



Environmental Health

Environmental Health

- Across the world, the environment is a key determinant of health and well-being.
- Clean air, stable climate, adequate water, sanitation and hygiene, safe use of chemicals, protection from radiation, healthy and safe workplaces, sound agricultural practices, health-supportive cities and built environments, and a preserved nature are all prerequisites for good health (WHO).
- Globally, nearly 25% of all deaths and total disease burden can be attributed to environmental factors.
- Unimproved water and sanitation ambient air pollution

Why Is Environmental Health Important?

- Maintaining a clean healthy environment is central to increasing quality of life and years of healthy life.
- lower the burden of preventable environmental diseases that are disproportionately felt by residents of poor developing countries.

***The reasons for this disproportionate effect in poor countries include lack of modern technology, weak protective environmental laws and regulations, a lack of awareness, and poverty.

- Healthier environments could prevent almost one quarter of

WHO Definition of Environmental Health

It refers to the theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially affect adversely the health of present and future generations.

What Is Environmental Health Science?

“The study of those **factors** in the environment that affect human **health**” under these conditions:

Factors (“pollutants” or “toxics” = Hazard) in air, water, soil, or food ... that human activities produce.

Transferred to humans by inhalation, ingestion, or absorption (exposure).

Production of adverse health effects as a result of that exposure.

Basic Requirements for a Healthy Environment

Clean air

Safe and sufficient water

Safe and adequate food

Safe and peaceful settlements

Stable global environment

World Environment Day (WED)

In 1972, the UN General Assembly designated 5 June as World Environment Day (WED). The first celebration, under the slogan “Only One Earth” took place in 1973. In the following years, WED has developed as a platform to raise awareness on the problems facing our environment such as air pollution, plastic pollution, illegal wildlife trade, sustainable consumption, sea-level increase, and food security and others. Furthermore, WED helps drive change in consumption patterns and in national and international environmental policy.

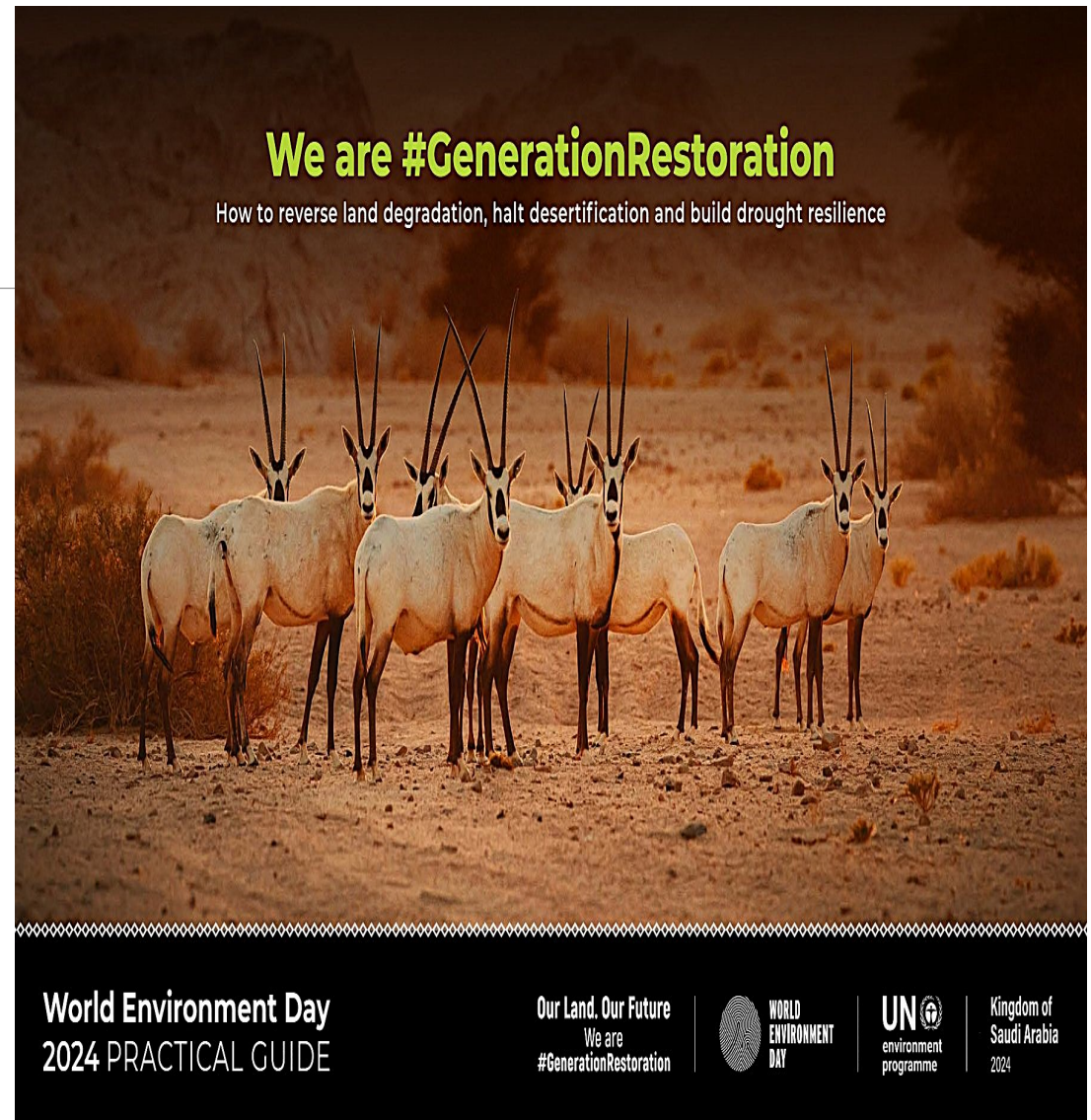
Why take part?

