



WORKSHOP 6

**Climate action and
biodiversity in
Cambodia**

SDGs



- **Reduce our ecological footprint** by changing the way we produce and consume goods and resources.
- **Efficient management of our shared natural resources**, and the way we dispose of toxic waste and pollutants.
- Encourage industries, businesses and consumers to **recycle and reduce waste.**



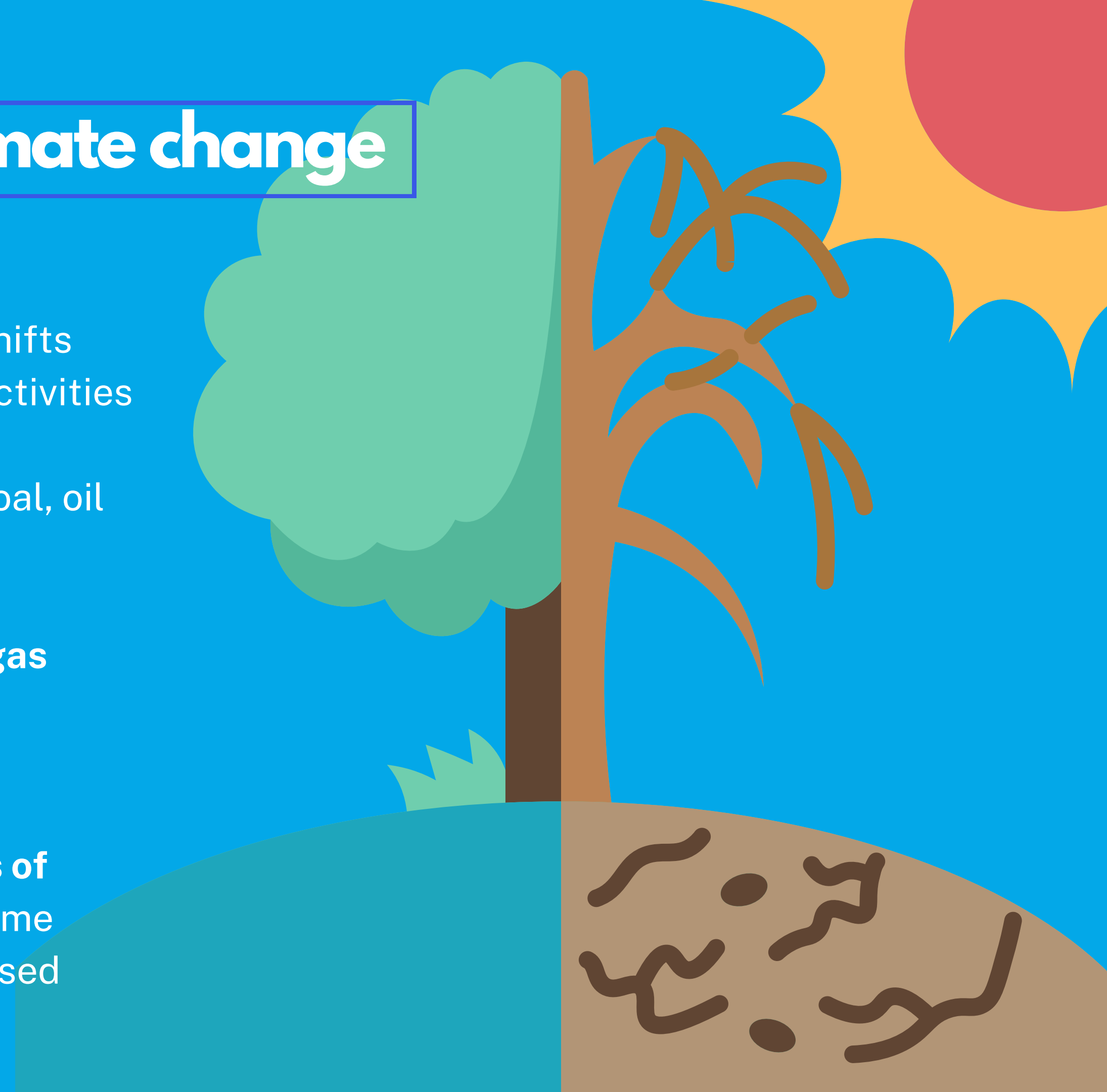
- **Address the needs of developing countries** to both adapt to climate change and invest in low-carbon development.
- **Support vulnerable regions.**
- **Integrate disaster risk measures**, sustainable natural resource management, and human security into national development strategies.

