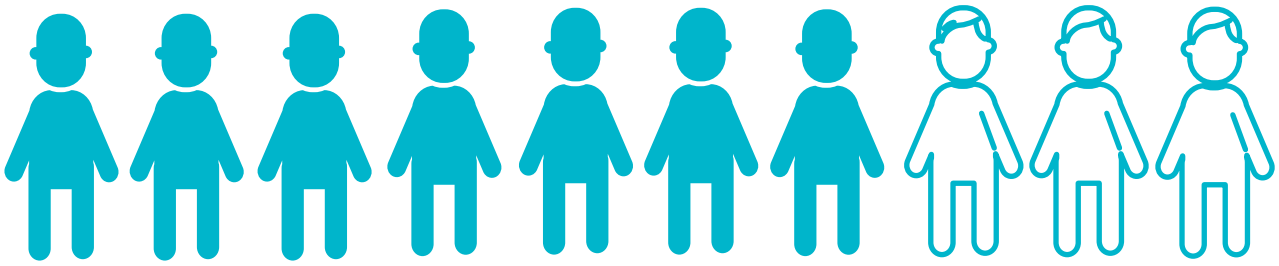
# WATER

People around the world drink water from a variety of sources, which may be treated in various ways. Accordingly, drinking-water can be safe or unsafe for consumption. Most of the many diseases caused by unsafe drinking water are infectious diseases, such as diarrhoea, and parasitic diseases. To protect health, safe water is also important for food preparation and personal hygiene. Furthermore, the adequate management of water bodies and reservoirs can play an important role in the control of vector-borne diseases.

Indian village women on the way back from collecting drinking-water in the monsoon period.

# KEY RISKS TO HEALTH

## In 2015:

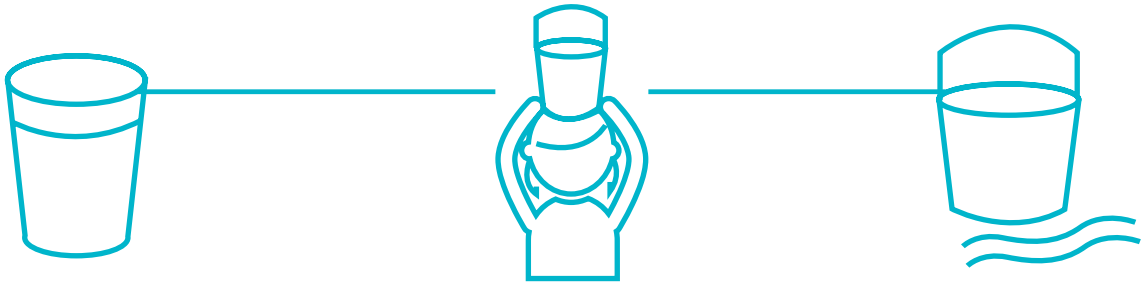


**7/10**

people used safely managed drinking water services in 2015. The remaining 3 used water sources defined as basic (17%), limited (4%), unimproved (6%) or surface water (2%) *(10)*.

**2.1 B**

More than 2.1 billion people still lacked safely managed drinking-water in 2015, including at least 2 billion people who drink water contaminated with faeces *(10)*.



**0.5 M**

About half a million diarrhoea deaths were caused by inadequate drinking-water in 2016, including 178 000 deaths in children aged under 5 years, representing 3.3% of deaths in that age group *(2)*.

**263 M**

Around 263 million people, mostly women, collected water from outside the home from sources more than half an hour away *(10)*.

**159 M**

159 million people collected drinking-water directly from surface water sources *(10)*.

Woman collecting surface water, which is at high risk of contamination.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions to improve safe water access include the following *(11–13)*:

## 1. Regulations

Develop and implement drinking water and recreational water quality regulations that include locally relevant health–based targets, promotion of risk assessment and risk management and surveillance *(11, 12)*.

## 2. Safely managed drinking-water

Pursue SDG target 6.1 in terms of providing people with access to safely managed drinking-water services (that is, located on the premises, available when needed, and free from contamination).

## 3. Monitor progress

Develop capacity to monitor progress against national targets.

## 4. Multi-barrier approach

Minimize microbial and chemical contamination in drinking-water by protecting water sources, applying a multi-barrier treatment system (for example filtration and chemical disinfection), and preventing recontamination during distribution, storage and handling.

## 5. Interim solutions

Effectively implement targeted interim solutions, such as household water treatment and safe storage, and hygiene promotion in cholera hot spot communities or during waterborne disease outbreaks.

## 6. Water resources management

Manage water resources in order to reduce health impacts from water related vector-borne diseases.

# MAIN WHO ACTIONS

WHO actions on water quality and safety include the following:

## Guidelines

Maintain up-to-date WHO drinking-water quality guidelines *(11)* and guidelines for safe recreational water *(12)* and facilitate their application into country regulations.

## Technologies

Evaluate performance of water treatment technologies.

## Tools for water safety

Develop tools for water safety planning and drinking-water quality surveillance *(13)*.

## Country support

Support countries in implementing water safety plans *(13)*, improving water, sanitation and hygiene (WASH) in health care facilities, and strengthening surveillance and monitoring programmes.

## SDG indicators

Report on SDG indicators 6.1.1 (proportion of population using safely managed drinking-water services), 1.4.1 (proportion of population with access to basic services), 3.9.2 (mortality due to unsafe WASH practices), and 6.A.1 and 6.B.1 (allocation of resources and cooperation with partners), as well as other key indicators.

# SECTORAL POLICIES INTERACTING WITH WATER

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Water and sanitation**

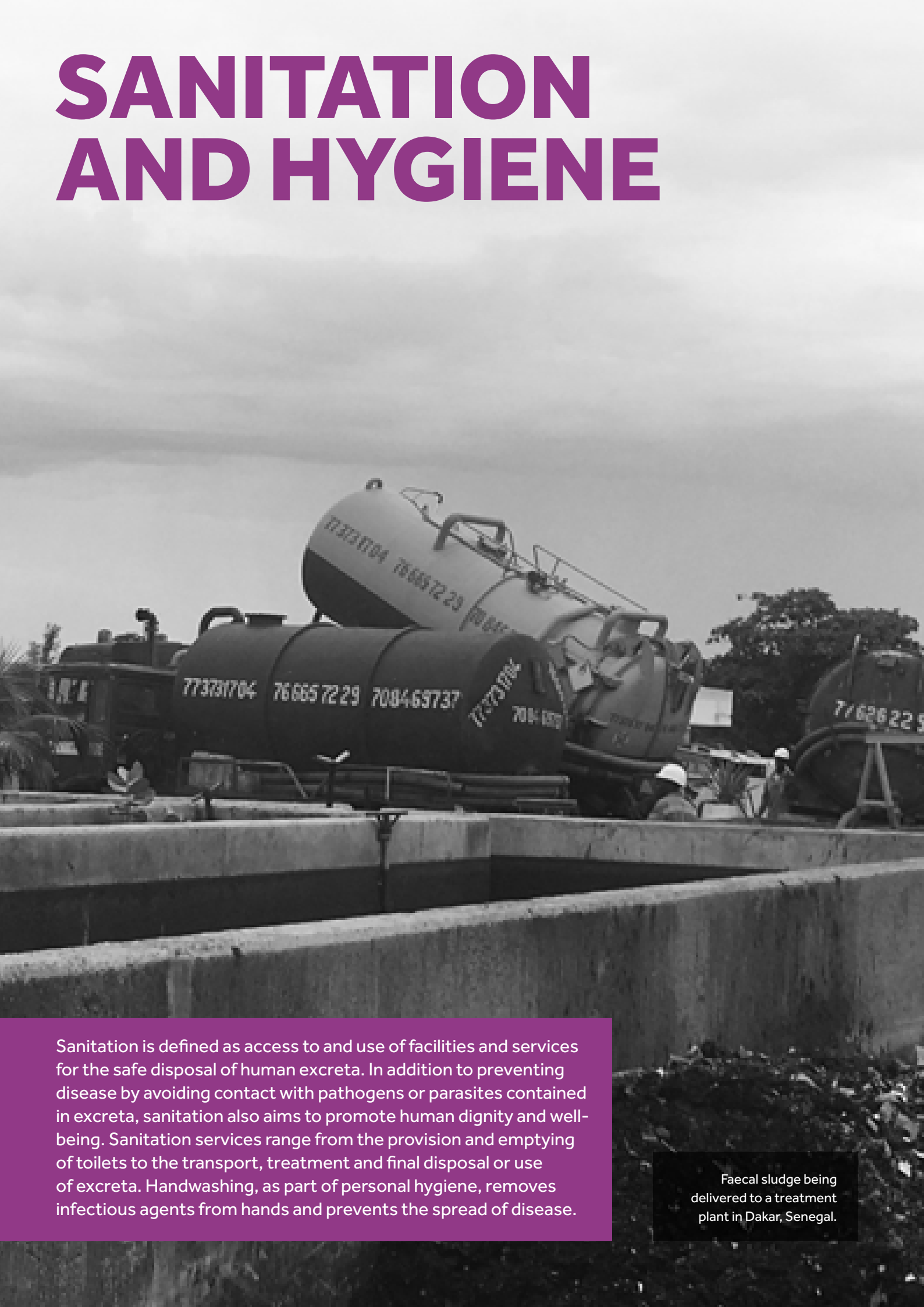
**Industry**

**Agriculture**

**Health**

Further information: www.who.int/water_sanitation_health/en/, https://washdata.org/.

# SANITATION AND HYGIENE




Sanitation is defined as access to and use of facilities and services for the safe disposal of human excreta. In addition to preventing disease by avoiding contact with pathogens or parasites contained in excreta, sanitation also aims to promote human dignity and well-being. Sanitation services range from the provision and emptying of toilets to the transport, treatment and final disposal or use of excreta. Handwashing, as part of personal hygiene, removes infectious agents from hands and prevents the spread of disease.

Faecal sludge being delivered to a treatment plant in Dakar, Senegal.

# KEY RISKS TO HEALTH

## BILLIONS OF PEOPLE DO NOT HAVE ACCESS TO SAFE SANITATION

**2/5**

people used safely managed services in 2015. The remaining 3 used sanitation defined as basic sanitation (29%), open defecation (12%), unimproved (12%) or limited sanitation (8%) *(10)*.

**4.5 B**

Nearly 4.5 billion people still lacked access to sanitation services that safely manage excreta so that they do not contaminate water supplies, fresh produce and beaches *(10)*.