Time is running out, and nature is in emergency mode. To keep global warming below 1.5°C this century, we must halve annual greenhouse gas emissions by 2030. Without action, exposure to air pollution beyond safe guidelines will increase by 50 per cent within the decade and plastic waste flowing into aquatic ecosystems will nearly triple by 2040.

We need urgent action to address these pressing issues.

WED, 2024

Host: The Kingdom of Saudi

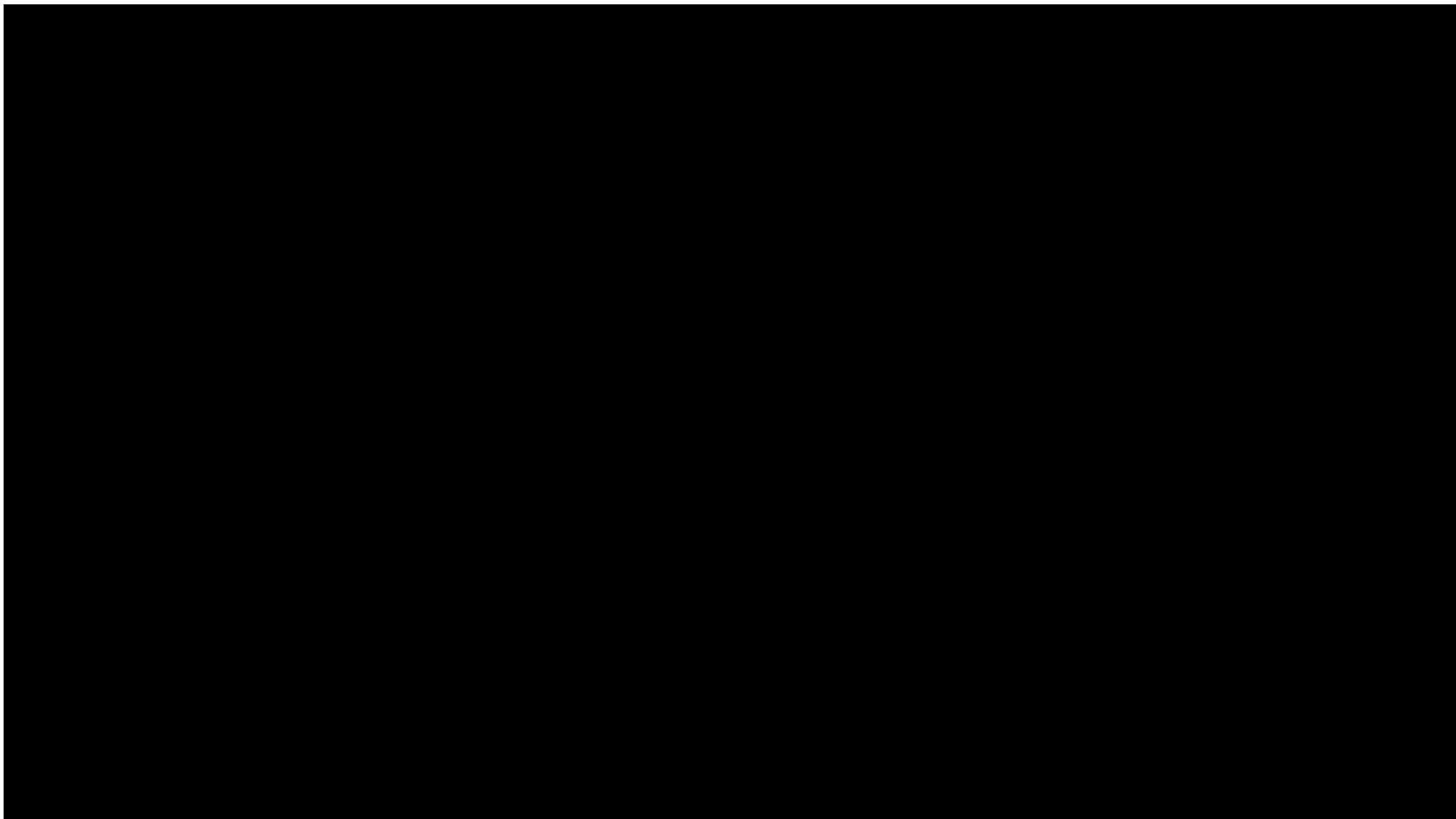






WED, 2025

- **Host country:** Republic of Korea (South Korea).
- **Theme:** Ending plastic pollution.
