

Addressing Climate Change in the Caribbean: A Toolkit for Communities



Addressing Climate Change in the Caribbean: A Toolkit for Communities

Prepared for Christian Aid (Caribbean) by the Caribbean Natural Resources Institute (CANARI)

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Abbreviations and Acronyms

BRIC CANARI	Brazil, Russia, India and China Caribbean Natural Resources	IPCC	Intergovernmental Panel on Climate Change
	Institute	IUCN	International Union for
CARICOM	Caribbean Community		Conservation of Nature
00000	Caribbean Community Climate	NGO	Non-governmental organisation
	Change Centre	SIDS	Small Island Developing States
CBO	Community-based organisation	UN	United Nations
COP	Meeting of the Conference of the	UNFCCC	United Nations Framework
	Parties		Convention on Climate Change
CSO	Civil society organisation		

Glossary

Adaptation

In the context of climate change, adaptation is the adjustment in natural or human systems in response to actual or expected climatic occurrences or their effects, which reduces harm or takes advantages of beneficial opportunities. For people, it means being ready for climate change by building capacity and putting measures in place to cope with and recover from the impacts of climate change. It also means preparing ourselves to live with any climate-induced change to our surroundings.

Atmosphere

The air or layers of gases that surround the Earth. The dry atmosphere consists almost entirely of nitrogen and oxygen, together with small amounts of other gases, including greenhouse gases such as carbon dioxide and ozone. In addition, the atmosphere contains water vapor, clouds and aerosols. The atmosphere protects the Earth from the sun's harmful rays.

Bleach

See Coral bleaching.

Carbon sink

Any process, activity or mechanism that removes carbon-containing compounds like greenhouse gases, and aerosols from the atmosphere. Trees, plants and oceans can act as carbon sinks but may not always remove carbon from the atmosphere as fast as it is produced.

Climate

The average, or typical, weather conditions of a given area observed over a long period of time (usually 30 years or more).

Climate change

Any statistically significant, long-term modification (change) in the climate of a zone or region. Climate change may be caused by natural processes or by persistent changes in the atmosphere or in land use caused by human activity. When the term is used to describe what is happening to the Earth today, it refers to the increase in the Earth's temperature and changes in rain, snow or other moisture from the atmosphere, caused by greater levels of CO₂ and other gases in the atmosphere. The term 'climate change' is often used interchangeably with 'global warming'. The term 'climate change' is often used interchangeably with 'global warming'. However, 'climate change' is a better term because it covers many other changes, besides rising temperatures.

Condensation

The process through which water vapour in the air turns into liquid. Water drops on the outside of a cold glass of water are condensed water formed by the cooling of the water vapour in the air on the outside of the glass. Condensation is the opposite process of evaporation.

Coral bleaching

Loss of colour of corals due to loss of the algae that live on them and provide their nutrients and colouration. Bleaching occurs in response to physiological shock as a result of abrupt changes in temperature, salinity (saltiness), and turbidity (amount of sediment present in the water).

Ecosystem

A geographical area where a community of living (plants and animals) and non-living (climate, landscape) things interact together and affect each other.

Evaporation

The process by which a liquid becomes a gas. When the sun heats up water in rivers, streams, lakes, the ocean or moisture in the soil, it turns some of it into vapour or steam. The water vapour or steam leaves the source of water or moisture and goes into the air where it eventually forms clouds. Evaporation is an essential part of the water cycle and is the reverse of condensation.

Extreme weather

An extreme weather event is one that is rare within a given time period at a particular place. Examples are heat waves, cold snaps/spells, droughts, floods (and the landslides that often accompany them) storms, cyclones and storm surges.

Fossil fuels

These are fuels produced by the remains of living organisms that built up underground over geological periods. Fossil fuels mainly consist of carbon and hydrogen and are also known as hydrocarbons. They are found in different states: liquid (for example, oil), solid (for example, coal, peat) and gaseous (for example, natural gas).

Global warming

See Climate change

Greenhouse effect

The greenhouse effect is the rise in temperature that the Earth experiences because certain gases in the atmosphere (for example, water vapour, carbon dioxide, nitrous oxide, methane and ozone) trap energy from the sun.

Greenhouse gases

The atmospheric gases that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds. Water vapour (H_2O), carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), and ozone (O_3) are the primary greenhouse gases in the Earth's atmosphere.

Industrial Revolution

A period of rapid industrial growth with far-reaching social and economic changes, beginning in England during the late 1700s and spreading to Europe and later to other countries, including the United States. The Industrial Revolution marked the beginning of a strong increase in the use of fossil fuels and emission of, in particular, fossil carbon dioxide. In much of the climate change literature, the terms "pre-industrial" and "industrial" refer to the periods before and after the year 1750, respectively.

Intergovernmental Panel on Climate Change (IPCC)

Established in 1988 by the World Meteorological Organization and the UN Environment Programme, the IPCC surveys world-wide scientific and technical literature and publishes assessment reports that are widely recognised as the most credible sources of information on climate change.

Kyoto Protocol

An international agreement that is linked to the United Nations Framework Convention on Climate Change (UNFCCC). Its major feature is that it sets binding targets for 37 industrialised countries and the European Community for reducing greenhouse gas emissions.

Mitigation

Mitigation involves measures to reduce greenhouse gas emissions, by limiting activities that produce greenhouse gases, or to enhance the natural systems or sinks (see carbon sinks) that remove greenhouse gases from the atmosphere. Without mitigation, climate change would continue unchecked and would eventually outstrip all our efforts to adapt.

Parts per million

This is a way of measuring the concentration of one thing within another, for example carbon dioxide in the atmosphere. One part per million (ppm) of carbon dioxide means for every 1 unit of carbon dioxide there are 1 million units air (all the other gases that make up the atmosphere).

Photosynthesis

The process a plant uses to combine sunlight, water, and carbon dioxide from the air (or bicarbonate in water) to produce oxygen and energy for its own growth (sugar).

Precipitation

Moisture that falls from the sky, including rain, snow, and hail. Precipitation occurs when so much water has condensed that the air cannot hold anymore. The clouds get heavy and water falls back to earth in the form of rain, snow, hail, sleet, dew, and frost.

Risk

Risk is the chance of injury, damage or loss defined as a measure of the probability and severity of an adverse effect to health, property, the environment or other things of value.

UN Framework Convention on Climate Change (UNFCCC)

This Convention provides an overall framework for efforts between governments to tackle the global challenge posed by climate change. It recognises that the stability of the climate system, which is a shared resource, can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The Convention has been ratified by 192 countries.

Vulnerability

The degree to which a natural, human or built system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extreme weather. Vulnerability depends on the scale or severity of the climate change effect, the extent to which the system is exposed, its sensitivity to changes, and its ability to adapt.

Weather

Short-term atmospheric conditions. Weather is measured by temperature, humidity, wind speed, atmospheric pressure, cloudiness and precipitation.

Sources:

Green Facts Glossary http://www.greenfacts.org; IPCC Glossary of Climate Change Terms http://www.unfccc.int; International Union for Conservation of Nature (IUCN) http://www.iucn.org; La Cité des Sciences et de l'industrie http://www.cite-sciences.fr Scholastic http://teacher.scholastic.com/researchtools/researchstarters/weather/ Encyclopaedia of the Atmospheric Environment http://www.ace.mmu.ac.uk/eae/ US Geological Survey Water Science Glossary of Terms http://ga.water.usgs.gov/edu/dictionary.html US EPA http://www.epa.gov

Introduction

Why focus on climate change?

Climate change is already a part of our reality here in the Caribbean. It is not a future threat. Scientists have evidence that the Caribbean is getting warmer, hurricane seasons are becoming more active and storms more intense, and rainfall patterns are shifting. All these changes are linked to climate change. Climate change is as much a challenge to our communities, livelihoods and overall wellbeing as unemployment, poverty, HIV/AIDS, or violence. It has been called a threat to development and a "threat multiplier" because of how it combines with other challenges and vulnerabilities to "make things that are already a problem worse".¹

Climate influences the types of buildings we construct, the houses we live in and the clothes we wear. It shapes **ecosystems** (ecological systems) and helps determine types of plants and animals found in a particular location. Climate influences our culture, the types of things we do for fun, and even our mood.² This means that changes in climate can affect how we live, the plants and animals around us, our health and well-being, and even how we earn our livings. Human and biological systems are so closely connected that a change in one system has consequences or effects on the other. Dramatic and long-term changes in climate have the potential to set back and even undo efforts to create sustainable ways of earning a living, eliminate poverty, protect the natural environment and improve people's standard of living.

The Caribbean is on the frontline

Small islands like those of the Caribbean produce less than 1% of the gases in the air that are responsible for climate change, yet they are among the most vulnerable to its effects. Our islands are vulnerable to natural hazards because they are so small and the land and sea environments are closely linked: whatever happens on one affects the other. Climate change is a big threat as many of its direct effects are environmental. And because most of our islands rely on industries that use the environment, such as fisheries, tourism, and agriculture, anything that damages our natural resources also affects our economies and livelihoods.

We can no longer do business as usual

We have to take climate change seriously and we have to understand what it means for us. Climate change doesn't mean we will experience new weather conditions, but it *does* mean that what we used to think of as unusual in terms of weather conditions is becoming normal. Severe weather, like

¹ Huq, S. and C. Pettengell. 2008. The impact of climate change on human security. The Bridge Magazine. Issue 1-10/2008

² Hulme, M. 2006. *Climate change: A statement of science.* Tyndall Centre for Climate Research and School of Environmental Science, University of East Anglia.

intense hurricanes and flooding, that would have been experienced once every 100 years, for example, might now be experienced every 10 years, or even more frequently. We have to plan for this.

We have to apply the ways and means we have used to cope in the past and we have to find new ones to ensure that our countries and communities are better able to stand up to the effects of climate change. And even though we are small producers of the polluting gases that cause climate change, we can contribute to the global effort to reduce them. Every little bit counts.

The time to act is now

Climate change and its effects may seem too big for ordinary people to do something about, but we *can* make a difference. The time to act is now and taking action is not just the job of politicians and scientists. We owe it to ourselves to reduce the level of risk we currently face and we owe it to our children and grandchildren to ensure we do not leave them a world full of catastrophe and disaster.

About this toolkit

This toolkit has been developed to help community organisations develop responses to climate change. It aims to give community leaders and members a general understanding of climate change and provide some ideas for action. Each community's needs and context are different, so the ideas and tools presented in this toolkit should be used as a general guide and starting point for responding to climate change.

This toolkit is divided into four sections.

Section 1 provides a knowledge base for action on climate change. It includes background information about climate change and gives examples of key impacts on the Caribbean.

This section also looks briefly at the main approaches to dealing with climate change (mitigation and adaptation) and gives an overview of the international climate talks that will lead to a new agreement to reduce greenhouse gas emissions.

Section 2 sets out what communities can do to address climate change in four main areas:

- Understanding and reducing community risk and vulnerability
- Public education and awareness
- Engagement and networking
- Lobbying and advocacy

This section also lists some practical actions that individuals and households can take to prepare for a changing climate and reduce their impact on the climate system.

Section 3 provides tools and templates to suggested actions in Section 2.

Section 4 lists useful contacts, suggested readings and online resources.

The meanings of words in the text that appear in **blue** can be found in the glossary at the beginning of the document.

1 Climate Change Basics

1.1 Understanding climate change

Our climate is changing

Some of the things we used to be able to say with confidence about our seasons and **weather** in the Caribbean no longer seem to be true. The rains come at unexpected times, and the dry seasons now last longer than they used to. Hurricane seasons are more intense and on average we have more hot days and nights than before.

All this is happening because the Earth is getting warmer. These are not short-term changes that will soon reverse themselves. We are well into a long-term process that will only get worse over time unless we do something about the warming of our Earth and its causes.

What is climate change?

Progress and advances in technology over the past 150 years have made our lives more comfortable and convenient, but this has come at a price. Part of this price has been an increase in the gases in the **atmosphere** that help control the Earth's temperature. These gases, which include carbon dioxide (CO₂), water vapour, ozone and methane, are produced by burning **fossil fuels** like coal, oil and natural gas for daily activities like driving motor vehicles and generating electricity for our homes, factories and businesses. While we have been adding more of these gases to the atmosphere we have also been cutting down the trees and forests that naturally help remove some



of these gases, particularly CO_2 , from the air.

These gases are called **'greenhouse gases**' because they help keep the Earth warm by trapping the energy produced by the sun, much like the glass panels of a greenhouse (Fig. 1). The **greenhouse effect** helps make our planet habitable by trapping some of the sun's energy to keep us warm. However, an excessive amount of these protective gases in the atmosphere is causing the Earth to become too warm. The increase in the Earth's temperature and changes in rainfall and other forms of **precipitation** caused by greater levels of CO₂ and other gases in the atmosphere is known as **climate change** or **global warming**. And this is having a dramatic effect on the climate system and people's lives all over the world, especially here in the Caribbean.

Has human activity really increased warming of the Earth?

Human activity is not the only source of greenhouse gases. Some of these gases are produced naturally, but how we use the planet and its resources has tipped the balance. More pollution and the destruction of important natural systems mean these gases are being produced faster than they can be removed naturally from the atmosphere.

Weather records show a steady increase in global average temperature over the past 100 years. We also know there has been growing industrialisation and pollution over this period. What's more, the rate of warming has become faster over the past 50 years. Since 1998, we have had five of the warmest years on record.

How humans help increase greenhouse gases

The more 'developed' or industrialised countries and societies become, the more greenhouse gas emissions they tend to produce. The period for which weather records show an increase in global average temperature coincides with growing industrialisation and pollution. The levels of CO₂ in the atmosphere have gone up by just over one-third since the **Industrial Revolution** (late 18th and early 19th centuries) from 284 to approximately 380 **parts per million** today.³ So although greenhouse gases occur naturally, human activity has tipped the balance and is causing their rapid build-up in the atmosphere. The three main human activities which are causing this rapid build-up in



the atmosphere are:

• Burning of fossil fuels like coal, oil and natural gas, which produce CO_2 , for energy. Most greenhouse gases produced by humans result from energy emissions from power and transportation, making CO_2 the largest contributor to the enhanced greenhouse effect (Fig. 2).

