



CHANGING HUMAN ECOLOGY

How does it affect our health and well-being?

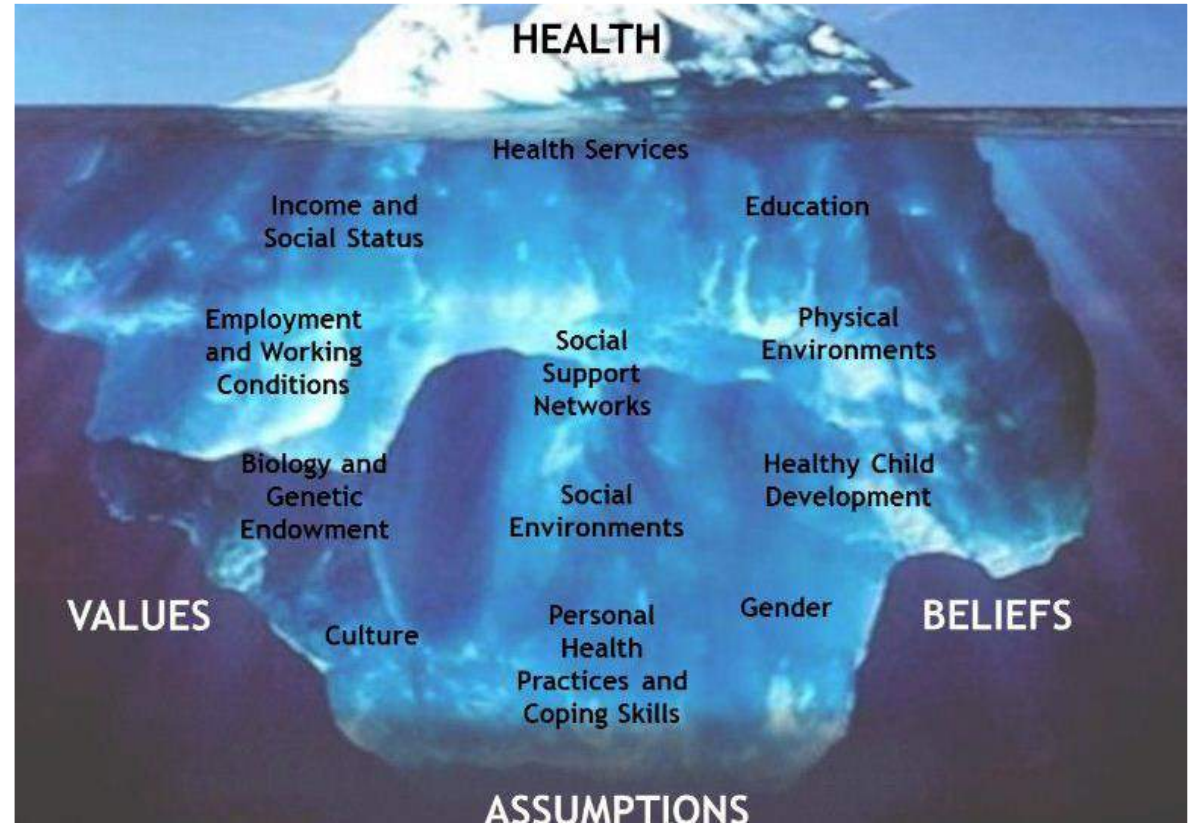
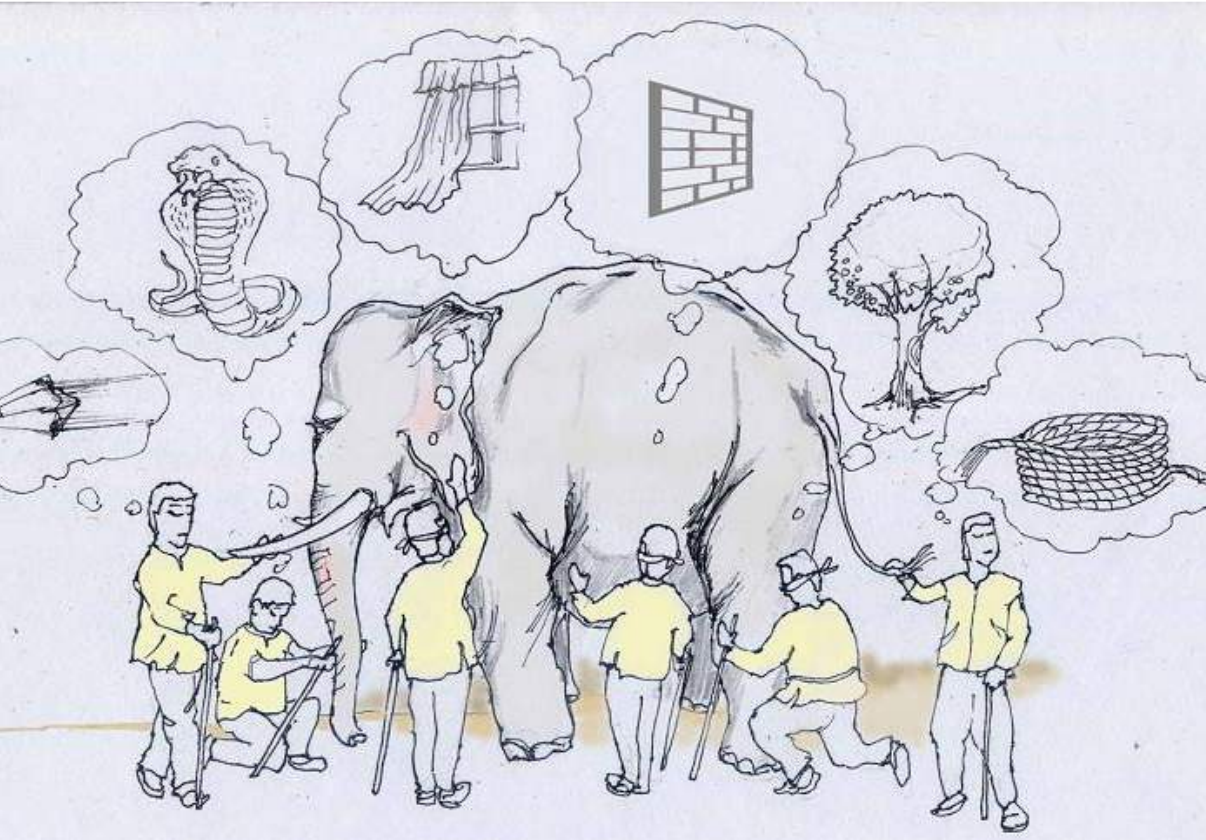
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“HUMAN ECOLOGY”