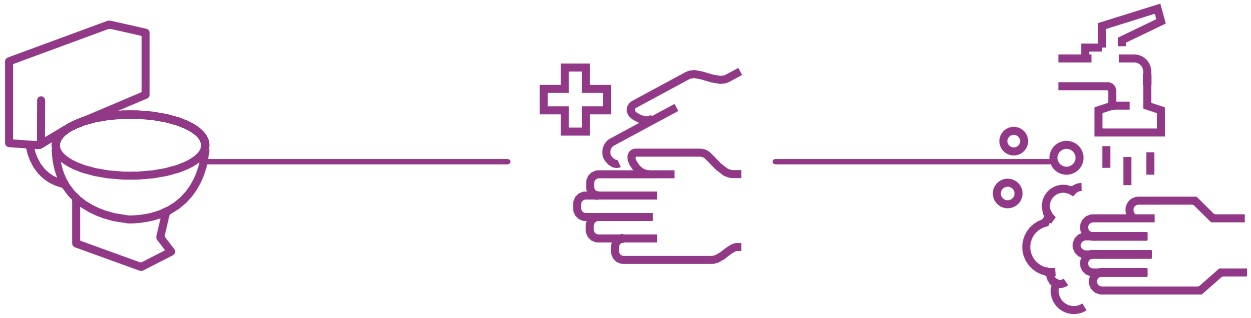
**2.3 B**

2.3 billion people (or 32% of the global population) were still lacking basic sanitation (that is, a private household toilet) *(4)*.

**892 M**

892 million people still practised open defecation *(4)*.

## INADEQUATE SANITATION AND HYGIENE RESULTS IN THOUSANDS OF DEATHS



**432 K**

About 432 000 diarrhoea deaths were caused by inadequate sanitation, including 153 000 children aged under 5 years *(2)*.

**165 K**

An estimated 165 000 diarrhoea deaths were caused by inadequate hygiene *(2)*.

**26%**

Only an estimated 26% of the world population is estimated to wash hands with soap after contact with excreta *(14)*.

Woman washing clothes at river Ganges in Varanasi, India.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions to improve sanitation and hygiene include the following:

## 1. Open defecation

End open defecation through demand creation and supply of safe toilets.

## 2. Safe toilets and handwashing facilities

Ensure entire communities have access to safe toilets that contain excreta and use basic handwashing facilities, at home, at school, in health facilities and at work.

## 3. Safe excreta management

Work towards universal safe excreta management along the sanitation chain using risk assessment and management approaches, health protective technologies and efficient operation and maintenance.

## 4. Hand hygiene

Increase hand hygiene with hygiene promotion interventions.

## 5. Agriculture

Ensure safe practices where wastewater and excreta are used in agriculture and aquaculture.

## 6. Antimicrobial resistance

Combat antimicrobial resistance though sanitation and hygiene for infection prevention and through improved wastewater management.

## 7. Health sector function

Strengthen the health sector function to coordinate, target, and integrate sanitation and hygiene in health programmes where they are needed for primary prevention (for example neglected tropical diseases, nutrition, and disease outbreaks).

# MAIN WHO ACTIONS

WHO actions on sanitation and hygiene include the following:

## SDG indicators

Report on SDG indicators 6.2.1 (on proportion of population using safely managed sanitation services) and 6.3.1 (on proportion of wastewater safely treated), as well as indicators on WASH resource allocation (6.a) and WASH-related disease (3.9), in cooperation with partners.

## Sanitation and health guidelines

Promote guidelines in sanitation and health *(15)* and facilitate their application into country programmes.

## Sanitation safety planning

Scale up support to sanitation safety planning *(16)* for implementation of sanitation and health guidelines and guidelines on safe use of wastewater, greywater and excreta.

## Recreational water safety

Update global guidance and promote preventive management of water quality at recreational beaches.

## Health care facilities

Assist in improving safe WASH in health care facilities.

## Neglected tropical diseases

Accelerate and sustain progress on control and elimination of neglected tropical diseases through the WASH and neglected tropical disease strategy and toolkit *(17, 18)*.

## Antimicrobial Resistance

Support implementation of the Global Action Plan on Antimicrobial Resistance through WASH for infection prevention and safer management of wastewater *(19)*.

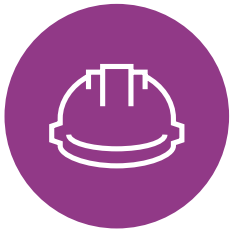
# SECTORAL POLICIES INTERACTING WITH SANITATION AND HYGIENE

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Water and sanitation**

**Industry**

**Agriculture**



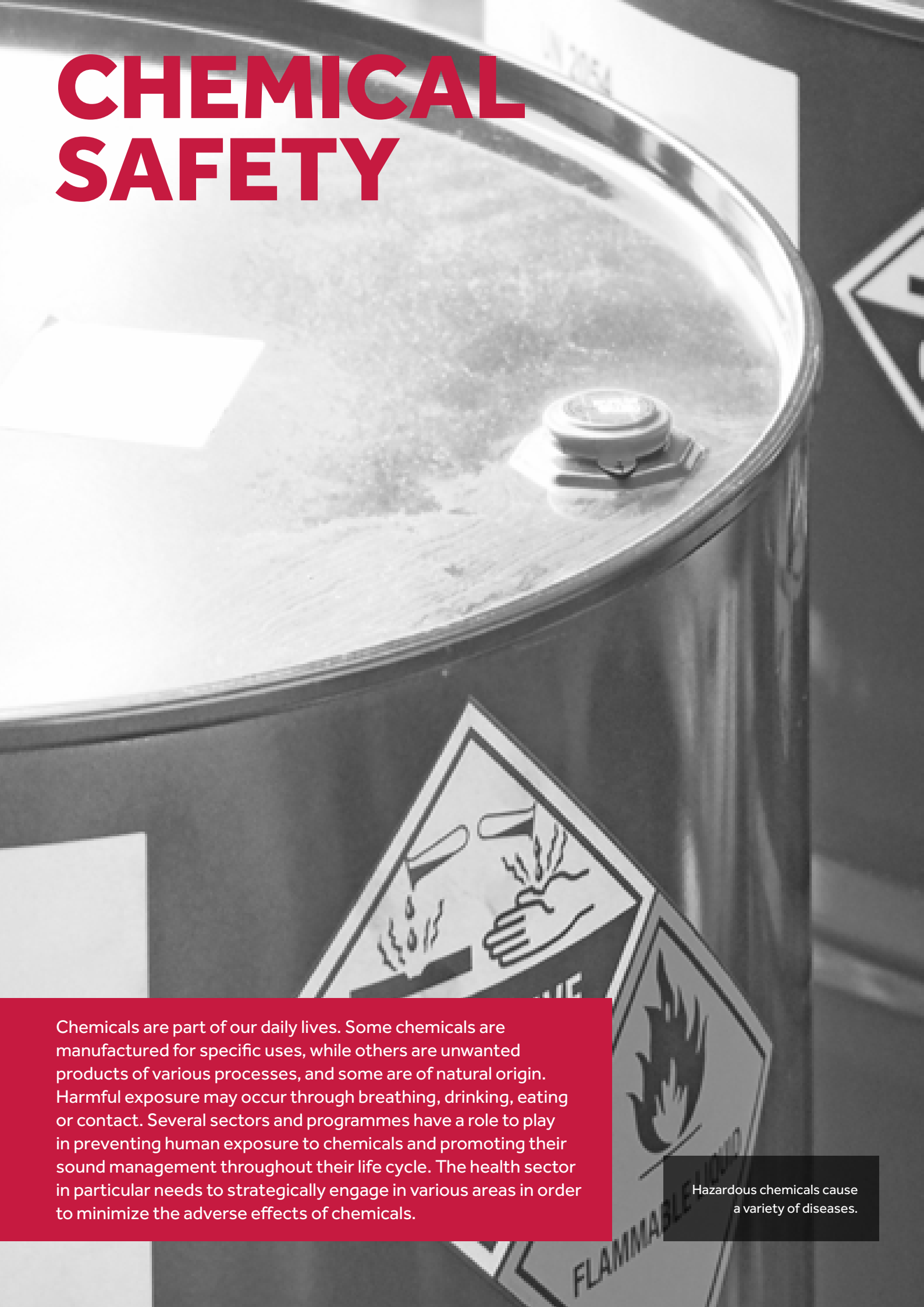
**Labour**

**Health**

Further information: www.who.int/water_sanitation_health/en/; https://washdata.org/.

# CHEMICAL SAFETY

Chemicals are part of our daily lives. Some chemicals are manufactured for specific uses, while others are unwanted products of various processes, and some are of natural origin. Harmful exposure may occur through breathing, drinking, eating or contact. Several sectors and programmes have a role to play in preventing human exposure to chemicals and promoting their sound management throughout their life cycle. The health sector in particular needs to strategically engage in various areas in order to minimize the adverse effects of chemicals.



