



CLIMATE CHANGE MODULE

FOR YOUNG PEOPLE



Acknowledgements

Climate Change Module for young people

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With contributions from:

Adolescents and young people, including students, youth leaders, environmental youth groups, girls and young women, persons with disabilities, and LGBTQI+ youth from Dili, Viqueque, and Lautém municipalities, who participated in the consultations and field testing and shared their experiences, perspectives, and insights during the development of this guide.

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Their meaningful contributions helped shape the content, language, and tools to ensure they are relevant, inclusive, culturally appropriate, and youth-friendly.

Disclaimer:

This guide is an educational resource intended to support learning and youth engagement in climate action. It simplifies climate change, advocacy, and policy concepts for educational purposes and does not replace official government policies or United Nations Framework Convention on Climate Change (UNFCCC) documents.

The Development of Adolescent and Youth-Friendly Climate Change Module and Toolkit Series was funded by the Korea International Cooperation Agency (KOICA).



How to use this resource?

The **Youth-Friendly Climate Change Module and Toolkit Series** were developed to empower adolescents and young people in Timor-Leste, especially those aged 15 to 28, by providing climate change learning resources that support informed, inclusive, and locally driven climate action.

These resources are:

- ① **Youth Climate Change Module**
- ② **Youth Climate Action Guideline**
- ③ **Climate Action Tool**
- ④ **International Climate Agreements Guide**
- ⑤ **Climate Governance Guide**
- ⑥ **Photo Essay Toolkit**
- ⑦ **Climate Glossary Toolkit**

This **Climate Change Module** is **the first resource** of the Youth-Friendly Climate Change Module and Toolkit Series. We recommend starting with the Climate Change Module to build a strong foundation before diving into this guide. But you're also welcome to jump straight to other toolkits if you're mainly looking for practical ways to take climate action now. This resource is available in two languages: **English and Tetun**. Both versions are intended to ensure broader accessibility and understanding

How to use this module: This module is yours to explore in your own way. You can learn through speaking, writing, observing, organizing activities, creating ideas, or supporting others in your community. You can read it on your own, with friends, or as part of a group discussion. If reading feels difficult, you can also learn by talking about the topics together, drawing, role-playing, or sharing stories.

There is no single "right" way to use this module. What matters most is your curiosity, participation, and willingness to take action. Remember—every action, big or small, can make a difference for our planet.

Table Of Content

Acknowledgement

How to use this resource?

Welcome

Session 1. Understanding Climate: Core Concepts and Change

1

Session 2: How Climate Change Affects People?

19

Session 3: How Do We Respond to Climate Change?

37

Session 4. Youth Climate Action & Reflection

63

Wrap-up & Key Takeaways

79

Reference

81

Welcome

Many small and climate-vulnerable countries, especially Small Island Developing States (SIDS), face unique and urgent climate challenges. Despite contributing very little to global greenhouse gas emissions, these countries are highly exposed to floods, droughts, coastal erosion, landslides, and extreme heat. These hazards affect homes, schools, food, water, and livelihoods. Young people, children, and vulnerable communities often feel the impacts most strongly, as they usually have the fewest resources to cope with change.

Adolescents and youth make up a large part of the population in many climate-vulnerable countries and are essential partners in addressing these challenges. However, many still lack access to locally relevant knowledge and practical tools to understand and respond to climate change. This gap makes it harder for communities to plan, adapt, and build resilience for the future.

This module is designed to respond directly to these needs. It aims to help young people:

-  **Understand what climate change is and why it matters**
-  **Recognize how climate change is affecting their communities and daily lives**
-  **Explore practical and realistic ways to adapt and respond**
-  **Build confidence to take informed action, individually and collectively**

By participating in this module, you will gain knowledge and skills to make decisions, plan actions, and protect your community, while contributing to broader national efforts to increase climate resilience. The content is grounded in national priorities and local development contexts, making it relevant for adolescents and young people in both urban and rural areas.

This module encourages active participation. Young people will share stories, draw, brainstorm, role-play, and work in small groups. There are no “right” or “wrong” answers — everyone’s experience matters. The aim is to support youth to think critically, collaborate, and design practical climate actions that are meaningful in their own context.

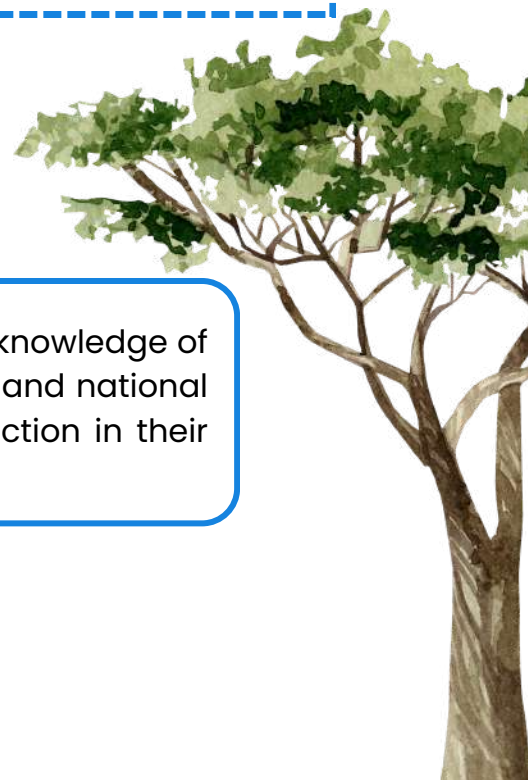
Through this module, participants will:

- **Learn climate change concepts in clear, youth-friendly language**
- **Explore examples of climate impacts from local communities**
- **Understand how small and simple actions can reduce risks and increase resilience**
- **Gain tools to participate in local initiatives and support their community**

Climate change can feel big and overwhelming, but young people have creativity, energy, strong community networks, and the capacity to lead change. With knowledge, skills, and support, they can help protect themselves, their families, and their communities today and for future generations.

Overall Objective

To equip adolescents and young people with practical knowledge of climate change adaptation, grounded in local realities and national priorities, and to empower them to take meaningful action in their communities.





Session 1: Climate – Core Concepts and How It Changes

Learning Goals

By the end of this session, you will be able to:

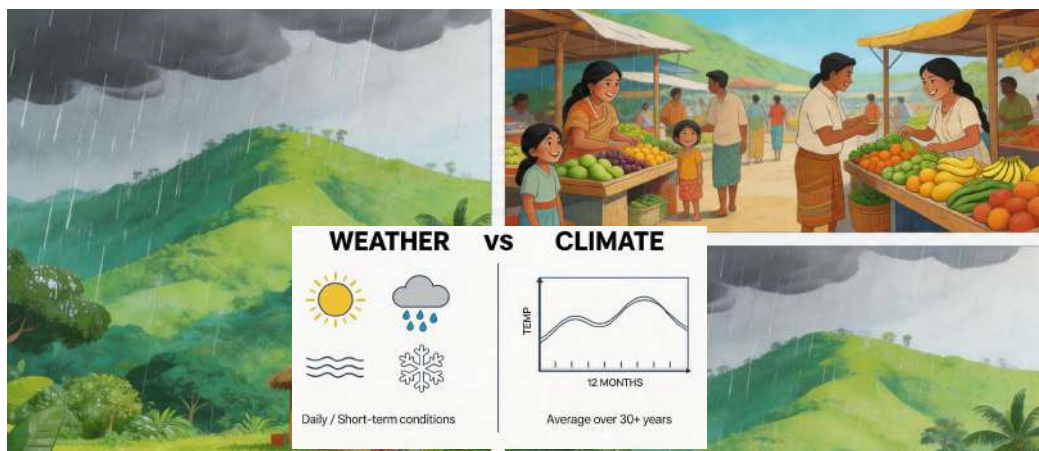
1. Understand the difference between weather and climate.
2. Explain the components of the climate system.
3. Describe how energy from the Sun regulates Earth's temperature.
4. Identify greenhouse gases and their role in the greenhouse effect.
5. Understand natural and human causes of climate change.
6. Discuss how human activities contribute to climate change.

1.1 Climate & Weather

Weather is the day-to-day condition of the atmosphere at a specific place and time, such as rain, sunshine, wind, or temperature.

Climate is the typical weather conditions of a specific place over a long period of time, usually at least 30 years.

Diagram 1: Weather (short-term) vs Climate (long-term)



Weather is what happens today, yesterday, or this week.

Climate is what the weather is usually like over many years.

In **Timor-Leste**, the **weather** can change from sunny to rainy in just a few hours, while, the **climate** follows regular rainy and dry seasons last for months each year.

“Take a moment and look outside:”

Is it hot and sunny ?

Or

Is it cloudy and rainy ?

These are examples of weather— what’s happening right now.

Now think about longer-term changes, like the rainy and dry seasons. That’s climate, what you can expect over months and years.



Quiz 1: Guess the Weather vs Climate!



Instructions:

- Read each statement carefully.
- Write '**Climate**' or '**Weather**' if the statement correctly refers to one of them.
- Check your answers at the end of session 1.

No	Statement	Climate or Weather?
1.	There was heavy rain in Dili yesterday.	
2.	Timor-Leste has rainy and dry seasons every year.	
3.	Hot sunny day in Baucau.	
4.	Strong winds on Atauro Island today.	
5.	Rainy seasons in Timor-Leste usually start in November and end in April.	
6.	Dili is warm and humid all year round.	

*"**Climate** is what we expect, **weather** is what we get."*
Mark Twain

1.2 The Climate System

The climate system has five major connected parts.
When one changes, the others are affected too.



Air **(Atmosphere)** – the mixture of gases that surround the earth (rain, wind, heat)

Living things **(Biosphere)** All living things on Earth – plants, animals, humans, and even microorganisms – and the places where they live (land, rivers, oceans, and air).



Ice **(Cryosphere)** – the earth's ice and snow masses (glaciers, ice caps, ice sheets, sea ice, snow).

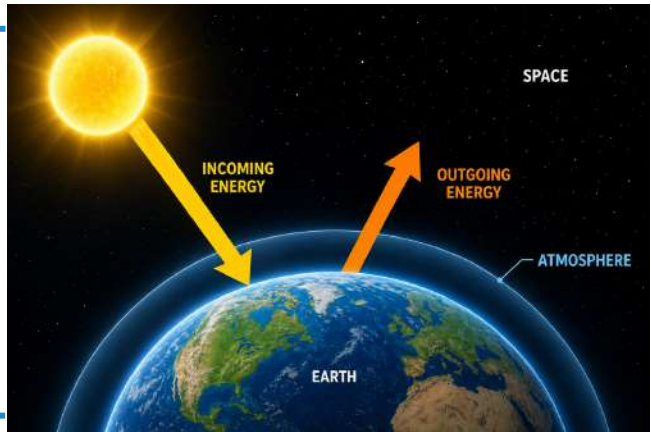
Land & soil **(Geosphere)** – the solid part of the Earth (land, rocks, mountains, soil)

Water **(Hydrosphere)** – the earth's water, including fresh and salt water (oceans, rivers, lakes, groundwater, and rain.)

This helps us understand why climate impacts affect health, food, water, and safety.

1.3 Earth's Energy Balance and the Greenhouse Effect

The sun is Earth's main source of energy. It warms our planet and affects the weather and climate. Energy from the Sun and the atmosphere work together to keep Earth warm enough for life.



A. The natural energy balance

Incoming energy (from the Sun):

- ☒ The Sun sends energy to Earth as sunlight.
- ☒ Some sunlight is reflected back into space.
- ☒ The rest is absorbed by land, oceans, and air.

Outgoing energy (from Earth):

- ☒ Earth releases this energy back into space as heat.

B. The natural greenhouse effect

- ☒ Some gases in the atmosphere trap a small amount of heat.
- ☒ These gases act like a natural "blanket" around Earth.
- ☒ This helps keep Earth warm enough for people, animals, and plants to live.

Earth stays warm because of a balance between incoming sunlight and outgoing heat, with greenhouse gases helping to trap just enough heat in the atmosphere.

C. What are Greenhouse Gases (GHGs)?

Greenhouse gases are gases in the Earth's atmosphere that trap heat and help keep the planet warm.

How greenhouse gases trap heat

Sunlight passes through the atmosphere and warms the Earth's surface (land, oceans, and plants). After being warmed, the Earth releases this energy back toward space as heat. Greenhouse gases in the atmosphere absorb part of this outgoing heat and send some of it back toward the Earth instead of letting it fully escape into space.

