

## Climate change is a human rights issue



*Solomon Islands: Rising sea levels swallowed Nadahlen's house. Standing by her new home, she gazes at the sea where her old home used to be. Nicole Pryor / World Vision*

### Climate change

Climate change is threatening people's food security, agriculture, water supplies, economic development and health. In this world of great inequality, it is people living in poverty who are most vulnerable to the impacts of our warming world, especially children. For this reason, climate change is not only an environmental problem... climate change is a human rights issue.

“We are the first generation to be able to end poverty, and the last generation that can take steps to avoid the worst impacts of climate change. Future generations will judge us harshly if we fail to uphold our moral and historical responsibilities.”

– Ban Ki-moon  
Former United Nations Secretary-General

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## What is climate change?

Climate change is any significant long-term change in the climate. From geological history, scientists have found that the earth's climate has changed many times due to natural systems and causes, including seven ice ages and tropical periods in between. However, there is evidence to show that, as a result of human actions, average temperatures increased by 0.85 degrees Celsius between 1880 and 2012. This is called global warming.

In 2014, the Intergovernmental Panel on Climate Change wrote in their fifth assessment report: *"Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen."*

Climate change is impacting all countries in the world. Evidence of climate change is seen in increased global average temperatures, rising sea levels, more intense storms and melting ice sheets and glaciers.

According to most climate scientists, the greenhouse effect is the main cause of global warming. The greenhouse effect occurs when gases in the atmosphere (carbon dioxide, methane, nitrous oxide, water vapour and chlorofluorocarbons) trap heat around planet earth instead of allowing it to escape back into space. Certain amounts of these greenhouse gases occur naturally to keep the earth warm enough for life. However industrial and agricultural practices over the past 200 years, such as burning of fossil fuels (oil, coal and natural gas) and cutting down trees (deforestation), have released large extra amounts of greenhouse gases, trapping more heat and warming the earth.

## What is the difference between climate and weather?

Weather is day-to-day conditions in the atmosphere at a particular place. Weather can change daily or even hourly. Climate is the weather experienced by a place over many years. A drop of 5 degrees Celsius in the weather may mean you need to take a jacket with you if you go outside. However, a drop of 5 degrees Celsius in the average climate may mean 100 metres of ice covering your house!



*Honduras: Higher temperatures, changing rainfall patterns and drought reduce the amount that Solano and other subsistence farmers can grow. Israel Cárcamo / World Vision*

## How does climate change impact people living in poverty?

The environmental effects of climate change have major consequences for people all around the world. People living in poverty are most vulnerable, especially those who live in low-lying coastal areas such as islands in the Pacific. Climate change makes life harder and more dangerous for those who are living in poverty, and adds to existing problems like food insecurity and risk of disaster. These social and economic impacts make it difficult for people to access their basic human rights, including those of food, water, health, housing and education. The diagram on the next page shows how climate change affects these things.

“Population, economic growth, and patterns of consumption and production all play a role in climate change. But a common mistake is to equate more people with more emissions, while ignoring inequality. Right now, only 2.5 billion people [one-third of the world's population in 2017] make enough money – more than \$10 per day – to consume enough to contribute to emissions.”

– United Nations Population Fund.

# How does climate change affect people living in poverty?

## CLIMATE CHANGE

Increasing average land and ocean temperatures are known as climate change, and this affects the environment in different ways:

- Oceans:** Warming oceans melt sea ice, raising sea levels. Excess carbon dioxide dissolves into oceans making them more acidic.
- Weather:** Warming temperatures increase extreme weather events like heatwaves, cyclones, heavy rainfall, floods and droughts.
- Snow and ice:** Snow cover, glaciers and ice sheets reduce in size and extent.
- Seasons:** Winter gets shorter and spring arrives earlier. Lakes and rivers freeze later and melt earlier.
- Habitats:** Growing seasons last longer. Plant, animal and insect habitats extend or reduce affecting their survival.