The Relationship between humans and their natural, social, and built environment.

Understanding of human ecology is a diffuse history with advancements in ecology, geography, sociology, psychology, anthropology, zoology, epidemiology, public health, economic, and many disciplines.



INFLUENCING FACTORS TO HEALTH AND WELL-BEING



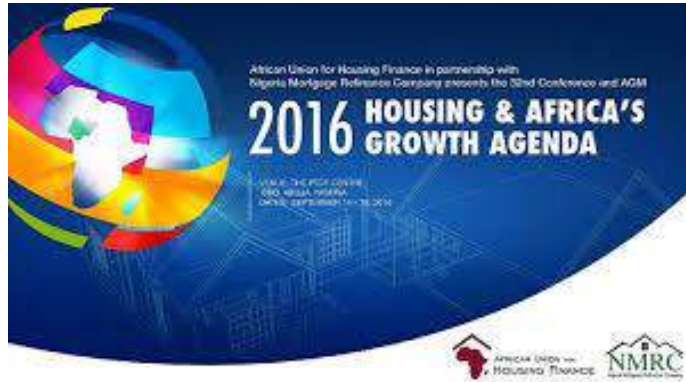
PLACES

Where we live, spend our lives, work, play, commute, actively engage in social, cultural, political and economic lives.



LAND AND SPACES

Lands we use and spaces we create for different purpose of our daily activities.