This helps keep the planet warm enough for life. This natural process is called the **greenhouse effect**.

When the amount of greenhouse gases increases, more heat is trapped in the atmosphere. This causes the Earth to become warmer than normal, leading to global warming.

Did you know ?

Earth receives sunlight every second, but only about 70% is absorbed, while 30% is reflected back into space.

This balance helps keep Earth's average temperature around 14°C, which is suitable for life.

Without greenhouse gases, Earth would be much colder—around -19°C.

Greenhouse gases:

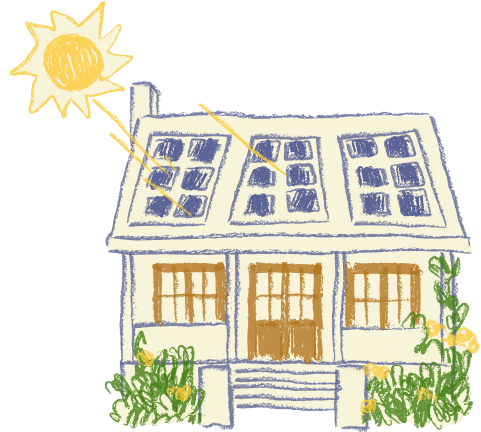
- Trap heat in the atmosphere.
- Can remain in the atmosphere for many years, from decades to thousands of years.
- Help maintain a temperature that supports life on Earth.

Main Greenhouse Gases

Greenhouse gases can be natural or increased by human activities.

Naturally occurring greenhouse gases:

- Water vapour (H_2O)
- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Ozone (O_3)



Human-caused greenhouse gases

Since the Industrial Era began in the 18th century, human activities have released large amounts of greenhouse gases, causing global warming and climate change.

The main greenhouse gases released by human activities are:



Carbon dioxide (CO_2)
(burning fossil fuels, deforestation)



Methane (CH_4)
(livestock, waste, agriculture)



Nitrous oxide (N_2O)
(fertilizers and farming)



Fluorinated gases
(used in cooling and refrigeration)

Did you know ?

Carbon dioxide is the primary greenhouse gas resulting from human activities, particularly from burning fossil fuels, deforestation, and changing the way land is used.

Our reliance on fossil fuels has led to a 50 percent increase in the concentrations of carbon dioxide in the atmosphere over the last 200 years.

Methane is another important greenhouse gas that is responsible for 25 percent of global warming. Methane is released during the extraction and transport of coal, gas, and oil, and by waste landfills and agricultural practices.

1.4 Climate Change

Climate change is a long-term change in the Earth's climate caused by natural processes and increasingly today, by human activities.

It includes changes such as:



Rising temperatures; and



Rainy and dry seasons that may start earlier or later than usual and end earlier or later than before.

Climate change can occur due to two main factors:

A. Natural factors that cause climate change

Climate change can happen naturally because Earth's climate system is always slowly changing.

1). Changes in the Sun's energy

- The Sun does not always give the same amount of energy.
- Sometimes it gives slightly more or less heat.

This can make Earth a bit warmer or cooler over long periods.

2). Volcanic eruptions

- Big volcanoes can release ash and gases into the sky.
- Ash can block some sunlight from reaching Earth.

This can temporarily cool the Earth.

- Some gases can also affect temperature over time.

3). Slow natural changes in Earth's climate

- Earth's position (orbit and tilt) changes very slowly over thousands of years.
- Ocean currents and wind patterns also shift naturally over time.

These natural changes:

- happen **slowly**;
- happen over **thousands of years** ; and
- are part of Earth's normal climate system.

These natural changes are slow and normal.

But today, climate change is happening faster because of human activities.

B. Human factors that cause climate change

Today's climate change is mainly caused by human activities that add extra greenhouse gases to the atmosphere. These gases trap more heat around the Earth, making the planet warmer.

This is called **anthropogenic climate change**, meaning climate change caused by human activities.

The main human activities that cause climate change include:

1. Burning fossil fuels (energy, transport, electricity)

- Cars, buses, and motorbikes burn petrol and diesel.
- Factories burn fuels to produce goods, like clothes and plastic products.
- Electricity in homes, schools, and cities often comes from burning fuels.

*This releases **carbon dioxide (CO₂)** into the air
CO₂ traps heat and makes the Earth warmer.*

Did you know ?

Fossil fuels are natural energy sources like coal, oil, and gas, made from the remains of plants and animals that lived millions of years ago. When people burn these fuels – for cars, cooking, or making electricity – they release carbon dioxide (CO₂) and other gases that trap heat in the air and make the Earth warmer.

2. Cutting down forests (deforestation and land use change)

- Forests are cleared for farming, houses, and roads.
- Trees that absorb carbon dioxide are removed.
- Sometimes forests are burned, releasing more CO₂.

When there are fewer trees, less CO₂ can be absorbed from the air, so more CO₂ remains in the atmosphere.

3. Agriculture and waste

- Cows and livestock produce methane (CH₄).
- Fertilizers used in farming release nitrous oxide (N₂O).
- Waste in landfills produces methane as it decomposes.

These gases trap heat more strongly than CO₂.

Did you know ?

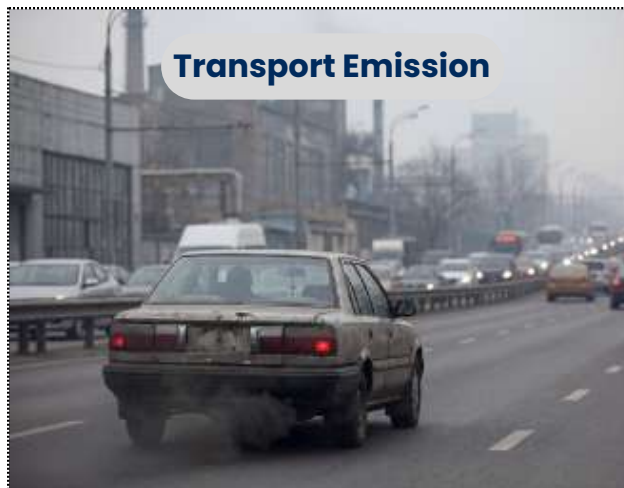
Cows produce a lot of methane, a powerful greenhouse gas, through digestion — a fully grown cow can emit up to about 500 liters of methane per day. That's one reason livestock industry contributes significantly to global methane emissions and climate change.

All these human activities increase greenhouse gases in the atmosphere. This leads to more heat being trapped and causes the Earth to warm.

The images below show the main human activities that increase greenhouse gases.

Burning Fossil Fuels

Energy, transport, and electricity release CO₂ into the air.



Transport Emission

Photo source: Vecteezy



Power Plant

Photo Source : Steve Buissinne / Pixabay.

Deforestation

Cutting forests reduces the Earth's ability to absorb CO₂.

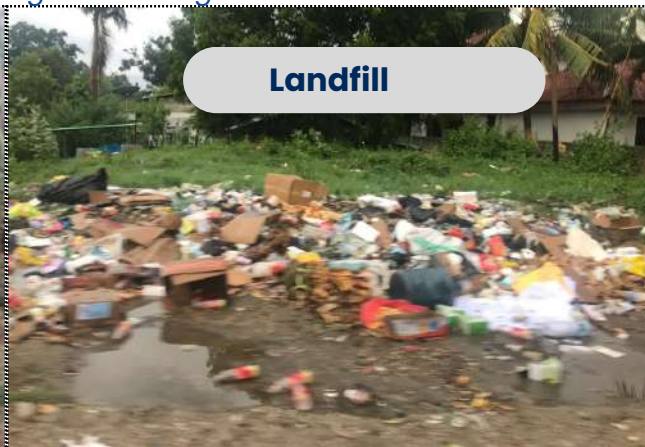


Cutting down forest

Photo Source: National Geographic

Waste

Farming and waste release methane and other greenhouse gases.



Landfill

Photo Source: EBP/2020



According to the Intergovernmental Panel on Climate Change (AR6, 2022), climate change increases the intensity of some extreme weather events.

Quiz 2: True or False – Climate Detective!



Instructions:

- Read each statement carefully.
- Write **True** if the statement is correct.
- Write **False** if the statement is wrong.
- Check your answers at the end of session 1 and see if you are a Climate Detective Hero!

No	Statement	True or False
1.	Changes in solar energy are the main cause of modern climate change.	
2.	Cars release carbon dioxide when they burn fuel, which contributes to climate change.	
3.	Cutting down forests increases carbon dioxide in the atmosphere.	
4.	Methane can be released from livestock and waste landfills.	
5.	Using fertilizers in farming can release gases that contribute to global warming.	
6.	Human activities are the main cause of recent climate change.	

IMPORTANT – Understanding the Difference Between Hazards, Climate Change, and Environmental Damage/Destruction

Hazards

- Natural events.
- Examples: floods, storms, droughts, and landslides.
- A flood can happen naturally, even without climate change.

Climate Change

- A long-term change in Earth's weather and climate.
- Climate change does not directly create hazards, but it can influence hazards by making them:



Stronger



More frequent



Less predictable



For Example:

Heavy rain → Flood

Climate change → More heavy rain → Bigger floods

Waste → blocks drains → causes flooding (but not climate change)

Burning → releases gases → climate change

Environmental Damage or Destruction

Can happen with or without climate change.

Examples include:



Forest loss from logging;



Soil erosion from farming;



Coral reef damage from pollution; and



Water pollution from waste.

Climate change can worsen environmental damage, but it is not the only cause.

Quick Check

1 Is a flood always caused by climate change?

☐ Yes ☒ No

Answer: No.

Explanation: Floods are natural hazards. They can happen even without climate change. However, climate change can make heavy rainfall more intense, which may lead to stronger floods.

2 What is climate change?

- ☒ A long-term change in Earth's climate
- ☐ Only heavy rain or flood
- ☐ Recycling plastic

Answer: A long-term change in Earth's climate.

Explanation: Climate change means weather patterns change over a long period of time, not just during one weather event.

3 Can environmental damage happen without climate change?

☒ Yes ☐ No

Answer: Yes

Explanation: Environmental damage can be caused by human activities such as pollution, logging, or waste, even if climate change is not the cause.

Climate change is a long-term change in Earth's climate that can make weather and hazards more extreme. Understanding the difference between hazards, climate change, and environmental damage is the first step to protecting people, communities, and nature.

Quiz 3: Match – Draw a Line!

Instructions: Draw a line to match each statement on the left with the correct answer on the right.

No	Statement	Climate System Part or Energy Flow
1.	Today is sunny and hot.	Climate Change
2.	Oceans store heat and affect climate.	Energy In
3.	Sunlight reaches Earth.	Ocean
4.	Human activities release gases that build up in the atmosphere and slowly warm the Earth over time.	Greenhouse Effect
5.	The country Timor-Leste has hot temperatures every year.	Climate
6.	Heat leaves Earth into space.	Energy Out
7.	Greenhouse gases trap heat in the atmosphere.	Weather

Summary Box:

Session 1: Climate – Core Concepts and How It Changes

Weather vs Climate

- Weather: Day-to-day changes (rain, sun, wind, temperature).
- Climate: Average weather over 30+ years.

Example: Sudden rain showers vs. rainy and dry seasons.

The Climate System

- Five connected parts: Atmosphere, Oceans, Land, Ice & Snow, Living things.
- A change in one part affects the others.

Earth's Energy Balance and the Greenhouse Effect

- Sunlight is absorbed, reflected, or trapped by the atmosphere.
- Greenhouse gases act like a blanket, keeping Earth warm.
- Too many greenhouse gases result in faster warming.

Climate Change

- Long-term change in Earth's climate.
- Caused by natural processes (Sun, volcanoes, Slow changes in Earth's orbit, winds, and ocean currents) and human activities (burn fuels, deforestation, agriculture).
- Examples: hotter temperatures, shifting seasons, droughts.

Greenhouse Gases (GHGs)

- CO₂ – cars, factories, burning fuels, deforestation.
- CH₄ – livestock, waste.
- N₂O – fertilizers and farming.
- O₃ – traps heat.