Climate change

Climate change refers to **long-term shifts in temperatures and weather patterns**. Such shifts can be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (coal, oil and gas).

Burning fossil fuels generates greenhouse gas emissions that trap the sun's heat and raise temperatures.

Warmer temperatures lead to the hallmarks of climate change: rising sea levels, more extreme weather, heat-related deaths, and the increased transmission of infectious diseases.



Climate change



WARNING

If we don't slow global emissions, **temperatures could rise to above 3 degrees by 2100**, causing further irreversible damage to our ecosystems.

Climate change

Glaciers and ice sheets in polar and mountain regions are already melting faster than ever, causing **sea levels to rise.**

Almost **two-thirds of the world's cities with populations of over 5 million are located in areas at risk of sea level rise.**

If no action is taken, entire districts of New York, Shanghai, Abu Dhabi, Osaka, Rio de Janeiro, and **many other cities could find themselves underwater** within our lifetimes, **displacing millions of people.**



Climate change

Global warming impacts everyone's food and water security.

Climate change is a direct cause of soil degradation, which limits the amount of carbon the earth is able to contain. Some 500 million people today live in areas affected by erosion.

90% of disasters are now classed as weather and climate-related.

26 million people are pushed into poverty as a result.

Climate change

Climate change is a major threat to international peace and security. The effects of climate change heighten competition for resources such as land, food, and water, leading to mass displacement.

The World Bank estimates that, in the absence of action, **more than 140 million people in Sub-Saharan Africa, Latin America, and South Asia will be forced to migrate within their regions by 2050.**



Air pollution

Air pollution refers to the release of pollutants into the air.

According to the World Health Organization, each year air pollution is responsible for **nearly 7 million deaths around the globe.**

9 out of 10 human beings currently breathe air that exceeds the WHO's guideline limits for pollutants, with those living in low- and middle-income countries suffering the most.

10 WAYS TO BEAT AIR POLLUTION

World Environment Day is celebrated on the 5th of June every year and is the United Nation's principal vehicle for encouraging awareness and action for the protection of our environment. This year's theme is #BeatAirPollution



Most polluting industries

1 Fuel industry

Across the globe... **100.3m** barrels of oil per day were used in 2019.

Annual carbon emissions from these fossil fuels include:

- Coal** 13.98bn tonnes
- Oil** 11.07bn tonnes
- Gas** 7.12bn tonnes

2 Agriculture

The IPCC's Special Report on Climate Change and Land estimated that agriculture was directly responsible for up to: **8.5%** of all greenhouse gas emissions in 2019.

A breakdown of the agricultural emissions places:

- Food production and processing: **45%**
- Enteric fermentation: **39%**
- Manure storage: **10%**
- Transportation of products: **6%**

3 Fashion industry

Estimates place the fashion industry as being responsible for around **10%** of the globe's carbon emissions.

The likes of fast fashion are also responsible for huge amounts of waste. In fact, maintaining the fast fashion crave means that **85%** of textiles go to the dump each year.

4 Food retail

Each year, the UK wastes around **1.9 tonnes** of food.

Plastic waste is also heavily aligned with food retail produce, with a recent report suggesting that **800,000 tonnes** of plastic waste a year come from retailers alone.

Most polluting industries



5

Transport



Transport is responsible for around

One fifth of global carbon emissions.

Of total transportation emissions

Commercial freight is responsible for

40%

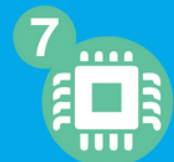


Passenger travel is responsible for

60%

Only **16%** of this is the result of passenger transport, the vast majority comes from land-based passenger vehicles.

For example, **76%** of households in the UK own a car... which on average emit around **4.6 tonnes** of carbon annually.



7

Technology



At present, it is estimated that there are around **30bn** internet connected devices and if this figure continues to grow



By 2025 it is estimated that the IT industry will be responsible for around **5.5%** of the world's carbon emissions.



6

Construction

Often overlooked, the construction industry is responsible for a considerable amount of pollution, including:



of air pollution.

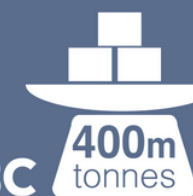


of drinking water pollution.



of landfill wastes.

What's more shocking, however, is that according to the UK Green Building Council around



of materials are used by the UK construction industry each year – with an estimated



of that ending up as waste.



The construction industry is also responsible for around **50%** of all-natural resource extraction worldwide. This includes the following:

One-sixth



of global freshwater consumption.