Street we walk, drive in, carry on activities

STREET



Air we breath & activities we discharged in the air

AIR



AQI Category	Index Values
Good	0 - 50
Moderate	51 - 100
Unhealthy for Sensitive Groups	101 - 150
Unhealthy	151 - 200
Very Unhealthy	201 - 300
Hazardous	301 - 400
	401 - 500

WATER

Water we drink, use, and discards



Food from the sources to the table.

FOOD





PEOPLE

People we live with in our home, our neighbors, and those whom we interact with here and there.



ANIMALS

Animals that we come in contact with knowingly and unknowingly



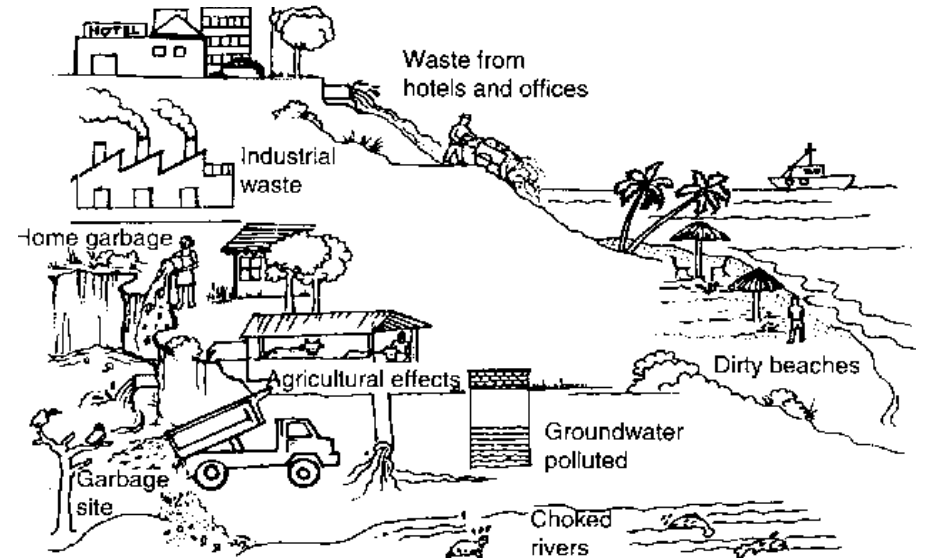
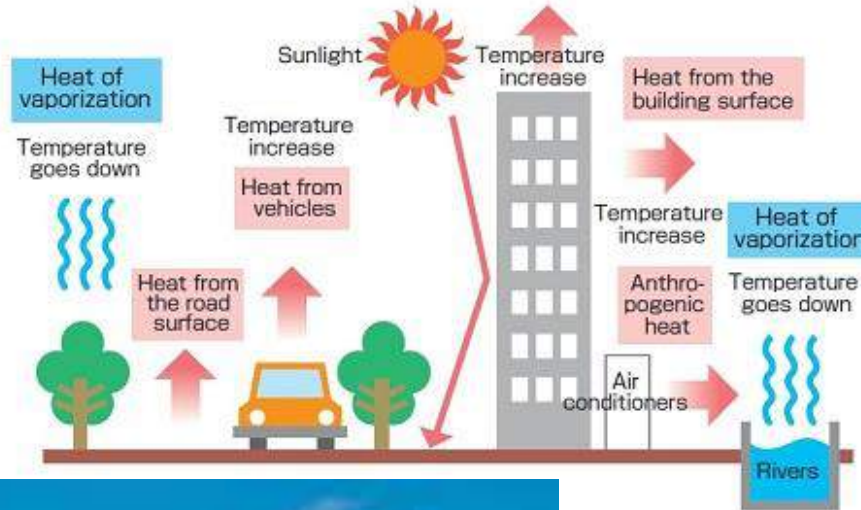
CHEMICAL & PARTICLES



Chemical and particles that we exposed to and produce in our daily lives

OPPORTUNITIES & THREATS

● How the Heat Island Phenomenon occurs





NEW URBAN AGENDA

What can we do to address the threat?

