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.

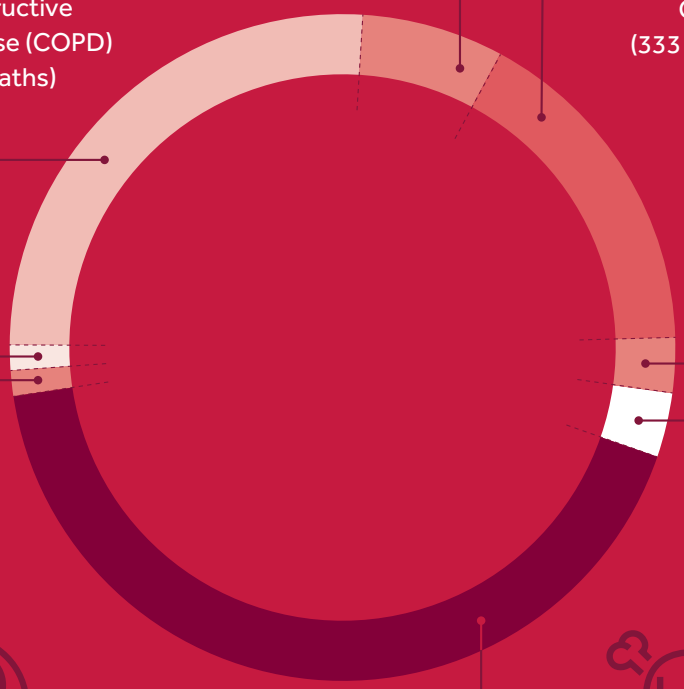
Hazardous chemicals cause a variety of diseases.

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.

2.0 M More than 2 million deaths were due to chemicals in 2019.

PROPORTIONS OF THOSE KILLED BY SELECTED CHEMICALS IN 2019:



26% Chronic obstructive pulmonary disease (COPD) (517 734 deaths)

7% Self-harm (137 831 deaths)

17% Cancers (333 867 deaths)

1% Pneumoconiosis (23 014 deaths)

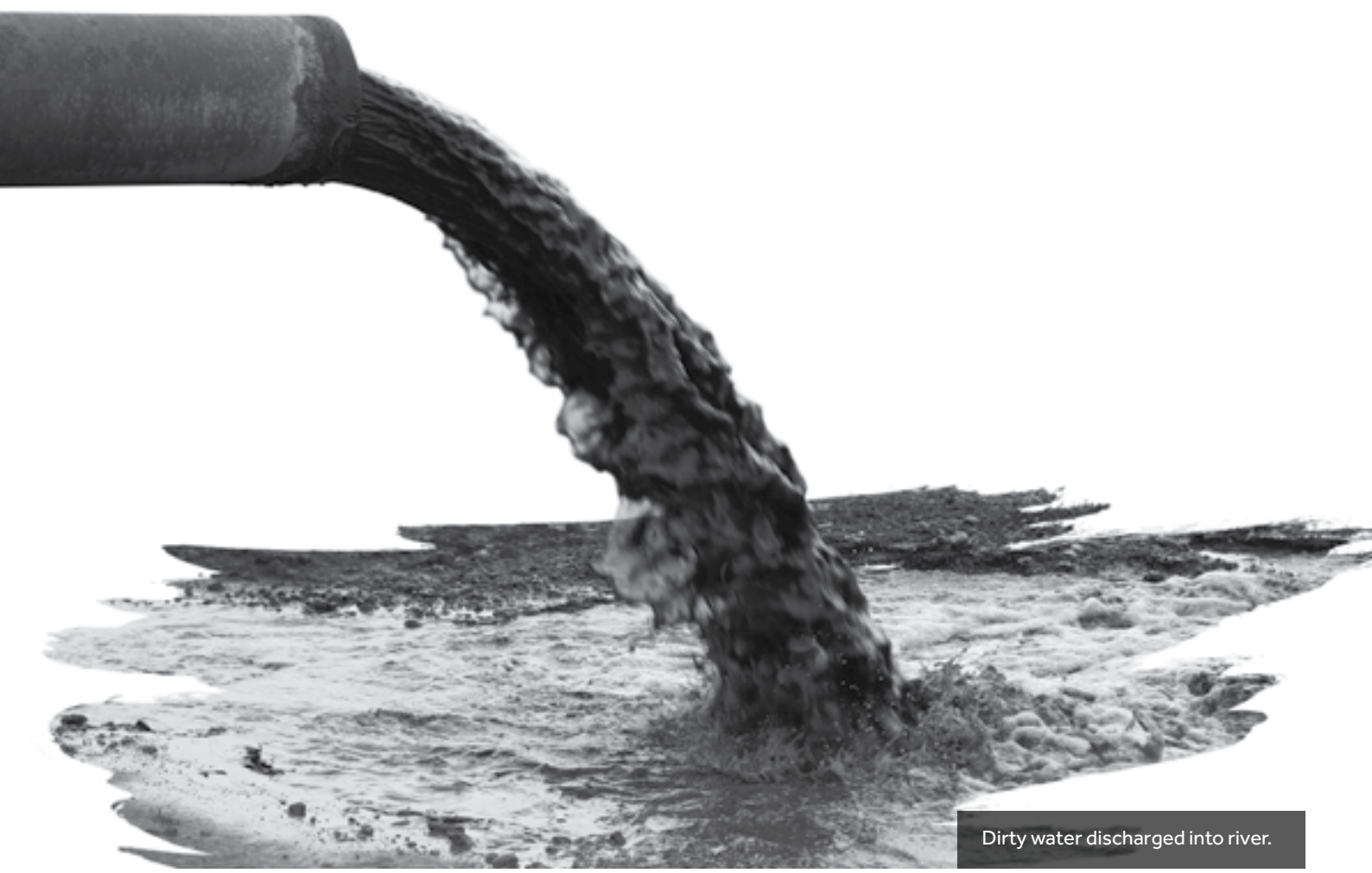
3% Chronic kidney disease (52 938 deaths)

1% Congenital anomalies (26 643 deaths)

42% Cardiovascular diseases (848 778 deaths)

3% Poisonings (61 523 deaths)

Source: Public health impact of chemicals: knowns and unknowns, Disease burden and mortality estimates and Global Health Data Exchange.



Dirty water discharged into river.

WHAT ARE KEY ACTIONS FOR IMPROVEMENT?

Implement the WHO Chemicals Road Map 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:

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.

Source: Healthy environments for healthier populations: why do they matter and what can we do? Geneva: World Health Organization; 2019 (WHO/CED/PHE/DO/19.01).

World Health Organization