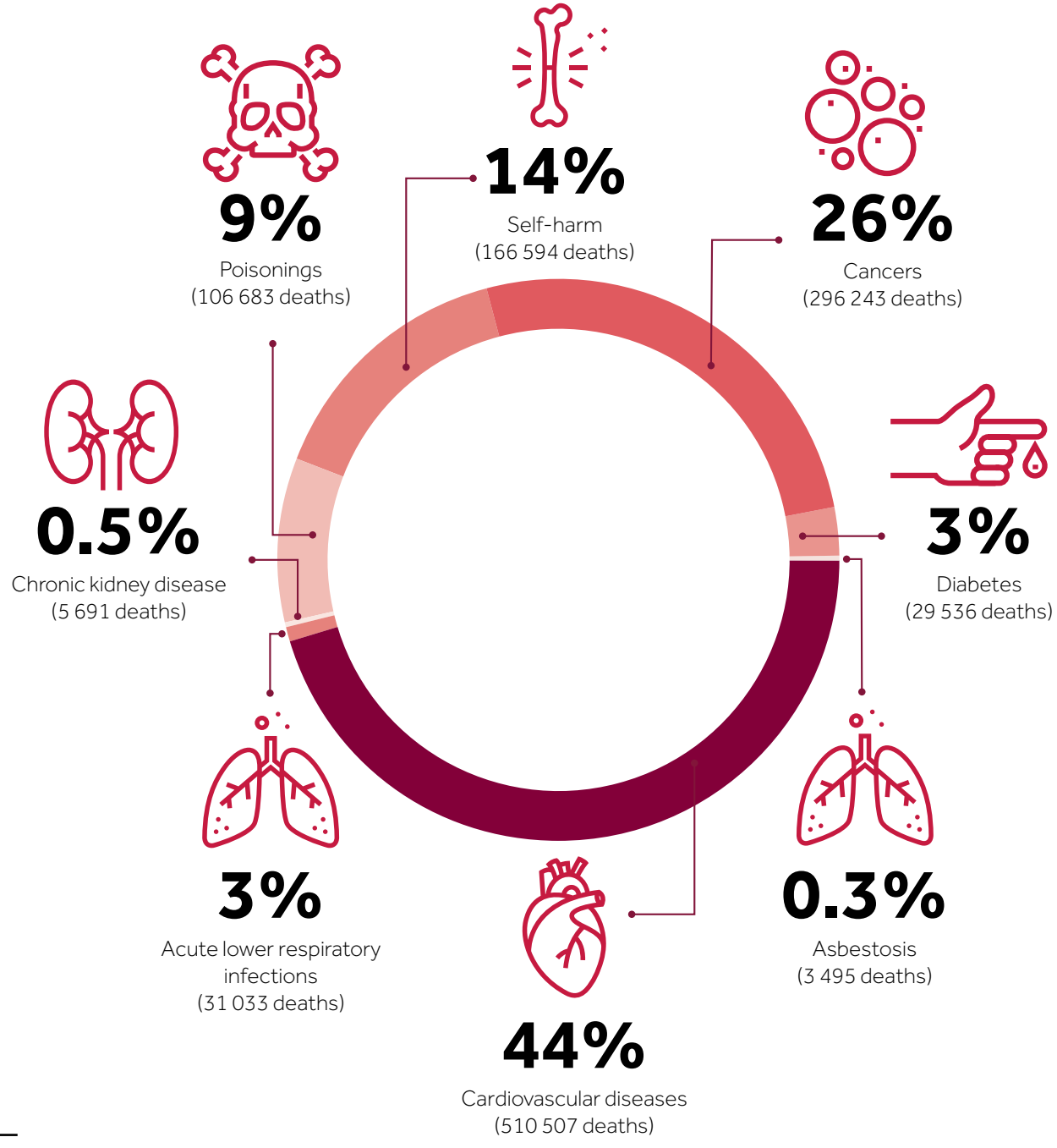

Hazardous chemicals cause a variety of diseases.

# KEY RISKS TO HEALTH

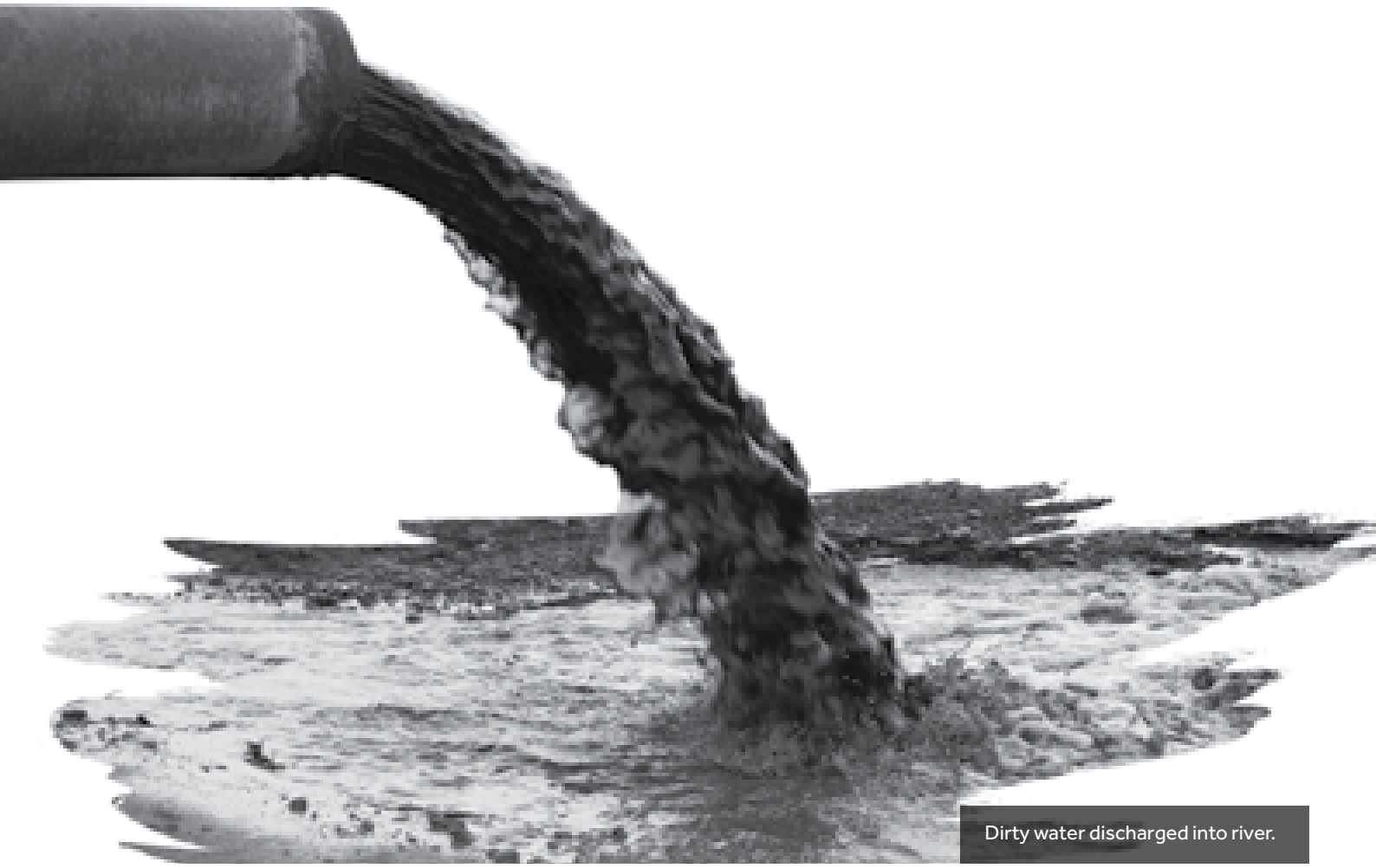
Hazardous chemicals can be found in the air, in consumer products, at the workplace, in water, or in the soil, and can cause a large variety of diseases. Many more diseases, such as mental, behavioural and neurological disorders, adverse pregnancy outcomes, cataracts, or asthma, could be prevented by reducing or removing chemical exposure.

**1.6 M** More than 1.6 million deaths were due to chemicals in 2016 *(20)*.

## PROPORTIONS OF THOSE KILLED BY SELECTED CHEMICALS IN 2016:




Source: WHO *(20, 21)* and Global Health Data Exchange *(22)*.



Dirty water discharged into river.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Implement the WHO Chemicals Road Map *(23)* approved by the World Health Assembly in 2017, which comprises four action areas:

## 1.

### Risk reduction

Perform risk reduction, including through regulating chemicals (for example by implementing the Minamata Convention on Mercury and regulating lead paint), carrying out public education, and sharing best practices.

## 2.

### Knowledge and evidence

Fill the gaps in knowledge and evidence on chemical risks, including through biomonitoring and surveillance, and estimating the disease burden from chemicals.

## 3.

### Institutional capacities

Strengthen national institutional capacities to address chemical threats, including in response to chemical incidents and emergencies.

## 4.

### Leadership and coordination

Ensure leadership and coordination to promote the inclusion of health considerations in all chemical policies, and engagement of the health sector in chemicals management activities at the national, regional and international levels.

# MAIN WHO ACTIONS

WHO actions on chemical safety include the following *(23)*:

### Countries and other stakeholders

Support countries and other stakeholders in implementing the WHO Chemicals Road Map.

### Awareness

Raise awareness, for example coordinating the International Lead Poisoning Prevention Week each year.

### Norms, guidance and tools

Provide norms, guidance and tools to address chemicals of major public health concern.

### Chemical risk assessment

Improve chemical risk assessment globally through the WHO Chemical Risk Assessment Network.

# SECTORAL POLICIES INTERACTING WITH CHEMICAL EXPOSURE

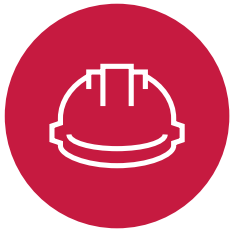
Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Water and sanitation**

**Industry**

**Housing**

**Agriculture**



**Labour**

**Health**

Further information: www.who.int/health-topics/chemical-safety.

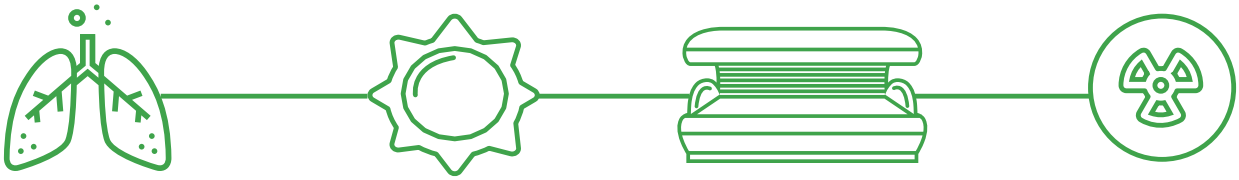
# RADIATION

People are exposed both to natural radiation, for example ultraviolet radiation and radon, and to radiation generated by human activities. Radioactive sources (emitting for example X-rays) are used in medicine for diagnosis and treatment, and in research, industry and nuclear energy production. Other forms of radiation include electromagnetic fields emitted by electricity, by devices such as mobile phones, lasers, and LED lamps, and also by the sun. To protect people from overexposure to radiation, the health sector should engage further with other sectors tasked with managing these sources.

Aerial view of beach in Mallorca, Spain.

# KEY RISKS TO HEALTH

## EXPOSURE TO RADIATION FROM SEVERAL SOURCES CAN INCREASE RISKS OF CANCERS AND DEATHS



**58 K**

Over 58 000 deaths from lung cancer were caused by residential radon in 2016 *(22)*.

**60 K**

More than 60 000 skin melanoma-related deaths are caused by solar ultraviolet radiation yearly (2000) *(24)*.

**450 K**

More than 450 000 non-melanoma skin cancer and 10 000 melanoma cases are caused by sunbed use each year in the United States of America, Europe and Australia (2014) *(25)*.

**20 K**

20 thousand thyroid cancers were caused by the Chernobyl accident (up to 2015) *(26)*.

## MEDICAL PROCEDURES EXPOSE PEOPLE TO LEVELS OF RADIATION:

**4 B**

Four billion medical imaging and millions of radiotherapy and nuclear medicine procedures are performed each year (2008) *(27)*.