“HEALTH” AS THE PULSE OF THE NEW URBAN AGENDA

World Health Organization & UN Habitat 2016 report





TWO CORE THEMES

- Collective vision of *sustainable, livable, and economically vibrant cities* that urban decision-maker must apply a “**health lens**” – to fully assess the risks and opportunities posed by their policies and programmes and measure their effects.
- Achieving truly sustainable development will required much greater **cross-sectoral coordination** to protect and improve the health of vulnerable populations in fast growing urban areas.

Challenges

The **RAPID** and often **UNPLANNED URBANIZATION** witnessed worldwide has led to **INCREASED PRESSURE ON THE ENVIRONMENT**



Solutions

PROMOTE SOUND URBAN PLANNING, sustainable building, low-carbon transports, green spaces and sustainable lifestyles



Our cities account for up to **80% OF ENERGY CONSUMPTION** as well as **75% OF GLOBAL WASTE AND CARBON EMISSIONS**



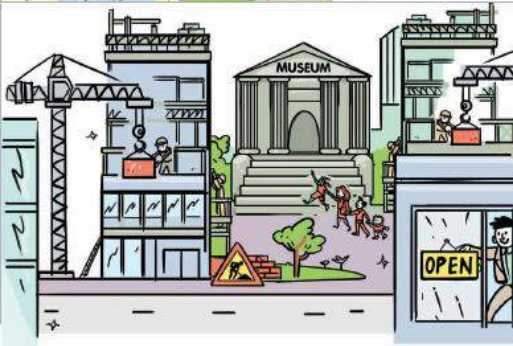
INVEST IN RENEWABLE ENERGY, waste management, sustainable and green infrastructure



Due to the high concentration of people, infrastructure, housing and economic activities, **CITIES ARE PARTICULARLY VULNERABLE** to climate change and natural disasters



PROTECT CITIES - which are important social, cultural and economic centres - from environmental and climate threats



SDG 11 SUSTAINABLE CITIES AND COMMUNITIES

AIR POLLUTION AFFECTS NEARLY ALL OF US

An estimated **6.5 million** deaths were associated with air pollution in 2012. This is **11.6% of all global deaths.**

CITIES EXCEEDING WHO GUIDELINES FOR SAFE AIR*

60%

Over 60% of the cities and towns in high-income European countries

90%

Over 90% of cities and towns in low- and middle-income countries of Europe, Latin America, Asia and the Middle East

17%

17% of the cities and towns in North America

35%

Over 35% of the cities and towns in high-income Asian countries



*From the 3,000 cities and towns that are monitoring and reporting air pollution levels

DISEASE BURDEN CAUSED BY AIR POLLUTION

36%

of all lung cancer deaths

35%

of COPD (Pulmonary disease) deaths

34%

of stroke deaths

27%

of heart disease deaths

90%

90% of people living in cities do not breathe safe air

8%

Air pollution levels have risen 8% globally from 2008-2013

30%

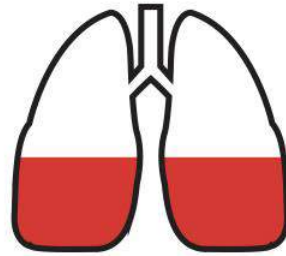
Almost 1/3 of cities monitoring air pollution have reduced air pollution levels by 5% in the last 5 years

50%

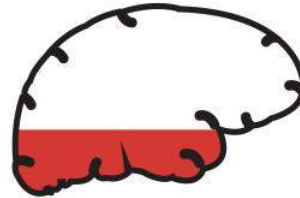
Almost half of cities monitoring air pollution in high-income countries reduced air pollution levels by 5% in 2008-2013.

THE **INVISIBLE KILLER**

Air pollution may not always be visible, but it can be deadly.



36%
OF DEATHS FROM
LUNG CANCER



34%
OF DEATHS FROM
STROKE



27%
OF DEATHS FROM
HEART DISEASE

BREATHE LIFE.
Clean Air. Healthy Future.