• Destruction of forests by burning or cutting down trees, whether for lumber, or to make room for farming or to build houses and factories. The trees and vegetation in mature forests store carbon and when they are destroyed, CO₂ and other greenhouse gases are released into the atmosphere. Trees and plants also help remove CO₂ from the air through **photosynthesis**. Forests are considered natural **carbon sinks**. Deforestation therefore not only produces more greenhouse gases, it also takes away one of nature's ways of removing these gases from the atmosphere.

³ Dybass. C. 2009. *Decline in greenhouse gas emissions would reduce sea level rise, save Arctic Sea ice*. National Science Foundation. Public Release 14 April 2009. http://www.eurekalert.org

 Agricultural and industrial practices. For example, methane, the second largest contributor to the greenhouse effect, is produced by rice cultivation, cattle and sheep ranching and given off during coal mining and oil drilling, and by leaky gas pipelines.⁴

What tells us that climate change is taking place?

We have been experiencing unusual and extreme weather patterns the world over. More intense storms in the Pacific and the Caribbean, longer droughts in parts of Africa and the Mediterranean and more severe monsoons (torrential rains) in Asia have all been linked to climate change. So too have disappearing glaciers (ice sheets or ice masses) in Europe and melting ice at the North and South poles.

Climate change is responsible for the increase in the number of heat waves since the 1950s and for the rise in sea level that began in the 20th century, after little change up to 1900. In many places, seasons are starting earlier or later than they used to. In parts of North America, some animals are moving northwards as their usual territory becomes warmer.

Climate change is not felt in the same way by all countries and regions

Climate change or "global warming" does not mean that all places are warmer and that the increase in temperature has been steady from one day to the next or even one year to the next. The temperature has gone up and down over this period of time, and weather conditions have been inconsistent. For example, in summer 2002 there were rains and widespread floods in Europe, but one year later there were record-breaking heat waves and droughts that left 35,000 people dead.⁵

However, the big picture shows an overall trend of:

- higher temperatures worldwide, including more hot days and nights;
- changes in precipitation (rainfall and snow);
- increases in sea level; and
- more unusual and frequent **extreme weather**.

These in turn have affected people, plants and animals, as well as many finely balanced and complex relationships in nature.

Extreme weather events such as heat waves, droughts, floods (and the landslides that often accompany them), storms, hurricanes, coastal surges, and cold snaps, are becoming not only stronger, but more frequent too. Severe weather that would have been experienced once in every 100 years, for example, might now be experienced every 10 years, or even more frequently.

As the Earth gets warmer it is likely to be wetter, but not necessarily in all places. More heat means faster **evaporation** of water into the atmosphere, which turns into moisture for rain, snow or hail through the process of **condensation**. Changes in precipitation will vary from place to place and areas that now get lots of rain are likely to get more, while dry areas are expected to become drier.

⁴ United Nations Environment Programme - World Meteorological Organization. 1997. *Common questions about climate change* cited by U.S. Global Change Research Information Office. http://www.gcrio.org

⁵ IPCC. 2007. IPCC. 2007. Climate Change 2007: The physical science basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. United Kingdom and New York, NY, USA: Cambridge University and Stern, N. 2007. The economics of climate change: The Stern review. United Kingdom: Cambridge University Press

Disasters from extreme weather can come at a high social and economic cost. In May 2004, the village of Fond Verettes in southeast Haiti was completely destroyed by flooding and landslides after heavy rains that devastated parts of Haiti and the Dominican Republic.



Remains of the police station in Fond Verettes, Haiti after severe flooding. *Photo: Weaver Destin*



Remnants of market stalls in Fond Verretes, Haiti. Photo: Jean-Claude Louis/Panos Caribbean

What does climate change mean for the Caribbean?

The Caribbean is one of the regions that are most vulnerable to the effects of climate change. The small size of our islands and their economies, and the extent to which the main industries of many islands – tourism, fisheries, and agriculture – rely directly on natural resources mean natural disasters and other threats to the environment can be devastating for the region. The consequences are not only felt in the environment. They also affect our economies, livelihoods and lives.

More intense hurricanes have been among the striking impacts of climate change. The region has had more and stronger storms over the past 10 years. Although some of this increase is due to natural variations in weather, warmer seas help form the stronger storms that have devastated many islands in recent years. The cost of major hurricanes can be very high: Hurricane Ivan in 2004 cost the Cayman Islands USD 3,432 million.

Clearing up debris in Gonaïves, Haiti in September 2008. Between mid-August and early September 2008, Haiti was hit by four hurricanes and tropical storms in a row. They affected more than 165,000 families, killed an estimated 793 people and caused USD 89,739 million in damages.⁶ One of these hurricanes, Hanna, was ranked sixth on the list of 10 worst natural disasters in 2008 by the number of deaths and missing persons.⁷ Photo: Jean-Claude Louis/Panos Caribbean



⁶ Gouvernement de la République d'Haïti. 2008. *Rapport d'évaluation des besoins après désastre Cyclones Fay, Gustav, Hanna et Ike.* Un rapport préparé par le Gouvernement de la République d'Haïti avec l'appui de la Banque Mondiale du Système des Nations-Unies et de la Commission Européenne

⁷ International Strategy for Disaster Reduction (UNISDR) and Centre for Research on the Epidemiology of Disasters (CRED), Department of Public Health Université Catholique de Louvain, Belgium. *2008 Disasters in numbers*. Available at http://www.unisdr.org/eng/media-room/facts-sheets/2008-disasters-in-numbers-ISDR-CRED.pdf

The region is becoming warmer and drier and rainfall patterns are changing. Waterscarce islands like Antigua and Barbuda, Barbados and St. Kitts and Nevis could be faced with severe drought and water shortages because of longer dry seasons. Climate change also causes more intense wet seasons and so in recent years, heavy rainfalls have caused catastrophic flooding and landslides in Guyana, Haiti, and Jamaica.

Climate change is putting severe stress on coral reefs. Coral reefs are very important to people living in islands and coastal states. They are home to many tropical or reef fish and support fisheries. They produce sand and help protect the coast from storm surges and wave damage. Warmer waters cause corals to expel the small plant organisms (algae) that live in them. When this happens the corals go white or 'bleach'. Bleached corals can eventually die. Strong hurricanes also put pressure on the reefs, most of which are already damaged by pollution from the land, overfishing and disease. In 2005, the Caribbean had a record-breaking hurricane season and a massive **coral bleaching** episode.

Rising sea levels could make the coastal zones in some places disappear, and even all or most of some low-lying islands like Barbuda and the British Virgin Island of Anegada. Damage to the coastal zone has disastrous effects on our economies and the industries that rely on coastal resources. Most people in the Caribbean (70%) live and work in the coastal zone and it is also where much of the infrastructure, like roads, airports, and sea ports, is found.

Warmer waters are bad for some Caribbean marine species. The Caribbean Sea has already warmed by 1.5°C in the past century. If it were to become a further 1°C warmer, fish like tuna and parrotfish, would go in search of cooler waters. Loss of the parrotfish would remove a favourite meal from our dinner tables. It would also affect coral reef health because this fish prevents a certain type of algae from overgrowing the reefs.⁸

Whales feed in cold water but travel to warmer waters to give birth. Each year thousands of humpback whales make the long journey from the Gulf of Maine on the northeast coast of the United States of America, to Samaná Bay on the northeast coast of the Dominican Republic where they give birth and mate for the next season. Their usual breeding season runs between late December and March, but authorities in the Marine Mammal Sanctuary in Samaná Bay are noticing that the whales are coming later and leaving earlier than they used to do. Scientists think climate change is to blame and speculate that warmer waters in the north encourage them to stay there longer. Whale watching is a tourist attraction in the Dominican Republic and if the whales stop going there it would affect the local economy in Samaná Bay and its surroundings. Plans are underway for scientists in the Marine Mammal Sanctuary to team up with their counterparts in the Stellwagen Bank National Marine Sanctuary in Maine to study the effects of warming waters on whale migration. Photo: Leslie Dibos/CEBSE, Inc



⁸ Moxam, E. 2008. "Fish exodus looms - Climate change could drive away species from Jamaica" *Gleaner Online*, Monday, 10 March 2008 http://www.jamaica-gleaner.com/gleaner/20080310/lead/lead1.html

Higher sea levels also affect mangroves. Mangroves, like reefs, protect the coast. They are also breeding grounds for fish and help control sea water quality by filtering out pollution from the land. When mangroves and reefs are damaged, coastal areas are more vulnerable. The natural response of mangroves to higher sea levels is to move back and re-establish themselves further inland. But when barriers such as roads, seawalls and other construction prevent them from doing so, they become submerged or drown and the protective fringe of mangroves along the coastline gets smaller. Many mangrove forests in the region have already been weakened by pollution or destroyed to make way for buildings and agriculture.

Climate change is linked to **increases in some diseases carried by insects and rodents**. Warmer temperatures in the Caribbean have caused the *Aedes aegypti* mosquito that carries dengue fever to breed faster. Higher temperatures alone do not lead to increased dengue outbreaks, but they are a contributing factor. The region had one of the worst ever dengue outbreaks in 2007.

Floods and heavy rains are favourable for the spread of water-borne diseases and diseases associated with water like leptospirosis. Guyana, for example, had an outbreak of leptospirosis after heavy flooding in 2005. Rats carry leptospirosis, but it spreads through water contaminated by their urine.

Agricultural production is being affected by climate change. Intense hurricanes, early season drought, and changing rainfall patterns are affecting growing seasons. In 2005, Hurricanes Dennis and Emily caused an estimated USD 2.2 million in agricultural loss and damage in Jamaica.⁹ The 2008 hurricane season ravaged Haiti's agricultural sector, destroying many crops right at the start of the harvesting season. Research on farming communities in the southern St. Elizabeth area of Jamaica is finding that the cycles of intense hurricanes and prolonged droughts is testing traditional farming methods.¹⁰

Warmer temperatures can also affect crops yields. From example, cool nights during the cane reaping season favour better juice quality and this means more sugar when the cane is milled. Fewer cool nights in the region could contribute to a decrease in the amount of sugar that can be made from each ton of cane harvested. Preliminary research by the Environmental Management Authority in Trinidad and Tobago supports this.¹¹

Mulching with Guinea Grass is a traditional practice used by farmers in south St. Elizabeth, Jamaica to reduce evaporation of soil moisture. Photo: Donovan Campbell/ Department of Geography and Geology, UWI, Mona.



⁹ Brown, I. 2005. *Impact of climate change on Caribbean agriculture: CARDI calls for research targeted at areas under threat.* Jamaica Information Service. Tuesday, August 30, 2005. http://www.jis.gov.jm

¹⁰ McGregor, D.F.M., D. Barker, and D. Campbell. 2009, in press. 'Environmental change and Caribbean food security: Recent hazard impacts and domestic food production in Jamaica ', in D.F.M. McGregor, D. Dodman and D. Barker (eds.) *Global change and Caribbean vulnerability: Environment, economy and society at risk?* Kingston, Jamaica: University of the West Indies Press

¹¹ Ibid.

1.2 Responding to climate change

Climate change and its effects may seem overwhelming, but we can do something about it. The time to act is now. We owe it to ourselves to reduce the level of **risk** we face now and to our children and grandchildren to ensure we do not leave them a world full of catastrophe and disaster.

Climate change and its adverse effects are mainly the result of poor decisions and failure to act. We need commitment and action by everyone - individuals, communities, businesses and governments - to deal with it.

Everyone is affected, everyone must act

Climate change affects each of us, whether we know it or not. But although everyone is affected, all have not contributed equally to the problem. Some of the places that have contributed least to the problem, such as small islands, will be affected the most. This is the injustice of climate change. Larger industrialised countries have built their economies and industries over the past 200 years using fossil fuels, often polluting the air and water. Their emissions and those of larger, newly-industrialising countries like Brazil, Russia, India and China (BRIC) are driving global warming and climate change.

In order to halt the current rate of warming, we urgently need to reduce greenhouse gas emissions. But no single nation acting on its own can reduce global emissions to the levels needed for the climate to stabilise. Actions to deal with climate change have to be taken at international, national and local levels.

- At the global level, we need agreement on how to reduce greenhouse gas emissions and how quickly this will happen. Richer countries must take responsibility for controlling the bulk of their emissions and helping poorer countries cope with climate change.
- At the national level, our countries must put measures in place to reduce emissions and prepare for climate change impacts. Even small greenhouse gas producers can make their contribution to bringing down overall global emissions.
- At the local level, as individuals, households, communities and businesses, we can play our part by building up our resilience to climate change impacts and reducing our carbon emissions. Even though our countries do not produce large amounts of CO₂, we need to contribute to the global effort to reduce greenhouse gases. Every small contribution adds up. Reducing carbon emissions also makes good economic sense. Rising fuel prices means it is more expensive to put gas in our cars and generate electricity for our homes and businesses. Conservation is good for the environment and for our pockets.

Approaches

There are two main approaches to dealing with climate change:

Mitigation – This means that as a global community we need to reduce greenhouse gas emissions and remove them from the atmosphere.

Adaptation – This means we need to ensure that all countries and communities can stand up to the impacts of climate change by strengthening the natural and physical environments and putting measures in place to cope with and recover from impacts.

Mitigation

Although the region is a small producer of greenhouse gases, we can contribute to global efforts to reduce emissions by using less energy from fossil fuel sources and using more alternative energy sources. We need comprehensive energy policies in our countries to support this. As individuals, we can cut back on our energy consumption with simple measures like turning off lights and appliances when not in use, replacing incandescent light bulbs with energy-rated fluorescent ones, and making fewer car trips, carpooling or using public transportation.

See Section 2.5 Practical actions that individuals and households can take to reduce their impact on the climate.

Reducing emissions is not the only thing that needs to be done, however. We have to make sure we can withstand the current effects of climate change by strengthening our natural systems and infrastructure. This is very important for the Caribbean. Part of the reason climate change is having such a negative effect on us is because we have let our environment become badly damaged. Healthy ecosystems like coral reefs, mangroves and forests, are not only better able to stand up to natural disasters, they even help reduce the impacts of severe weather.