## MANY COUNTRIES HAVE DEVELOPED LEGISLATION FOR PROTECTION FROM SELECTED RADIATION RISKS:

**78%**

of surveyed countries (40 of 51 countries) developed legislation for protection against any electromagnetic frequency (e.g. power lines, radiofrequency) *(2)*.

**56%**

of surveyed countries (25 of 45 countries) developed legislation for protection against artificial tanning sunbeds *(2)*.

Chernobyl nuclear power plant.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions to combat the adverse health effects of radiation include the following:

## 1.
### Legislation
Establish relevant legislation, tools and mechanisms to protect the public, workers and patients from radiation.

## 2.
### Protective measures
Inform the public about the effects and risks of overexposure to radiation, and protective measures that can be taken.

## 3.
### Radon
Reduce exposure to radon, for example through radon mitigation strategies.

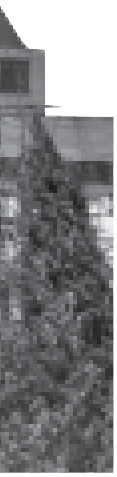
## 4.
### Ultraviolet radiation
Encourage personal protection against ultraviolet radiation.

## 5.
### Medical use of radiation
Promote a safety culture in the medical use of radiation and reduce unnecessary medical radiation exposure.

## 6.
### Emergencies
Build and strengthen national capacities to respond to radiation emergencies.

# MAIN WHO ACTIONS

WHO actions on the adverse health effects of radiation include the following:



### Radiation safety standards

Develop radiation safety standards and support countries in their implementation.

### Information

Produce information on the effects of radiation through advocacy and communication.

### Emergencies

Coordinate preparedness and public health response to radiation emergencies.

### Research agendas

Develop research agendas on radiation-related topics.

### Evidence-based policy

Assess health risks from radiation exposure and provide evidence-based policy options, guidelines and tools, for example on radiation safety in medicine, sunbed use, radon control, and emergency preparedness and response.

# SECTORAL POLICIES INTERACTING WITH HEALTH PROTECTION FROM RADIATION

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Industry**

**Energy**

**Telecom**

**Housing**

**Labour**

**Health**

Further information: www.who.int/health-topics/radiation.

# CLIMATE CHANGE

Climate change has both direct impacts on health, due to extreme weather events, and indirect effects, for example resulting from food and water insecurity, and from increasing transmission of vector- and waterborne diseases. Further impacts may include the disruption of health care systems and water and sanitation supplies, increased health inequality, displacement of communities, and resulting health consequences. On the other hand, numerous co-benefits are achieved from climate change mitigation actions, for example through cleaner air and healthier and more sustainable diets.

Flooded roads in Houston, United States of America.

# KEY RISKS TO HEALTH

Climate change is expected to cause **250 000** additional deaths per year between 2030 and 2050.[2]

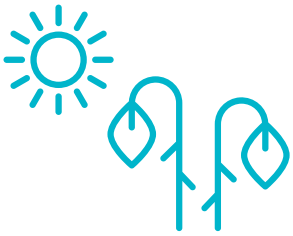
These deaths will result from several factors, including increases in malnutrition, malaria, diarrhoea and heat stress. Direct health costs will amount to an estimated US$ **2–4 billion** per year by 2030.

**TODAY**

The number of people flooded per year globally is expected to increase by **10–25 million** per year by 2050 *(29)*.

**2050**

Between **25 million** and **1 billion** climate change migrants are expected by 2050 *(30)*.



An additional **1.4 billion** persons are projected to experience drought exposure events per year by 2100 *(28)*.

**2100**

## Number of countries supported to strengthen climate-resilient health systems (2019)

Status as of February 2019. Source: WHO.

**35** With WHO or joint WHO/partner support.

**5** With support of other international agencies.

[2] Fact sheet on climate change and health: https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health.

Climate change leads to extreme weather events such as droughts and can aggravate water scarcity.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions to combat the adverse health effects of climate change include the following:

## 1.
### Carbon emissions
Implement policies to reduce carbon emissions and meet the targets of the Paris Agreement on Climate Change as a way of gaining health co-benefits, particularly through reduced air pollution.

## 2.
### Energy systems and public transportation
Build cleaner energy systems and public transportation, promote active movement, promote sustainable and healthy diets, and encourage other choices or conditions that have the potential to reduce carbon emissions and result in health co-benefits.

## 3.
### Health systems
Build climate-resilient and sustainable health systems, for example by ensuring that health care facilities have reliable energy and WASH provision, are resilient to extreme weather, and are reducing their environmental impact.

## 4.
### Vulnerability
Reduce health vulnerability to climate change, including through ensuring food and water security, and providing early warning systems for heatwaves or floods.

## 5.
### Heat islands
Design urban plans to include green spaces that reduce heat islands in cities.

# MAIN WHO ACTIONS

WHO actions on the adverse health effects of climate change include the following:

### International climate negotiations

Ensure that international climate negotiations fully consider health risks and opportunities.

### Policy and technical support

Provide policy and technical support to countries to plan, implement and finance programmes to address the health effects of climate change.

### Evidence

Synthesize the evidence, raise awareness and monitor progress on climate change and health effects, from global to country level.

### Reduce carbon emissions

Support climate change mitigation by promoting actions that reduce carbon emissions and simultaneously improve health.

# SECTORAL POLICIES INTERACTING WITH HEALTH PROTECTION FROM CLIMATE CHANGE

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Industry**

**Energy**

**Transport**

**Housing**

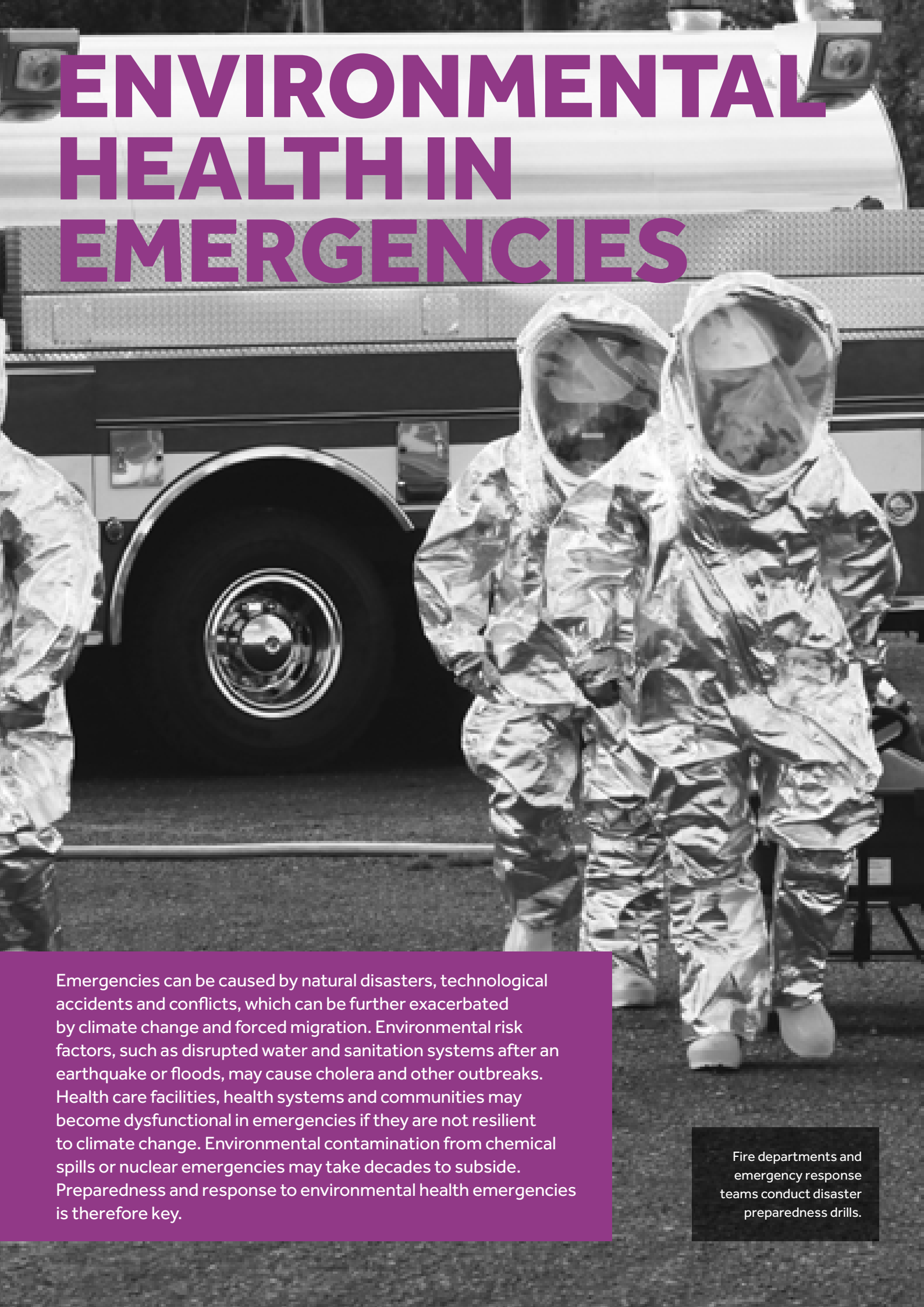
**Agriculture**

**Labour**

**Health**

Further information: www.who.int/health-topics/climate-change.