Human Activities Increasing GHGs

- Transport & electricity → CO₂
- Deforestation → CO₂
- Farming → CH₄ & N₂O
- Waste & industry → CH₄ & CO₂

Answer Keys for Session 1: Climate – Core Concepts and How It Changes

Answer key for Quiz 1 Weather vs Climate

1. Weather
2. Climate
3. Weather
4. Weather
5. Climate
6. Climate

Answer Key – Quick Quiz 2: True or False – Climate Detective

1. False – Modern climate change is mainly caused by human activities, not solar energy changes.
2. True – Cars burn fuel and release CO₂, which contributes to climate change.
3. True – Cutting down forests reduces CO₂ absorption, increasing CO₂ in the atmosphere.
4. True – Livestock and landfills release methane (CH₄).
5. True – Fertilizers can release nitrous oxide (N₂O), a greenhouse gas.
6. True – Activities like burning fuels, deforestation, and farming increase greenhouse gases.

Answer Key – Quick Quiz 3: Match – Draw a Line

1. Weather
2. Ocean
3. Incoming Energy
4. Climate Change
5. Climate
6. Outgoing Energy



Session 2: How Climate Change Affects People?

Learning Goals

By the end of this session, you will be able to:

1. Explain climate risk by describing how hazards, exposure, and vulnerability interact.
2. Identify common climate hazards (such as floods, droughts, landslides, and heatwaves) and how they affect people and communities.
3. Describe how climate change impacts daily life, including health, food, water, education, and infrastructure.
4. Recognize who is most vulnerable to climate change.

2.1 Understanding Climate Risk

In Session 1, we learned about climate change and natural hazards.

In this session, we explore how climate change affects people and communities.

Climate change affects people's lives, communities, and environments. Changes in rainfall, temperature, and sea levels can influence health, food production, water availability, and the places where people live.

Reminder!

Climate Change as a Risk Multiplier

Climate change can make natural hazards stronger, more frequent, or less predictable. Here is what it can do in Timor-Leste:

- ▲ **More heavy rain** → Higher flood risk
- ▲ **Longer dry seasons** → More severe droughts, crop stress
- ▲ **Hotter days** → Heat stress, impacts on health
- ▲ **Rising sea levels** → Increased coastal flooding and erosion
- ▲ **Stronger storms** → More damage to homes, roads, and crops
- ▲ **Greater stress on water resources** → Less water for drinking, cooking, and farming

To understand why some people are more affected than others, we can look at climate risk.

Climate Risk!

To understand how climate change affects people and communities, we can use a simple idea:

$$\text{Risk} = \text{Hazard} \times \text{Exposure} \times \text{Vulnerability}$$

The United Nations Office for Disaster Risk Reduction explains that disasters occur when hazards affect people who are exposed and vulnerable.

For example:

- ◆ Heavy rain is a hazard.
- ◆ Homes built near rivers increase exposure.
- ◆ Weak housing or poverty increase vulnerability.

When these factors combine, the risk of disaster increases. This helps explain why some communities are more affected by floods, droughts, or storms than others.



Key Terms

Risk

The chance that a hazard will cause harm to people, property, or communities. Risk depends on three things: hazard, exposure, and vulnerability.

Hazard

A natural event that could cause harm, like floods, droughts, storms, heatwaves, or landslides.

Exposure

Who or what is in the path of the hazard. For example, people living in floodplains, homes near rivers, or farms in dry areas are “exposed” to the hazard.

Vulnerability

What makes people, communities, or assets more likely to be harmed when a hazard occurs. For example, weak houses, lack of resources, or poverty increase vulnerability.

Exploring Climate Risk in Our Communities

- Look at each photo and read the table.
- Notice the Hazard (the event).
- Notice the Exposure (what or who is affected).
- Notice the Vulnerability/Impact (how people are affected).
- Many hazards, like floods, droughts, and landslides, can become more frequent or severe because of climate change.
- This shows how climate risk is calculated:

$$\text{Risk} = \text{Hazard} \times \text{Exposure} \times \text{Vulnerability}$$

Reflect:

How might these risks affect people’s lives in your community?
What could be done to reduce vulnerability?

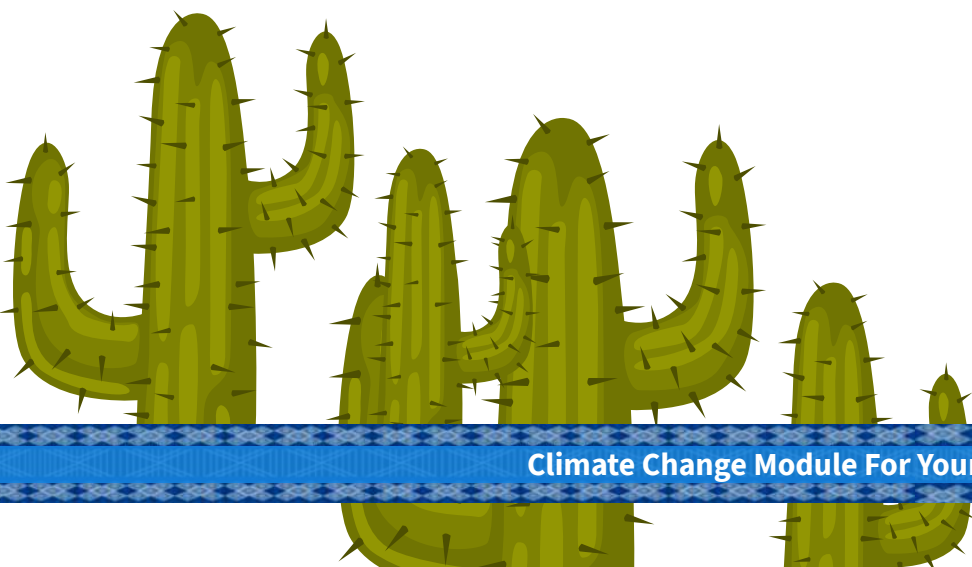
Images	Hazards (What is the hazard?)	Exposure (Who/what is exposed?)	Vulnerability (What makes them vulnerable?)
 Photo source: World Bank (via UNDRR)	Inland Flooding from heavy rainfall.	People living in low-lying areas / houses near rivers.	Houses may be poorly built, lack of drainage, limited resources to cope, poverty.
 Photo source: Catherine Jones / FAO	Drought	Farmers, crops, livestock.	Small farms, poor irrigation, limited water access.
 Photo source: UNICEF/China/2025/Lu Yufan	Drought / water shortage	Child fetching water, local community relying on the water source.	Child is young and dependent, water source is scarce, may travel long distances, poor sanitation, limited access to alternative water.
 Photo source: JosueAlwyn/LSMTL/Viqueque/2026	Lanslides	Bridge, people using it, nearby homes.	If a landslide damages it, the community could be cut off from food, supplies, and services.

Quiz 1 – What's the hazard?

Instruction:

- Read each description below.
- Write the name of the climate hazard it describes (Floods, Droughts, Heatwaves, Coastal erosion, Landslides, Fires).

No	Statement	Hazard
1.	Water rises from rivers and covers houses, schools, and roads.	
2.	No rain for a long time, making wells run dry and crops die.	
3.	Very hot weather that makes people sick and plants wilt.	
4.	Beaches and mangroves slowly disappear as the sea eats the coast.	
5.	Mud, rocks, and soil slide down hills, covering homes and roads.	
6.	Flames destroy forests and farmland, often spreading quickly.	



2.2

How Climate Change Affects People and Communities

In section 2.1, we learned that risk depends on hazards, exposure, and vulnerability, and now we will see how these risks affect real life in key areas of community life.

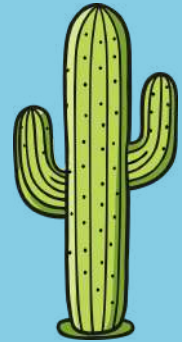
Story: A Day in the Life of Ana – Timor-Leste

Ana, a 12-year-old girl from a small village in Baucau, wakes up to the sound of rushing water. The river near her home has overflowed overnight, and her garden, where her family grows maize and vegetables, is flooded. She worries about her younger brother, who is coughing from the damp and cold, and wonders if school will still be open. When she looks outside, she sees that the road is covered in water and mud — school is canceled today.

Quickly, Ana helps her family move their belongings to higher ground. They cover the food and sweep water away from the house as best they can. Drinking water is scarce, and Ana remembers to boil water before drinking.

Later, the villagers gather in the community hall to discuss how to keep homes and children safe during floods. Ana listens carefully and shares her idea: planting trees along the riverbank to slow the water during future floods. Her suggestion is appreciated, and she feels proud — even at her age, she can make a difference.

Weeks later, come another issue, although the sun shines brightly, but the river is barely flowing. The maize and vegetable garden is dry, and the soil cracks under Ana's feet. The stream near her home, which usually provides water for cooking and washing, is almost empty. Ana walks with her mother to a neighbor's home to fetch water, carrying heavy buckets.



Food is scarce, and meals are smaller than usual. Ana misses school to help her family manage water. In the evening, villagers meet again to talk about coping with the drought. People suggest planting crops that need less water and building small rainwater tanks. Ana eagerly shares her idea – a tank near her home to store rainwater for dry days.

As Ana lies down to sleep that night, she thinks about the challenges she faced and the solutions she helped create. She realizes that even though floods and droughts make life difficult, she can learn, act, and help her community be ready for the next challenge and she is not alone, she has a community that helps each other to face challenges.

Discussion and Reflection

Questions to Discuss:

- 1 What challenges did Ana face during the flood and drought?
- 2 How did Ana help her family and community?
- 3 If you were Ana, what actions could you take to adapt to floods or droughts?
- 4 How can youth in your school or village support each other during climate events?

Ana's story shows how climate hazards like floods and droughts can affect many parts of daily life. These impacts can influence health, food, water, education, and the places where people live.

Key Areas of Climate Change Impacts on Community Life

Children & Youth

Learning & School

- Floods, droughts, or storms can make it harder to go to school.
- Example: During floods in Dili, some children cannot attend classes because roads are blocked or schools are damaged.

Play & Safety

- Safe spaces for play may be reduced during extreme weather.
- Landslides, floods, or heatwaves can make outdoor activities risky.

Stress & Wellbeing

- Experiencing extreme weather or losing access to water, food, or safe spaces can cause stress and affect mental health.

Reflection:

- How might children stay safe and continue learning or playing during extreme weather?
- What could families or schools do to support children's wellbeing?

Heat Stress & Illness

- Very hot days and heatwaves can cause exhaustion, dehydration, or heatstroke.

Disease Spread

- Floods create standing water, increasing mosquito breeding and the risk of diseases like dengue or malaria.

Vulnerable Groups

- Children, elderly, and people with pre-existing illnesses are most at risk.

Local Example

- After heavy rains in some villages, dengue outbreaks increase because water collects in containers around homes.

Reflection:

- How can communities protect health during heatwaves or floods?
- What simple actions can help reduce risks for children and vulnerable people?



Food and Livelihoods

Crops & Farming

- Droughts reduce crop yields; floods wash away crops and destroy farmland.

Fishing

- Warmer oceans and changing sea levels affect fish populations.

Income & Livelihoods

- Farmers and fishers may lose income, affecting families' ability to buy food.

Local Example

- Droughts reduced maize and vegetable production, causing shortages and higher prices.

Reflection:

- How could communities support farmers and fishers during extreme weather?
- What could families do to adapt to changes in food availability?

Water

Shortages

- Longer dry periods cause water to run out, especially for communities relying on rainwater.

Contamination

- Heavy rains can mix sewage, saltwater, or pollutants into drinking water.

Access & Health

- Limited clean water affects drinking, cooking, and hygiene, increasing disease risk.

Reflection:

- How could communities ensure safe water access?
- What solutions can youth and families contribute to?

Local Example

- In remote villages, residents may have to walk long distances for water during dry seasons.



Settlements & Infrastructure

Damage to Homes & Schools

- Floods, landslides, and storms can destroy houses and school buildings.

Roads & Transport

- Roads may be blocked or damaged, making travel and transport difficult.

Community Services

- Disruptions in electricity, water, or healthcare reduce communities' ability to cope.

Local Example

- Flooding in Dili caused temporary school closures and damaged roads.

Reflection:

- How can communities protect homes, schools, and services?
- What can children, youth, and families do to prepare for extreme weather?



2.3 Who is Most Affected?

Who Is Most Vulnerable and Why?

- ✓ Children and young people are among the most affected because they depend on adults, services, and safe environments to grow and learn.

When these systems are disrupted, their health, safety, education, and future opportunities are at risk.

- ✓ Vulnerability is highest among families who have fewer resources, limited access to health care, education, safe water, and social protection, or who live in high-risk areas such as floodplains, steep hillsides, or coastal zones.

Many already face poverty, isolation, or limited services—and climate change adds extra pressure to these existing challenges.