## SOCIAL AND ECONOMIC EFFECTS

### AGRICULTURE, FOOD AND INCOME

Higher temperatures, greater variability in rainfall and greater frequency of extreme weather events, such as droughts and floods, make it harder for farmers to grow crops. Farmers relying on cash crops are left without a source of income. Subsistence farmers struggle to grow enough nutritious food to feed their families. As a result, malnutrition increases.

### WATER

Changes in rainfall patterns and snow distribution, as well as higher temperatures and more droughts and floods, affect the amount of accessible drinking water. People resort to drinking dirty water, putting them at risk of water-borne disease. Families have to walk long distances to get water, reducing the time available for school or earning an income.

### HEALTH

Increases in average temperatures or extreme weather events, like floods, allow tropical diseases to spread into new areas where people are less immune or prepared. Hunger and lack of access to safe water are also health risks. Malnutrition, diarrhoea and malaria are already major health issues that are increasing with climate change. The effects of climate change increase stress and affect people's mental health.

### MIGRATION

Food or water shortages cause people and animals to move to other places. People also move due to conflict, droughts, floods and extreme weather events. Rising sea levels mean migration is the only option for people of low-lying regions such as the Pacific islands. Migration threatens people's cultural connection with their land and their livelihoods.

### EDUCATION

Natural disasters, food and water shortages, poor health, migration and conflict make it much more difficult for children to access school regularly so they miss out on their right to an education.

### CONFLICT

When extreme lack of food and water threaten people's lives, social structures may break down resulting in conflict. Migration pressures can increase instability. Conflict could happen at local, regional or global scales, and could be political, a riot or something much more violent like civil war.

### HOMES

Sea level rise, extreme weather events and conflict destroy homes and property. The cost to repair or rebuild and increased insurance costs make it harder for families to get adequate shelter.

## EFFECTS ON HUMAN RIGHTS

These social and economic effects negatively affect people's access to human rights causing more people to live in deeper levels of poverty.

## How is the international community responding?

The United Nations and governments around the world have been working together to combat climate change since the 1990s. There are now three main strategies:

### Intergovernmental Panel on Climate Change

is the international organisation that assesses science related to climate change. Its role is to provide assessments of the science so that governments can make national policies. It was established by the World Meteorological Organisation and the United Nations Environment Programme in 1988.

### United Nations Framework Convention on Climate Change

is a treaty adopted by governments in 1992 at the Rio Earth Summit. The Convention was the first time the international community recognised climate change was a problem. Governments made a commitment to limit greenhouse gas emissions and address climate damage caused by people.

The Kyoto Protocol (1997) is an international agreement linked to the Convention which created binding targets to reduce emissions. When its first commitment period ended in 2012, the Doha Amendment to the Kyoto Protocol was adopted.

The Paris Agreement (2015) strengthens the response and the ability of countries to reduce emissions and deal with the impacts of climate change through new finance, technology and capacity building. It commits countries to keep the global temperature rise well below 2 degrees Celsius, and aims for 1.5 degrees Celsius.

**Sustainable Development Goals** are targets agreed by the United Nations General Assembly in 2015 for everyone in every country across the globe. The 2030 targets aim to end all forms of poverty, fight inequality and injustice, tackle climate change and protect the environment. Goal 13 focuses on strengthening adaptation to the impacts of climate change and disasters. Governments have agreed to make this happen through increased awareness, action and international collaboration, including committing to provide US\$100 billion annually by 2020 to help developing countries combat climate change.

## How is New Zealand responding?

Climate change is impacting New Zealand through average temperature increase, sea level rise, changes in rainfall patterns, and extreme weather events. These affect people, water, coastal areas, agriculture and more.