# ENVIRONMENTAL HEALTH IN EMERGENCIES

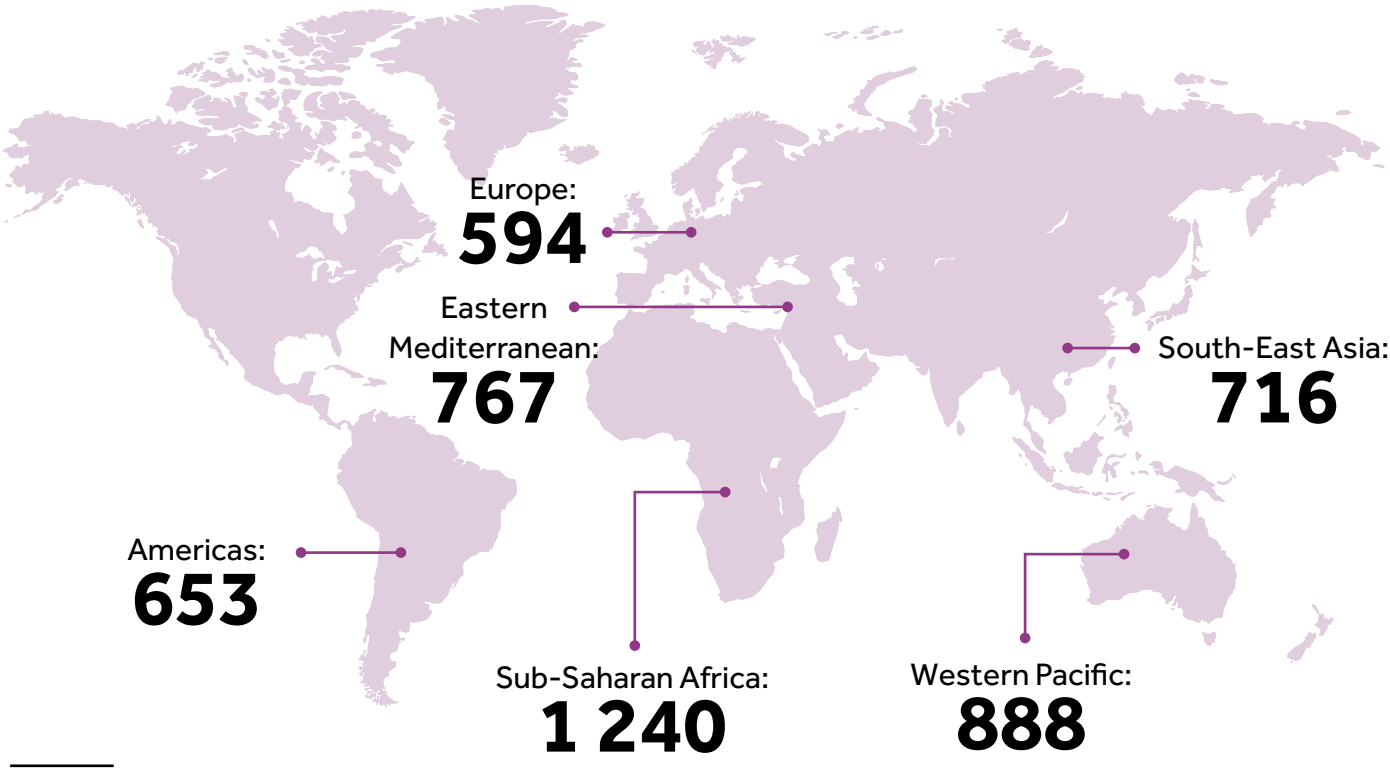


Emergencies can be caused by natural disasters, technological accidents and conflicts, which can be further exacerbated by climate change and forced migration. Environmental risk factors, such as disrupted water and sanitation systems after an earthquake or floods, may cause cholera and other outbreaks. Health care facilities, health systems and communities may become dysfunctional in emergencies if they are not resilient to climate change. Environmental contamination from chemical spills or nuclear emergencies may take decades to subside. Preparedness and response to environmental health emergencies is therefore key.

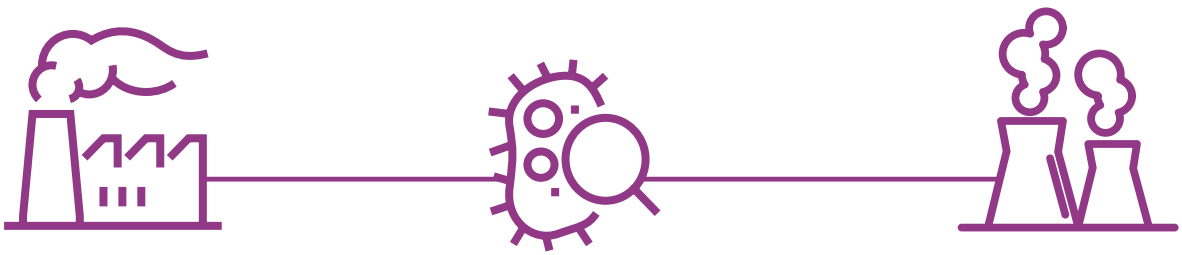
Fire departments and emergency response teams conduct disaster preparedness drills.

# PRIORITY SETTINGS FOR ACTION

## NUMBER OF TECHNOLOGICAL DISASTERS BY WHO REGION, 2000–2017




Source: International Disaster Database *(30)*



Over **4800** technological disasters, such as industrial accidents, occurred between 2000 and 2017 *(31)*.

**2.15 M** people affected worldwide *(31)*.

**47** countries affected by cholera, usually transmitted through faecally contaminated water or food *(32)*.

about **2.9 M** cases annually *(32)*.

**80 000** people relocated as a result of the accident at the Fukushima Daiichi Nuclear Power Station, which caused widespread radiological contamination *(33)*.

A chemical or radionuclear event in one country can lead to health consequences in other countries *(31)*.

Checking radiation levels in a danger zone.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions on environmental health in emergencies include the following:

## 1. Policies and plans

Implement national policies and plans for prevention, preparedness, response and recovery in the event of emergencies, including technological disasters arising from natural hazard events.

## 2. Intersectoral coordination

Strengthen intersectoral coordination and collaboration for emergencies.

## 3. Capacities

Ensure institutional and human capacities and resources are in place for dealing with environmental health impacts in emergencies.

## 4. Early warning systems

Put in place early warning systems.

## 5. Safe WASH services

Invest in safe WASH services in cholera hot spot communities, including in health care facilities.

## 6. Construction and maintenance

Ensure the construction and maintenance of earthquake-, flood- and cyclone-resistant infrastructure, such as buildings, industrial facilities, and water supply and sanitation systems.

## 7. International Health Regulations

Implement the International Health Regulations on chemical, radiological and nuclear events.

## 8. Occupational health and safety

Integrate occupational health and safety into national health security plans.

# MAIN WHO ACTIONS

WHO actions on environmental health in emergencies include the following:

### Guidance and assistance
Develop guidance and provide assistance for public health management of emergencies.

### Cholera
Support the development of national cholera prevention and control plans and strengthen coordinated WASH and health actions through the Global Task Force on Cholera Control.

### Capacities
Support countries in developing the necessary capacities for prevention, preparedness, response and recovery in the event of emergencies, including those required for implementation of the International Health Regulations.

### Health care facilities
Support Global Health Cluster partners in monitoring and improving WASH in health care facilities in emergencies.

### Knowledge
Improve knowledge on the burden of disease from radiation and chemical emergencies.

### Occupational health and safety
Support and build country capacity to protect occupational health and safety in public health emergencies.

# SECTORAL POLICIES INTERACTING WITH EMERGENCY PREPAREDNESS AND RESPONSE IN ENVIRONMENTAL HEALTH EMERGENCIES

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Industry**

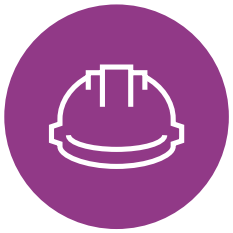
**Energy**

**Housing**

**Land use planning**

**Health**

**Water and sanitation**



**Labour**

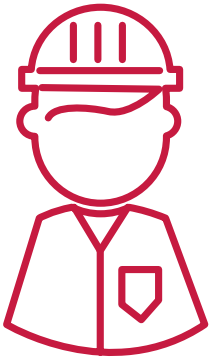
Further information: www.who.int/environmental_health_emergencies; www.who.int/health-topics/radiation.

# WORKPLACES

People at work are exposed to many occupational risks – including high levels of dust, noise, vibration, heat, toxic chemicals, pathogens, ergonomic risks and unsafe equipment – leading to occupational diseases and injuries. Psychosocial factors, such as harassment, shift work, long working hours, and precarious employment, affect physical and mental health and well-being and lead to health inequalities. Improving health at work requires regulations and measures for occupational health and safety, enabling healthy behaviours and provision of occupational health services.

People in unofficial employment often face particular health hazards.

# PRIORITY SETTINGS FOR ACTION



**1.2 M**

At least 1.2 million deaths were due to occupational risks in 2015 *(34)*.

**3%**

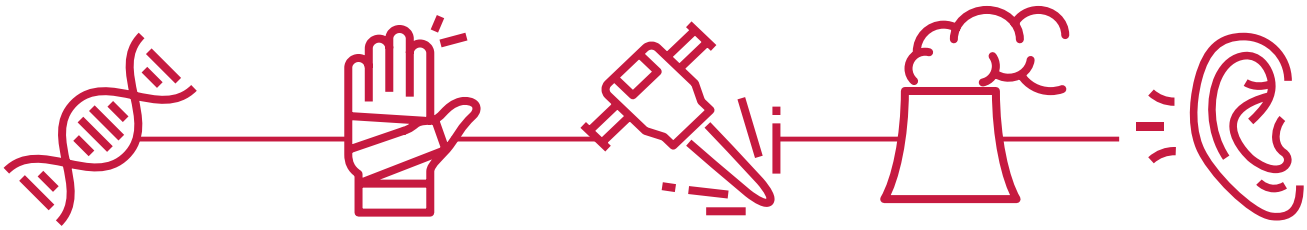
About 3% of the global disease burden is due to occupational risks.

**70%**

Noncommunicable diseases contribute 70% to the total occupational disease burden.

## OCCUPATIONAL DISEASE BURDEN BY SELECTED OCCUPATIONAL RISKS:

### (IN DISABILITY-ADJUSTED LIFE-YEARS) *(22)*



**28%**

Occupational carcinogens (20 682 726 DALYs)

**29%**

Occupational injuries (22 028 767 DALYs)

**21%**

Occupational ergonomic factors (15 479 932 DALYs)

**13%**

Occupational particulate matter, gases, and fumes (9 377 104 DALYs)

**10%**

Occupational noise (7 108 277 DALYs)

Construction workers carrying wood.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions on workplaces and occupational health include the following:

## 1.
### Cooperation
Strengthen the cooperation of the health and labour sectors to achieve healthier and safer work environments and improve the health and well-being of working people.

## 2.
### Regulations
Implement occupational safety and health regulations to protect workers from work-related health problems.

## 3.
### Monitoring
Monitor the status of workers' health and its determinants at the national, local and workplace levels.

## 4.
### Primary prevention
Foster the primary prevention of occupational health risks based on the hierarchy of controls: replace and substitute harmful products and processes, use engineering and administrative controls and personal protective equipment.

## 5.
### Essential interventions and basic health services
Ensure access of all workers to essential interventions and basic health services for prevention and control of occupational and work-related diseases and injuries, including workplace risk assessment, case management of occupational diseases and health surveillance of workers.

# MAIN WHO ACTIONS

WHO actions on workplaces and occupational health include the following:

### National policies
Provide technical support for the development of national policies on workers' health.

### Early detection
Develop methods for early detection of the most common occupational diseases.

### Global observatory
Establish a global observatory for workers' health, covering the state of workers' health and its determinants.