One-quarter



of wood consumption.

One-quarter



of global waste.

Overconsumption

Overconsumption is individuals consuming more resources than they need and that the earth can provide. This extreme behavior also prevents the natural renewal of resources due to the speed of consumption.

If everybody in the world consumed resources at the rate people do in OECD and EU countries, **the equivalent of 3.3 earths would be needed to keep up with consumption levels.**



Food waste

Globally, approximately a **third of all food produced** for human consumption is lost or wasted. Every time food is wasted, all of the resources that went into each of those steps are wasted, too: plastic for packagings, water to grow vegetables...



There are **2 types of waste**:

- **Food “loss”** occurs before the food reaches the consumer as a result of issues in the production, storage, processing, and distribution phases.
- **Food “waste”** refers to food that is fit for consumption but consciously disposed at the retail or consumption phases.

Plastic

Every minute, the equivalent of one garbage truck of plastic is dumped into our ocean.

Approximately 7 billion of the 9.2 billion tonnes of plastic produced from 1950-2017 became plastic waste, ending up in landfills or dumped.

Plastic pollution can alter habitats and natural processes, directly affecting millions of people's livelihoods, food production capabilities and social well-being.

9 TIPS FOR LIVING WITH LESS PLASTIC



1

Bring your own shopping bag



2

Carry a reusable water bottle



3

Bring your own cup



4

Pack your lunch in reusable containers



5

Say no to disposable straws & cutlery



6

Skip the plastic produce bags



7

Slow down and dine in



8

Store leftovers in glass jars



9

Share these tips with your friends

LESS PLASTIC.

REFUSE SINGLE USE # CHOOSE REUSABLES



WWW.LESSPLASTIC.CO.UK

In Cambodia

2000

It is the estimated number of **plastic bags each person use each year in Phnom Penh**. In April 2018, the Government acted to reduce this by requiring supermarkets and general stores to charge customers 10 cents for each plastic carry bag.



Between 1994 and 2002

The volume of solid waste in Phnom Penh has doubled.



Recycling



There are essentially three main steps: collection, processing, and remanufacturing into a new product.

COLLECTION

Recyclable materials are generated by a consumer or business and then collected by a private company or government entity.

PROCESSING

The materials are transported to a processing facility, where they are sorted, cleaned of contaminants, and prepared for transport to a manufacturing facility.

REMANUFACTURING

After all necessary processing is completed, recyclables are made into new products.

Environmental, economic and community benefits can be attained from recycling.



Around the world

- **More than 13 million deaths** around the world each year are due to avoidable environmental causes.
- **The last four years were the hottest on record.**
- **80% of the world's natural resources** are used by only **20%** of the world's population.

Around the world

- Germany has the highest recycling rate in the world.
- In the U.S., up to 40% of all food produced goes uneaten, and about 95% of discarded food ends up in landfills. It is estimated that reducing food waste by 15% could feed more than 25 million Americans every year.
- Global waste is expected to increase to 3.4 billion tons by 2050.



SDGs



- Sustainably manage and **protect marine and coastal ecosystems** from pollution.
- **Address the impacts of ocean acidification.**
- Enhance conservation and the **sustainable use of ocean-based resources** through international law.



- **Reduce the loss of natural habitats** and biodiversity.
- **Support global food and water security**, climate change mitigation and adaptation, and peace and security.

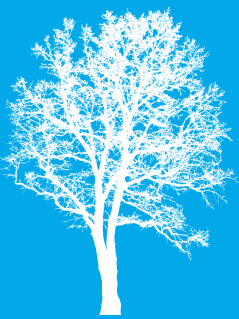
Biodiversity



Biodiversity is all the different kinds of life on Earth (animals, plants, microorganisms). Each of these species and organisms **work together in ecosystems to maintain balance and support life.**



The value of biodiversity products and services is enormous. It has been estimated that **more than 40% of the world economy and 80% of the needs of the world's poor are derived from biodiversity.**



Trees and other vegetation absorb pollutants and thereby help to improve air quality. **Less plant cover thus means less filtering capacity to clean our air.**



Biodiversity

Pollution, including from hazardous wastes and chemicals, is widely accepted as one of the main drivers of biodiversity loss.

5 concerns in Cambodia



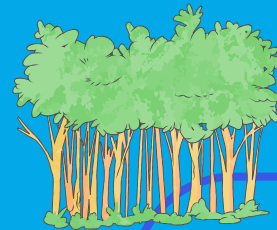
Degradation of inland aquatic resources

Loss of fisheries due to over fishing, destructive and illegal fishing practices and clearance of inundated forests.