A healthy mangrove forest is a living barrier against storm surges and wave action. Photo: Nicole Leotaud/ Caribbean Natural Resources Institute

Adaptation

Adapting to climate change is an opportunity to reduce human stresses on the environment and restore it. Many environmental and planning laws and regulations allow for this but need to be obeyed and enforced. We can do our part in our homes and communities by not polluting, especially drains and waterways, and not destroying important ecosystems when we construct buildings, fish, farm, hunt or use nature for recreation. We can also ensure that we keep our properties in good repair so that hurricanes and disasters do not catch us unprepared. We should also ensure that we do not build or farm in areas that are vulnerable to natural disasters or that are specially protected because of their landscape, wildlife or historic value. Adaptation is not just an environmental issue, it also relates to planning, development and disaster preparedness.

1.2.1 The international policy process

The UN Framework Convention on Climate Change (UNFCCC)

The main international process for climate change policy making and agreements is led by the United Nations. In 1992, its member states adopted the UN Framework Convention on Climate Change (UNFCCC). This is a non-binding treaty on how to limit greenhouse gas emissions and reduce the impact of climate change. The Convention calls for the stabilisation of greenhouse gas levels. It encourages action but sets no mandatory limits on greenhouse gas emissions for individual nations and makes no provisions for enforcement.

By January 2009, 192 countries (including CARICOM member states¹² and the Dominican Republic and Haiti) had signed and ratified the Convention. The countries that have signed on to the Convention, known as the Parties, meet every year to negotiate targets and rules for mitigating climate change and adapting to its impacts. These meetings are called Conferences of the Parties (COPs).

Parties prepare and submit National Communications. National Communications are progress reports on the steps they are taking, or plan to take, to implement the Convention. These can be downloaded from http://unfccc.int/national_reports/items/1408.php. Follow the link for <u>Non-Annex</u> <u>I National Communications</u> to find reports from Caribbean Countries. National ministries or departments with responsibility for climate change can also provide your country's most recent progress report.

The Kyoto Protocol

The first major protocol was the Kyoto Protocol which was adopted in 1997, and began to operate or entered into force in 2005. It is linked to the UNFCCC but stands on its own as a legally binding commitment. Industrialised countries are required to reduce their greenhouse gas emissions by at least 5% below 1990 levels. The commitment period started in January 2008, and will last five years, until December 2012. Developing countries are encouraged to introduce measures to cut back their emissions. As of January 2009, 183 countries had ratified the Kyoto Protocol.

After Kyoto

Even before the commitment period started, it was clear to those who had signed on that the reductions mandated by the Protocol would not be sufficient to stabilise the climate. Negotiations have begun on the agreement that will replace the Kyoto Protocol at the end of 2012.

At the 2007 Climate Change Summit in Bali, Indonesia, a plan of action was developed for reaching a new agreement once the Kyoto Protocol expires. Popularly known as the Bali Roadmap, it sets out a process for negotiations that must be completed by the end of 2009 and which will give a new set of emissions targets. It also provides a framework for talks about adaptation, facilitating the transfer of clean, non-polluting technologies to developing countries and reducing emissions from deforestation.

¹² Montserrat is the only full CARICOM member state that has not signed on directly to the UNFCCC as it is a United Kingdom Overseas Territory and the United Kingdom is responsible for its territories' international relations, (including conventions). The UK is, however, a signatory to both the UNFCCC and the Kyoto Protocol.

1.2.2 The Copenhagen climate talks: What is at stake?

Many people consider 2009 a crucial year for climate change. A lot is at stake for the 15th Meeting of the Conference of the Parties (COP 15) to the UNFCCC which will take place in Copenhagen, Denmark from 7 to 18 December 2009. This conference is expected to produce a comprehensive climate change agreement that will begin after the Kyoto Protocol expires.

Reaching an agreement will not necessarily be straightforward as there are many interests being brought to the negotiating table. The talks must do four main things:

- decide what targets industrialised nations will set to reduce their greenhouse gas emissions;
- find ways in which developing countries can limit emissions growth while still enjoying economic growth;
- resolve funding issues to help developing countries respond effectively to climate change; and
- set up a system that gives developing countries an equal voice in how resources for mitigation and adaptation are used.

Cutting CO₂ emissions

Coming to an agreement on cutting CO_{2} emissions involves:

- setting goals for the levels of the cuts;
- deciding from what date emissions cuts will be measured (benchmark); and
- determining who will do the cutting.

Level of cuts. The **Intergovernmental Panel on Climate Change** (IPCC) has recommended emissions cuts by 2020 of between 25 and 40% below 1990 levels. A number of countries have already indicated what level of cuts they might be willing to make. The European Union is proposing that industrialised countries reduce emissions by 30% by 2020 and between 60 and 80% by 2080 compared with 1990 levels. Canada is talking about a 20% cut between 2006 and 2020. China and India are promising to reduce their "emissions intensity" 20% by 2020, meaning their emissions will continue to grow, but that the levels per unit of energy will decline.¹³

Benchmark. Countries will also have to agree on the date from which cuts will be measured, in other words a benchmark. The Kyoto Protocol used 1990 as the benchmark year and the IPCC recommends continuing to use that. But depending on the year used, some countries may have to make larger cuts relative to others, because of their more recent rates of industrialisation. Russia, for example, would have to make deeper cuts than other industrialised countries because its economy collapsed (and emissions dropped) with the 1990 fall of the Soviet Union and as the economy recovered its emissions increased.¹⁴ Other countries may be seen to get off lightly because the cuts they are required to make may not be that large in absolute terms.

¹³ Edwards, R. 2009. "Two months to save the world" *The Sunday Herald* (Scotland) Sunday 29 March 2009. http://www.sundayherald.com/search/display.var.2498516.0.two_months_to_save_the_world.php

¹⁴ Tulloch, J. (ed). 2009. *Climate agenda 2009: Copenhagen climate summit.* Allianz Knowledge Partner Site. Published 12 January 2009. http://knowledge.allianz.com/en/globalissues/climate_change/top_climate_stories/key_2009_copenhagen.html

Who should be cutting? Under the Kyoto Protocol only 37 industrialised nations were required to cut their CO₂ emissions, but other emerging economies, like Brazil, China, Mexico, India and South Africa are proving to be growing carbon emitters. The USA and Australia rejected the Kyoto Protocol because they felt these large developing countries with expanding economies got a free ride.¹⁵

Some developing countries feel they should be allowed to industrialise at their own pace in order to meet their development objectives. They argue that the established industrialised counties were allowed to reach their current level of development without having to reduce their pollution. But the reality is we are now in a world where we have to limit carbon emissions. The agreement will include provisions for 'low carbon strategies' that allow developing countries to meet their development targets despite being in a 'carbon constrained world.'

Box 1. What Does Christian Aid Think Needs to Happen at Copenhagen?

Emissions cuts

Rich, industrialised countries, the ones most responsible for the emissions that are changing the world's climate, must commit to cutting emissions by 80% by 2050. But these cuts need to be made by these countries at home and not 'offset' overseas. Rich countries should not ask poorer countries to make their reductions for them.

Binding global cuts must be paid for by industrialised countries

Richer countries need to pay a greater share of the cost of global cuts – on top of the actions they are taking domestically.

Sharing technology

Technology that can help cut emissions while still allowing economic development must be made available to poorer countries to produce at a lower cost.

Supporting adaptation

Rich countries have to financially support poorer ones in adapting to climate change.

Measurable cuts in poorer countries

Developing countries also have to play their part by bringing in emission-cutting laws that can be measured, reported and verified.

Source: Christian Aid Countdown to Copenhagen Campaign (www.christianaid.org.uk)

All players need to buy in to the Copenhagen agreement

There is a lot at stake and there are many different positions and even opinions on what the world's climate can bear. We can't afford a situation where some major players do not buy in to the Copenhagen agreement. Coming out of Copenhagen in December 2009:

- The USA and China must both agree how to go forward. Together they produce just over 40% of all carbon emissions so any agreement that does not have their full support and commitment will fall short.
- Industrialised countries have to agree to significant, legally binding, and verifiable cuts in emissions, both in the medium- and long-terms.
- Emerging economies, such as Brazil, India, Mexico, and South Africa, have to agree to take steps towards curbing their emissions.

¹⁵ Tulloch, J. (ed). 2009. Op. Cit.

• Industrialised countries need to commit to providing money and other resources to help developing countries adapt to unavoidable climate change and adopt clean technology to reduce their emissions while pursuing their development strategies.¹⁶

What is important for the Caribbean to get out of these talks?

The main concerns of the Caribbean as it looks towards the 2009 talks are:

- Securing global agreement to stabilise the level of greenhouse gases in the atmosphere at 350 parts per million (or less). If levels are allowed to exceed this, the impacts will be devastating for vulnerable countries like those in the Caribbean. This is still above pre-industrial levels and some people believe we should be agreeing to an even lower target in order to assure our future.
- International cooperation between developed and developing countries to ensure the latter get the financial and technological assistance they need. This requires new commitments of resources beyond the existing commitments of aid targeted towards poverty reduction.
- Technical and financial support from the international community to strengthen regional and national systems to respond to climate change. Support will help us to collect data about climate change in the region and study the **vulnerability** of our countries and communities to climate change. This will help us develop and implement plans to adapt to climate change.

The Caribbean has joined other small island developing states (SIDS) in calling for stabilisation targets at a 45% reduction of 1990 greenhouse gas levels by 2020 in the first instance, and then a 95% reduction of 1990 levels by 2050, with a stabilisation target of 350 parts per million.

1.2.3 Civil society organisations and the climate change response

Climate change is a threat to our economies, our health, our way of life, our culture, and our physical security. It will affect our development at all levels – regional, national and local – and require responses from all actors – government, private sector, civil society and individuals.

Civil society organisations (non-governmental and community-based organisations), have always played a critical role in addressing the development issues affecting those we work with. It is now critical that we understand the facts about and implications of climate change, assess its impact on our development objectives, and develop the skills we need to respond to the challenges it brings. We must learn what actions we can take and how to take these actions effectively.

Policy makers, scientists and technocrats are working hard to conduct the relevant research and develop appropriate policy responses. We in turn must make sure that the information reaches communities and that they are empowered to act to protect themselves and their livelihoods. This is a part of our role as civil society organisations.

¹⁶ Tulloch, J. (ed). 2009. Op. Cit.

2 What Communities Can Do About Climate Change

Climate change affects everyone and everyone has a role to play in addressing its impacts. Communities can do a lot to reduce their vulnerability, adapt to changing climate conditions and make a contribution towards reducing greenhouse gas emissions.

Much of what needs to be done, especially to build resilience, is in line with good sustainable development practices. These include things like good environmental management, soil conservation methods and putting disaster preparedness measures in place. There are many things that communities already do, or used to do, to cope with natural climate conditions and variability. In some instances climate change adaptation or mitigation may be just a matter of scaling up these things or bringing back old practices. Many of the steps to be taken are in a community's control and some things can even be done without large investment or expenditure.

Communities can identify how they are affected by climate change and put measures in place to increase resilience of livelihoods and infrastructure to extreme weather events and other climate change impacts.

Community organisations can play a role in raising awareness about climate change and in advocating for policies and programmes that take climate change into account.

A community climate strategy might include one, some, or all of the four components listed below:

- 1. Understanding and reducing community risk and vulnerability
- 2. Public awareness and education
- 3. Engagement and networking
- 4. Lobbying and advocacy

How to develop these components is explained in the following sections.

In addition, there are practical measures (many of them small things) that individuals and households can take to be better prepared for more extreme weather and to reduce their impact on the environment and climate system. Some of these are listed at the end of this section.

2.1 Understanding and reducing your community's risk and vulnerability

Good management of a community's natural and built environments can make them better able to stand up to bad weather and climate threats.

- Proper disposal of garbage and keeping drains free of debris and rubbish help reduce flooding caused by blocked drains and gullies.
- By replanting mangroves, coastal/fishing communities can help protect the ecosystems on which their livelihoods are based, and build up coastline protection against increasingly strong storms.
- If famers who plant on the hillside use soil conservation measures and don't burn to clear land, they will help reduce the soil erosion and landslides that are often a consequence of bad storms or heavy rains.
- Not building in unsuitable areas such as flood prone areas or areas prone to other natural disasters will reduce the threat to human life and livelihoods.

Good farming and environmental practices and new technologies won't guard against all climate impacts, so the other thing that communities have to do is be prepared for extreme weather. They must ensure they are not caught completely unawares.

A community disaster plan can help ensure that a community can mount a coordinated response, should a disaster strike. Disaster plans have traditionally been developed in response to the annual hurricane season but changing conditions mean community disaster plans have to be prepared with more than just the hurricane season in mind and take into account other disasters, including drought (if in a drought-prone area), unseasonal flooding and heavy rains. It is also important for plans to take into account how communities can build resilience to disasters and not just respond to them.



Landslide in the Rio Grande Valley, Jamaica. Photo: Jamaica Conservation and Development Trust

Climate change can present opportunities

Climate change is often thought of as a threat, but it could also be considered an opportunity to find new and innovative ways of doing beneficial things, like introducing a community insurance scheme to help reduce economic losses after disasters, or developing a seed bank so that farmers will have a local source of seeds if their crops are wiped out by bad weather, disease or pests, or even adopting new technology that will save energy such as solar heaters and energy-saving light bulbs.

Adapting to climate change at the community level can build upon and sustain livelihoods, and should take advantage of community knowledge, resources, and networks. What your community's adaptation plan will look like will depend on the threats it faces and how severely it is affected by each threat.

2.1.1 Community audit

A good place to start is by doing a community audit. Your community audit will be a careful review of your community and the people who live in it in order to understand how it is affected by climate change and to identify steps that need to be taken to ensure that it can stand up to the impacts of climate change. You can examine how climate change affects livelihoods, health or infrastructure. Your community might be a geographic area or it might be a group of people with a common interest, for example farmers, fishers, migrant workers, people living with HIV, etc.

Below are some basic steps you can follow when doing a community audit.

• Organise a workshop with members of your community or group to look at how you are affected by climate change.

Many people are familiar with the terms "climate change" or "global warming" but may not know exactly what the terms mean or understand how climate change relates to them and their lives. A community workshop or meeting is a good way to begin to explore the issues collectively.

See Box 2 Tips for Communicating Climate Change.

Part of the workshop should be used to explain climate change and its threats. You must make sure everyone has a basic understanding of climate change and its threats. Start with what people already know. Before launching into formal presentations about climate change, encourage community members to share what they know about climate change and how they think it affects them. Engage them in a discussion about changes in weather patterns they might have observed in their community or island. Find out if they think conditions are the same now as when they were young. Ask them what changes they have seen over the years. Let them explain how these changes have affected people's lives.