### Primary care
Provide technical support to countries for integrating work-related health aspects into people-centred primary care.

### Country capacity
Strengthen country capacity for protecting the health and safety of health workers.

### Emergencies
Develop tools for management of occupational health and safety in public health emergencies.

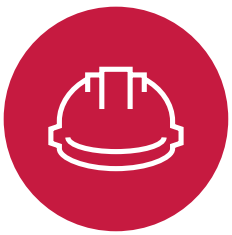
### Vulnerable situations
Synthesize and disseminate evidence and good practices for protecting the health of workers in vulnerable situations, such as those in the informal sector and small-scale farming, and migrant workers.

# SECTORAL POLICIES INTERACTING WITH WORKERS' HEALTH

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Industry**

**Agriculture**



**Labour**

**Health**

**Energy**

**Transport**

Further information: www.who.int/health-topics/occupational-health.

# CITIES

The main asset of cities is the health of its citizens. Cities offer many services for health and well-being, as well as income opportunities. Conversely, cities concentrate risks to health, such as air pollution, social isolation and violence. Health, environmental, societal and climate benefits can be achieved through proper city governance and healthy urban planning. Actions to unlock benefits include moving towards sustainable transport; efficient land use and solid waste management; adequate provision of housing, water and sanitation; and open and green spaces for all.

Green space in urban areas creates opportunities for physical activity, social and leisure activities.

# PRIORITY SETTINGS FOR ACTION

**1/2**
Over half the world's population live in cities

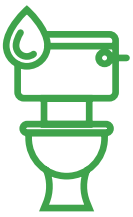
**70%**
of the world's population are expected to live in cities by 2050

Cities can be hot spots for many health and environment risks – from air pollution, to waste and chemical contamination, to traffic injuries.

## BUT HEALTH-FOCUSED URBAN DESIGN AND CITY GOVERNANCE CAN MAKE CITIES A BEDROCK FOR HEALTHY LIFESTYLES THROUGH ACTION ON:

**Supply of energy**

**Urban planning**



**Water and sanitation**

**Waste management**

# LEVELS OF URBAN TRANSFORMATION:

**1.** Current policies assessed and mapped

**2.** Health policy-makers enhanced their competencies

**3.** Tools developed and applied for assessing health and economic benefits

**4.** Alternative scenarios tested – vision for healthy urban future articulated

**5.** Targeted information has intensified demands for change

**6.** Urban leaders act – changes in policies, air quality, climate, environmental and health indicators are tracked

Source: WHO.

View of green roof on modern buildings and other residential buildings in Sydney, Australia.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions on urban health and environmental risks include the following:

## 1.
### Awareness
Raise awareness of the huge health impacts of unhealthy urban environments among policy leaders and the public, including through better monitoring of air pollution and other risks.

## 2.
### Health leaders
Convene health leaders at urban level to assess pollution risks and take action, building on Health in All Policies approaches.

## 3.
### Sectoral and urban policies
Incorporate health criteria in sectoral and urban policies, city master plans, and sector development policies and plans for transport, energy, housing, and waste management.

## 4.
### Economic costs
Assess the economic costs of risks to health and monitor risks and the effectiveness of new interventions for health and health equity.

## 5.
### Policy change
Track progress on policy change and results from city initiatives to address environmental risk, as well as their links to health.

# MAIN WHO ACTIONS

WHO's Urban Health Initiative provides a model for the health sector to contribute to healthy urban planning and policies, sustainable development and climate resilience. The Urban Health Initiative develops health sector leadership, capacity and tools to address urban planning and health issues more effectively through the following measures:

### Tools and training materials

Provide health-oriented tools and training materials, adapted for use at the city level, to assess air pollution and other environmental risks and compare the health benefits or costs of particular development strategies.

### Competency and leadership

Enhance health sector competency and leadership to use these tools, to demonstrate the health costs of unsustainable development and demand more health-enhancing urban policies.

### Economic costs

Provide evidence about economic costs of poor development choices so as to leverage investments that benefit health as well as equity, particularly for vulnerable groups.

### BreatheLife campaign

Develop and promote membership of the BreatheLife campaign *(5)* to leverage policy and public commitments to clean air, climate-friendly cities and healthier urban lifestyles.

# SECTORAL POLICIES INTERACTING WITH HEALTH IN CITIES

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Industry**

**Energy**

**Transport**

**Land use planning**

**Labour**

**Health**

**Water and sanitation**

Further information: www.who.int/health-topics/urban-health.

# HOUSING

The quality of housing has major implications for people's health. Characteristics such as living space (crowding), low or high indoor temperatures, injury hazards in the home, water quality, air quality, neighbourhood noise, asbestos, lead, tobacco smoke, radon and accessibility of housing for people with functional impairments are all of relevance. Preventive measures related to housing construction, renovation, use and maintenance can promote better overall health.

Poor housing conditions create multiple health risks.

# PRIORITY SETTINGS FOR ACTION

## THE PROBLEM:

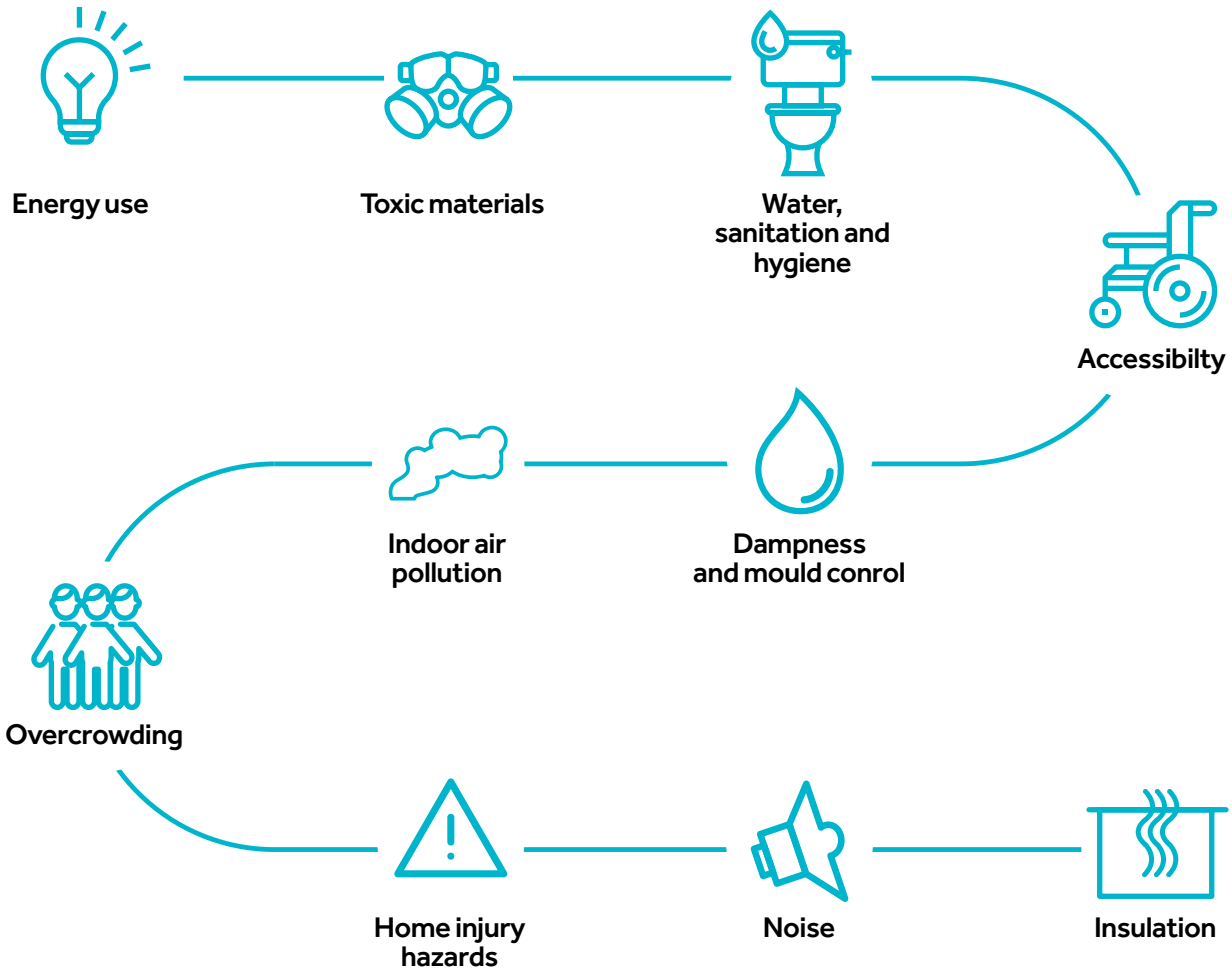
**828 M**

828 million people are living in slums.

The World's population will double by 2050 and will require adequate housing solutions. Poor housing conditions create multiple health risks.

Households are an entry point for a multifactorial approach to improve many housing conditions as part of the drive to create a healthier living environment.

### HOUSING CAN IMPROVE WELL-BEING THROUGH ACTING ON:



Slum on the Saigon river bank, in front of modern buildings, in Ho Chi Minh City, Viet Nam.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions on housing include the following:

## 1. Health criteria

Incorporate health criteria in housing and construction policies.

## 2. Cooperation

Facilitate cooperation between the health sector and other relevant sectors to foster implementation of those policies.

## 3. Intersectoral planning

Facilitate intersectoral planning and collaboration at all levels, and allocate sufficient resources.

## 4. Capacities

Develop the capacities of health professionals to better identify and prevent environmental exposure due to substandard housing conditions.

## 5. Knowledge and evidence

Fill the gaps in knowledge and evidence on housing risks for health, and estimate the disease burden from housing.

## 6. Slum upgrading

Promote health-based slum upgrading strategies.

# MAIN WHO ACTIONS

Possible WHO actions on housing include the following:

## Norms and guidance

Provide norms and guidance to address housing and health through the development of WHO housing and health guidelines *(35)*.

## Awareness and communication

Raise awareness and develop communication materials on key housing recommendations for health and reach out to various stakeholders, from policy-makers to users.

## Implementation

Provide support for the implementation of the guidelines through the development of tools for addressing housing and health and disseminate good practices.

## Housing upgrading

Synthesize evidence on major risks in slums and propose key housing upgrading interventions with documented health benefits.

## Capacities

Build capacities of health workers to understand the mental and physical health impacts of housing.