- **Slogan:** "Shared Challenge, Collective Action".



Hazards in the Environment

What are Hazards?

- Things in the environment that are harmful are called **hazards** and include things like chemicals, disease-causing bacteria, loud noises and even stress in our life.
- hazards can be natural or human-made.

Types of Hazards in the Environment

Chemical: Air pollutants, toxic wastes, pesticides, VOCs

Biological: Disease organisms present in food and water, also Insect and animal allergens

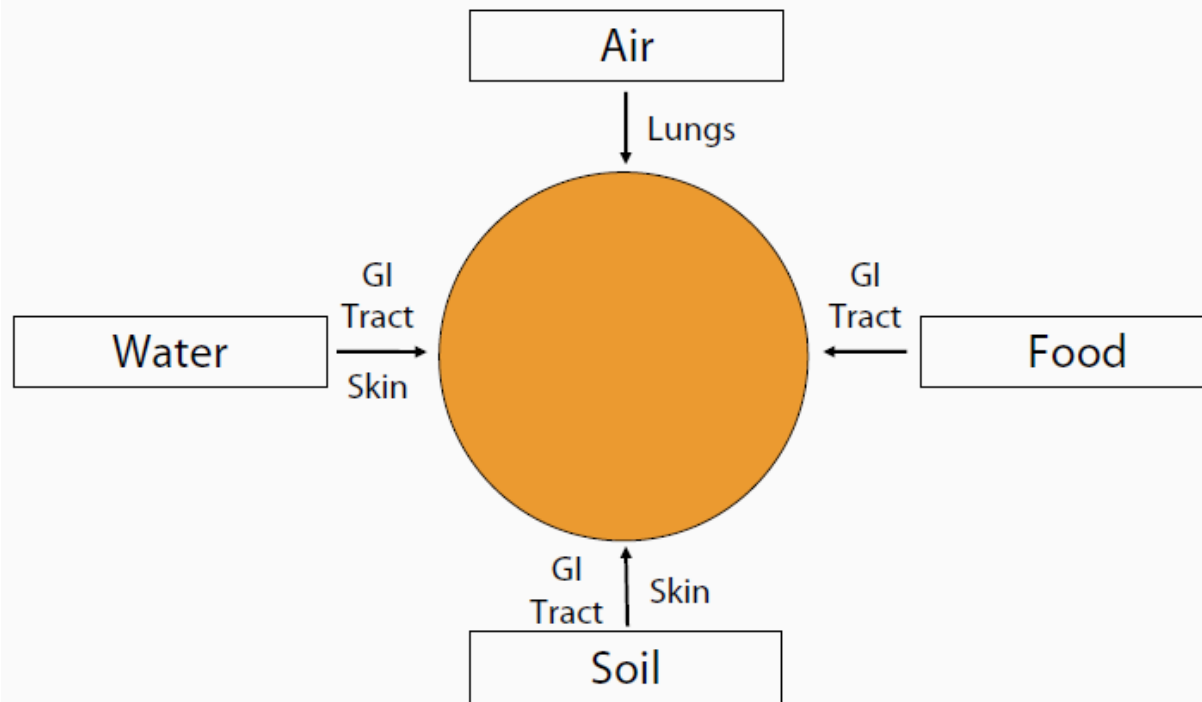
Physical: Noise, ionizing and non-ionizing radiation