In more structured presentations, look at global and regional trends, as well as projections for the region and your country, if available. The information in Section 1 of this Toolkit can be adapted for use in presentations. Invite your country's UNFCCC Focal Point, national climate change experts from your country's meteorological office, disaster response agency, environmental protection agency or a local university to make presentations. You can also

invite representatives of NGOs that work on climate change or related issues to address your meeting.

Section 4 of this toolkit has a list of organisations which you might find useful under 4.2 Contacts.

Consider using video to help your audience "see" climate change and what other communities are doing about it.

See Box 4 Climate Change Video Resources in Section 2.2 below.

See **Section 3 Tools and Templates** for activities and materials that can help to test and reinforce knowledge and understanding of climate change impacts in the Caribbean:

- 3.1 Mapping Exercise 1: Climate Change Impacts in the Caribbean
- 3.2 Climate Change Basics Quiz

• Identify climate change risks and threats to your community.

Apply what has been learnt about general climate change impacts to your community. Identify hazards and vulnerable areas in your community. Take past experience into account as well as projections for the region or your country, if available. You may be able to get risk maps from your country's national disaster management agency. Consult any community vulnerability assessments that may have been done in your area by other organisations.

See Section 3 Tools and Templates, 3.3 Mapping Exercise 2: Community Vulnerability for a tool that can help you to do this exercise in a visual and participatory way.

The Red Cross has also developed a Community Vulnerability Assessment Tool and is willing to work with communities to apply it. For information about this tool, go to http://www.ifrc.org/what/disasters/ preparing/preparedness-tools/vca.asp.

2.1.2 Community action plan

Once you have identified the main threats and hazards to your community, you need to figure out a strategy for dealing with them. You may wish to organise a separate workshop from your audit activity to do this, but don't let too much time pass between the two. Here are some key steps to follow in developing a community action plan:

• List and prioritise risks and threats to your community.

You will not be able to address all the identified risks and threats at once, so you will need to determine which are considered the most important by the community and the order in which they should be addressed.

For each major threat, write out what the key issue is, the desired change (your goal), and what needs to be done for this to happen (your activities and approach).

- List the resources needed to take action to address these threats. For each major threat, identify the resources that will be needed in order to take the desired action. Resources may be financial, but they could also be technical or human.
- Identify any existing community programmes, projects or interventions that might be used to address these risks.

Think about all the different things being done in your community now which may already be addressing these threats or risks.

• List the organisations and agencies that might be willing to provide assistance.

Think about the different organisations which work in this area at the community level and at the national level. List those that you feel might be interested in joining your efforts to address the threats to the community.

See Section 2.3 Engagement and networking to learn more about making links with other groups and agencies.

• Develop a time line.

For each activity (including for obtaining any resources that are needed), agree on what needs to be done, by when, and who will do it. Setting dates and deadlines is important in your planning.

• Develop a fundraising strategy.

There are sources of support for community-based climate change adaptation activities. It is expected that even more money will be available after the December 2009 UN Climate Change Conference in Copenhagen. You have to be ready to take advantage of these opportunities by knowing what your community needs and having a plan to go about meeting these needs.

2.2 Public awareness and education

There is no shortage of information about climate change. It is possibly one of the most studied and discussed environmental issues, yet greenhouse gas emissions continue to increase.¹⁷ Although there is a lot of information available, it has not really persuaded most people to act or decision makers to show the political will that is needed to respond effectively.

One reason for this is that climate change is not the easiest issue to understand, much less communicate. Much of the information that is available about climate change is complex. It is not easily understood by the ordinary person. Also, the uncertainty that surrounds climate change comes out in some of what has been written about it. This can make reports seem confusing and even contradictory.

There is a need for strong, clear and simple messages about climate change that get people to take action. Before people take action, they have to understand and identify with the issue.

Public awareness and education is an important part of any strategy to address climate change, whether it is to get support for a community-based adaptation intervention, bring about a change in behaviour, or influence local or national decision making.

Community organisations can play a role in helping people understand what they need to know about climate change by breaking down information and relating it to people's knowledge and experience. Documenting your community's experience of climate change can be used to educate community members and other audiences in your country about climate change. Community stories can also be powerful evidence for policy making.

Panos Caribbean has, for example, used community oral testimonies in Haiti and Jamaica to tell communities' stories about climate change and has successfully used this information to bring climate change impacts alive to national and international audiences. In these oral testimonies ordinary people tell how they have seen changes in climate in their communities and the impact this has had on their lives.

2.2.1 Steps in communicating about climate change

• Define your communication objective

Determine what you would like to have happen because of your message on climate change. Do you want to create awareness? Do you want to build support for an activity or project? Do you want to change behaviour? Do you want to influence a decision or policy? When you have answered these questions you will be able to define your communication objective: What do you want to communicate and why?

¹⁷ Andrey, J. and L. Mortsch. 2002. Communicating about climate change: Challenges and opportunities *in* Scott, D., B. Jones, J. Andrey, R. Gibson, P. Kay, L. Mortsch and K. Warriner (eds). 2000. *Climate change communication. Proceedings of an International Conference. Kitchener-Waterloo, Canada.* 22 – 24 June 2000

• Define your audience

Once you have figured what you want to achieve through your communication, you need to think about whom you need to reach in order to meet this objective. This is your audience. You can have more than one target audience group. Develop a profile of your audience. How do they get information (written, audio-visual, face to face etc.). What age range is your audience? Are they mostly men or women? How do they make a living? How influential are they in bringing about the change or action you are trying to achieve? Answering these questions gives you a profile of your audience.

• Develop your message

Once you have a profile of your audience, develop messages to reach them. A good message:

- is specific;
- communicates clearly to your audience;
- is linked to something they care about;
- is believable and can be backed up by evidence/hard facts.

Your messages should convey a sense of urgency. They should help people understand how they can benefit from making the changes to their way of life. Your messages should show that these changes will build resilience, sustain livelihoods and reduce vulnerability. It is not enough for people to be told the right thing to do. There are many "right things to do" that people are aware of but don't do. People need to see what is in it for them. How will they benefit?

You can also use experiences from your community in efforts to educate decision makers about the challenges climate change poses to people in communities. You can speak about people's needs and their ideas and innovations. Clear messages can show what is happening on the ground in communities and why action is needed

• Use the right messenger

Having a good message is not enough; it is important to use the right messenger. A popular musician or athlete is likely to be a more influential messenger among young people than a scientist or politician. On the other hand a decision maker or politician may be more receptive if your message is supported by technical specialists as well as community persons.

• Get the message out

Some of the channels you can use to get your information out include:

- Radio
- Television
- Print
- Internet
- Face to face communication (including meetings)
- Events (special days, awards, exhibitions)

Box 2. Tips for Talking Climate Change¹⁸

Make sure you understand the issues and concepts before trying to communicate them to others

If you have a clear understanding of the issues, you will be better able to explain them others and to convince them of the urgency of taking action. Climate change is a complex issue. Don't be afraid to ask experts and people who work on the issue on a regular basis to help you to understand it.

• Start with people where they are

People learn and understand concepts, ideas and information more quickly when they can relate them to what they already know. Build on people's knowledge base and experience rather than beginning with figures, scenarios, probabilities, and technical or scientific information.

• Speak in plain language, not technical, climate change jargon

The language that scientists use is not easily understood by non-scientists. It is hard for people to relate to information if the words and terms used are not familiar to them or are not explained in a way they can understand.

• Keep your messages clear, accurate and simple

Avoid giving too much information about several issues at once. Think about what you want your audience to understand and stick to information that supports that.

• Show the story of climate change

Use examples to illustrate your points. Instead of just saying the cost of damage from hurricanes is high, give a dollar amount for a particular country and storm. Using pictures (video and photographs) of climate change impacts to illustrate your point can be powerful.



Bleached coral Photo: Owen Day/Buccoo Reef Trust

Healthy reef Photo: Owen Day/Buccoo Reef Trust

¹⁸ Adapted from Ten Tips for Talking Public Health. Created for Turning Point by the Sutton Group, December 2001 in National Association of County and City Health Officials. nd. NACCHO Public Health Communications Toolkit. Washington, DC: NACCHO. http://www.naccho.org/advocacy/MarketingPublicHealth_toolkit_overview.cfm

Box 2 Tips for Talking Climate Change continued

Make your case with your audience in mind

A lot of the popular information available about climate change is generated in the North (in developed countries) for audiences in these countries. These messages aren't always completely appropriate to people in many of the countries that are very vulnerable to the effects of climate change. When you communicate about climate change, look for issues that reflect your audience's experience. Use examples they can relate to. Destruction of coral reefs and the possible loss of the parrotfish will be more meaningful to a Caribbean audience than melting ice caps and drowning polar bears.

Connect with current events

Look at what people in your community are talking about and issues in the news and see how they relate to climate change. Make the linkage for your audience. Use these issues as hooks to start a discussion about climate change. You can use relevant newspaper reports and photos about flooding, hurricanes, drought etc. to show the damage being caused by climate change.

Take advantage of national or international commemorative days or weeks, such as the start of the hurricane season, Disaster Preparedness Week, World Wetlands Day, World Environment Day or Earth Day to introduce points about climate change.

Link climate change with other environmental and social issues that might be familiar to people so they can understand how the issues are connected. A heavy rain fall or landslide is an opportunity to talk more broadly about increasing climate change risks and what can be done about them.

Concentrate on what is do-able for your audience

Be realistic in the action or behaviour change that you are asking your audience to make. Help people understand what is possible, given their resources and skills. Help them understand that every action counts. Show how actions and behaviour at the community level can contribute to wider change.

Be creative in how you communicate

Use multiple communication tools to get to your audience. Don't just think about the traditional media (newspapers, radio and TV) and traditional tools (print articles, news features on radio and TV). Think about how popular culture, whether through song, dance or drama, can be used to get out messages about climate change.

Box 3. Popular Culture and Climate Change Communication

In October 2007 in Saint Lucia, the Caribbean Natural Resources Institute (CANARI) and Panos Caribbean co-facilitated a regional workshop entitled "Enhancing the role of civil society in raising awareness and building capacity for adaptation to climate change" with funding from the Commonwealth Foundation. Twenty-five participants from 11 Commonwealth Caribbean countries took part, including:

- representatives of national and local civil society organisations (CSOs);
- performance artists and drama-in-education-specialists; and
- print and broadcast journalists.

CANARI and Panos were committed to introducing and testing a range of communication tools and methods, particularly those that would resonate with community audiences in the Caribbean. The highly participatory workshop included:

- mini-lectures and discussions on climate-related issues and the development of communication strategies, facilitated by specialists;
- presentations of case studies of adaptation planning within the region;
- a field trip to the village of Laborie to assess, with community members, its current vulnerabilities to climate variability and change; and
- presentation of messages about climate change to the Laborie community.

The CSO participants worked with drama-in-education specialist, Conroy Wilson, from the Jamaica Ashe Ensemble and Barbadian poet-musician and advocate, Aja, to develop messages in poetry, song and drama. The group's productions included:

- a poem/song entitled "I don't wanna wash away"; and
- a drama performance with various scenes conveying messages about sea level rise, sea warming, changes in rainfall patterns and stronger hurricanes.

These were presented to the Laborie community at an evening gathering in the Market Complex, together with Aja's poem "Live as One" and a video on coral bleaching entitled "In Hot Water" by the Buccoo Reef Trust.

During the course of the workshop, the media practitioners also developed a newsletter for the Laborie community about climate change, a PowerPoint presentation entitled "The Laborie Experience", and a radio "sound portrait" of the Laborie field trip.

Everyone at the workshop felt they had taken part in a dynamic and exciting experience and



Drama performance in the Market Complex, Laborie, St. Lucia. Photo: Panos Caribbean

the feedback from the local community was excellent. More importantly, it has stimulated a close network and a multiplier effect within the region, with many of the participants applying the techniques learned at the workshop to their national and local contexts. Such activities have included sensitisation of popular recording artistes and the development of climate change songs in Jamaica; a workshop for youth in Barbados; incorporating climate change-related activities into the Sandwatch programme in Bahamas; and broadcasting climate change messages on the radio in Dominica.

2.2.2 Tools

Use communication tools or media that you know are most effective with the audiences you have identified. You can use more than one tool in getting your message across.

Tools you can use include:

- Press releases
- Brochures
- Feature articles
- Background papers
- Fact sheets
- Position papers
- Letters
- Fliers

- PowerPoint or overhead
 presentations
- Videos
- Public service announcements
- Radio programmes
- Television programmes

- Blogs
- Email campaigns
- Web sites
- Spokespersons
- Popular theatre
- Songs
- Competitions

Don't reinvent the wheel in your education and awareness efforts. You can include and adapt climate change communication tools produced by others into your work. There are, for example, several videos of climate change that can be used to: a) explain the phenomenon of climate change; b) illustrate its effects on the environment and on communities; and c) show how some communities are responding (Box 4). Most of these materials are from outside of the Caribbean, but can still be useful visual communication aids for your target audiences.

Box 4. Climate Change Video Resources

- The Tobago-based Buccoo Reef Trust has produced videos on climate change and coral bleaching in the Caribbean that can be viewed on their YouTube channel http://www.youtube.com/user/buccooreef.
- The ProVention YouTube channel http://www.youtube.com/provention has several videos of community climate change adaptation and disaster risk reduction. The videos tell stories from all over the world and include productions in English, Spanish and French.
- You can find videos about climate change in the Caribbean produced by the International Federation of Red Cross and Red Crescent Societies and Sandwatch Foundation on the ProVention channel. Also see the Sandwatch Foundation's channel. http://www.youtube.com/user/SandwatchFoundation and the International Federation of Red Cross and Red Crescent Societies' Climate Centre web site http://www.climatecentre.org/
- National Geographic has produced general climate change videos that show global impacts of climate change. http://video.nationalgeographic.com/video/

2.2.3 Working with the media

The media can be an effective way of getting your news and information out to a large group of people. Many reports about climate change in our local media come from elsewhere. We need more stories about the impacts of climate change locally and how particular weather events fit a pattern of rising risk due to climate change. These will help audiences better understand what climate change means in their lives.