Why a Small Island Country is Highly Vulnerable to Climate Change?

Small island countries like Timor-Leste, are highly vulnerable to climate change.

Some of the main reasons why a Small Island Country is vulnerable:



High exposure to climate hazards

It is exposed to multiple climate-related hazards, including:

-  Floods
-  Droughts
-  Landslides
-  Coastal erosion
-  Sea level rise



Many settlements, schools and key infrastructure are located in hazard-prone areas, increasing the potential impact when disasters occur.



Dependence on climate-sensitive livelihoods

A large share of the population relies on rain-fed agriculture and small-scale fisheries. Climate events such as droughts, delayed rainfall or flooding directly affect crop yields, food production and household income.



Existing challenges in nutrition and health

Local communities experiences high levels of child malnutrition and food insecurity. Climate shocks reduce the availability and quality of food and water, and increase risks of water- and vector-borne diseases, placing children at particular risk.



Limited access to basic services

In many rural and remote areas, access to safe water, sanitation, health care and education remains limited. Climate impacts such as floods and landslides further disrupt service delivery and damage essential infrastructure.



Young population and demographic vulnerability

Timor-Leste has one of the youngest populations in the world. Because children and youth make up a large proportion of the population, climate impacts are felt most strongly by this age group across health, education and livelihood pathways.



Housing and infrastructure vulnerability

Many houses are constructed from light materials and are located in floodplains or steep areas. Roads and bridges are frequently damaged by heavy rainfall and landslides, isolating communities and disrupting services.



Environmental degradation

Deforestation, soil erosion and loss of mangrove ecosystems reduce natural protection against storms, floods and coastal hazards. Degraded ecosystems also reduce livelihood opportunities and resilience.



Limited financial and adaptive capacity

High poverty levels and limited access to financial resources reduce the ability of households to recover after disasters. Repeated climate shocks increase vulnerability and can push families deeper into poverty.

Summary Box – Session 2

Key Takeaways:

- Climate risk depends on Hazard × Exposure × Vulnerability. Hazards are events like floods or droughts; exposure is who or what is affected; vulnerability is what makes them more likely to be harmed.
- Climate hazards can impact many parts of daily life, from children going to school, to food production, water availability, health, and homes.
- Young people and children are often most affected, as they depend on adults, schools, and services for safety, learning, and wellbeing.
- Communities can reduce vulnerability by planning, working together, and taking practical actions — like safe water storage, resilient farming, or building safer infrastructure.
- Understanding climate risk helps us see how hazards, exposure, and vulnerability connect, and how actions in each area can protect lives and livelihoods.

Key Message for Youth:

Climate change affects people here and now. Communities, especially children and young people, face greater risks, but understanding these impacts helps us plan, prepare, and take action.

Answers Key for Session 2: How Climate Change Affects People

Answer Key for Quiz 1 – “What’s the Hazard?”

1. Floods
2. Droughts
3. Heatwaves
4. Coastal erosion
5. Landslides
6. Fires



Session 3: How Do We Respond to Climate Change?

Learning Goals

By the end of this session, you will be able to:

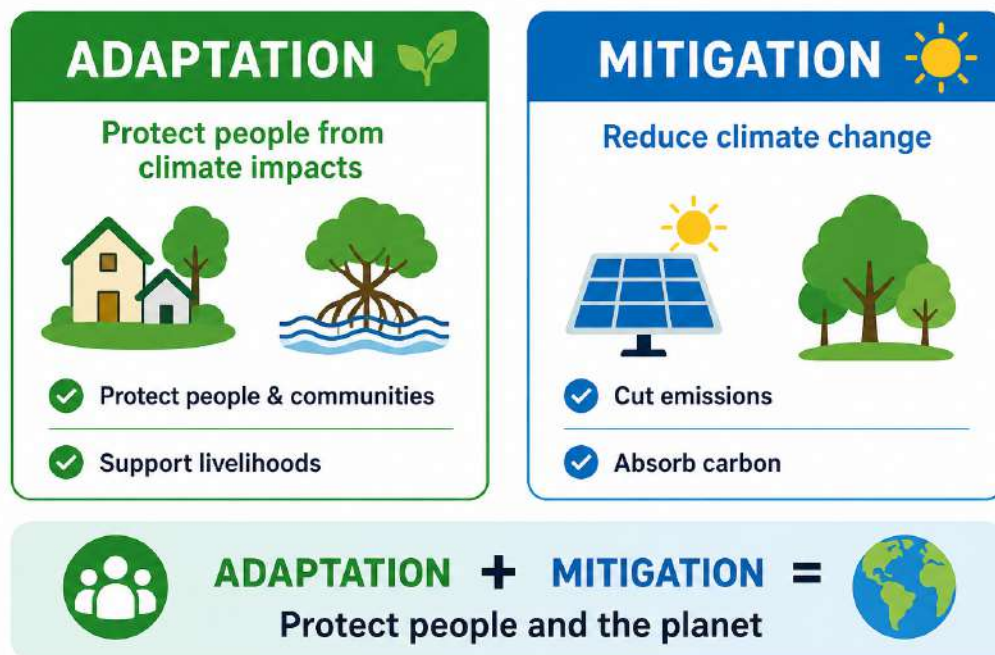
1. Understand climate action: adaptation and mitigation.
2. Explain why adaptation is important for vulnerable communities.
3. Identify key adaptation actions (policy, services, ecosystems, and community-based actions).
4. Recognize basic mitigation actions to reduce emissions.
5. Understand how adaptation and mitigation build resilience together.

3.1 Climate Action

Climate change affects people, nature, and services. We respond in different ways to reduce risks and stay safe.

Climate action means all efforts to address climate change by both reducing its causes (mitigation) and reducing its impacts (adaptation and resilience).

Two main climate action approach:



Adaptation helps people adjust to the impacts of climate change, while **mitigation** reduces the causes of climate change. When both are combined, they strengthen **resilience**, which means the ability to cope, recover, and continue living safely despite climate impacts.

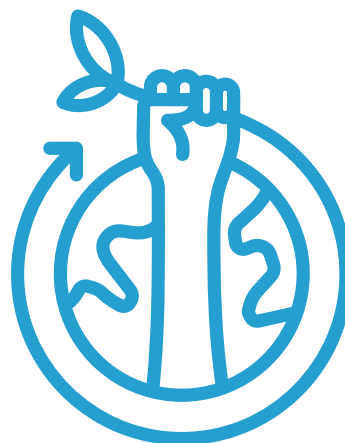
Climate Action can be measure at different levels:

International: Countries may cooperate on climate action, including reducing emissions and supporting responses to climate impacts (Mitigation + Adaptation).

National: Governments may adopt renewable energy and transition towards less dependence on fossil fuels (Mitigation).

Local: Communities may work to protect and restore local forests and coral reefs, led by community members (Mitigation + Adaptation).

Individual: Individuals can contribute by changing their lifestyle and adopting more sustainable daily habits, such as planting trees, switching off electricity when not in use, reducing plastic use, and using public transport or cycling (Mitigation + Adaptation).



3.2 Adaptation: How Do we prepare and adjust?

Adaptation is actions to prepare for or adjust to climate change impacts so people, communities, and nature are safer.

Like carrying an umbrella before a storm, adaptation means preparing for what is coming.

Why adaptation is important?

In the previous section, you learned that climate change is already affecting people through stronger storms, floods, droughts, heat, and coastal erosion. Communities have strength to respond. By taking action, we can adapt to these changes and protect our health, education, livelihoods, and daily lives.

Adaptation is especially important for:

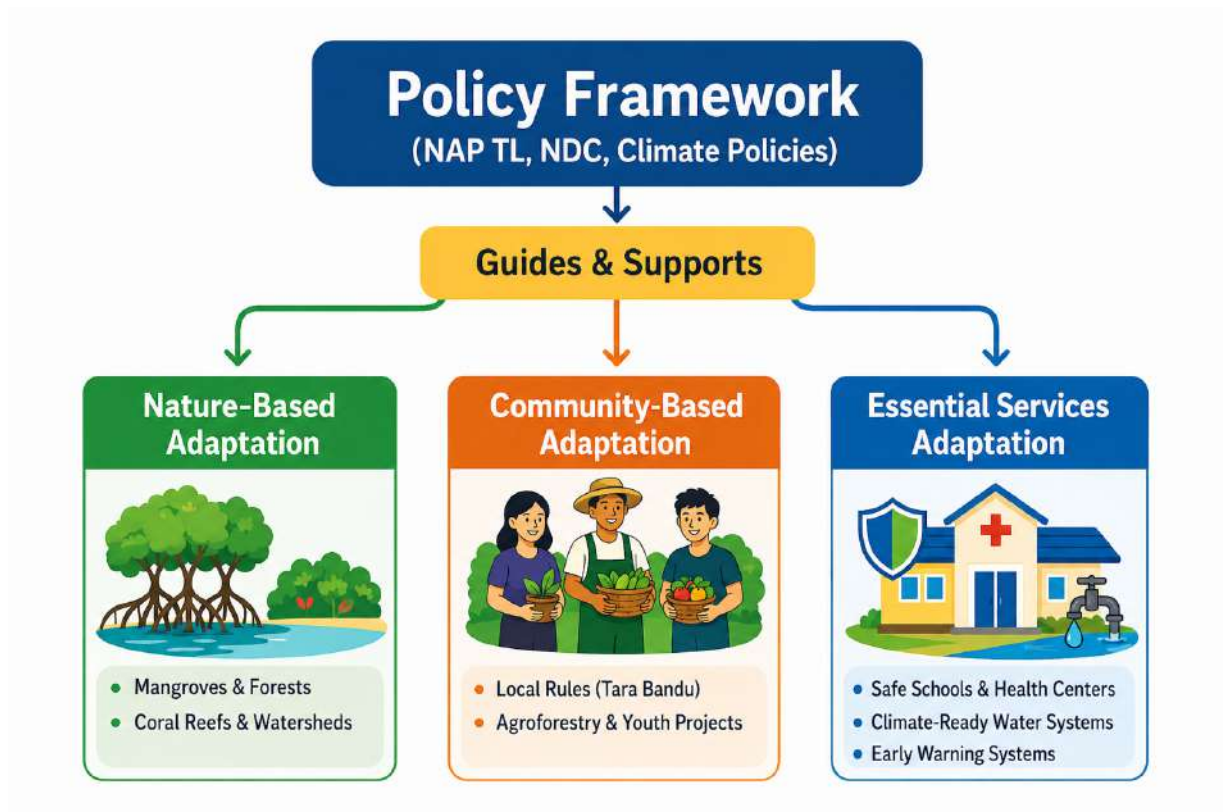
- ✿ Children and young people.
- ✿ Rural communities dependent on farming and fishing.
- ✿ People with disabilities and marginalized groups.
- ✿ Countries with small islands and long coastlines, including Timor-Leste.

Adaptation means acting early instead of only responding after disasters.



Climate Adaptation Approaches include:

a). Policy and Plans



Policies and plan (ex. NAP) give guidance, funding, and rules to support climate action.

Policy & Plans (Government Strategies for Climate Action)

Policy and plans (e.g. NAP TL, NDC) provide the framework that guides climate action. They help turn national strategies into practical actions in areas such as nature, communities, and essential services.

Key Instruments in Timor-Leste:



National Adaptation Plan (NAP): Roadmap for climate-resilient development. Helps communities adopt safe schools, climate-ready water systems, and resilient infrastructure.



Nationally Determined Contribution (NDC): Timor-Leste's climate goals under the Paris Agreement. Guides planning for early warning systems, disaster preparedness, and protecting vulnerable communities.



Climate Change Policies: Legal and strategic frameworks that coordinate adaptation across sectors, making sure actions are sustainable and integrated into national development.

Early Warning Systems: Tools that warn communities before floods, storms, droughts, or heatwaves. In Dili and other areas of Timor-Leste, flood early warning systems use rain gauges, river water-level sensors, and weather data to send alerts to authorities and communities before floods occur. This system has helped anticipate several floods and protect over 300,000 people by giving time to prepare or evacuate before disasters strike.

This early warning technology can measure **rainfall, soil moisture, river levels, and other data in real time**, helping communities know when danger is coming.



A Village Story: Turning Plans into Action

In a small village in Timor-Leste, heavy rains often flooded the roads, damaged crops, and sometimes cut families off from schools and health centers. During storms, power cuts were common, and access to clean water and services became difficult. In the rainy season, teachers in the school often noticed that lessons were interrupted and students struggled to continue learning when extreme weather hit. For many families, daily life and access to essential services became uncertain whenever the weather was severe.