Socioeconomic: Access to safe and sufficient health care

Routes of exposure

How do hazards
get transformed
to our
bodies????

- Routes of exposure through gaseous, liquid, and solid medi



Adapted from Moeller, D.W.

Health Effects of Hazards

Acute vs. delayed onset

Clinical vs. subclinical manifestations

Transient (reversible) vs. chronic (irreversible)

Examples of Manifestations

Lung disease

Reproductive effects

Teratogenic effects

Neurologic effects

Immunosuppression and hypersensitivity

Cancer

Vulnerable Groups (susceptible)

Low socioeconomic status

Women

Children

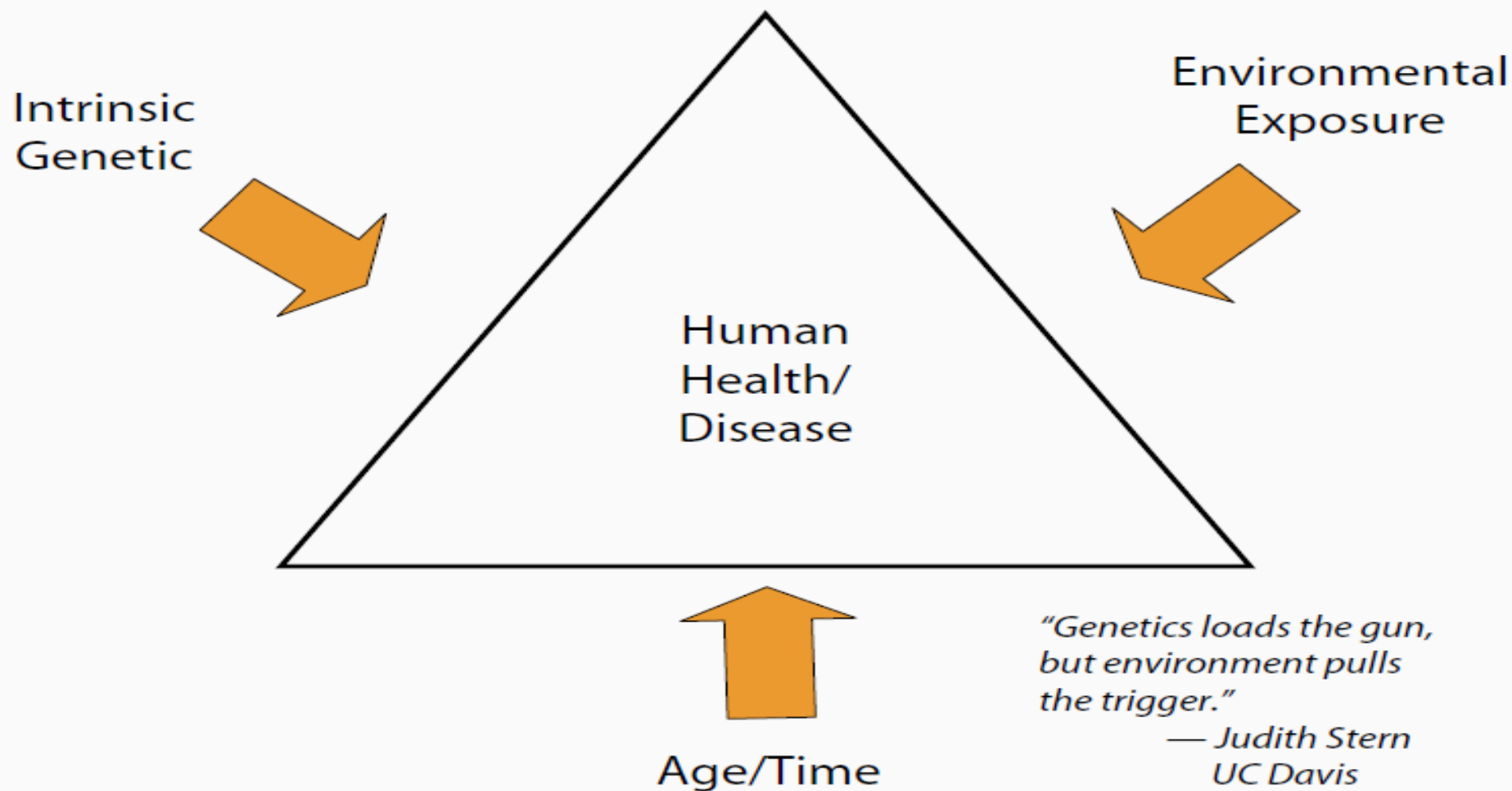
Elderly

Ethnic minorities

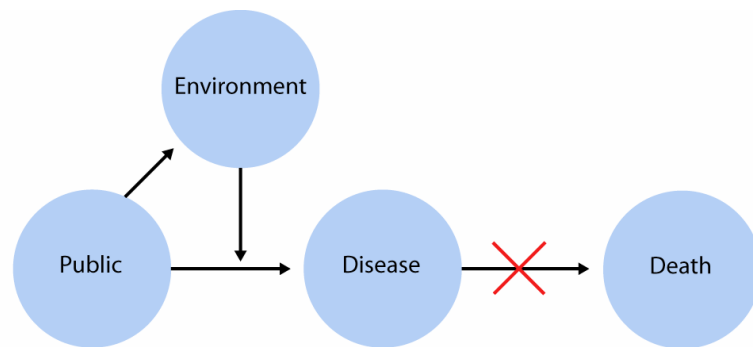
Disabled

Indigenous peoples

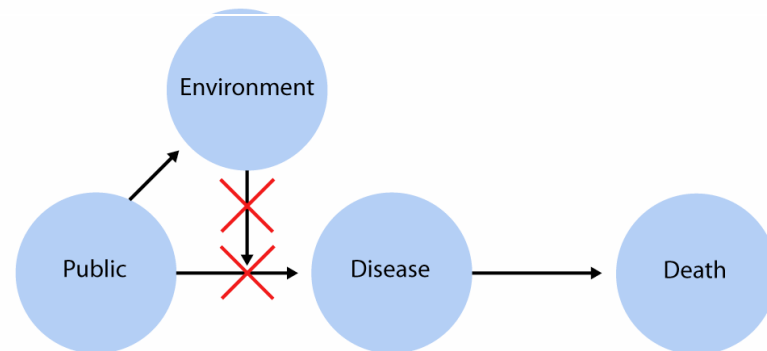
Environment Pulls the Trigger



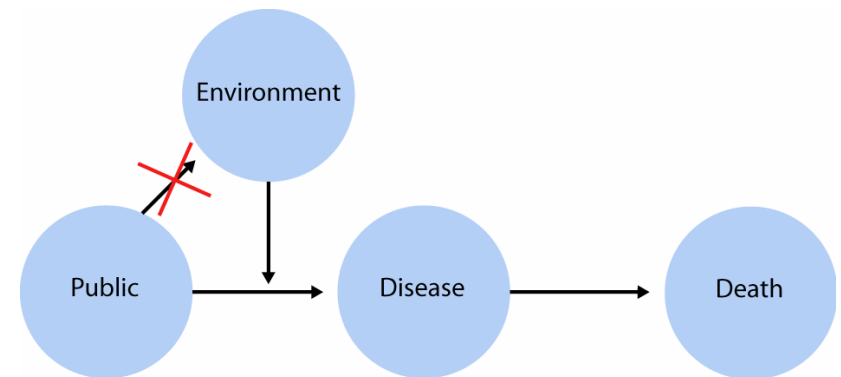
Improving Human Health and Environment: 3 Models