Here are some tips for working with the media:

- Build a relationship with journalists responsible for reporting on your area (this can be the geographic area or the subject or issue). When you read the newspapers look out for the names of the journalists or reporters who may be writing about events in your area/community or who write on environmental or climate change issues. Take some time to introduce yourself and your organisation and let them know what you do and what your interests are. This way, when you send her/him a press release or an invitation to an event, s/he will already know something about you and your area. After a story about your work or issue is published, follow up with a telephone call or email message.
- Help journalists to understand the issue. Educate them. Invite reporters on field visits so they can see what you are talking about. Engage them in a conversation about climate change risks and impacts in an environment where they can see the consequences. This can mean just giving them information without necessarily expecting an article to be published.
- Get your facts right and ensure your information is correct and trustworthy. It is important for your journalist contacts to know they can trust the information they get from you. If you tell a journalist that 700 people in your community were affected by a recent landslide and it turns out that only 7 were, they won't consider you a credible source of information in the future.
- **Pay attention to newsworthiness.** Don't waste a journalist's time and patience by running to them each time you think you have a story. Only approach them to cover an issue when you have a story that will be considered news. In other words, it should be new, important or unusual, and informative.
- Pay attention to current events and link your news to them. The start of the hurricane season when people are thinking weather and climate is a good time to pitch a story about climate change. The run-up to an international meeting where climate change or related issues will be discussed also presents an opportunity to bring local issues to the attention of the media and to generate public debate.
- Pay attention to your media houses' audience. Make sure that your story idea will matter to the specific group of people who make up the media outlets' readers, listeners, or viewers.
Communicating with the media

Media advisories and press releases are the usual ways of letting the media know about an upcoming event or news.

A media advisory informs the media about an upcoming event, like a press conference. It is brief and concise and states:

- "Who" (who is organising the event/activity)
- "What" (what the event or activity is)
- "Where" (venue/where it will be held)
- "When" (date and time) and
- "Why" (why it is newsworthy e.g. what will take place/which guest speaker will be there etc.).

It is like an invitation.

A press release, on the other hand, is like a mini news story. It should read like an article with quotes and facts and should be suitable for publication as a brief article as well as provide enough background for a journalist to develop a longer article. Some media houses in the Caribbean are so short staffed that they will use most, if not all of a well written press release. Keep this in mind as you write.

Your release should provide key facts and highlights about your issue or activity. Use quotes to enhance the press release. Keep it short. Try to limit your press release to one page and definitely no more than two. Use simple and clear language. If you have never written a press release before, spend some time looking at news articles in your local paper to get a feel for how news items are presented.

The press release should also answer the questions Who, What, Where, When and Why. Your most important information should always be in the top sections of your release.

Press releases are often sent alone, by e-mail, fax or post and can be included in press kits.

Both your press release and media advisory should have a contact name and telephone number so that the journalist or reporter can follow up with you. Also, never assume that your press release or media advisory has been received by the reporter or editor. Always phone and check to make sure that it has reached the news desk or news editor or your contact at the newspaper.

Go to Section 3 Tools and Templates for a sample press release and media advisory template which can guide you in drafting these documents and a press kit check list:

- 3.4 Press release sample format
- 3.5 Press advisory/ media invitation
- 3.6 Press kit check list

2.3 Engagement and networking

You can help strengthen community and NGO action on climate change through developing partnerships and relationships for knowledge and information sharing, and coalition-building.

2.3.1 Knowledge networks

• Build a network on climate change.

You can make working links with relevant organisations such as the departments of meteorology, environment and health in government, the national disaster management office, the water authority and NGOs. These links will help you gather information on climate change science and policy and seek attention for the impacts on your community.

See **Resources**, **4.2 Contacts** for a list of some of the organisations in the Dominican Republic, Haiti and Jamaica that work on climate change and disaster risk reduction.

- Build relationships with your local university's climate change department.
 Faculty members can be invited to make presentations on climate change and its impacts at your events. You can even think about getting them involved in your working committees. If your community is developing an adaptation plan, for example, consider whether or not it might be useful to invite a climate change expert to be a member of the committee responsible for developing the plan.
- Get to know your climate change negotiators and your UNFCCC Focal Point.

Work with them to organise briefing sessions for nongovernmental organisations and the media before and after they go off to international climate change negotiations.

See **Resources, 4.2 Contacts** in the Dominican Republic, Haiti and Jamaica.

- Learn more about your country's efforts in implementing the UNFCCC. Get a copy of your country's most recent National Communication on Climate Change.
- Collect information and data about climate change impacts and responses in your community.

Not only will this information be useful to you, it will be an important resource for other communities and for climate change experts. Hard evidence is useful for designing programmes, making policy decisions and negotiating positions (including your own for advocacy).

• Do not be afraid to ask climate change experts, who may be assisting you through training or by being on a committee, to explain technical terms.

An expert uses these terms in her/his everyday work and sometimes forgets to make them

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simple when speaking to or writing for the average person. Be sure that you understand information passed on to you before you pass it on to anyone else.

 Your meteorological office has a wealth of information that will be useful in developing climate change strategies.

Ask them to put your community organisation on its mailing list for weather-related newsletters and bulletins. If you have a community centre, display these prominently and ensure that all of the members of the committee know about them.

 Visit the web sites of regional and international agencies that work on climate change, such as the Caribbean Community Climate Change Centre (CCCCC) and the IPCC, and subscribe to their newsletters and bulletins, where available.

These help provide an understanding of what is happening globally with climate change, and how it will affect your country.

See Resources, 4.3 Additional reading and useful web sites.

2.3.2 Coalition building and developing collective responses

- Bring your concerns about climate change to meetings of any networks of community organisations or NGOs that your organisation is a member of. Explore how you might develop collective responses to shared concerns.
- If there is no formal way for civil society to feed into in your government's preparations for Copenhagen, the discussions and exchanges among groups can help develop a joint/shared civil society organisation (CSO) position. A few CSO representatives could then be given the task of contacting the ministry or agency responsible for climate change and the UNFCCC focal point and act as the link between CSOs and the policymakers. These representatives should both gather views from their partners and feed information back to them.
- Make contact with local and national environmental organisations and exchange information with them. Some of these organisations may be able to help design community adaptation plans.
- Take advantage of the opportunities for involvement in processes led by others (for example, CSO participation in national climate change committees/task forces, or policy processes). They can also create their own mechanisms for developing collective responses to climate change.
- Many international NGOs, like Christian Aid, have developed climate change campaigns that aim to influence the international negotiations as well as their governments' climate change policies and positions. Find out what your international partners are doing about climate change and about any campaigning they may be doing in their countries. You may be able to provide useful evidence for their positions and they may be able to reflect your concerns in their work.

• Businesses such as supermarkets, stores, shops, banks, insurance companies and other service providers in the private sector have a stake in climate change impacts. Involve them in your planning and in assisting in practical ways to make the community more resilient to climate change related disasters.

2.4 Lobbying and advocacy

There are many examples from across the Caribbean of how communities and interest groups have organised around a particular issue and brought about change. Communities and interest groups sometimes use popular protest in efforts to call attention to their issue, and at times the scale of the action has been so big that it has helped to bring about change. But longer-term, more systematic and planned efforts to influence policies and decisions have ultimately been more successful. This is not to say there is no place for a public protest, but a public protest on its own is less effective than a public protest that is part of a series of activities built around a specific theme, with a clear and consistent message and a proposed solution to the problem that has been identified.

Advocacy is the deliberate process of influencing those who make policy

decisions.¹⁹ It involves a set of planned actions aimed at persuading those who have the responsibility for making policy decisions. An advocacy process is generally focused on a specific issue of local, regional, national or international importance. Advocacy works to achieve a *change* on these issues. It includes actions aimed at engaging with and influencing policy and decision makers directly and indirectly to achieve this change.

Direct engagement can include meetings, position papers and policy briefs to decision makers. Indirect engagement can include influencing the wider public opinion through articles and programmes in the national and local media.

Advocacy can be effective when it emphasises dialogue rather than confrontational methods like road blocking, persuasion rather than an aggressive demands, and alliance building rather than division.

This does not mean avoiding uncomfortable and inconvenient truths, nor does it mean advocacy should happen politely behind closed doors. One element of the success of many advocacy campaigns has been bringing issues to public attention, creating a public outcry, and getting members of the wider society to add their voices to efforts to influence policy makers to accept new ways of doing things.

¹⁹ Sprechmann, S. and E. Pelton. 2001. Advocating tools and guidelines - Promoting Policy Change. A resource manual for CARE Program Managers. Corporation for Assistance and Relief Everywhere, Inc. (CARE), Atlanta: USA

Box 5. The Cockpit Country Stakeholders Group

When word got out that a major bauxite company had plans to start prospecting for bauxite in Jamaica's Cockpit Country, a strategic alliance of some 20 NGOs, community organisations, educational institutions and tourism sector interest groups and more than 130 individuals, including scientists and journalists took centre stage for much of the second half of 2006. The advocacy campaign mounted under the banner of the Cockpit Country Stakeholders Group successfully drew public attention to the potential destruction of this ecologically important area and sparked public outcry about it.

The Cockpit Country is Jamaica's largest wet limestone forest; it is home to many threatened and endangered species and has specially adapted plants and animals found nowhere else in the world. Many sources of underground water originate there and most of the water supply of western Jamaica comes from the Cockpit Country's underground aquifers or the rivers they supply. It is also a culturally important area, as one of the island's four Maroon communities is found there. The Maroons are the descendants of runaway slaves who resisted re-enslavement throughout the colonial period.

The efforts of the Cockpit Country Stakeholder Group prompted a national debate about bauxite mining and the protection of natural and cultural resources, and led to the suspension of the Exclusive Prospecting License that had been granted. In addition to having direct discussions with the Minister of the Environment and other government officials, and attempting to engage with mining stakeholders, the Group launched the Save Cockpit Country public awareness campaign, which took the issue to the airwaves and newspapers and prompted ordinary citizens across the island to add their voice to the debate through the mass media. In short order, the government was aware that citizens were watching to see how they would deal with the issue and there was little support for actions that would harm the area.

The Stakeholder Group also circulated, in hard copy and electronically, a petition directed to the Prime Minister, which had three specific requests. To strengthen their advocacy position, they prepared a legal opinion on the laws and regulations that deal with both mining and natural resource protection and they used the Access to Information Act to get information on the track record of the bauxite companies in restoring mined out lands.

Source: Cockpit Country Stakeholders Group (www.cockpitcountry.org)

2.4.1 The need for climate change advocacy

Although governments take the formal lead in developing national policy and legislation on climate change, community and nongovernmental organisations can play a critical role. They can speak up to influence policies and legislation and to ensure they are implemented and enforced.

Climate change advocacy can help bring about needed changes in public policies which will result in finding solutions for climate change impacts that affect some of the poorest and most vulnerable people in our communities. Communities that are most affected by climate change impacts such as flooding and loss of coastlines, need to challenge existing policies which may no longer serve the purpose for which they were originally intended.

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The climate is changing faster than policies and programmes in most countries. The risks and threats of climate change are not always considered in decision making and how we do things is often based on assumptions of old conditions. This may no longer be useful for us in an environment where climate change risks are getting greater.

Policies and approaches that were once appropriate may no longer be so. The policies regarding fisheries, housing, transportation and agriculture, for example, may have to be changed or new ones introduced to address conditions which did not exist before. National development plans now have to take climate change into account if they are to be sustainable.

If those who provide food (our farmers and fishers) are adversely affected, whether in mountainous or coastal areas, and are unproductive because of flooding or land slippage and road destruction, then we will be challenged to find something as basic but important as food. This may mean then that policies regarding agriculture and fisheries or agricultural and coastal areas may have to change to take into account the increased risks facing these sectors or zones.

Climate change advocacy may not always have to do with adjusting or introducing new policies. There is a strong case for calling for effective application of existing policies and regulations, especially those relating to land use planning and environmental management. Many countries have planning and environmental legislation, regulations and policies on paper. These are often good documents that would help strengthen national systems against climate change impacts if they were implemented and enforced.

Advocacy can encourage the political will to develop and sustain climate-friendly policies. Climate change advocacy can focus on:

- Ensuring local, national and sector policies and activities take climate impacts into account and lessen risks; and
- Influencing your government's position on climate change in international negotiations.

National and sector policies

Some of the areas in which is it important for policies to be responsive to climate change and climate-friendly are:

- Agriculture
- Disaster Risk Reduction
- Energy
- Environment
- Food Security
- Health
- Housing
- Land Use and Planning
- Sustainable Livelihoods
- Transport
- Tourism
- Water
- See **Table 1** for examples of policies that affect the ability to cope with climate change.
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Policy Area	Policies that take climate change into account	Policies that ignore climate change risks				
Housing	Building on higher ground Using natural ventilation to cool buildings Encouraging the use of small-scale renewable energy, e.g., small wind turbines and solar water heaters	Building in low-lying or easily flooded areas Removing or not having tax incentives for using renewable energy technologies				
Tourism	Encouraging longer stay visitors Promoting eco-tourism through investment in preservation of buffering ecosystems	Encouraging visitors to the island on short stays/weekend breaks. Promoting eco-tourism through the exploitation of natural resources				
Energy	Supporting individual use of solar panels and solar water heaters	Preventing use of solar Panels or Solar water heaters				
Transport	Promoting low-energy forms of transport, e.g., cycling, shared cars, hybrid cars, energy efficient cars Developing public transport	Encouraging use of large energy-intensive vehicles, e.g., SUVs				
Food Security	Promoting and supporting local production of agricultural goods	Increasing reliance on foods imported from overseas				
Water Supply	Encouraging water conservation, e.g., metering, public education	Encouraging over-use of water (flat rate tariffs)				
Infrastructure	Ensuring roads have runoff/drainage systems	Building roads that do not have runoff/ drainage systems				

Table 1. Policies that affect the ability to cope with climate change

Source: Tompkins et al, 2005

International negotiations

What happens in international climate change talks affects every individual on the planet. We have an interest in ensuring that international negotiations result in the best possible deal for our countries and that our governments go to these negotiations with a position that adequately reflects the country's needs and with the evidence needed to support it.