Over time, policy and plan such as NAP and NDC helped guide and support practical projects in vulnerable villages. These plans helped different actors focus on strengthening essential services so communities could better cope with climate risks. Gradually, changes were introduced in key areas: roads were improved to maintain access during heavy rains, and solar power systems were installed in the school, community hall (sede suco), and health center, so these services could continue functioning even during electricity cuts caused by storms. Water services were also strengthened to improve reliability throughout the year.



Now, even though climate challenges still occur, the village is better prepared. Essential services are less likely to stop, and communities can continue daily life with fewer disruptions. Schools are able to run more consistently, health services remain available, and the community hall continues to function as a safe and active space during emergencies.

Reflection:

What essential services in your community—such as schools, health centers, or community spaces—do you think are most important to keep working during storms? Why?

b). Adaptation in Essential Services



Health



Flood and storm-ready health centers: Community health centres are equipped with emergency kits, solar lighting, and backup power, so health workers can continue saving lives during extreme weather.

For example: During storms, women can safely give birth with solar-powered lights or emergency kits; portable solar chargers keep phones working to call help.



Emergency response for childbirth: Portable solar lights, first-aid kits, and clean water ensure women can give birth safely, even during floods or storms.



Youth engagement: Young volunteers support health campaigns, vaccination drives, and disaster response in their communities.



Water & Sanitation



Solar-powered water pumps: Provide safe and reliable water during droughts, floods, or when landslides damage normal water systems.



Rainwater harvesting and storage: Schools, clinics, and villages can collect and safely store rainwater to maintain access even when rivers, wells, or springs are disrupted.



Clean water and hygiene interventions: Reduce the risk of waterborne diseases during disasters.



Education & Schools



Climate-resilient schools: Buildings designed to withstand floods, storms, and heat, with safe evacuation routes.



Solar-powered devices: Solar chargers are used to charge phones, tablets, and lights so learning continues even during power outages.



Community centers

Community centers are safe spaces where people can gather during emergencies such as floods, landslides, or storms. They provide temporary shelter for families, children, and vulnerable groups.



Solar energy: Provides reliable electricity during disasters when the power grid may be down. Supports lighting, communication, and charging devices.



Clean water: Ensures safe drinking water, reducing the risk of waterborne diseases after floods or heavy rain.



First aid & hygiene facilities: Some centers may also include basic medical care, toilets, and handwashing stations to protect health.



Communication hubs: Community centers can help coordinate relief efforts and share important disaster information with local residents.

c). Nature-based adaptation (Ecosystem-based adaptation)

Ecosystem-Based Adaptation means protecting nature—like forests, mangroves, and reefs—so it can protect us from floods, droughts, and coastal erosion.

Restore Natural Habitat

Restoring natural habitat means bringing damaged forests, rivers, reefs, and mangroves back to health so they can protect people and wildlife.

We are restoring mangroves, forests, and coral reefs to protect our coasts, rivers, and families.



Mangrove restoration : Protects coasts from erosion and storm surges.



Forest restoration : Prevents landslides and keeps rivers flowing.



Coral reef protection : Supports fisheries and food security.



Watershed restoration : Improves drinking water supply.

Restoring ecosystems helps communities adapt to climate change by creating safer environments for children and families during floods, storms, and droughts.

Healthy forests, mangroves, and reefs also support local livelihoods like fishing and farming, which are threatened by changing weather. At the same time, natural spaces provide areas for learning, play, and cultural activities, helping communities stay strong, resilient, and connected to their environment.

Ecosystem is community of plants, animals, people, and the land, water, and air around them, all working together like a forest, a mangrove area, or a coral reef. Ecosystems help communities by providing clean water, protecting farms, and reducing disaster risks.



Regional Inspiration: Pacific Agroforestry and Climate Resilience

In the Pacific Islands, countries are using agroforestry and sustainable land practices as nature-based solutions to help communities adapt to the impacts of climate change. These approaches combine tree planting, sustainable agriculture, and ecosystem restoration to support food security, protect soil, and strengthen resilience to extreme weather and changing rainfall patterns.

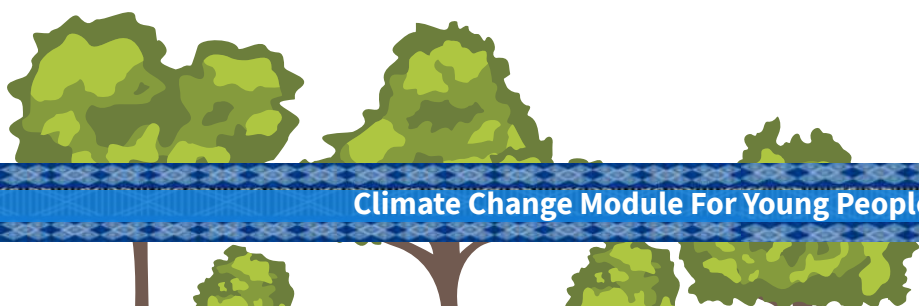
In Samoa, the Ministry of Natural Resources and Environment has launched an Agroforestry Program that promotes sustainable agricultural practices and community engagement as part of the country's climate resilience planning. This initiative supports awareness-raising, community involvement (including schools and local stakeholders), and demonstration activities that help people adopt climate-smart farming methods.

In Vanuatu, a regional ecosystem-based adaptation project (PEBACC+) recently trained more than 30 community members – including youth – in agroforestry practices that integrate trees with farming systems. These practices help maintain soil nutrients, prevent erosion, and boost long-term land productivity while strengthening local capacity to respond to climate risks.

These nature-based solutions:

- Strengthen soil health and reduce erosion by keeping land covered with trees and vegetation.
- Support food systems and food security by diversifying what communities grow.
- Help communities adapt to climate impacts like variable rainfall and stronger weather events.

Pacific agroforestry and sustainable land practices are examples of how working with nature can help people and ecosystems build resilience in the face of climate change.



Case Study: Guardians of Hera's Mangroves

In Hera, Dili, mangroves protect communities from storms, erosion, and saltwater flooding. But over time, these forests faced threats from development, overharvesting, and rising seas.

To build resilience, youth, volunteers, and community members joined efforts to restore the mangroves. With support from the Mangrove Study Centre (KFF), they learned to grow seedlings in nurseries, plant them along the coast, and monitor their growth. Students helped care for and track the trees while learning about ecosystems, biodiversity, and climate adaptation.

Traditional knowledge was also key. Using Tara Bandu, the community created rules to protect mangroves, preventing unnecessary cutting and keeping the ecosystem healthy for future generations.

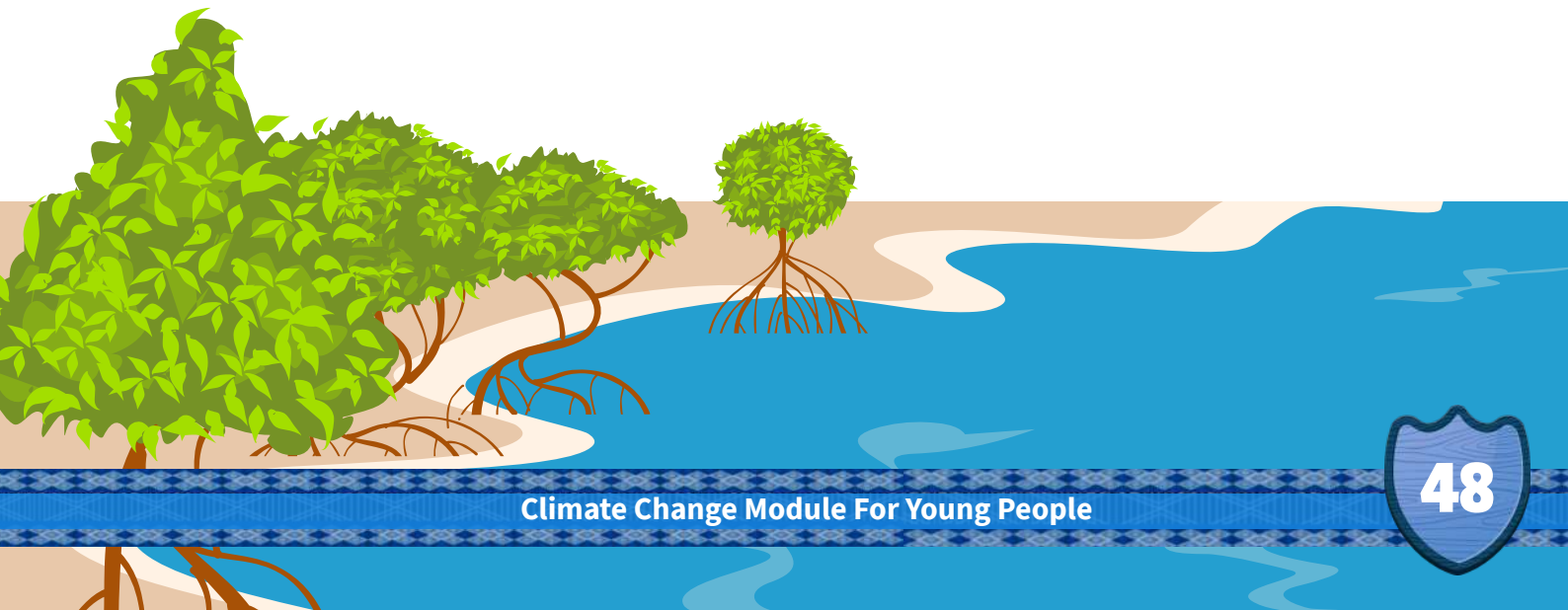
Benefits of Mangrove Restoration:

- ★ Protects the coast from storms and erosion.
- ★ Supports fish habitats and biodiversity.
- ★ Strengthens ecosystems against climate change.
- ★ Engages youth, building skills, knowledge, and pride.

"We are learning how to care for nature while protecting our homes and future," said a youth volunteer.

This story shows that adapting to climate change isn't always about building walls or digging wells — sometimes, the best solution is to work with nature.

Learn more: [KFF – Mangrove Study Centre, Hera](#)



d). Community-based adaptation

Community-based adaptation (CBA) means local people leading climate action in their own communities. They combine their knowledge, culture, and experience with support from youth groups, CSOs, and NGOs to create solutions that really work for everyone.

Community adaptation focuses on:

- reducing risks from climate change;
- protecting livelihoods; and
- building resilience, especially for the most vulnerable groups such as children, farmers, fishers, people with disability and people living in hazard-prone areas.

Community adaptation happens when communities work together, try out solutions, learn from experience, and make decisions that fit their village or neighborhood.

People work together—young people, elders, farmers, fishers, teachers, and leaders—to:

- 🔗 Understand local climate risks (floods, droughts, landslides, heat).
- 🔗 Identify which families or areas are most at risk.
- 🔗 Choose practical local solutions that fit their environment and lifestyle.



Local Examples

Tara Bandu for Reef and Coastal Protection

Tara Bandu is a traditional law and community rule in Timor-Leste that protects people, nature, and natural resources. It is based on local customs and ceremonies where a community agrees on rules — for example, about fishing, cutting trees, or hunting — and everyone promises to follow them. Tara Bandu can help communities manage forests, water, and coastal resources sustainably.

Communities use Tara Bandu, a traditional system of rules, to manage coral reefs, fishing areas, and coastal zones. By regulating fishing, protecting sensitive reef areas, and limiting coastal degradation, Tara Bandu helps maintain healthy ecosystems that buffer communities from storms, waves, and erosion. It also supports sustainable fisheries, protects livelihoods, and strengthen resilience to climate change.

1

2

Community run Agroforestry and Reforestation

In regions like Aileu and Liquiça, local farmers, women, and youth are leading reforestation efforts under climate adaptation programmes.

They plant native and fruit trees on degraded land, restoring soil health and protecting water resources — actions that support both the environment and livelihoods.

Mangrove Restoration in Liquiça

In Liquiça District, communities have been working together to restore mangrove forests. Members collect seeds, plant thousands of trees by hand, and monitor their growth. This helps protect the coast from erosion and storms and supports fishing livelihoods. The work uses both traditional methods and modern tools.

3

4

Fishing Community Mobilization

Fishing communities are organizing to protect marine ecosystems and restore mangroves, with support from initiatives like NGO Blue Ventures. Around 30,000 mangrove seedlings have been planted, helping sustain fisheries and protect coastal areas from climate hazards.