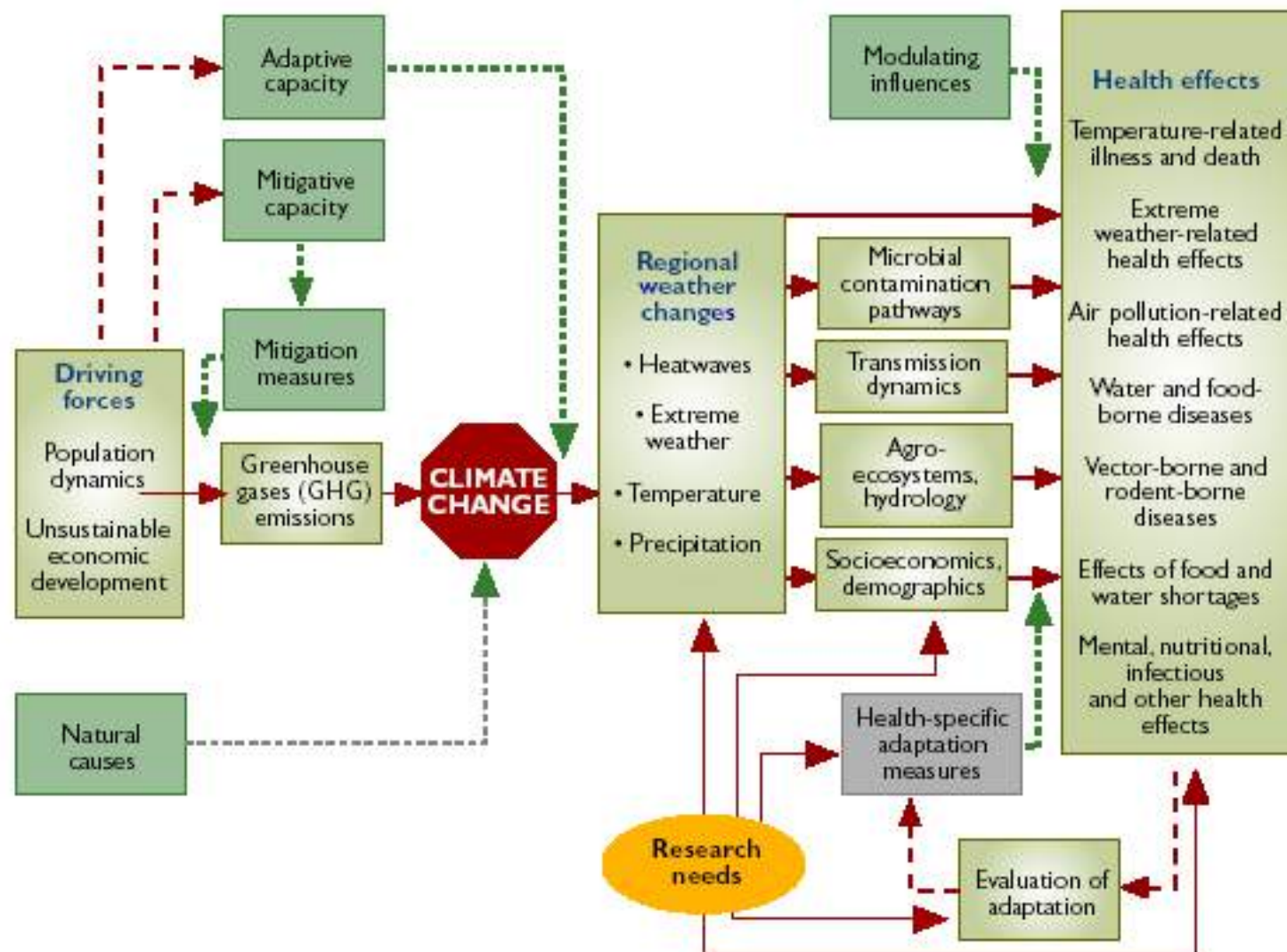


World Health
Organization



CLIMATE &
CLEAN AIR
COALITION
TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS

Figure 13.1. Climate change and health: pathway from driving forces, through exposures to potential health impacts. Arrows under research needs represent input required by the health sector. (Modified from reference 4)



WHO IS AT RISK OF CLIMATE CHANGE

Those **living in poverty**, as well as **women, children and the elderly**.