Our governments and civil society are not always on opposing sides of the fence in the international climate arena. Community and other civil society organisations can provide data and evidence that governments can use to strengthen their case in international negotiations. Emotional outbursts do not influence policies; 'hard' evidence such as photographs, videos and carefully and precisely recorded data, can.

Engage with your government around the climate talks. Let your government know that you are paying attention to what it does at international meetings and demand accountability. Take part in national consultations in the run up to these meetings and work to have your group or organisation's views incorporated in the final positions taken

Box 6. Opportunities for Engagement on Climate Change in 2009

Although negotiations for the December 2009 UN Conference on Climate Change in Copenhagen are well on their way, a final deal has not been reached and there are still opportunities to make your voice heard on the issues. You can engage with your national negotiating team ahead of the UNFCCC inter-sessional informal consultations that will take place between September and October 2009.

Several of the items on the agenda of the UN General Assembly (starting on 15 September) are related to climate change, such as the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, the International Strategy for Disaster Reduction and the Convention on Biological Diversity. Member states will also discuss protection of the global climate.

Let your government know you are watching them and ask what positions on any or all of these agenda items it will take to New York. Ministries of Foreign Affairs are usually responsible for coordinating national representation at these meetings.

CARICOM member states will attend the 2009 Commonwealth Heads of Government Meeting (CHOGM) in Trinidad and Tobago from 27 to 29 November. Coming as closely as it does to the UN Climate Change Conference in December, Commonwealth member states will discuss climate change under their overall theme of "Partnering for a More Equitable and Sustainable Future". They are likely to include a statement on climate change in their final communiqué. Find out from your Ministry of Foreign Affairs what position your government is taking to the CHOGM.

The Commonwealth People's Forum (CPF) to be held from 22 to 26 November in Trinidad and Tobago will give community and nongovernmental organisations an opportunity to network and talk about climate change issues through its Environment and Climate Change forum assembly.

For more information, go to the CPF web site: www.commonwealthfoundation.com/governancedemocracy/CPF2009/2009CPF/

2.4.2 Whom should climate change advocacy target?

Ministries and local government authorities

The various ministries of government are the obvious ones to be targeted. These include the ministries of agriculture, environment, education, housing, planning, health and water.

The government agency responsible for disseminating government information as well as the ministry responsible for communication and information are other possible targets.

Local government authorities also need to be targeted as they often control local planning decisions.

• Political representatives (e.g., parliamentarians, senators, deputies, mayors, councillors)

These individuals have influence in local and central government and are the links between these structures and the communities and people they are elected to represent.

They need to be made aware of the impact of climate change on the ground and the actions which must be taken at both community and government levels to adapt to these changes and mitigate their impact. It is in their interest to ensure that the needs of communities they represent are being met.

Mass media

There are local television and radio stations which have specialised programmes for issues affecting communities. Some are more predisposed to investigating and reporting on topical issues and so should be the ones you contact first.

National and community newspapers have reporters who investigate and cover matters of significance which have local, national and international impacts. Invite journalists to meetings and give tours of the community to provide opportunities for interviews with persons affected by climate change impacts.

Also see Section 2.2.3 Working with the media.

2.4.3 Tools for advocacy

- Meetings
- Briefing documents
- Mass media (radio, TV, print, media site visits)
- Internet (web sites, Blogs, social networking sites like Twitter and Facebook, especially to reach youth and young adults)
- Workshops
- Face to face visits
- Public consultations
- Videos
- Written correspondence
- Electronic communication
- Use of influential persons
- Presentations (including to parliamentary committees; task forces; local government authority meetings; community meetings; sector meetings, such as professional and trade associations; trade unions etc)

2.4.4 The advocacy process

In outlining advocacy strategies and plans, you need to be aware that different approaches can be taken depending on the environment in which you are operating.

Advocacy methods will be determined by a number of factors including local, regional and national politics, the cultural situation and the way in which social relations are organised in your particular

community, country or region. These all vary from place to place. It is also not unusual for the process to evolve out of a particular set of circumstances, for example, severe flooding in a community as a result of climate change, which needs to be addressed.

Box 7. Key Elements of an Advocacy Strategy

Formulating an advocacy strategy and plan will include a number of steps:

- Define the problem What is the issue you want to focus on? Be clear on this.
- Identify possible allies or partners. Who shares this interest? Which other groups or individuals also want to see this change?
- Identify goals (the change you want to bring about) and objectives (specific actions you will take to reach these goals).
- Identify your advocacy message(s). What do you want to say? How do you want to say it?
- Develop a plan of action to accomplish your objectives. Assign responsibilities.
- As part of your plan, determine which local or national government departments regulate what needs to be done; find and analyze the regulations or procedures that affect what needs to be done; Identify who has the most power in affecting changes needed.
- As part of your plan, determine whether or not a champion could be useful to your campaign. A champion is usually a high-profile individual who could be influential in convincing selected audiences. A champion can help put an issue on the agenda of a particular group or sector, bring a solution to the attention of decision-makers and help build consensus.
- Keep a diary or log of correspondence, telephone calls, conversations and interviews.
- Prepare your case. This means documenting the facts surrounding the case. You need to be clear.
- Determine the measures you will use to evaluate whether or not your actions have been effective. How will you keep track of your planned actions? How will you know if you have succeeded?
- Write out a timetable of the sequence of actions which will need to be taken in presenting your case. For example, making appointments, writing letters etc., publication of media reports, appearances on radio and television programmes, and presentations to parliamentary committees or local government authority meetings etc.
- Implement your plan.
- Evaluate your results. Have you successfully completed the actions you planned? Did you reach your goals? What difficulties did you have? What factors helped you?
- Follow-up with what needs to be done next.
- Celebrate even if it is a small victory or none at all. At least you took some action.
- Never give up! An advocate's work is never easy. Changing the world, or even a corner of it, is a big job!

2.4.5 Formulating advocacy messages

The tips for developing clear communication messages in **section 2.2.1** and **Box 2** help you develop your advocacy message(s), but there are a few other things to keep mind:

Refine your message

Have a specific person in mind as you refine your message for a particular audience. For example, don't think generally about influencing your local government authority to take action. Think about convincing an actual person within the authority - Mayor X or Councillor Y. What do you know about this person? What are the types of issues they respond to? Can you create a link between your issue and their pet concerns? What kind of words will make them react?

• Be consistent

Your messages need to be consistent. Regardless of the tools and channels you use for your advocacy, what you say has to be consistent so people are hearing the same thing about what needs to be done to address your concern. Make sure your messages stress the same things over and over again.

Use multiple pathways

The most effective advocacy campaigns use a variety of tools and approaches to get their message out. You want to try to reach your audience wherever they are. This means using different ways to reach them which all support each other. You may make a presentation to parliament, organise a letter writing campaign, have articles published in the newspapers, and organise a public march – all on the same issue. Get as many stakeholders as possible involved in these multiple activities.

2.4.6 Alliance building

Your networks and partnerships will be important in your advocacy effort. Partnerships and coalitions can help you expand your reach and give you access to additional ideas, skills and resources. You may also have to develop relationships with new allies, even unlikely ones. Keep an open mind.

See Section 2.3 Engagement and networking

Linkages with government agencies

While advocating for change to a government policy, you might find that a technical government agency shares your position. When NGOs in Trinidad were advocating in the 1980s and 90s to stop commercial rice farming and other illegal activities in the Nariva Wetland, they formed a partnership with the government's Wildlife and National Parks Section, which had been trying to work within government to achieve the same end. Trade unions, professional groups, and sector lobby groups are other potential allies that might be outside your regular network.

International support

External organisations and international conventions can be used to support your national actions and positions. You can use government commitments under international treaties they have signed (for example, the Convention on Biological Diversity) to support climate change-related positions.

External organisations can provide technical expertise and can help make your issue more visible. Organisations in Jamaica and the Dominican Republic have, for example, successfully drawn on the resources and credibility of the International Union for Conservation of Nature (IUCN), the world's oldest and largest global environmental network, in support of local advocacy. When individuals and organisations in the western town of Negril in Jamaica set out to oppose peat mining in the 6,000 acre Negril Morass in the early 1980s, IUCN's support made it possible for them to raise the prolife of their issue internationally and benefit from the expertise of a wetlands specialist. More recently, IUCN members in the Dominican Republic sought support from the organisation in their efforts to resist attempts at changing the status of some protected areas to allow for tourism development.

2.5 Practical actions that individuals and households can take to reduce their impact on the climate system²⁰

2.5.1 Reduce your personal vulnerability

You can take measures to reduce the vulnerability of your home, community and business to natural hazards in the following ways:

- □ Prepare for hurricanes. Have a plan in place to secure property, including a system for protecting windows and glass doors. This could be permanent storm shutters or having on hand 5/8" marine plywood cut to fit and ready to install. Know where your local shelter is and have an evacuation plan for your household.
- □ Install straps or additional clips to securely fasten roofs to buildings' frame structure.
- Regularly cut back trees and shrubs around buildings.
- □ Keep up with routine maintenance and keep rain gutters and downspouts clear of debris.
- □ If you live in a coastal or fishing community, identify where and how boats will be secured.

The Cari	ibbean	is e	expected	to	experience	less	rainfall,	and	this	means	less	water	will	be	availabl	e in	
some pla	aces.																

- Reduce domestic water consumption, for example through the installation water-saving devices.
- □ Plant drought-tolerant plants in gardens and apply water conservation techniques such as the use of mulch to reduce evaporation.
- Create a soak-away system and reuse water that has been used in the home (except from the toilet) for plants (gray water recycling).
- □ If your water supply is not reliable, you can collect and store rainwater in tightly covered containers to prevent mosquitoes from breeding in your collected water.

²⁰ This section is adapted from Brown, N. 2008. Climate change in the UK Overseas Territories: An overview of the science, policy and you. Peterborough, UK: Joint Nature Conservation Committee and is reprinted with kind permission from the Joint Nature Conservation Committee.

2.5.2 Reduce your energy use

You can take several simple steps to reduce transport and residential energy consumption.

Transport

- Drive less and drive more slowly. Cars pollute more when they travel over 90km/hr.
- Do not idle car engines (i.e., leave the engines running for longer than 10 seconds). Idling for longer periods uses more fuel than shutting off and restarting the car.
- ➡ Walk, bicycle, take a bus or carpool rather than using individual cars when this is practical. Plan your schedule carefully so that you reduce the amount of driving you do for daily activities.
- Use public transportation.
- Buy energy-efficient vehicles when replacing existing models.

Household

- Switch off TVs, computers, lights, etc. that are not being used and unplug items on "standby." Many appliances use electricity when they are turned off or not in use, including TVs, video and audio systems, computers, and chargers (for cell-phones and other electronic equipment).
- □ Use electrical appliances with high-efficiency ratings and select the energy-saving setting on your refrigerator and other major appliances. New refrigerators, for example, use 40% less energy than models made just 10 years ago.
- Replace incandescent light bulbs with efficiency-rated fluorescent ones. Energy-efficient light bulbs use 75% less energy and last 10 times longer than conventional ones.

2.5.3 Practice good environmental habits

Look after the environment and it will look after you. The damage to the environment caused by human activity makes Caribbean countries more vulnerable to the negative effects of climate change.

■ Keep rivers and watercourses free of garbage and debris to help keep wetlands and reefs healthy so they can play their role in protecting the coastline from storm surges and wave action.



Healthy forests, wetlands and coral reefs are better able to stand up to the effects of natural disasters and extreme weather. Photo: Owen Day/Buccoo Reef Trust

- Maintain and protect mangroves. A healthy mangrove is a living barrier against storm surges and wave action. Destroying mangroves for the construction of roads, homes or businesses, dumping garbage in them, or cutting them down for fuel wood or agricultural stakes all contribute to the weakening or destruction of mangrove forests. Their ability to support marine and bird life is affected and they are less able to filter land-based run-off and debris that enter the seas.
- Maintain and protect coral reefs. Pollution from activities on land improper waste disposal and run-off from farming and industry – affects the health of coral reefs, as do activities in the sea. In addition to reducing the land-based sources of reef stress, it is important to ensure that commercial (fishing) and recreational (scuba diving, snorkelling and swimming) activities do not damage reefs.
- Avoid unsustainable farming practices. The misuse and over use of pesticides and fertilizers, over-cultivation on marginal lands, and inappropriate farming techniques on hillsides, all contribute to soil erosion and soil loss. Some of this soil ends up in inland water bodies (rivers, lakes, ponds); some makes its way to the marine environment. Pollution of water sources reduces the amount of fresh water that is available for domestic and commercial use.
- Protect our trees. Trees are important for removing the greenhouse gas carbon dioxide from the atmosphere. Do not just destroy forests for construction and agriculture. If trees are removed for development, we should plant new trees to replace them. Trees are also important in preventing soil erosion.
- Reduce or eliminate the use of chemicals in our homes and communities. Chemicals poured down drains and toilets eventually run into our water ways and the sea where they can destroy the coral reefs.

2.5.4 Lessen your impact on the environment: Reduce, Reuse and Recycle

In making choices about what and how you consume, you affect the environment.

- Use organic waste from your kitchen as compost for your garden.
- □ When you shop, choose items with less packaging.
- Take your own reusable bag to the shop instead of packing your groceries in plastic bags.
- □ Where recycling facilities are available, use them.
- Even if there are no recycling facilities available, try to get the most use out of containers which are recyclable and reusable such as plastic and glass bottles, plastic and paper bags, cardboard boxes and plastic containers. They can be used to store items, as pots for plants, to make craft items etc.

3 Templates and Tools

3.1 Mapping Exercise 1. Climate change impacts in the Caribbean

Purpose: Use this activity with a group to reinforce knowledge and understanding of climate change impacts in the Caribbean or test your own knowledge after reading Section 1 of the toolkit. This activity is best done with a group after a presentation on climate change impacts in the Caribbean. It can be done as an individual exercise or working in small groups.

Time needed: 30 minutes to work on maps and 10 minutes per group report.

Materials needed: Blank outline map of the Caribbean, Post-it Notes, and assorted markers. A blank outline map of the region is provided on the following page. This can be photocopied or a map can be drawn on a blackboard or a large sheet of paper.