Case Study- Keeping Water Flowing: A Community Story from Bobonaro

In Bobonaro Municipality, communities have faced a growing problem: longer dry seasons and less predictable rainfall were threatening the natural water springs that families rely on for drinking, cooking, and farming. To address this, the Timor-Leste Red Cross (CVTL), local volunteers, and village disaster committees joined forces with community members to take action.

Around 50 residents, including youth, women, and elders, worked together to build rainwater catchments and community wells. By storing water from the rainy season, these structures ensure that villages have enough water during the dry months. The community didn't just follow instructions — they used their local knowledge, shared tasks, and organized group work to make the project succeed.

Young people played an active role, helping to construct the water systems, organizing teamwork, and spreading awareness about protecting water resources. Their involvement shows that adaptation isn't just about experts or governments — it's about communities taking charge of their own solutions.



Thanks to this effort, families now have more reliable water supplies, and the community has strengthened its cooperation and resilience. By working together, the people of Bobonaro turned a climate challenge into an opportunity to learn, act, and protect their future.

“We worked together to build something that will help everyone in our village,” says one young volunteer. “It feels good to see our community safer and stronger.”

For more details, see the [Timor-Leste Red Cross project](#)

Quiz: Which Adaptation Type?

Instruction: Read each example and choose whether it is Ecosystem-based, Community-based, or Adaptation in Essential Services. (Remember: policies and plans support all these actions!)

- Planting mangroves along the coast to reduce flooding.
- Families build a shared rainwater tank for dry seasons.
- Hospitals prepare emergency kits and solar backup for storms.
- Villagers organize a tree-planting day to prevent landslides.
- Installing solar-powered pumps to bring water to a village.
- Schools set up evacuation plans and first-aid kits for extreme weather.

3.3 Mitigation: How do we reduce causes?

Adaptation helps us cope with climate impacts, but mitigation is also needed to keep them from becoming worse.

If we only adapt but don't reduce emissions, global warming will keep rising, causing stronger storms, floods, heatwaves, and droughts. Mitigation is our way to take care of the planet and make it a safer, healthier place for everyone.

Mitigation means taking action now to reduce the greenhouse gases we release into the atmosphere, so we can slow down global warming and protect the planet for the future.

Examples of key actions include:

- Using renewable energy (e.g. solar or wind instead of fossil fuel).
- Protecting and restoring forests (trees absorb and store carbon dioxide).
- Improving energy efficiency in transport and buildings (e.g. fuel-efficient vehicles and LED lighting in buildings).
- Reducing waste and pollution (e.g. recycling, less burning).

Mitigation also means moving toward carbon neutrality or net zero, where we reduce emissions by using renewable energy and shifting to cleaner systems.

Carbon Neutral / Net Zero

Carbon neutral or net zero means that the greenhouse gases we release are balanced by actions that remove them, like planting trees, using renewable energy, or improving energy efficiency.

Many countries around the world have set a goal to reach net zero by 2050. This means that by 2050, the amount of greenhouse gases they release into the air will be balanced by the amount they remove, so overall emissions are close to zero.

Did you know?

Net zero does not mean no emissions at all — it means we take action to balance what we produce.

Reaching this goal is important to slow global warming and reduce the worst impacts of climate change.

For example, a school or village plants trees and uses solar energy to balance the greenhouse gases from electricity and transport.

Reflection: *Imagine your village wants to be “net zero.” What could people stop using or change to make less pollution, and what could they plant to balance the air?*

Renewable Energy and Energy Transition

Renewable energy comes from sources that never run out, like the sunlight, wind, or water. Using it instead of coal, oil, or gas keeps the air clean and helps fight climate change.

Some examples of renewable energy are:

- 🌿 Solar panels on rooftops.
- 🌿 Small wind turbines in villages.
- 🌿 Mini-hydro in rivers or streams.

Timor-Leste is very sunny almost all year, so solar panels can give electricity to many homes and schools.

Sustainable energy transition is a transformative change in how energy is produced, distributed, and consumed, with the goal of shifting from fossil fuels to systems centered on renewable energy sources such as solar, wind, hydropower, and geothermal energy.

This transition is very important for addressing the climate crisis, as fossil fuels still provide about 80% of the world's energy supply, and the current energy system is the main driver of global climate change, responsible for around 68% of total greenhouse gas emissions.



To accelerate the energy transition, it is necessary to increase renewable energy production and energy storage, decarbonize fossil fuel-dependent sectors, improve energy efficiency measures, and create an enabling environment supported by innovative financing mechanisms.

Timor-Leste's Energy System and Solar Potential

- Timor-Leste relies heavily on diesel to generate electricity for its population of around 1.3 million people, which leads to high electricity costs, fuel dependency, supply disruptions, and CO₂ emissions.
- Some rural villages and households still do not have access to the national electricity grid.
- The country receives high solar radiation (about 18–24 MJ/m² per day), making it very suitable for solar energy production.
- The government aims to increase renewable energy from 0.2% in 2021 to 35.4% by 2030, with solar energy as a key priority.

3.4 Building Climate Resilience

- *Adaptation helps us prepare for climate impacts.*
- *Mitigation helps reduce future climate risks.*

When adaptation and mitigation are done well, communities become more resilient.

Resilience is the ability of people, communities, or systems to anticipate, prepare for, respond to, and recover from the impacts of climate change, while continuing daily life and staying strong during events like floods, heat, or heavy rainfall.

Like a palm tree, resilience means staying strong even after storms.



For example, planting mangroves helps adapt to coastal flooding while also storing carbon, which supports mitigation. Together, these actions build stronger resilience in coastal communities.

Story: Building Hope and Resilience in a small village

In a small village in Viqueque, life used to be unpredictable. Heavy storms brought strong winds that toppled trees, washed away roads and bridges, and caused electricity blackouts. Crops were damaged, water became scarce during dry months, and children sometimes missed school. Families worried about food, water, and safety — and the future felt uncertain.

The villagers decided to act — not with separate solutions, but with climate-integrated actions that combine adaptation, mitigation, and community cooperation.

To protect lives and daily life today, the community worked together:



Raised footpaths and built stone footbridges across small streams, so children could safely walk to school even during floods. This was a community effort, with youth, elders, and parents sharing labor, knowledge, and local materials.



Installed rainwater harvesting systems and solar-powered water pumps, giving families access to clean water year-round, even when electricity went out during storms.



Created community early warning systems, where youth volunteers spread alerts about floods, storms, and strong winds, helping families prepare in time.

At the same time, they focused on protecting the environment for the future:



Restored mangroves along the coast to reduce erosion, protect homes from storm surges, and support fisheries for livelihoods.



Planted trees on hillsides to stabilize soil, prevent landslides, provide fruit, and absorb carbon, helping slow climate change.



Adopted agroforestry, combining crops with trees to improve soil, food production, and long-term climate resilience.

These actions are connected and reinforcing:

-  Safer footpaths and bridges (adaptation) allow children to attend school safely.
-  Solar water pumps (adaptation + mitigation) provide water without relying on electricity, even during blackouts.
-  Mangroves and forests (mitigation) protect homes, crops, and fisheries while absorbing carbon.
-  Community cooperation (social) strengthens everyone's ability to act during storms, floods, or power outages.

Even when strong winds fell trees and caused electricity outages, the village stayed resilient: children still reached school safely, families accessed water, and community members worked together to restore paths, clear debris, and protect crops. Elders guided recovery using Tara Bandu, the traditional rules for managing forests and water, while youth led planting and monitoring initiatives.

Today, this Viqueque village is thriving despite climate challenges. Children play and learn safely, families grow crops and raise fish, and restored forests and mangroves shield homes from storms. By combining nature-based solutions, community cooperation, and practical infrastructure, the village demonstrates true climate resilience — able to survive shocks today and protect its future tomorrow.

Key lesson for youth: Climate challenges are real, but when adaptation, mitigation, and community action are integrated, even the most vulnerable communities can become strong, hopeful, and resilient.

Sources & Inspiration:

- [UNDP Timor-Leste — Building Resilient Communities](#)
- Timor-Leste National Adaptation Plan (NAP)
- [IPCC WGII AR5, Chapter 14](#)



Summary Box

Adaptation

Adaptation helps us cope with climate change today – e.g., protecting coasts, planting mangroves, or harvesting rainwater.

Ecosystem-based adaptation: Use nature to keep people safe (like planting mangroves).

Community-based adaptation: People work together to solve problems (like building a rainwater system).

Policy-guided adaptation: Governments make rules to protect people and nature (like forest protection laws).

Mitigation

Mitigation helps slow climate change for the future – e.g., planting trees, using solar energy, biking instead of driving.

Why both matter:

- Adaptation alone isn't enough – without reducing emissions, global warming keeps getting worse.
- Mitigation alone isn't enough – communities still need to prepare for storms, floods, droughts, and heat.

Resilience is what happens when adaptation and mitigation work together:

Communities can anticipate, prepare, respond, and recover from climate impacts.

Like a palm tree, resilient communities bend but don't break during storms.

Taking care of people and the planet at the same time builds stronger, safer, and more hopeful communities.

Quiz: Mitigation and Resilience



What is mitigation?

- A) Actions that reduce greenhouse gas emissions to slow climate change.
- B) Preparing for floods and storms.
- C) Planting crops that grow faster.
- D) Moving to a different village.



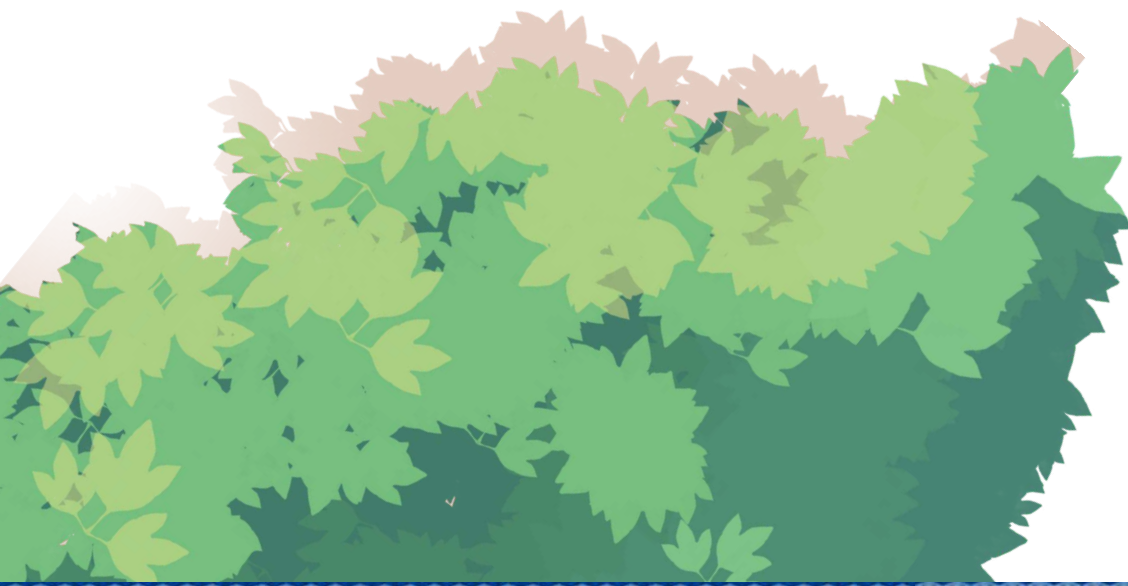
Why do communities need both adaptation and mitigation?

- A) Adaptation solves all problems, so mitigation is not needed.
- B) Mitigation alone can reduce all climate impacts immediately.
- C) Combining both helps communities cope today and reduce risks for the future.
- D) Neither is important; we just need technology.



Which of the following is an example of an action that does BOTH adaptation and mitigation?

- A) Planting mangroves along the coast.
- B) Riding a car to school every day.
- C) Building walls only for protection.
- D) Leaving fields uncultivated.