Coastal and marine resources management

Coastal areas degraded, loss of mangrove forests, depletion of fisheries and coral reefs.



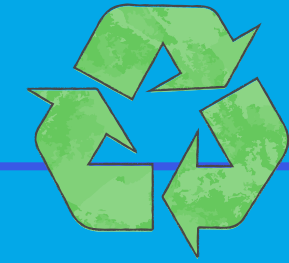
Land degradation

Loss of the land productive capability due to human activities and natural processes.



Depletion of biodiversity

Decline in the number, genetic variability, and variety of species.



Waste management

Pressure on the infrastructures and services used to manage waste. This cause harmful impacts to the environment and human health, especially communities adjacents to dumpsites.

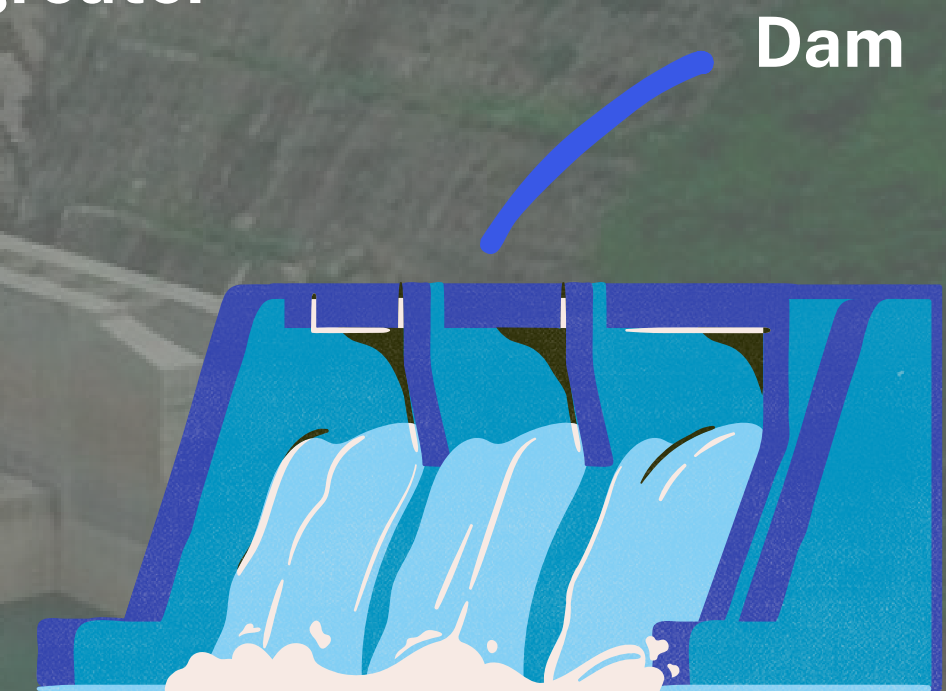
Degradation of inland aquatic resources

Depletion of fisheries is also caused by the construction of dams, hydropower projects and irrigation projects.

The riverine ecosystems of the Mekong River Basin possess the **world's most productive inland fishery** and provide highly productive food crops for millions of people annually.

The 46 dams constructed in the Lower Mekong Basin have caused **greater losses of biodiversity and fisheries than climate change.**

[Learn more](#)



Land degradation

Cambodia was considered as one of the mangrove deforestation hotspots within Southeast Asia, showing a high rate of loss (5.4%) between 2000 and 2012. The overall loss of mangrove forests **between 1989 and 2017** has been assessed as 42% in the four coastal provinces of Cambodia.

During this period, **more than 26,000 hectares** of mangrove forests have been cleared in Koh Kong province. In Sihanoukville, 8,127 ha of mangrove forests have been destroyed in the same period.