- ✓ New Zealand is a member of the Intergovernmental Panel on Climate Change, participates in international climate change negotiations under the United Nations Framework Convention on Climate Change, has ratified the Paris Agreement and is committed to realising the Sustainable Development Goals.
- ✓ Through the New Zealand Aid Programme, the government has set priorities to build resilience to climate change and natural disasters, and to develop renewable energy sources, especially in the Pacific.
- ✗ Under the Paris Agreement, the New Zealand government has committed to contributing climate finance, however New Zealand's overall contributions are modest.
- ✗ Under the Paris Agreement, the New Zealand government has pledged to slash greenhouse gas emissions by 30 per cent from 2005 levels and 11 per cent from 1990 levels by 2030. However, this target is less ambitious than the targets of many comparable countries. In 2015, New Zealand's greenhouse gas emissions were 24.1 per cent higher than 1990 levels.
- ✗ The New Zealand government has invested in renewable electricity, climate research and incentives for sustainable business. However, there is no overarching plan and legal framework to eliminate New Zealand's greenhouse gas pollution.



*India: Children learn about climate change and planting trees to mitigate the effects.*  
Annila Harris / World Vision

## How can communities respond to the effects of climate change?

Scientists expect that average temperatures will continue to rise and the effects of climate change will continue for decades to come. The world is dealing with climate change and its effects in two ways – mitigation and adaptation. Many organisations and groups are helping communities to mitigate and adapt to climate change.

**Mitigation** involves reducing greenhouse gas emissions and stopping the problem of climate change from growing. This means burning less fossil fuel, producing more renewable energy (wind, solar and hydro power), as well as planting and protecting trees to absorb the build-up of carbon dioxide in the atmosphere. Individuals can also mitigate the effects of climate change by increasing energy efficiency, using cars less, reducing consumption, recycling more, eating less meat, and planting trees.

**Adaptation** involves learning how to live with existing climate change and protecting people from the future effects of climate change. This means growing drought-resistant crops, caring for the soil, planning how to respond to disasters to reduce their effect, and resettling communities into lower-risk areas.



*India: Biogas is a clean fuel source for cooking which helps to mitigate climate change. It reduces the burning of firewood and dung which produce a lot of emissions.*

*Annika Harris / World Vision*

## How is World Vision responding to climate change?

World Vision partners with communities living in extreme poverty to help them adapt to and mitigate climate change so their human rights are safeguarded and realised.

### **Adaptation**

Adapting to climate change might involve a combination of planting trees to restore the environment; implementing 'climate-smart' agriculture and sustainable land management; preparing for extreme weather events; training women in developing countries to swim in order to survive a flood or storm; or in low-lying countries, like Bangladesh, moving homes, shops and schools onto boats.

### **Mitigation**

Climate change mitigation for communities might involve introducing clean energy and energy-efficient ways of cooking, or participating in carbon markets to earn additional income from projects that reduce greenhouse gas emissions.



*Tanzania: Changing rainfall patterns mean Aloisi (wearing red) and his family need to adapt by making their water storage larger so it can collect more water.*

*Jon Warren / World Vision*



*Honduras: Soil conservation, drought-resistant native plants and irrigation have helped Plinio's family make sure their vegetable garden will withstand increases in temperature and reduction in rainfall.*

*Marcela Andino/Israel Cárcamo / World Vision*

# How is World Vision helping communities live with climate change?

## Preparing and adapting in PNG

Ramu River communities in north-eastern Papua New Guinea are interdependent with the environment. Their crops and livelihoods are vulnerable to prolonged wet and dry seasons and frequent Ramu River floods. In 2015, flooding was so severe that it damaged gardens, closed schools and spread water-borne sicknesses. Climate change is making events like these more extreme and occur more often.

During 2016, 10 communities and two schools partnered with World Vision to prepare for and adapt to climate change. They established five disaster management committees and designed disaster management plans, installed warning signs and hazard maps, and taught everyone how to respond quickly. Community representatives received first aid kits and learned first aid skills from the Red Cross.

Community members worked together to reduce disaster risks in their areas, including planting bamboo, rosewood trees and mango trees along the river banks to prevent flooding. Some families strengthened and raised their houses so they don't get flooded, and established vegetable gardens inland, away from the river. Community members cleared dangerous trees from around houses and schools to prevent damage. Two communities started building new homes further from the river to reduce the flood risk. World Vision provided rainwater collection systems and 9000 litre water tanks to provide alternative sources of water. Farmers learned to grow a drought-resistant food crop called African yams with plant nurseries in each village to ensure there are plenty of new plants.