Scenario Question:

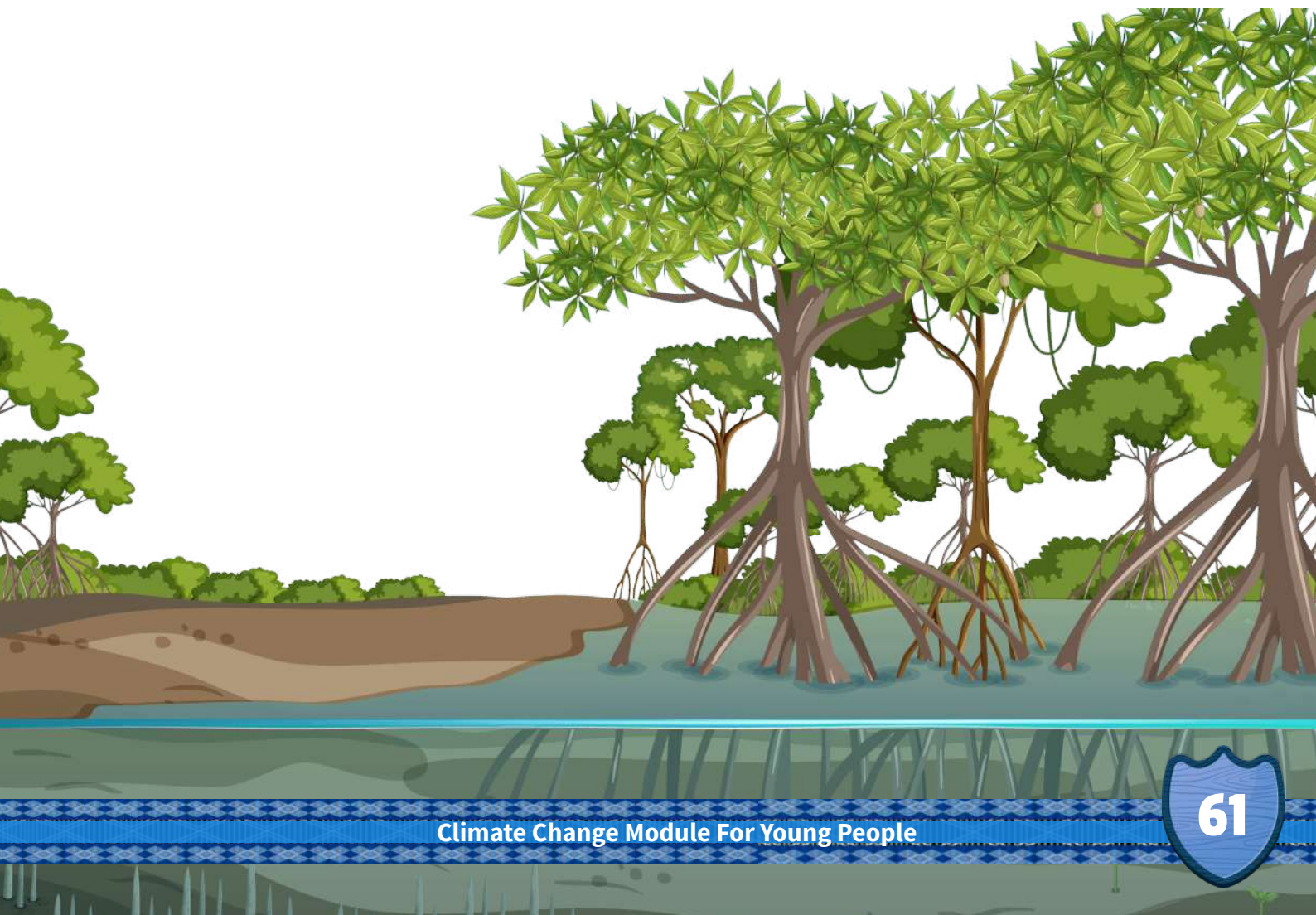
Imagine a small village in Viqueque municipality where storms often damage roads, electricity fails, and water is scarce in dry months. Which combination of actions would make the village resilient?

- A) Build stronger footpaths and bridges, install solar water pumps, plant trees on hillsides.
- B) Wait for storms to pass and rebuild each time.
- C) Focus only on planting crops without protecting soil or water.
- D) Do nothing and hope for better weather.



Bonus Question:

- Can you think of one adaptation action and one mitigation action that you could do in your school or home to help your community become stronger and more resilient?



Answer Key for Quiz: Guess the Adaptation Type

No	Adaptation Type
1.	Ecosystem-based
2.	Community-based
3.	Adaptation in Essential Services
4.	Community-based
5.	Adaptation in Essential Services
6.	Adaptation in Essential Services

Answer Key for Quiz: Mitigation and Resilience

- 1.A
- 2.C
- 3.A
- 4.A



Session 4. Youth Climate Action & Reflection

Learning Goals

By the end of this session, young people will be able to:

1. Identify ways they can take action at the individual, community, and global levels to adapt, reduce risks, and support resilience.
2. Be inspired to share knowledge, lead initiatives, and use your voice to influence positive change locally and globally.
3. Reflect on their own role in climate action and plan practical steps they can do personally and with their peers.
4. Understand opportunities in green jobs and entrepreneurship.

4.1 Youth Climate Action

Youth climate action is when young people learn, lead, and participate in ways that help their communities adapt to and respond to climate change. This can include personal lifestyle changes, local projects, awareness-raising, advocacy, and influencing policies or broader climate initiatives.

Even small actions — like planting a tree, helping with a local flood project, or sharing information — can protect people, nature, and essential services like schools, clinics, and farms.

Young people can take action to protect the environment and address climate change. Actions can range from raising awareness to hands-on activities, like community clean-ups, sustainable projects, or environmental education.

Youth Climate Action at Three Levels:

- Individual and Lifestyle Actions
- Local Community Actions
- System and Global Actions



Learn more about youth climate action in the “Youth Climate Action Toolkit”.

Individual and Lifestyle Actions

Efforts people make on their own — through daily choices and habits — to reduce greenhouse gas emissions and support climate solutions. One person can take in daily life to reduce their impact on the climate and adapt to its effects. This includes choices like saving energy, planting trees, using public transport, reducing waste, or conserving water.

A young person chooses to walk or cycle instead of using a motorbike to reduce carbon emissions.

Individual Action can include:

- ☀️ Plant trees or maintain a home garden.
- ☀️ Save water and energy at home.
- ☀️ Walk, cycle, or use public transport instead of cars.
- ☀️ Reduce, reuse, and recycle waste.

Changemaker Story – Climate-Smart Eureka Moment

Alya from Lautem – Smart Gardening for Climate Resilience

In Lautem, rainfall has become unpredictable, and dry seasons often last longer than before. Alya, a 19 years old, noticed that her family sometimes struggled to grow enough food during these dry periods. She decided to take individual climate action — not just for herself, but to show others in her community how small daily actions can help adapt to climate change.

Climate Actions:



She created a vertical container garden using old buckets and bottles to grow moringa, papaya, cassava, and sweet potato seedlings, saving space and protecting plants from uneven rainfall.



She made a simple slow-drip watering system from reused bottles to keep her plants alive during dry periods.



She shared videos and photos on Facebook and TikTok, calling it her “Bottle Garden Challenge” and encouraging friends to try climate-smart gardening at home.

Impact:



Friends and neighbours began commenting and asking how to start similar action.



Friends and neighbours tried container gardens or slow-drip watering for the first time.



People realized small, smart adaptations can make a real difference during dry seasons.



Alya’s posts turned individual lifestyle action into community climate adaptation, spreading knowledge digitally.

Reflection:

1. How do Alya’s gardening actions help her family adapt to climate change
2. How can sharing climate-smart habits online influence your community?
3. What is one lifestyle habit you could adopt to prepare for droughts or unpredictable rainfall in your area?

Local Community Actions

Community or local climate action refers to collective efforts by groups, local governments, schools, NGOs, or communities to address climate change through adaptation, mitigation, awareness, and preparedness activities. These actions build local resilience and help protect people and ecosystems from climate impacts.



Actions taken by groups, neighborhoods, schools, or communities to respond to climate change together. These can include tree-planting campaigns, community gardens, flood preparedness, or local advocacy for safer infrastructure. A village group builds rainwater storage systems to prepare for dry seasons is an example of local community action.

Local community actions can include:

-  Organize a school or village tree-planting campaign.
-  Build or support local disaster preparedness plans.
-  Start awareness campaigns about water conservation, clean energy, or recycling.
-  Help communities recover after floods, droughts, or storms.
-  Collaborate with local leaders on climate-smart solutions.

Youth Changemaker Spotlight

Ross Mery da Gloria – Kios Matenek, Timor-Leste

Inspiration for Climate Action

Ross Mery da Gloria is a young changemaker from Timor-Leste who is actively involved in community development through **Kios Matenek**, a social space that promotes learning, community engagement, and sustainable lifestyle practices.



Ross believes that many environmental challenges are influenced by human behavior. Waste generation, pollution, and unsustainable consumption patterns place increasing pressure on the environment and contribute to climate change. Through her work, she encourages sustainable lifestyle practices that help reduce environmental impacts and support a healthier planet for future generations. She also supports young people to take action in their communities and become part of the solution.

Challenges and Community Action

At the beginning, introducing new environmental and social concepts to the community was challenging. Ideas such as green building practices and hydroponic farming were not widely familiar in the community, and many people were initially unsure about their benefits.

To address this, Kios Matenek focused on education and community engagement. Activities included free language learning programs, practical demonstrations for visitors interested in hydroponic farming, and continuous community outreach. Over time, as people began to understand and observe the positive results, they became more open and supportive of these initiatives.

Positive Change and Youth Participation

Kios Matenek has contributed to increasing youth participation in community learning activities. Young people have become more involved in social spaces and local initiatives. Although the change is gradual, it represents meaningful progress compared to the early years since the establishment of Kios Matenek in 2021.

Through the promotion of social entrepreneurship, more young people have been encouraged to explore business ideas that support sustainable and community-driven development. The initiative also supports the emergence of young entrepreneurs who are interested in community-oriented and environmentally responsible economic activities.

Visitors to Kios Matenek can also learn practical skills, such as hydroponic farming, which demonstrates how food can be grown in small urban spaces.

Inclusion of Children, Youth, and Vulnerable Groups

Kios Matenek promotes inclusive community participation through programs such as:

- English and Portuguese conversation classes.
- Community learning activities.
- Sunday Market initiatives that create social and economic opportunities.

These activities provide learning and interaction spaces where community members can develop knowledge, skills, and social connections.

Message to Young people

Young people do not need to feel overwhelmed by global environmental challenges. Change can start with small and practical actions in daily life. Reducing waste, saving energy, planting trees, and sharing environmental awareness are meaningful contributions.

Ross encourages youth to set small, achievable goals and remain consistent. Simple actions practiced regularly can create long-term positive environmental impact and inspire others.

Reflection:

- What motivated Ross Mery to promote community environmental awareness?
- How can education support environmental sustainability?
- Why is youth participation important in community development?

System and Global Actions

System or global climate actions are actions taken at national, regional, or international levels to address climate change through laws, policies, funding, education, and international cooperation. These actions help reduce greenhouse gas emissions, strengthen adaptation, and support climate-resilient development.

Young people can contribute by participating in climate advocacy, engaging in youth networks and forums, supporting community voices, and helping influence climate policies and decisions. Youth participation can happen through schools, local organizations, social campaigns, consultations, and national or international climate discussions.

Global actions can include:

- Participating in youth climate forums or advocacy campaigns.
- Contributing ideas to local or national climate plans.
- Joining youth-led organizations or environmental groups.
- Raising awareness through media, art, storytelling, or digital platforms.
- Supporting community voices in climate decision-making.

Through these actions, young people can build skills in:

- leadership.
- communication.
- teamwork and collaboration.
- critical thinking.
- advocacy and public speaking.
- problem-solving.
- civic participation and decision-making.

For example, Timor-Leste participates in global climate agreements such as the Paris Agreement and submits Nationally Determined Contributions (NDCs) to support climate action and adaptation.

Youth Changemaker Spotlight

Dedy Kayaka – Founder of Underwater Cinema, Timor-Leste.

While Dedy's activities start at the local level like beach cleanups, snorkelling experiences, and environmental exhibitions – the impact of his work goes beyond the community.

By raising awareness, engaging youth, and sharing stories of Timor-Leste's marine ecosystems, Dedy contributes to national conversations on marine conservation and inspires global audiences about the importance of protecting oceans. His initiative shows that youth-led action can connect local efforts to broader climate and environmental policies, making it a perfect example of system- or global-level action.



Inspiration for Climate Action

Dedy Kayaka is a marine conservation advocate from Timor-Leste and the founder of Underwater Cinema, a volunteer initiative that promotes ocean protection through community engagement, storytelling, and youth participation.