## Prioritized action

Advocate prioritized action on the health impacts of housing policies with other key United Nations agencies, for example UN-Habitat and the United Nations Economic Commission for Europe.

# SECTORAL POLICIES INTERACTING WITH HEALTH IN HOUSEHOLDS

## (in addition to health authorities)

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Energy**

**Land use planning**

**Water and sanitation**

**Industry** (incl. construction)

Further information: https://apps.who.int/iris/bitstream/handle/10665/276001/9789241550376-eng.pdf.

# HEALTH CARE FACILITIES

Health care facilities are the operational heart of service delivery. Limited access to water, sanitation and hygiene and poor waste management impede the ability to maintain hygienic environments and prevent health care-acquired infections. Reliable energy supply is fundamental for maintaining the quality, range and population coverage of essential health services. Yet many health care facilities in low- and middle-income countries currently lack water, sanitation, and energy, as well as occupational health services. Ensuring climate resilience and environmental sustainability of health systems can generate considerable health gains.

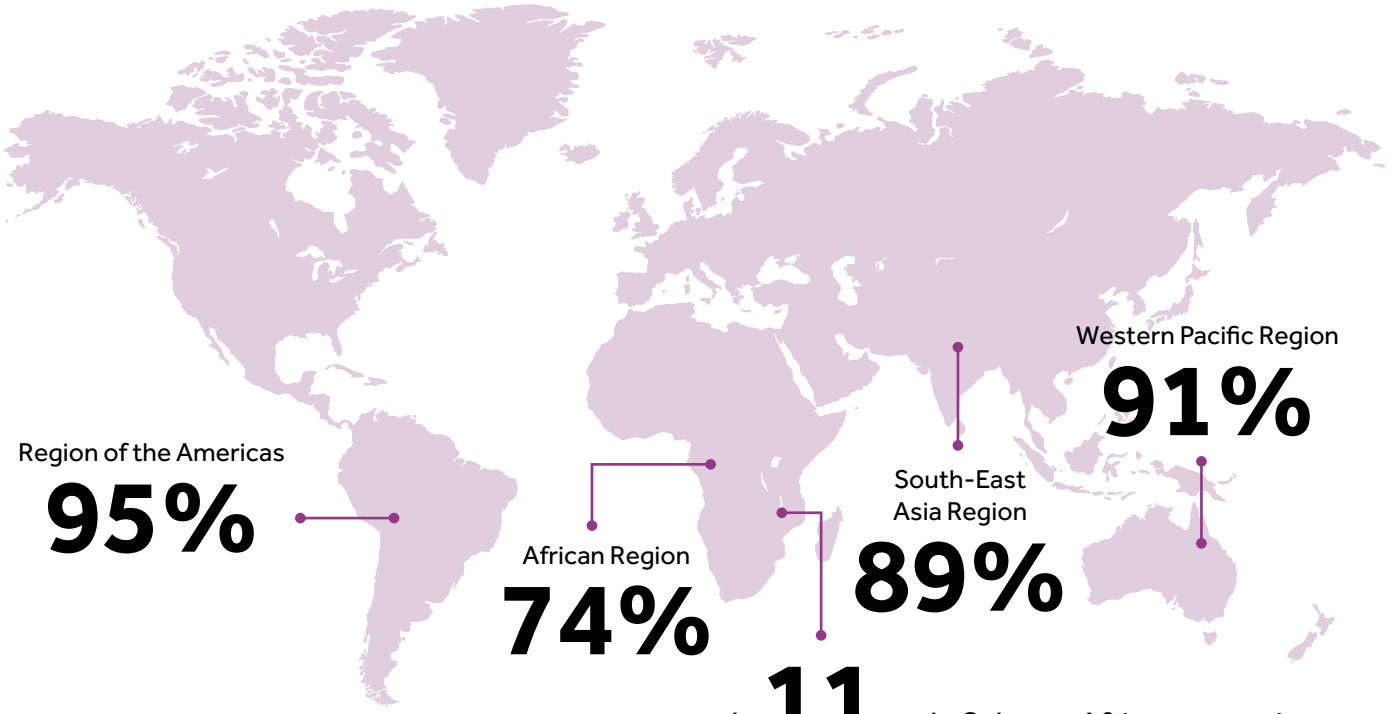
Many health care facilities around the world are lacking basic services, hindering routine medical procedures.

# PRIORITY SETTINGS FOR ACTION

## IMPROVED WATER IN HEALTH CARE FACILITIES BY WHO REGION

Source: WHO and UNICEF *(36)*.

88% of all health care facilities have water services




In **11** sub-Saharan African countries, one quarter of health care facilities lack any access to electricity *(37)*.

## BASED ON A REVIEW OF 125 LOW- AND MIDDLE-INCOME COUNTRIES:

**26%**
of health care facilities lack access to even basic levels of water *(36)*.

**21%**
have no sanitation *(36)*.

**43%**
have no handwashing facilities at point of care *(36)*.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions on health care facilities include the following:

## 1.
### National assessments
Conduct national assessments and set appropriate targets for improving WASH in health care facilities.

## 2.
### Adequate water and sanitation
Prioritize the provision of adequate water and sanitation to ensure infection prevention and quality care in health care facilities.

## 3.
### Electricity
Ensure that hospitals and health care facilities are equipped with an adequate and reliable supply of electricity for essential health care services.

## 4.
### Workers
Protect health care workers.

# MAIN WHO ACTIONS

WHO actions on health care facilities include the following:

### Global call to action

Drive coordinated global action to effectively respond to the United Nations Secretary-General's global call to action for WASH in all health care facilities *(38)*.

### Energy-efficient medical devices

Identify energy-efficient medical devices for resource-constrained settings.

### Gaps

Assess the gaps in water and sanitation services, handwashing with water and soap, and sustainable energy access in health care facilities.

### Implementing standards

Support countries in strengthening and implementing standards and embedding WASH indicators in health monitoring information systems.

### Advice and guidance

Provide advice and guidance on the power demands of essential health care services.

### Health facility improvement tool

Support training and implementation of the water and sanitation for health facility improvement tool (WASH FIT) in collaboration with health efforts *(39)*.

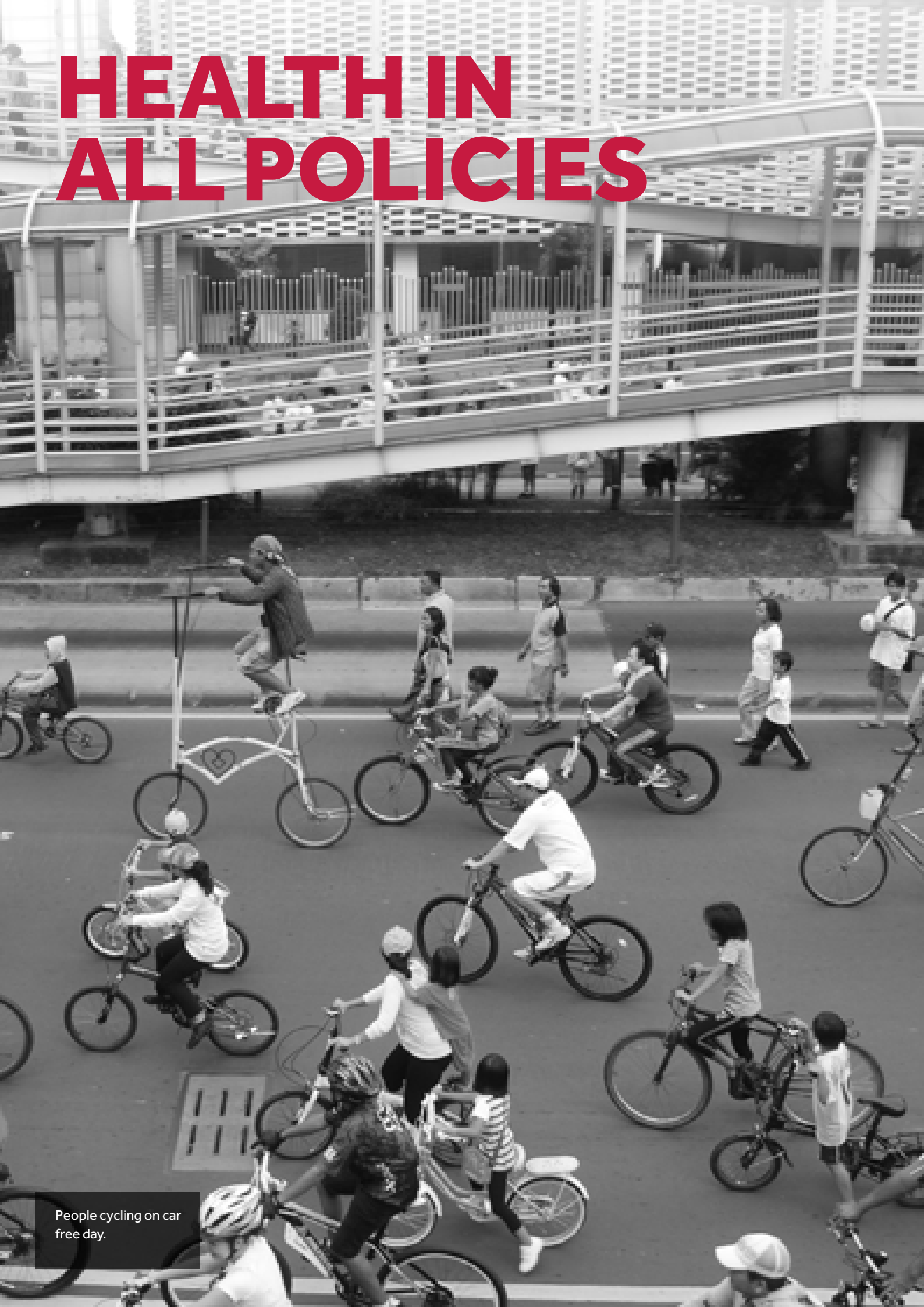
# SECTORAL POLICIES INTERACTING WITH HEALTH CARE FACILITIES

Cooperation with the following sectors may be required to sustainably reduce risks to health:

**Energy** | **Health** | **Water and sanitation** | **Industry** | **Labour**

Further information: www.washinhcf.org; http://www.who.int/water_sanitation_health.

# HEALTH IN ALL POLICIES



People cycling on car free day.