Cambodia's forests have been extensively fragmented. **Fragmentation is a key driver of ecosystem degradation, weakening the capacity of habitats to provide important ecosystem services.**

Waste management

Waste in Phnom Penh - The key numbers



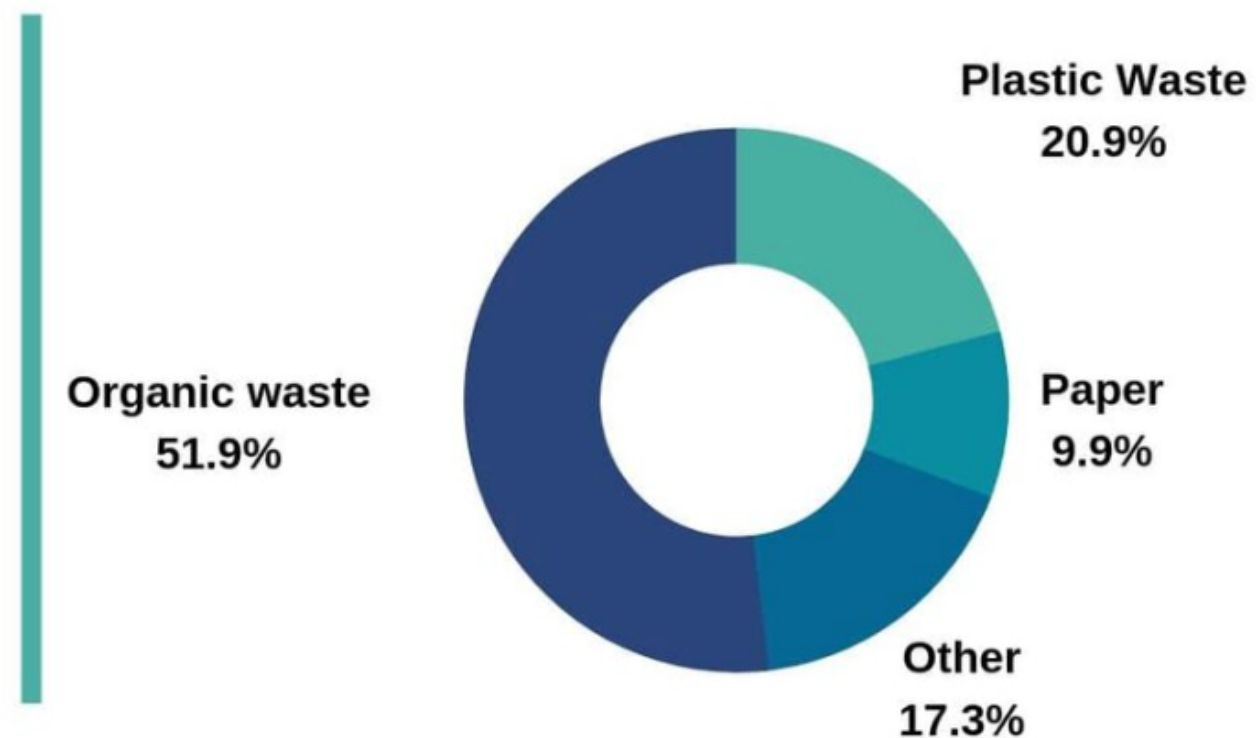
1 million tonnes of waste is produced each year in Phnom Penh

Amount of waste in PP is expected to **more than double by 2030**

Two main dumpsites in the city are expected to **reach their capacity by 2020**

Most waste is organic but **plastic waste (20.9% of total waste) is on the rise**

Municipal waste composition in Phnom Penh



Depletion of biodiversity

Cambodia is one of the most biodiverse countries in Southeast Asia, with as many as **8,260 plant species** along with more than **250 species of amphibian and reptile, 874 fish species and over 500 bird species.**

[Learn more](#)



What can we do?

10 WAYS TO HELP OUR OCEAN

at home

around town

on the water



1

Conserve Water
Use less water so excess runoff and wastewater will not flow into the ocean.



2

Reduce pollutants
Choose nontoxic chemicals and dispose of all chemicals properly.



3

Reduce waste
Cut down on what you throw away.



4

Shop wisely
Choose sustainable seafood. Buy less plastic and bring a reusable bag.



5

Reduce vehicle pollution
Use fuel efficient vehicles, carpool or ride a bike.



6

Use less energy
Choose energy efficient light bulbs and don't overset your thermostat.



7

Fish responsibly
Follow "catch and release" practices and keep more fish alive.



8

Practice safe boating
Anchor in sandy areas far from coral and sea grasses. Adhere to "no wake" zones.



9

Respect habitat
Healthy habitat and survival go hand in hand. Treat with care.

anywhere, anytime



10

Volunteer
Volunteer for cleanups at the beach and in your community. You can get involved in protecting your watershed too!

oceanservice.noaa.gov



- Increase the number of protected areas
- Increase the community management on fisheries and forests
- Law enforcement

<https://faolex.fao.org/docs/pdf/cam50411.pdf>
f (forests)
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