Outdoor workers and people **living with chronic medical conditions**.

Children are **the most vulnerable** due to their **exposure to the elements**.

**EVERYONE
EVERYWHERE**

Those living in **megacities, small island developing states** and other **coastal, mountainous and polar regions**.

Countries with **weak health systems** will be least able to prepare and respond.

WHETHER YOU LIVE IN A...



Rural village



Small island or coastal town



Big city

CLIMATE CHANGE THREATENS YOUR HEALTH

Drought, floods and heat waves will increase.



Vector-borne diseases, like malaria and dengue virus will increase with more humidity and heat.



Basic necessities will be disrupted...



FOOD

Hunger and famine will increase as food production is destabilised by drought.



AIR

Pollution and pollen seasons will increase leading to more allergies and asthma.



WATER

Warmer waters and flooding will increase exposures to diseases in drinking and recreational waters.

Between **2030** and **2050** climate change is expected to cause

250 000 ADDITIONAL DEATHS PER YEAR due to malaria, malnutrition, diarrhoea and heat stress.



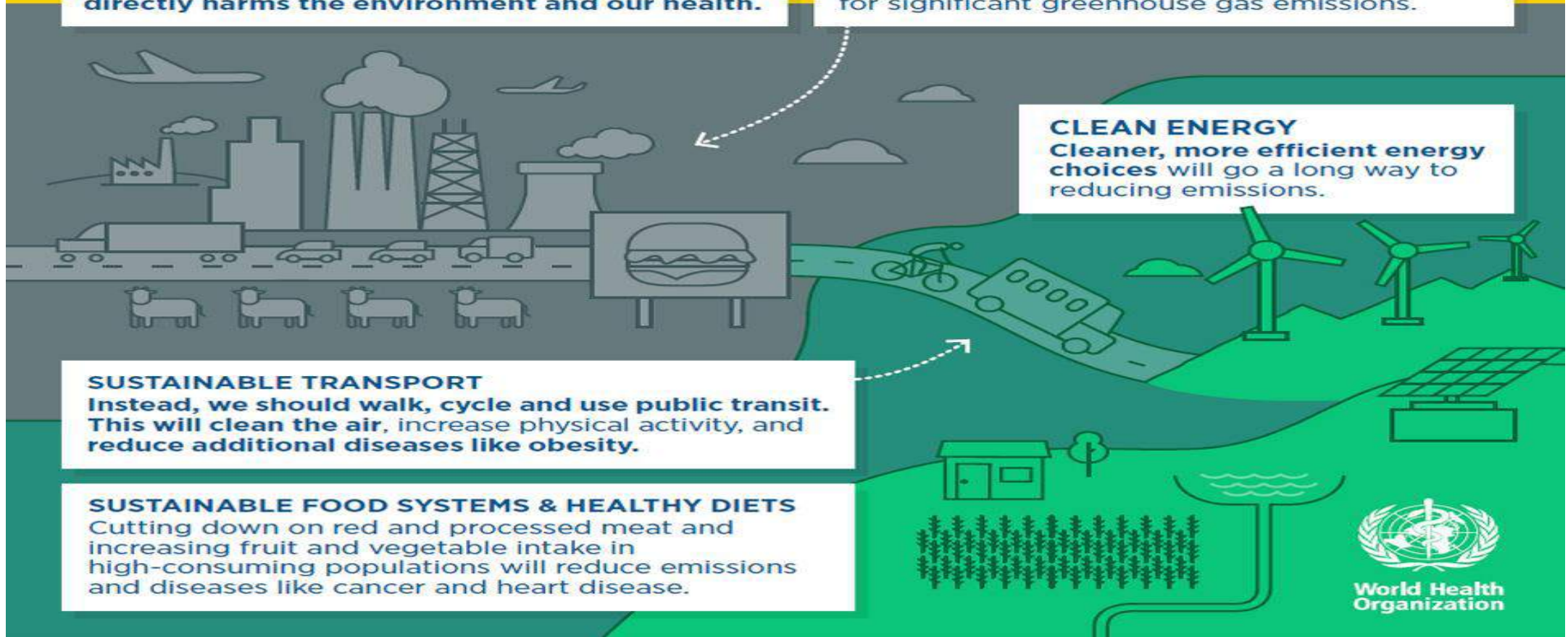
#ClimateChange

WHAT CAN WE DO ABOUT CLIMATE CHANGE?

