

# How is the world responding to climate change?

The world is dealing with climate change in two ways – mitigation and adaptation.

1. **Mitigation** involves reducing carbon dioxide gas emissions and stopping the problem of climate change from growing.

This means burning less fossil fuel (coal, oil and natural gas) and producing more renewable energy from technologies such as wind, solar and hydro power. Another way to reduce carbon dioxide in the atmosphere is to plant more trees and prevent the destruction of existing forests. Our forests help to absorb the build up of carbon dioxide, a major greenhouse gas, in the atmosphere.

2. **Adaptation** involves learning how to live with existing climate change and protecting ourselves from the future effects of climate change.

For example, this includes farmers growing drought resistant crops and learning new ways to care for the soil. It means teaching women in developing countries to swim in order to survive a flood or storm. In Bangladesh, it means moving homes, shops and schools onto boats.

## DID YOU KNOW?

In rich countries, governments can afford to build strong walls and barriers to protect communities from flooding and coastal erosion. However, developing countries have fewer resources available to adapt and protect their communities.

## Case study: Ethiopia

### Forest regeneration

In Ethiopia, the Humbo district is 420 kilometres south-east of the capital, Addis Ababa. Of the nearly 49,000 people in Humbo, an estimated 85 percent live in poverty. The people experience chronic food shortages because the area has high population density, variable rainfall and environmental degradation, and it is over-reliant on one crop – corn. Poverty, hunger and increasing demand for agricultural land have driven local communities to over-exploit their forest resources.

Soil erosion is also a severe problem. Heavy rain causes flooding and extreme downpours can cause mudslides that kill people and livestock and damage crops and infrastructure. On the other hand, prolonged drought conditions are becoming more extreme in lowland areas. Recurrent droughts and floods create ongoing poverty for many households. For example, poor families only start to recover from one disaster and another disaster comes and wipes out their gains.



Before: deforestation and soil erosion in Humbo district, Ethiopia.



### Creating a “carbon sink”

In response, World Vision has developed a mitigation project that involves the regeneration of nearly 3,000 hectares of degraded forests with indigenous, bio-diverse species. These forests act as a “carbon sink”, absorbing and storing greenhouse gases from the atmosphere to mitigate climate change. Over the 30-year crediting period, it is estimated that over 870,000 tonnes of carbon dioxide will be removed from the atmosphere.

Over 90 percent of the Humbo project area is being reforested using low-cost forest regeneration. When farmers cut down trees for wood, a series of live tree stumps are left which each sprout multiple shoots. The farmers decide which of these shoots to keep and cut away the excess, giving the selected shoots room to grow. Also, newly established tree nurseries are raising over 450,000 seedlings each year to restore the forest where no living tree stumps remain.

### Benefits of forest restoration

The regeneration of the Humbo forest is producing benefits for local communities. It has resulted in increased production of wood and tree products, including honey, fibre, fruit and wildlife. Improved land management has stimulated grass growth, providing fodder for livestock that can also be cut and sold as an additional source of income.

Reforestation is also reducing land degradation, soil erosion and flash flooding.

One community member said:  
“We are too much happy.  
We never expected to see so much grass growing from these rocky, barren slopes, to see trees growing so quickly or to harvest firewood so early in the program.”



After: reforestation in Humbo district, Ethiopia.

## For You To Do!

Read the Ethiopia case study above and make notes under the following headings.  
Download the worksheet and table below at [worldvision.com.au/schoolresources](http://worldvision.com.au/schoolresources)

Problems

Responses

Benefits