



AN INSTITUTION OF

**CCREEE**

CARIBBEAN CENTRE FOR RENEWABLE ENERGY & ENERGY EFFICIENCY



# WHAT DOES ENERGY HAVE TO DO WITH CLIMATE CHANGE?



## WHAT IS CLIMATE CHANGE?

Even though weather changes, it usually has a steady pattern over a long time – some times of year are hotter, other times have more rain, there is a season for storms, and so on. That steady pattern that we know is called the climate, and it usually doesn't change much. But recently, the patterns of weather have been very strange. Sometimes the weather is a lot drier than usual, storms are getting stronger, and everywhere is hotter than ever. The climate is changing before our eyes. That's new and dangerous.

## Does it have anything to do with the huge ice caps melting?

Yes, but not just ice caps. Mountain glaciers are shrinking, plants and flowers now bloom at different times, storms and hurricanes are more frequent and intense, and sea levels are rising.

Some of these impacts are very serious for us here in the Caribbean. As many of our countries are islands and are therefore surrounded by water, rising sea levels and increased storms and hurricanes can be quite dangerous for us. Even if we are lucky and no one dies during floods or storms, the damage they do to our homes, schools, roads, bridges, and other **INFRASTRUCTURE** can have an enormous impact on our countries.

Caribbean countries are often called **SMALL ISLAND DEVELOPING STATES, OR SIDS** for short, because we haven't quite finished developing or growing yet. Think of a baby and how they develop. First, they creep and crawl, then they stand, and then they learn to walk independently. We are not walking alone just yet in the Caribbean and because of this, **CLIMATE IMPACTS** can cause us to go back to crawling, even if we had already started standing and learning to walk.



## INFRASTRUCTURE

Definition: The basic items necessary for a country or community's population to function. These include: water supply, sewage plants, hospitals, airports, businesses and government buildings.



## SIDS

Definition: SIDS are islands of the Caribbean Sea and the Atlantic, Indian and Pacific Oceans. They are far away from other countries, vulnerable to environmental challenges such as climate change and generally small in size.

## CLIMATE IMPACTS

Definition: Climate change may cause damaging weather events such as more frequent and more intense hurricanes, floods, heavy rain, sea-level rise, drought and wildfires.





## What does energy have to do with all this?

Scientists believe that the earth getting hotter is mainly caused by **GREENHOUSE GAS (GHG) EMISSIONS**. These gases are released when we burn fossil fuel to convert it to other forms of energy, like electricity. This is often done to power vehicles, heat or cool homes and provide electricity to our homes and schools, among many other uses. The more energy from fossil fuels we use, the more greenhouse gases are released into the environment and the warmer the earth gets.

We need to use less energy and use energy from sources which do not release harmful gases or release less than fossil fuels do.



### GREENHOUSE GAS EMISSIONS

Definition: GHGs are gases in the atmosphere which trap energy from the sun. Without these gases, earth's average temperature would be cooler.



### FOSSIL FUEL

Definition: Fossil fuels are made from decomposed plants and animals buried deep into the earth for millions of years. We dig for them and burn them to use as different forms of energy for example, electricity.



## What can we do about it here in the Caribbean?

The truth is, larger countries use and waste much more energy than we do here in the Caribbean. They mainly use energy created from fossil fuels but, we have a responsibility to use energy in a **SUSTAINABLE** way, too. This means that we can use wind, geothermal, solar, hydro and ocean energy as much as possible in place of fossil fuels to provide us with our energy needs. At home, in offices and at school we can play our part by turning off electronic devices when not in use to save energy and avoid too much burning of fossil fuels.

Doing this will help us protect the earth and, save money at the same time!



### SUSTAINABILITY

Definition: Sustainability means using natural, social and economic resources in a way that does not threaten the ability of future generations to use these resources.