Exercise:

- 1. Give each participant or group of participants a map.
- 2. Ask participants to list the main ways in which climate change affects the Caribbean. Identify changes to climate (e.g., more hot days and hot nights) as well as impacts and consequences (e.g., drought, severe water shortages).
- 3. Participants should write out each change or impact either directly on the map, if using individual maps, or on a Post-it Note if using large maps.
- 4. Ask participants to design an accompanying icon or graphic to illustrate each impact identified. They should use one Post-it Note per change/impact and its accompanying graphic. Place Post-it Notes on the map.
- 5. Participants should put the impact or consequence where it occurs. For example, if they identify coral bleaching as an impact, they should put the Post-it Note off the shore of an island and not on a land mass.
- 6. Encourage participants to be creative!
- 7. Once participants have completed their maps, have each individual or group make a brief presentation of their map.



3.2 'Climate change basics' quiz

Note to the Facilitator/Instructor: Participants can refer to the section on Climate Change Basics in the toolkit when answering these questions. They can work in small groups to answer the questions and then the facilitator can review the answers with the large group. Alternatively, the quiz can be administered as a game with a large group.

- 1. Read the definition of climate change then identify the two main features.
- 2. Give three ways in which human activity has increased CO₂ release into the atmosphere. Do any of these activities occur in your community or island?
- 3. What has happened in the Caribbean as a result of temperature increase? Is there evidence that the temperature has increased in your community or island?
- 4. What have been the effects of changes in rainfall patterns in the Caribbean? Do you see any of these effects in your community or island?
- 5. Give three effects of warmer sea temperatures in the Caribbean.
- 6. Give four reasons why coral reefs are important. Have you noticed whether coral reefs have been destroyed in the waters around your island?
- 7. How do rising sea levels affect Caribbean islands? Has your island been affected by this?
- 8. Why are acidic oceans so devastating?
- 9. Intense hurricanes have been one of the main impacts of climate change. Give four possible effects of these hurricanes.
- 10. Warmer temperatures resulting from climate change are linked to the faster breeding of one type of mosquito in the Caribbean. What illness does this mosquito cause? Has this illness affected your community?

'Climate Change Basics' Quiz Answer Sheet

1. Read the definition of climate change then identify two main features.

Answer:

- a. Increase in the Earth's average temperature
- b. Changes in precipitation (rainfall)
- c. Greater levels of CO_2 , one of the greenhouse gases, in the atmosphere due to human activity.

The facilitator should use this opportunity to explain again what greenhouse gases are and the concept of the 'greenhouse effect'.

2. Give three ways in which human activity has increased CO₂ release into the atmosphere. Do any of these activities occur in your community or island?

Answer:

- a. Burning coal, oil and natural gas. CO₂ is produced from these activities.
- b. Destruction of forests by burning and cutting down trees. CO_2 is released as a result of these activities and they also remove the means by which CO_2 is absorbed.
- c. Carrying out agricultural and industrial practices such as rice cultivation, cattle and sheep rearing, and coal mining and oil drilling. These produce methane gas, one of the greenhouse gases.
- 3. What has happened in the Caribbean as a result of temperate increase? Is there evidence that the temperature has increased in your community or island?

Answer:

- a. More droughts
- b. More very hot days and fewer cold or cool nights
- c. Average temperature increase over the last 30 years
- 4. What have been the effects of changes in rainfall patterns in the Caribbean? Do you see any of these effects in your community or island?

Answer:

- a. Drought
- b. Water shortages
- c. Heavy rains resulting in land slides

5. Give three effects of warmer sea temperatures in the Caribbean. Answer:

- a. Fish migration
- b. Destruction of coral reefs
- c. The formation of stronger storms

6. Give four reasons why coral reefs are important. Have you noticed whether coral reefs have been destroyed in your island?

Answer:

- a. They produce sand
- b. They support fisheries (fish mature and live on coral reefs)
- c. They protect the coast from storm surges
- d. They provide opportunities for recreation, including as part of the tourism product
- 7. How does rising sea levels affect Caribbean islands? Has your island or anyone you know been affected by this?

Answer:

- a. Disappearance of coasts and possibly low-lying islands
- b. Destruction of livelihoods and infrastructure like roads, airports and sea ports
- c. Flooding
- d. Destruction of mangroves

Note to Facilitator: Use this opportunity to discuss the significance of mangroves.

8. Why are acidic oceans devastating?

Answer:

They contribute to the destruction of coral reefs.

9. Intense hurricanes have been one of the main impacts of climate change. Give four possible effects of these hurricanes.

Answer:

- a. Strong storm surges resulting in beach erosion
- b. Damage to buildings, houses, roads, bridges
- c. Loss of income from tourism, fishing, agriculture
- d. Loss of lives sometimes through resulting diseases
- e. Destruction of coral reefs
- f. Flooding
- 10. Warmer temperatures resulting from climate change are linked to the faster breeding of one type of mosquito in the Caribbean. What illness does this mosquito cause? Has this illness affected your community?

Answer: Dengue fever

3.3 Mapping Exercise 2. Community vulnerability mapping

Purpose: Use this exercise to demonstrate how to look for community solutions to address community issues. This activity will:

- 1. facilitate learning by creating a "hands-on" experience in preliminary vulnerability assessment and adaptation planning;
- 2. provide valuable visual representation of the perception of present vulnerabilities of the community; and
- 3. provide a platform for implementation of the community's action plan to adapt to climate change.

Time needed: 1 hour to work on maps and 10 minutes per group report.

Materials needed: Small topographical maps for referencing, large outline maps of a country or part of it, assorted markers, Post-It Notes of varying colours, sheets of paper (letter size or A4), masking tape.

Mapping exercise:

- 1. Use the most current climate projections for your country or region to set the scenario (e.g., Jamaica is expected to have less average rainfall, but periods of flooding and drought).
- 2. Refer to the topographical map to indicate key features on your outline map. These features may include:
 - a. forest reserves
 - b. water ways
 - c. agricultural hotspots
 - d. areas of high tourism activity / development
 - e. low-lying settlements
 - f. poorly planned settlements on steep slopes
 - g. communities (coastal and in other vulnerable areas).
- 3. Identify linkages from communities to resources and features identified on map (e.g. particular forest used by community for lumber, food; river used as a main source of water for community etc.)
- 4. Write expected impacts and effects on Post-It Notes (e.g., less rainfall; crop failure) and place on map where appropriate.
- 5. Also on Post-It Notes or sheets of paper, write effects on communities lives, livelihoods, cultural practices, etc.
- 6. Determine how best these issues can be addressed and what resources are needed, taking note of how the community is already coping with climate-related events.

3.4 Press release sample format





However, Mr. Briceno said, that while many countries are making progress in disaster risk reduction and are already using the Hyogo Framework for Action as a guiding tool, the world is not on track to achieve the HFA aim of a substantive reduction in disaster losses by 2015. The growing number disasters and the scale of their impacts threatens the lives and livelihoods of millions of people and the achievement of the Millennium Development Goals (MGDs)."

Commenting on the conference discussions, Panos Caribbean's Regional Director Media and Environment, Ms. Indi Mclymont-Lafayette, noted, "Many countries continue to focus on humanitarian assistance and emergency management in their disaster response, but climate change and its implications for more frequent severe weather events call for a risk reduction approach that includes prevention, mitigation and preparedness."

🗲

Use the following at the end of the press release to show that it is finished. It should be centred as shown here.

News peg: (optional, but recommended)

[A news peg or news hook links your story to a timely event and makes your story news. It helps a journalist or editor understand what makes your story important at this time and why it should be published now. Examples of news pegs include:

- Observance of a national or international commemorative day or week, such as World Wetlands Day or World Environment Day, Earth Day, or Disaster Preparedness Week
- The release of a new national, regional or international survey or study
- An act of legislation
- A public protest
- A town meeting
- The start of a season hurricane season, harvesting season for a crop that might be stressed by climate change]
- The opening of exposition or exhibition such as an agricultural fair]

For more information	Name and telephone number of contact person(s), organisation address and web site, if available.					
Contact:	[Organisation name]					
About [The Panos Caribbean]						
The Panos Caribbean is a non-partisan, non-profit international organisation that works to strengthen civil society in the Caribbean and Central America, as well as other parts of the world, by helping grass roots journalists to cover under-reported and misreported issues responsi-						
bly and in depth. Its aim is to broaden participation of all sectors of society in public debate on sustainable development. Panos Caribbean has its headquarters in Haiti and an office in						
Jamaica.	Information about your organisation/your organisation's history in one short paragraph					

3.5 Press advisory/media invitation



3.6 Press kit check list

A press kit is a folder that contains information about your event and organisation. It does not have to be big or fancy. The information you provide reporters should help them to write a story about the event or issue. Many journalists have too many things to cover and not enough time, so they appreciate receiving accurate and up-to-date information that can help them write a story about your issue or event.

Press kit check list:

- A one-page summary of your organisation or group (mission statement, constituency, goals, other important facts).
- \Box A copy of the press release about the event or activity.
- Brief background information about the issue of concern, such as a fact sheet or even a copy of your organisation's newsletter that may have featured the issue.
- A copy of any publications or brochures your organisation produces or distributes.
- □ Contact information for your media contact-designated spokesperson (you can include a business card, if available). Contact information should include as much information as possible, that is, a name, contact telephone and fax numbers and an email address. Ensure that someone can be contacted fairly quickly at all these numbers and addresses.

Additional items you could also consider including:

- A list of relevant upcoming events.
- Statements of support or testimonials from partners.



4.1 Events calendar 2009

Date	Event	Place		
1-12 June	UNFCCC 2nd Intersessional	Bonn, Germany		
5 June	World Environment Day			
11-14 June	G8 Finance Ministers	Venice, Italy		
26 June	G8 Foreign Ministers	Trieste, Italy		
8-11 July	G8 Summit	La Maddalena, Italy		
31 August - 4 September	World Climate Conference 3	Geneva, Switzerland		
15 September	UN General Assembly	New York, USA		
28 September - 9 October	UNFCCC 3rd Intersessional	Bangkok, Thailand		
October (date not set)	UNFCCC Intersessional/ministerial meetings	Location not confirmed		
16 October	World Food Day			
17 October	World Poverty Day			
November (date not set)	G20 meeting	Location not confirmed		
27-29 November	Commonwealth Heads of Government Meeting	Port of Spain, Trinidad		
7-18 December	UNFCCC COP 15	Copenhagen, Denmark		
12 December	Global Day of Action			

4.2 Contacts

DOMINICAN REPUBLIC

• Climate Change

Chief Climate Change Negotiator

Ing. Juan Mancebo National Climate Change Coordinator Secretaría de Estado de Medio Ambiente y Recursos Naturales Presidente González esq. Tiradentes, Edificio La Cumbre, piso 10 Santo Domingo Tel: (809) 472-0626 ext. 275 Email: juan.mancebo@codetel.net.do or cambioclimatico@medioambiente.gov.do

UNFCCC National Focal Point

Ing. Ernest Reyna Subsecretario de Medio Ambiente de la República Dominicana Secretaría de Estado de Medio Ambiente y Recursos Naturales Presidente González esq. Tiradentes, Edificio La Cumbre, piso 10 Santo Domingo Tel: (809) 472-0626 Email: sga@medioambiente.gov.do

Consejo Nacional para el Cambio Climático y el Mecanismo de Desarrollo Limpio

(National Council on Climate Change and Clean Development Mechanism) Mr. Víctor García García Director Oficina Nacional de Cambio Climático Av 27 de febrero #419 Edif. Grupo Metro, 6to piso Santo Domingo Tel: (809) 258 3450 Email: oncc@cambioclimatico.gob.do or vgarcia@cambioclimatico.gob.do

Oficina Nacional de Meteorología - ONAMET

(National Meteorological Office) Lic. Solangel González Coordinadora Unidad Cambio Climático Apartado Postal # 1153 Santo Domingo, Este Tel: (809) 788-1122 Email: solangel1530@yahoo.com Web site: www.onamet.gov.do

Secretaría de Estado de Medio Ambiente y Recursos Naturales

(Department for the Environment and Natural Resources) Mr. Jaime David Fernández Secretario de Medio Ambiente Presidente González esq. Tiradentes Edificio La Cumbre, piso 10 Santo Domingo Tel: (809) 472-4204 Email: despacho@medioambiente.org.do Web site: www.medioambiente.gov.do

Programa de las Naciones Unidas para el Desarrollo -PNUD (United

Nations Development Programme) Unidad de Comunicación Casa de las Naciones Unidas Avenida Anacaona #9 Mirador Sur, Apartado 1424 Santo Domingo Tel: (809) 537-0909 ext. 300 E-mail: registry.do@undp.org Web site: www.pnud.org.do/info/pnudrd

• Disaster Risk Reduction and Emergency Response

Centro de Operaciones de Emergencia - COE

(Emergency Operations Centre) Mr. Luis Antonio Luna Paulino Edif. Comisión Nacional de Emergencias, 1er Piso Plaza de la Salud Santo Domingo Tel: (809) 472-0909 Email: coe_subdir@codetel.net.do Web site: www.coe-repdom.4t.com

Cruz Roja Dominicana

(Dominican Red Cross) Calle Juan Enrique Dunant #51 Ensanche Miraflores Santo Domingo Tel: (809) 334-4545 / 412-8207 Web site: www.cruzroja.org.do

Cruz Roja Española

(Spanish Red Cross) Mr. Arnaldo San Román Tel: (809) 476-7178 Email: del.asro@cruzroja.es Web site: www.cruzroja.org

Red Nacional de Emergencias

(National Emergency Network) Mr. Jose Aristides Remy Ms. Germania Galvan Tel: (809) 741-0350 ext. 107 Email: rne.do@hotmail.com

Servicio Social Iglesias Dominicanas

(Dominican Church Social Services -National focal point for the International Disaster Prevention Network) Mr. Lorenzo Mota King Calle Luís E. Pérez no. 8, Ens. La Fe Apartado Postal no. 659 Santo Domingo Tel: (809) 542-6050 Email: lorenzo05lmk@hotmail.com Web site: www.ssid.org.do

HAITI

Climate Change

Chief Climate Change Negotiator

Mr. Moise Jean-Pierre Coordonnateur National Programme Changements Climatiques Ministère de l'Environnement 148, Ave Martin Luther King (Turgeau) Port-au-Prince Tel: (509) 2245-3222

Centre National de Météorologie d'Haïti

(National Meteorological Centre of Haiti) Rte de l'Aéroport Local Aéroport International Toussaint Louverture HT 6123, Mais Gate, Port-au-Prince Tel: (509) 2250-1164 / 2250-0333 Email: cnmhaiti@yahoo.fr