His journey into environmental action began while working with Blue Ventures in Timor-Leste. Although he started in an administrative role supporting office operations, he learned that every role contributes to a larger purpose. Through community-based fisheries monitoring activities, he witnessed how limited environmental data could affect coastal communities' ability to manage marine resources.

This experience helped him understand that marine conservation requires both science and community leadership. One of the most meaningful moments in his life was experiencing Timor-Leste's underwater ecosystems for the first time. The beauty of marine life felt like watching a living cinema beneath the sea. This experience inspired him to share the ocean's story with others.

Challenges

Like many community volunteers, Dedy faced several challenges when starting environmental activities:

- Limited funding and equipment.
- Low environmental awareness in some communities.
- Difficulty sustaining volunteer initiatives.
- Building trust and long-term community participation.

Instead of waiting for large financial support, he focused on starting small, working with volunteers, partnering with schools, and using storytelling to encourage environmental action.

Actions and Achievements

Dedy founded Underwater Cinema as a community initiative that promotes marine conservation through creative and accessible approaches.

The initiative supports:

- Snorkeling experiences that help youth connect directly with marine ecosystems.
- Beach cleanup activities to reduce plastic pollution.
- Environmental exhibitions combining art, multimedia, and education.
- Youth and women participation in conservation programs.

One of the major achievements was organizing the Ocean and Underwater Exhibition in Dili. The exhibition attracted approximately 7,000–10,000 visitors over seven days.

Around 70% of visitors were youth and women between the ages of 10 and 30, showing that creative storytelling can help engage young people in environmental learning.

The exhibition was supported by community partners, including Fundação Oriente and other local private and creative groups.

Culture and Climate Action

Dedy believes that climate action should respect and integrate local culture.

Traditional environmental law practices such as Tara Bandu in Timor-Leste play an important role in sustainable natural resource management.

He encourages combining:

- Indigenous knowledge;
- Community agreements;
- Environmental science; and
- Youth education and awareness.

Message to Young People

"You don't need a big title, funding, or expertise to start making a difference. Start small, stay consistent, and let your passion guide you. Environmental protection is a community responsibility."

He believes that emotional connection to nature is powerful. When people experience the beauty of the ocean directly, they are more motivated to protect it.

Reflection:

1. What inspired Dedy to take climate action.
2. How can storytelling help people understand and care more about the environment?
3. Why is community participation important in climate work?
4. Based on Dedy's story, think of one way you could use storytelling or social media to inspire climate action in your community or at a national/global level."

Youth Opportunities for Action

Green jobs, green careers, and green entrepreneurship are work, career paths, and business activities that protect the environment and support sustainable development. They help reduce pollution, use natural resources responsibly, and promote clean energy, sustainable agriculture, and waste reduction.

Green Jobs, Green Careers, and Clean Energy Entrepreneurship

Green Jobs - Jobs that help protect the environment and reduce climate impacts.

Examples:

- Reforestation workers.
- Waste management workers.
- Solar panel technicians.
- Sustainable farmers.
- Eco-tourism guides.

Green Careers: Long-term professions that support environmental sustainability and climate action.

Examples:

- Environmental scientists.
- Renewable energy engineers.
- Climate policy officers.
- Marine conservation specialists.
- Sustainable agriculture experts.

Green and Clean Energy Entrepreneurship: Businesses or enterprises that promote renewable energy and environmentally friendly solutions.

Examples:

- Solar energy businesses.
- Recycling enterprises.
- Eco-friendly product businesses.
- Clean cooking solution businesses.
- Sustainable tourism enterprises.

Blue Economy: Jobs, Careers, and Entrepreneurship

The blue economy supports sustainable livelihoods and businesses connected to oceans, coasts, and marine resources while protecting the environment.

Examples include:

- Sustainable fishing and aquaculture.
- Marine conservation and mangrove restoration.
- Coastal and marine tourism.
- Seaweed farming and seafood enterprises.
- Fisheries and marine resource management.
- Ocean-based community livelihoods and businesses.



Examples of Green Career and Green Entrepreneurship in Timor-Leste



Green Career

Elda Cesaltina da Costa Guterres is a Climate Diplomacy Advisor supporting the LDC Chair Office at Climate Analytics, with experience in climate policy, adaptation and resilience, climate finance, stakeholder coordination, disaster risk reduction, and early warning systems.

Her work includes supporting Timor-Leste's engagement in UNFCCC processes, coordinating climate change projects, contributing to national climate documents, and supporting community resilience initiatives, including local-level vulnerability assessments.

She holds a Master's degree in Environmental Leadership from the University of Galway, Ireland, and a Bachelor's degree in Environmental Science from Charles Darwin University, Australia, and is passionate about strengthening community resilience and supporting the effective representation of Timor-Leste and Least Developed Countries in international climate negotiations.

Green Entrepreneurship

INOVAR4

LOCATION: Across TL, since 2016

MAIN MISSIONS

- Providing technology services and solar solutions with local trained staff, across TL.
- Inovar4 partners with a range of solar providers and local electrical firms to offer a wide range of hybrid & off-grid power solutions.
- They also run free educational sessions across TL.

ECO DISCOVERY TIMOR-LESTE

LOCATION: Dili

MAIN MISSIONS

- An eco-friendly tourism business, 100% owned and operated by Timorese, providing eco-friendly tours across TL.
- Educate their guests on good preservation practices.
- Supporting locally based community projects and businesses.



Reflection Questions

1. Write a reflection on one thing I can do individually this week

2. Write a reflection on one thing my school or village can do

2. How can young people influence national or international decisions about climate change?

Wrap-up & Key Takeaways

We have learned that climate change is real, happening now, and happening where we live. It affects water, food, health, schools, homes, and the places we love.

We also learned something just as important:

Young people are not just victims — you are leaders of solutions.

You have ideas, energy, creativity, and strong community ties. Adaptation is about finding ways to live safely with a changing climate— protecting people, nature, and our future.

We looked at:

- what climate change is
- how it affects the people
- who is most at risk
- how communities, ecosystems, and governments can adapt
- actions youth can take individually and together.

Remember: small actions add up when many people do them

Key Takeaways

- Climate change affects daily life, not just nature.
- Children and young people are among the most affected — and the most powerful changemakers.
- Adaptation means reducing risks and staying safe as the climate changes.
- Nature helps protect us — mangroves, forests, coral reefs, and healthy land reduce floods and erosion.
- Communities that work together are stronger and recover faster.
- Policies and plans from government are important, but local action matters too.
- Water, food, health, homes, and schools are key areas that climate change affects.
- Everyone can take action — you don't have to do everything, but you can do something.

What You Can Do Next

- talk about climate change with family and friends.
- join or start a youth environment group.
- protect water, plant trees, and reduce waste.
- help during climate events safely and responsibly.
- share local climate stories and solutions.
- participate in community meetings or school projects.

Climate change is a big challenge — but you are not alone.
Together, young people can:

- protect communities.
- restore nature.
- inspire leaders.
- shape a safer future.

Your voice matters. Your actions matter. Your future matters.

Reference

- CBD. (n.d.). Timor-Leste: *National reports on natural resources*. <https://www.cbd.int/doc/world/tl/tl-nr-04-en.pdf>
- FAO. (n.d.). *Ecosystems*. Food and Agriculture Organization of the United Nations. <https://www.fao.org/ecosystems/en/>
- IIED. (n.d.). *Introduction to community-based adaptation to climate change*. <https://www.iied.org/introduction-community-based-adaptation-climate-change>
- IPBES. (n.d.). *Ecosystem services*. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. <https://www.ipbes.net/glossary/ecosystem-services>
- IPCC. (2007). WGII AR5 Chap14: *Climate change adaptation*. https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap14_FINAL.pdf
- IPCC. (2014). *AR4 synthesis report: Climate change 2014*. https://www.ipcc.ch/site/assets/uploads/2018/02/ar4_syr_full_report.pdf
- IPCC. (2021). *AR6 WGI chapter 7: Climate system*. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter07.pdf
- IPCC. (2021). *Glossary – Climate change*. <https://www.ipcc.ch/report/ar6/wg1/>
- IPCC. (2022). *Climate Change 2022: Impacts, Adaptation and Vulnerability (AR6 WGII)*. <https://www.ipcc.ch/report/ar6/wg2/>
- IPCC. (2022). *AR6 WGIII – Mitigation of Climate Change*. <https://www.ipcc.ch/report/ar6/wg3/>
- IRENA. (2021). *Renewable energy basics*. <https://www.irena.org/>
- KIWA Initiative. (n.d.). *Building resilience of ecosystems and coastal communities in Timor-Leste*. <https://kiwainitiative.org/en/projects/building-the-resilience-of-ecosystems-and-coastal-communities-in-timor-leste-to-enable-climate-change-adaptation-project>
- KIWA Initiative. (n.d.). *Fishing communities mobilized in the face of climate change*. <https://kiwainitiative.org/en/news/projects-monitoring/timor-leste-fishing-communities-mobilised-in-the-face-of-climate-change>
- National Geographic Education. (n.d.). *Fossil fuels*. <https://education.nationalgeographic.org/resource/fossil-fuels/>
- Practical Action. (n.d.). *Climate action*. <https://practicalaction.org/learning/climate-change/climate-action/>
- Regional NDC Pacific Hub. (2024, March 28). *Samoa leads agroforestry initiative towards climate resilience*. Pacific NDC Hub. <https://pacificndc.org/articles/samoa-leads-agroforestry-initiative-towards-climate-resilience>
- Regional NDC Pacific Hub. (2024). *Samoa's commitment to reducing GHG emissions in the AFOLU sector (includes community agroforestry awareness)*. Pacific NDC Hub. <https://pacificndc.org/articles/samoas-commitment-reducing-ghg-emissions-afolu-sector>
- Secretariat of the Pacific Regional Environment Programme. (2025, August). *Tagabe communities embrace agroforestry to strengthen land and livelihood*. SPREP. <https://www.sprep.org/news/tagabe-communities-embrace-agroforestry-to-strengthen-land-and-livelihood>

- Similie. (n.d.). *Dili's early warning system*. <https://similie.com/dilis-early-warning-system/>
- Timor-Leste Conservation. (n.d.). *Creating a protected area network*. <https://timor-leste.conservation.org/our-work/creating-a-protected-area-network>
- UN CC:Learn. (2025). *Climate change: From learning to action – How does the climate system work?* One UN Climate Change Learning Partnership course. <https://unccelearn.org/course/view.php?id=48§ionid=838>
- UNDP. (n.d.). *Planting future: Reforestation in Aileu and Liquiça, Timor-Leste*. <https://www.adaptation-undp.org/planting-future-reforestation-brings-new-life-aileu-and-liquica-timor-leste>
- UNDP. (n.d.). *Technology and tradition help restore Timor's mangrove forests*. <https://www.undp.org/timor-leste/stories/technology-and-tradition-help-restore-timors-mangrove-forests>
- UNDRR. (n.d.). *Timor-Leste floods teach costly lessons*. <https://www.undrr.org/news/timor-leste-floods-teach-costly-lessons>
- UNFCCC. (1992). *United Nations Framework Convention on Climate Change*. <https://unfccc.int/resource/docs/convkp/conveng.pdf>
- UNFCCC. (2021). *Net zero emissions*. <https://unfccc.int/topics/mitigation/the-big-picture/net-zero>
- UNFCCC. (n.d.). *Global climate action*. <https://unfccc.int/climate-action>
- United Nations. (n.d.). *Climate action – SDG 13*. <https://www.un.org/sustainabledevelopment/climate-action/>
- United Nations. (n.d.). *Youth in action: Climate change*. <https://www.un.org/en/climatechange/youth-in-action>
- UNICEF. (2015). *Unless we act now*. <https://sdgs.un.org/sites/default/files/publications/2161unicef.pdf>
- UNICEF. (2023). *Children's climate risk index (CCRI)*. <https://www.unicef.org/reports/climate-crisis-child-rights-crisis>
- UNICEF. (2023). *Over the tipping point*. <https://www.unicef.org/eap/reports/over-tipping-point>
- UN-SPIDER. (n.d.). *Disaster risk management*. <https://un-spider.org/risks-and-disasters/disaster-risk-management>
- World Bank. (n.d.). *Timor-Leste country profile: Climate knowledge portal*. https://climateknowledgeportal.worldbank.org/sites/default/files/country_profiles/17190-WB_Timor-Leste%20Country%20Profile-WEB.pdf
- World Meteorological Organization. (n.d.). *Climate topics*. <https://wmo.int/topics/climate>

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