Clinical Intervention Model

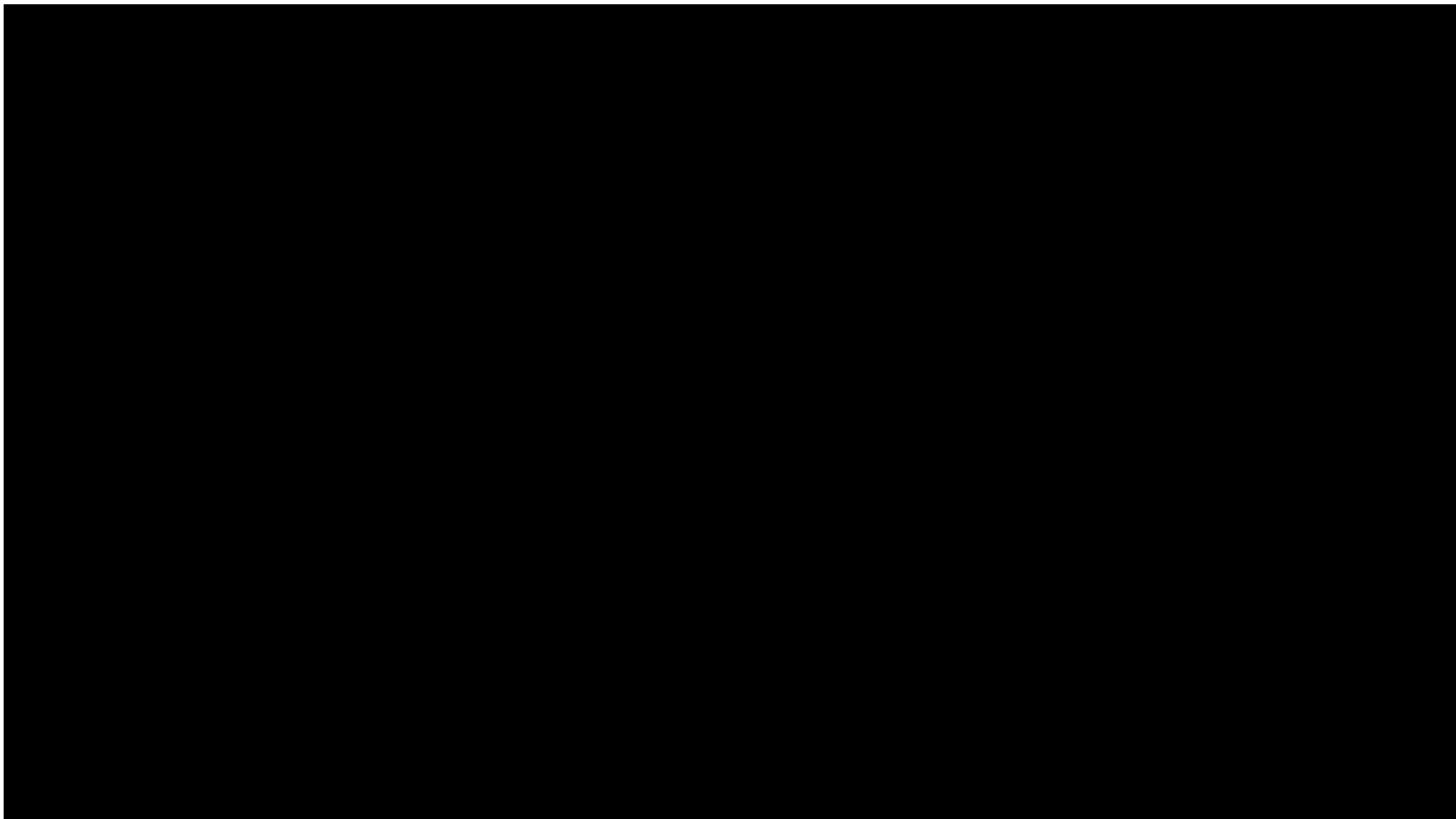


Public Health Intervention Model



Environmental Stewardship Model





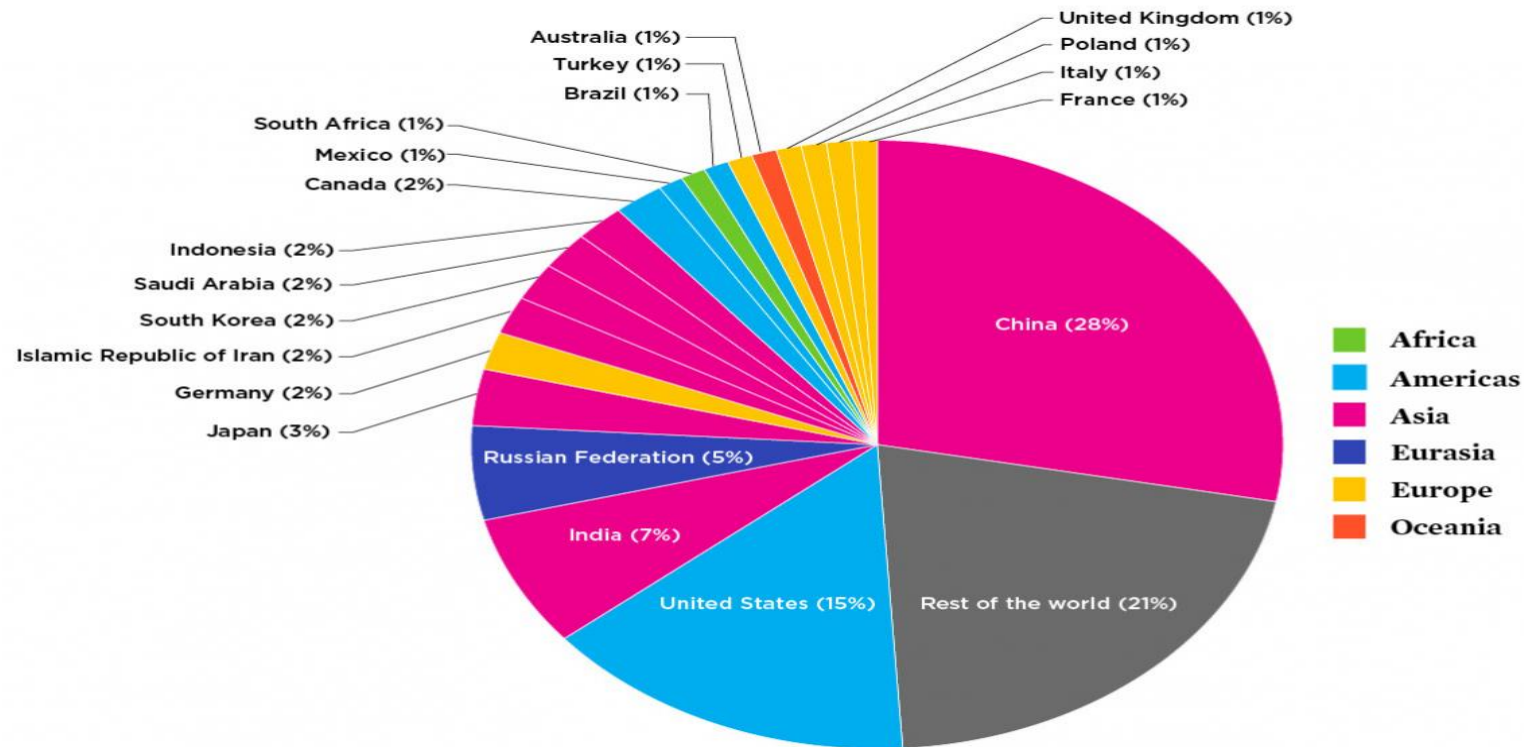
COP

The conference of the Parties(COP) to the UN Framework Convention on Climate Change (UNFCCC)is an international climate summit which is held annually unless the Parties (the countries involved)decided otherwise. At COPs , world leaders gather to work together on solutions to tackle climate change.



For the first time, world leaders promise to end deforestation by 2030, and to reduce emissions by 30% by 2030 (compared to 2020 levels).

Share of CO₂ emissions by country: Carbon Footprint



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Data: Earth Systems Science Data 11, 1783–1838, 2019

COP 29



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