• Government Agencies

Ministère de l'Environnement

(Ministry of the Environment) 181, Haut Turgeau Port-au-Prince, Haïti Tel: (509) 2256-9957

Ministère de l'Intérieur et des Collectivités Territoriales, Direction de la Protection Civile -

DPC (*Ministry of the Interior, Civil Protection Department*) 148, Ave. Martin Luther King Turgeau Port-au-Prince Tel: (509) 2245-3222 Email: bgp.dpc@gmail.com

• Development cooperation

Programme des Nations Unies pour le Développement en Haïti - PNUD

(United Nations Development Programme) 387 avenue John Brown HT 6111 B.P. 557 Port-au-Prince Tel: (509) 2229-1600 / 2244-9354 / 2244-9357 / 2244-9358 Fax: (509) 244-9366 / 244-9367 E-mail: registry.ht@undp.org Web site: www.ht.undp.org

Programme des Nations Unies pour le Développement en Haïti – PNUD/PROJET PAGE Route de Bourdon

Unité D'appui au Programme Canadien - UAPC

Rte du Canapé vert, rue St Surin, imp Frémont #3 Tel: (509) 2256 2625 / 2256- 2627 Web site: www.uapc.org

• NGOs

Croix Rouge Haïtienne

(Haitian Red Cross) Bureau Administratif Bicentenaire, Rue Eden #1 Port-au-Prince Tel: (509) 2222-2709

Fédération des Amis de la Nature – FAN

(Friends of Nature Federation) Email: fanhaiti@gmail.com

Fondation Seguin

(Seguin Foundation) Mr. Yves André Wainwright Rue Lambert # 100 (en face Innovations) Pétion-Ville, Port-au-Prince Tel: (509) 3619-1869 Web site: www.fondationseguin.org

Groupe de Recherche et d'Appui au Milieu Rural (GRAMIR)

Mr. Agnus Laraque 28, Rue Pacot, Port-au-Prince Tel: (509) 2245-7699 / 2245- 1981 Email: gramir@hughesnet.net

Haïti Survie

Mr. Aldrin Calixte Ruelle Alerte # 69 Port-au-Prince Tel: (509) 3401-9684 / 3733-7377 Email: hsurvie@yahoo.com

Konbit pou Ranfose Aksyon Lakay – KORAL

(Collective to Strengthen Local Action) Ms. Frantzie Dubois 20, Rue Jn Baptiste Canapé Vert, Port-au-Prince Tel: (509) 3816-7071 Email: frantziedubois@yahoo.fr

Mouvement Haïtien pour le Développement Rural – MHDR

(Haitian Movement for Rural Development) Ms. Vedrine Strauss 51, Route du Canapé Vert Port-au-Prince, Haiti Tel: (509) 511-1460 / 3753-2397 Email: mhdrural@hotmail.com or straussvedrine@hotmail.com

VETERIMED

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JAMAICA

• Climate Change

Chief Climate Change Negotiator

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IPCC Focal Point/Member UNFCCC Adaptation Fund Board

Mr. Jeffery Spooner Head, Climate Branch Meteorological Service of Jamaica 65 ¾ Half Way Tree Road, Kinston 5 Tel: (876) 929-3694 E-mail: j.e.spooner@cwjamaica.com

UNFCCC National Focal Point

Mrs. Sylvia McGill Director Meteorological Service of Jamaica 65 ¾ Half Way Tree Road, Kinston 5 Tel: (876) 929-3694 E-mail: metja@infochan.com

Meteorological Service of Jamaica

65 ¾ Half Way Tree Road, Kingston 5 Tel: (876) 929-3694 Fax: (876) 960-8989 Web site: www.metservice.gov.jm

Environmental Management

National Environment and Planning Agency - NEPA

Head Office 10 Caledonia Avenue Kingston 10 Tel: (876) 754-7540 Email: pubed@nepa.gov.jm Web site: www.nepa.gov.jm

Manchester

28 Caledonia Road, Mandeville Tel: (876) 625-0548 Portland 4 Smatt Road, Port Antonio Tel: (876) 715-3756

St. Ann Claremont Tel: (876) 972-4438

St. Elizabeth Black River Tel: (876) 965-9980

St. James Catherine Hall, Montego Bay Tel: (876) 979-9600

St. Mary Port Maria Tel: (876) 994-2343

Westmoreland Negril Parish Office Tel: (876) 957-3891 / 957-3576

Disaster Risk Reduction and Emergency Response

The following organisations provide training to build community capacity to respond to disasters:

Adventist Development and Relief Agency – ADRA, Jamaica

National Headquarters 125 Manchester Road Mandeville, Manchester Tel: (876) 625-5751 Fax: (876) 962-3417 www.wiunion.org

Jamaica Red Cross

National Headquarters Central Village, Spanish Town Tel: (876) 984-7860 to 2 Fax: (876) 984-8272 Web site: www.jamaicaredcross.org

Office of Disaster Preparedness and Emergency Management - ODPEM

12 Camp Road, Kingston 4 Tel: (876) 928-5111 to 4 Fax: (876) 928-5503 E-mail: odpem@cwjamaica.com Web site: www.odpem.org.jm

Parish Council/Parish Disaster Coordinator

Parish Councils are responsible for coordinating the parish disaster response. Each Parish Council has a full time Disaster Coordinator who can help organise community training and give advice on the preparation of community disaster plans.

Clarendon Sevens Road, May Pen Tel: (876) 986-2216 / 986-2234

Hannover Church Street, Lucea Tel: (876) 956-2236 / 956-2173

Kingston and St. Andrew Poor Relief/Emergency Division 65 Hanover Street, Kingston Tel: (876) 967-3329 / 922-0254

Manchester 32 Hargreaves Ave. Mandeville P.O. Tel: (876) 962-2278-9 / 962-2326

St. Ann Administrative Office St. Ann's Bay Tel: (876) 972-1942

St. Catherine Emancipation Square Spanish Town Tel: (876) 984-3111 to 2 / 984-9713

St. Elizabeth 58 High Street Black River Tel: (876) 965-2256 / 965-2267

St. Mary Islington, Port Maria PO Tel: (876) 994-2178

St. James 19a Union Street, Montego Bay Tel: (876) 952-5500 to 2

St. Thomas 4 South Street, Morant Bay Tel: (876) 982-9449 / 982-2227

Climate Change Community Toolkit/Christian Aid (Caribbean)

Portland 1 Gideon Ave., Port Antonio Tel: (876) 993-2665 / 715-5389 / 715-6762

Portmore

Shop 82-85, Portmore Pines Plaza, Portmore Tel: (876) 740-0789 / 740-7440 to 2

Trelawny Water Square, Falmouth Tel: (876) 954-3228/954-3970

Westmoreland Great George Street Savanna La Mar Tel: (876) 955-2655 / 955-2798

REGIONAL

The Caribbean Community Climate Change Centre -CCCCC

2nd Floor, Lawrence Nicholas Bldg. P.O. Box 563 Bliss Parade Belmopan City, Belize Tel: (501) 822-1094 / 822-1104 Fax: (501) 822-1365 Website: www.caribbeanclimate.bz

Caribbean Disaster Emergency Response Agency - CDERA

Building #1 Manor Lodge Lodge Hill, St Michael Barbados Tel: (246) 425-0386 (24-hour) Fax: (246) 425-8854 Website: www.cdera.org

Caribbean Natural Resources Institute - CANARI

Fernandes Industrial Centre Administrative Building Eastern Main Road, Laventille, Trinidad Tel: (868) 626-6062 Fax: (868) 626-1788 Email: info@canari.org Website: www.canari.org

Climate Studies Group Mona

Department of Physics University of the West Indies Mona, Kingston 7 Jamaica Tel: (876) 927-2480

Panos Caribbean

51, Route du Canapé Vert Port-au-Prince, Haiti Tel: (509) 2511 1460 / 2942-0321 / 3445-7923 Email: haiti@panoscaribbean.org

9 Westminster Road Kingston 10, Jamaica Tel: (876) 920-0070 / 0071 Fax: (876) 920-0072 Email: jamaica@panoscaribbean.org Web site: www.panoscaribbean.org

4.3 Additional reading and web resources

Climate Change

- For more information about climate change in the Caribbean see Christian Aid Caribbean's Advocacy Briefs:
 - Climate Change and What it Means for the Caribbean
 - Civil Society Countdown to Copenhagen: Caribbean Issues, Strategies and Negotiating
 Positions
 - Climate Change: What Civil Society Can Do About It
 - Climate Change: What Businesses Can Do About It
 - Climate Change: What Governments Can Do About It

Available on request from Christian Aid (Caribbean) in English, French and Spanish. Tel: (876) 754 8384 Fax: (876) 754 8808

- For information about climate change and small islands, see: Tompkins et al. 2005. Surviving climate change in small islands – A guidebook. Tyndall Centre for Climate Research and School of Environmental Science, University of East Anglia. http://www.tyndall.ac.uk/publications/surviving.pdf
- For a general overview of the most up-to-date scientific evidence of climate change and projected impacts, see:
 - *Climate change 101: Understanding and responding to global climate change* Available for download in:
 - English http://www.pewclimate.org/docUploads/Climate101-Complete-Jan09.pdf
 Climate change 101: Science and impacts
 - Available for download in: English http://www.pewclimate.org/docUploads/Climate101-Science-Jan09.pdf

IPCC and UNFCCC

 For a lay persons' summary of the 2007 Synthesis Report of the Intergovernmental Panel on Climate Change in simplified language see: UNEP/GRID-Arendal. 2009. *Climate in peril: A popular guide to the latest IPCC reports.* A joint publication of UNEP and SMI Books, Birkeland Trykkeri: Norway Available for download in English. http://www.grida.no/publications/climate-in-peril/

 For a general overview of the UN Framework Convention on Climate change see: UNEP and IFCCC. 2002. Understanding climate change: A beginner's guide to the UN Framework Convention on Climate Change. Available for download in: English http://unfccc.int/resource/docs/publications/beginner_en.pdf
 French http://unfccc.int/resource/docs/publications/beginner_fr.pdf
 Spanish http://unfccc.int/resource/docs/publications/beginner_sp.pdf

Community Mobilisation

For practical, step-by-step guidance in community-building skills see *The Community Toolbox* web site. This dual language (Spanish and English) on-line resource has 46 chapters on a range of issues including community assessment, strategic planning, and group facilitation. Chapter 34 has information on "Media Advocacy." Available in:

English http://ctb.ku.edu/en/ Spanish http://ctb.ku.edu/es/

For participatory actions to address the impact of climate change at community level see WWF-SouthPacific Programme. nd. *Climate witness community toolkit.* Based on WWF's work in the Pacific.

Available for download in English. http://www.wwfpacific.org.fj/publications/climate

Advocacy

 For tips on successful advocacy communications for the non-profit sector see: Fenton Communications. 2001. Now hear this: The nine laws of successful advocacy communications. Washington DC: Fenton Communications Available for download in English. http://smap.ew.eea.europa.eu/media_server/files/M/A/now_hear_this.pdf

Media Communications and Relations

For information on how to become more active and effective in relations with the media see: Jempson. M. 2004 Working with the media: WHCA action guide. Somerset, UK: The MediaWise Trust and World Health Communication Associates Ltd. Although this pocket-sized 98-page guide is aimed at those working in the health and environment sector, it will prove useful in many other sectors as well. Available for download in:

English http://www.env-health.org/IMG/pdf/English_final-2.pdf French http://www.env-health.org/IMG/pdf/French_final.pdf Spanish http://www.env-health.org/IMG/pdf/Spanish_Word_final.pdf

Web sites

National (Dominican Republic, Haiti, Jamaica)

- Ministry of the Environment and Natural Resources (National climate change web page for the Dominican Republic) http://www.medioambiente.gov.do/cms/index.php?option=com_content&task=view&id=225 &Itemid=234
- National climate change web page for Haiti http://unfccc.int/resource/ccsites/haiti/ccweb/index.html
- Meteorological Service of Jamaica (National climate change web page for Jamaica) http://www.metservice.gov.jm/ClimateChange.asp

Inter-governmental

- Caribbean Community Climate Change Centre http://www.caribbeanclimate.bz A number of Caribbean-specific reports can be downloaded from this site, including some countries' National Communications. You can also sign up to join an online climate change forum.
- Intergovernmental Panel on Climate Change http://www.ipcc.ch The IPCC Working Group and Assessment Reports are available on this web site. The IPCC's comprehensive Assessment Reports, which include summaries for policymakers from all three of its Working Groups, are widely recognised as the most credible sources of information on climate change.
- UN Framework Convention on Climate Change http://www.unfccc.int Information about the activities and reports of the UNFCCC are available on this site, along with updates on international climate talks.

Non-governmental/multi-sector

- Christian Aid http://www.christianaid.org.uk Information about Christian Aid's work on climate change, including the *Countdown to Copenhagen Campaign*. Policy papers on climate change are available for download.
- ProVention Consortium http://www.proventionconsortium.org
 An informal forum where different actors and constituencies can exchange information,
 knowledge, and ideas about reducing the risk and social, economic and environmental
 impacts of natural hazards on vulnerable populations in developing countries in order to
 alleviate poverty and contribute to sustainable development. Includes an extensive list of
 print and video resources in the following areas:
 - o Mainstreaming
 - o Risk Analysis
 - o Recovery
 - o Risk Transfer & Private Sector
 - o Research & Learning
- International Federation of Red Cross and Red Crescent Societies Caribbean http://www.caribbeanredcross.org
- International Federation of Red Cross and Red Crescent Societies Climate Centre http://www.climatecentre.org
 Includes general information on climate change and disaster risk reduction and resources for vulnerability assessment, awareness-raising, analysis and advocacy. The Red Cross/Red Crescent Climate Guide can be downloaded from this site. You can also find information on the Community Vulnerability Assessment Tool here.

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The CHRISTIAN AID (CARIBBEAN) CLIMATE CHANGE PROGRAMME

Christian Aid has made climate change a key area of focus and it recognises that civil society has an important role to play in the response to the challenges of climate change. The goal of Christian Aid Caribbean's Climate Change Programme is to strengthen the civil society response to climate change in the region and make it more effective.



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