# KEY COMPONENTS OF IMPLEMENTING HEALTH ACTION ACROSS SECTORS

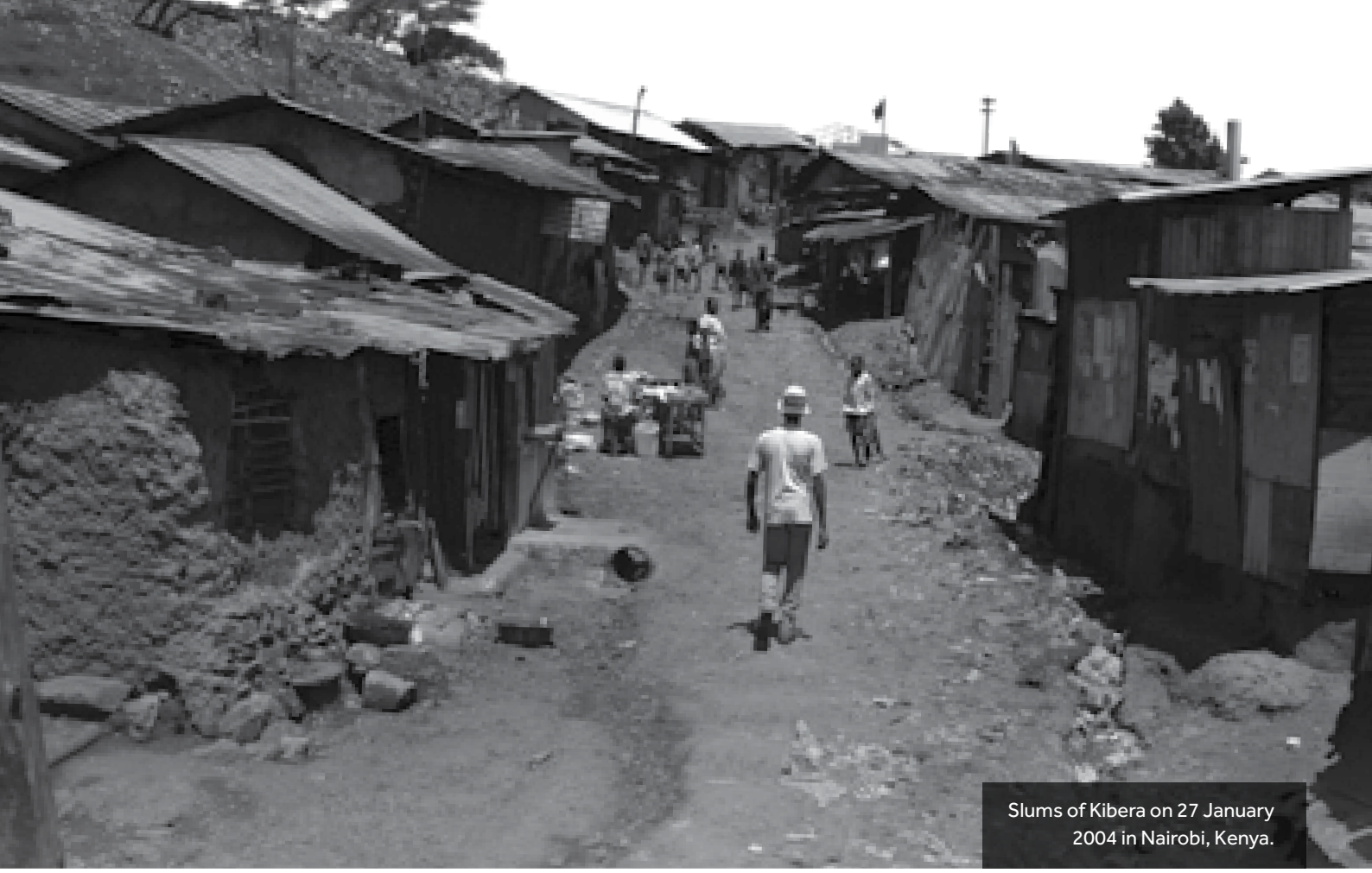
In the context of health and environment, governments and other societal actors can make efficiency gains from coherent policies for health. The Global Energy Assessment in 2012 found that, if policies to meet targets for energy use, climate change, air quality and health were made together rather than separately, **40%** of total costs could be saved *(40)*.


Source: WHO *(41)*.

**Health in All Policies is a framework** for action with the aim of collaborating across sectors to achieve a goal.

→ **It is an approach to public policies** across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity.

→ **Many risks to health** are influenced or even determined by policies in sectors other than the health sector, and need to be addressed by decision-making mechanisms that take health into account.



Slums of Kibera on 27 January 2004 in Nairobi, Kenya.

# WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Key actions on Health in All Policies include the following:

## 1. Monitoring

Monitor determinants and inequalities in determinants and evaluate policies addressing health and health equity determinants at national level.

## 2. Structures and mechanisms

Reinforce or create well resourced and mandated intersectoral structures and mechanisms for dialogue, joint work, decision-making and accountability for health, equity and well-being across government.

## 3. Whole-of-society approach

Use a "whole-of-society approach" when reducing risks to health, which is one that involves all relevant stakeholders in society, and strengthens the coordination among relevant stakeholders.

## 4. Work with other sectors

Give the health sector a policy mandate and space to work with other sectors to understand their constraints and interests, and to identify challenges and opportunities to include the health and co-benefit argument in relevant policies.

## 5. Promotion and prevention

Address health promotion and primary prevention when evaluating the performance of health systems and policies.

## 6. Knowledge

Support the growth of scientific knowledge on health determinants and policy impacts.

## 7. Skills and competencies

Support the development of appropriate skills and competencies in the health workforce, education systems and across society.

# MAIN WHO ACTIONS

WHO actions on Health in All Policies include the following:

### Training

Together with partners, scale up training, education and competencies in Health in All Policies.

### Tools

Together with partners, scale up the availability of practical tools for implementing Health in All Policies approaches.

### Policy evaluation

Facilitate and support policy evaluation and the exchange of experience and lessons learned.

# SECTORS OR GOVERNMENT MECHANISMS WITH POLICIES THAT INFLUENCE THE IMPLEMENTATION OF HEALTH IN ALL POLICIES

(in addition to health authorities)

### At the national level:

- Cabinet, President's office, Parliament.
- Ministries of planning, education, the interior, regional government, development (regional, sustainable, etc.), environment, infrastructure.

### At the subnational level:

- Mayor's office; planning (land management), etc.

Further information: www.who.int/social_determinants/en/.

# OUTLOOK

Creating healthier environments will have benefits for health and the quality of life, and will reduce the burden on the health care system. The sustainable approach adopted will also assist in achieving the goals enshrined in the 2030 Agenda for Sustainable Development. Many of the required actions to achieve healthier environments will have **co-benefits** in such areas as **mitigating climate change** and combating the loss of biodiversity.

While work needs to continue on developing effective strategies, **sufficient evidence is available** for taking basic steps in key areas. This document outlines some of the priority actions that will lead to healthier environments and **sustainable disease prevention**. Those actions will be undertaken by the global health community, sectors with health-determining policies, and other stakeholders.

**Priority actions** are broad in scope. They include implementing clean and safe technologies, promoting safe and healthy practices, developing policies such as introducing subsidies or setting safety standards, increasing resilience to climate change and other environmental threats, and planning for emergency response. They also include mainstreaming health and the environment in comprehensive policy areas, such as healthy transport and energy policies. Many of these actions require **intersectoral cooperation.** A **strengthened health sector** – providing leadership, ensuring that the health argument is being considered, and guiding action for health protection – will be central to the success of the proposed interventions.

WHO will continue to support countries and communities in their endeavour to create a healthier and safer world through **scaling up primary prevention** and building health-promoting environments. WHO will also provide leadership on environmental health matters, coordinate global and regional actions, support the development of international agreements for health protection, and influence international priority setting.

The world and its health community have the opportunity to create safe, enabling and equitable environments for better health and a more sustainable future by **transforming** our way of **living, working, producing, consuming and governing**.

Children are particularly vulnerable to environmental pollution.

# ADDITIONAL INFORMATION

## Scope

This publication provides an overview of main actions and WHO activities for protecting against disease and improving well-being through healthier environments. It does not aim to cover all environmental health risks; nor does it aim to address all possible actions for improvement, including actions that may be undertaken by WHO. It rather aims at providing an overview of each topic. A more comprehensive account of WHO global activities in the area of environmental health can be found at http://www.who.int/phe/en/.

## Regional activities

Region-specific processes and activities further facilitate environmental health action. For example, regional policy processes are coordinated by providing regional platforms for environment and health governance, and bringing together key sectors and stakeholders.

Additional region-specific information and activities can be found at the following websites:
WHO Regional Office for Africa: http://www.afro.who.int/
WHO Regional Office for the Americas/Pan American Health Organization: https://www.paho.org/hq/
WHO Regional Office for the Eastern Mediterranean: http://www.emro.who.int/index.html
WHO Regional Office for Europe: http://www.euro.who.int/en/home
WHO Regional Office for South-East Asia: http://www.searo.who.int/en/
WHO Regional Office for the Western Pacific: http://www.wpro.who.int/en/

## Additional outreach activities

Implementation of scaled-up action on environmental root causes of disease requires specific entry points using integrated approaches. Examples include dedicated national and subnational platforms for cross-sectoral policy-making, key settings as sites for interventions (a few have been further outlined in this brochure), partnerships (including for social movements), and international agreements.

Scaled-up communication efforts, including media engagement and special campaigns (such as the BreatheLife campaign) and capacity-building to engage in such activities, constitute other important ingredients for advancing the environmental health agenda. Effective communication is necessary to raise awareness, create demand and build support for healthier environments.

## Special initiatives and programmes for vulnerable populations

Enhanced support to populations in vulnerable situations is also needed to address the needs of those populations at special risk. Some groups are particularly vulnerable and have specific needs, as in the following examples.

- **Populations of small island developing States are at particular risk from climate change. Specific activities are being implemented to strengthen the resilience of their communities and health systems to climate risks.**

- **Children are especially vulnerable to environmental exposure. Their protection requires targeted action and awareness raising, including the development of capacities of health professionals to recognize the environmental impacts on children's health.**

Environmental health is targeted towards preventing disease and creating health-supportive environments.

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Globally, 23% of all deaths could be prevented through healthier environments. This document presents an overview of sectoral actions that can be taken by various actors – and the support that is being offered by the World Health Organization – to create healthier environments, including in priority settings such as workplaces, cities, dwellings, health care facilities, and emergency settings. Key risk areas are addressed, such as air pollution; water, sanitation and hygiene; chemical safety and radiation; and climate change.

The actions presented focus on intersectoral collaboration between a wide range of partners – international organizations, governments, and national and subnational actors – to create safe, enabling and equitable environments for better health and a more sustainable future.

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