Climate change is a reality for the communities of Ramu River, but they are preparing and adapting to improve their future.



**Papua New Guinea:** The Ramu River runs from the Kratke Range to the Bismarck Sea with small communities living in settlements near its banks.



**Myanmar:** Farmers help to regrow native forests to improve soil conditions through Farmer Managed Natural Regeneration. World Vision

## Improving the environment in Myanmar

Over the past 60 years in Myanmar there have been increases in temperatures, droughts, floods and cyclones, as well as changes to rainfall and the monsoon season. Since 2014, the Chauk and Yenangyaung communities in Myanmar's Dry Zone have been learning how to adapt to these kinds of climate change risks, reverse degradation of their local environment, and increase their incomes without compromising the environment.

World Vision introduced three new agricultural opportunities that are suitable for dry conditions and have good earning potential: growing peanuts, establishing plum orchards and breeding goats for sale. With more income, families are no longer cutting firewood to sell. Community members have formed support groups to help them produce and market their crops and livestock. Village savings and loans associations help people to save some of their income and provide small loans to improve and expand their businesses.

Water is vital to agriculture, so World Vision helped the communities to construct and improve 26 storage ponds and dams which can store water for eight months – twice as long as before. Pond management committees oversee water use for agriculture, livestock and homes.

World Vision trained community members in Farmer Managed Natural Regeneration to reverse environmental degradation caused by deforestation and overgrazing. Farmers regrow previously cut trees and integrate trees through their fields to improve soil, prevent erosion and increase moisture retention. Farmers also learned environmentally-friendly techniques like composting, adding goat manure to soil, intercropping, and cultivating Napier grass which has low water and nutrient requirements and improves soils.

The Chauk and Yenangyaung communities are well on their way to a more sustainable economic situation as well as adapting to the environmental and climate challenges they face.

## Manure to biogas in Tanzania

Community members from Magugu, Tanzania, have learned to keep dairy cows as part of the integrated development partnership with World Vision. Cow's milk is a nutritious addition to people's diets, and selling milk and calves improves family incomes and standards of living.

Just as exciting is another product of the cattle – their manure! Methane gas from cow manure can be used as a fuel source for cooking and home lighting by installing a biogas system.

World Vision trained Magugu community members to construct biogas systems that turn methane into fuel for their cooking and lighting needs.

1. Firstly, manure collected from the cow shed and toilet is mixed with water in an underground concrete tank.
2. This mixture moves through to the second tank, called the digester, where the biogas is extracted and piped into the house.
3. Inside the house, stoves and lamps burn biogas to cook food and provide lighting just as gas or kerosene versions do.
4. After the gas is extracted, the remaining waste goes to a third tank, often located close to any agricultural fields where it is used as organic fertiliser.

Biogas helps people to adapt to climate change through applying organic fertilisers that increase crop growth so that people can cope with changes in the weather. Biogas mitigates climate change in two ways: using this alternative fuel source means people from Magugu no longer have to walk up to six kilometres to collect firewood every few days, so using biogas reduces deforestation. Biogas also reduces the amount of greenhouse gas being released into the atmosphere. Cow manure releases methane which is a significant greenhouse gas. Methane's impact on global warming is 25 times greater than carbon dioxide. So burning methane and turning it into carbon dioxide means less greenhouse gas is released.

Magugu community members are pleased with the changes biogas is making in their lives. "When I heard about my biogas system, I was worried because I didn't know how to use it. But now I am happy because my two-kilometre journey to the mountains to look for firewood will end," says Clemensia.



**Tanzania:** Constructing one of several underground tanks that make up the biogas system.  
World Vision



**Tanzania:** Once the tanks are buried, only the tops are visible. The tall pipe in the background is the first tank where water is mixed with manure. The square top is the tank where the gas pipe connects, and the front tank is for the waste.  
World Vision



**Tanzania:** Herman demonstrates his biogas stove.  
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