We can do a lot to protect ourselves, our families, and future generations.

Our transport systems are inefficient, polluting and drive CO₂ into the atmosphere, which directly harms the environment and our health.

The same can be said of our energy and food systems. The livestock sector is responsible for significant greenhouse gas emissions.



CLEAN ENERGY
Cleaner, more efficient energy choices will go a long way to reducing emissions.

SUSTAINABLE TRANSPORT
Instead, we should walk, cycle and use public transit. This will clean the air, increase physical activity, and reduce additional diseases like obesity.

SUSTAINABLE FOOD SYSTEMS & HEALTHY DIETS
Cutting down on red and processed meat and increasing fruit and vegetable intake in high-consuming populations will reduce emissions and diseases like cancer and heart disease.



World Health Organization



PROTECTING CHILDREN FROM THE ENVIRONMENT

Each year 1.7 million deaths of children under 5 are linked to the environment.

570,000 deaths



Respiratory infections, including pneumonia

360,000 deaths



Diarrhoea

270,000 deaths



Neonatal conditions, including prematurity

200,000 deaths



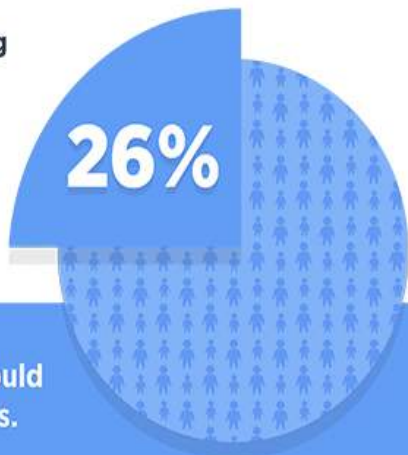
Unintentional injuries, such as burns, drowning

200,000 deaths



Malaria

26%



Reducing environmental risks could prevent a quarter of these deaths.



PROTECTING CHILDREN FROM THE ENVIRONMENT

Environmental risks include air pollution, chemicals, poor water, sanitation and hygiene.

CHILDREN ARE AFFECTED BY:



Air pollution



Inadequate water, sanitation and hygiene



Built environment



Second-hand smoke



Climate change



Hazardous wastes



UV radiation



Hazardous chemicals

CHILDREN ARE ALSO AFFECTED BY EMERGING THREATS SUCH AS:



Persistent organic pollutants / endocrine-disrupting chemicals



e-Waste

Minimising these risks are key to protecting children and achieving the Sustainable Development Goals.



KEY MESSAGES

- “Good Health for All” is effective markers of city’s sustainable development.
- “Healthy cities” are environmentally sustainable and resilient. Cities with clean air, energy-sufficient infrastructure, green spaces, can attract more investment and business
- “Healthy cities” are socially inclusive – where planning and policy-making incorporate the views, voices, and needs of all communities
- “Health” is not only an indicator for monitoring progress but a fundamental driver of sustainable development.
- Focusing on health can unlock progress to reduce inequalities in urban areas, and expand access to services and opportunities.



Shanghai Consensus on Healthy Cities 2016



ACCLAMATION DES MAIRES D'ALMATY :

LES VILLES AUX AVANT-POSTES DE LA SANTÉ
ET DU BIEN-ÊTRE POUR TOUS



Almaty Healthy City Summit of Mayors October 2018
“20000” cities in the world
For Healthier, Smarter, and Better Cities



OBRIGADO PELA SUA ATENÇÃO
MERCİ BEAUCOUP



Dr Suvajee Good