

Latin America and Caribbean consultation, Sao Paolo 2- 6 of October 2011

## CLIMATE CHANGE

### 1. Introduction

The purpose of this paper is to highlight key issues in the debate on climate change to shape our south-to-south learning and advocacy in 2012.

Climate change is the defining issue of our times: defining because the pace at which the environment is deteriorating. So our behaviour as individuals, as faith communities and as states will become more determined by our carbon footprint. And climate change is having the biggest impact on the poorest countries.

In this paper we will examine the effects of climate change from a human rights perspective addressing in particular:

- The human impact of the current environmental degradation.
- The unfairness of the effects of climate change. Developed countries which are the main drivers of global warming are less affected, while, poor countries with little responsibility for the problem, are being devastated.
- The need for developing countries to grow their economies to overcome poverty – a process that often results in higher carbon emissions.

So the debate about climate change is complex, and in this paper we will try to disentangle its components. At the end the paper looks at ways forward for south-to-south learning and advocacy work. **These will be the focus of our discussions in Sao Paolo.**

### 2. Climate change – the basics

#### a. **What is CLIMATE CHANGE?**

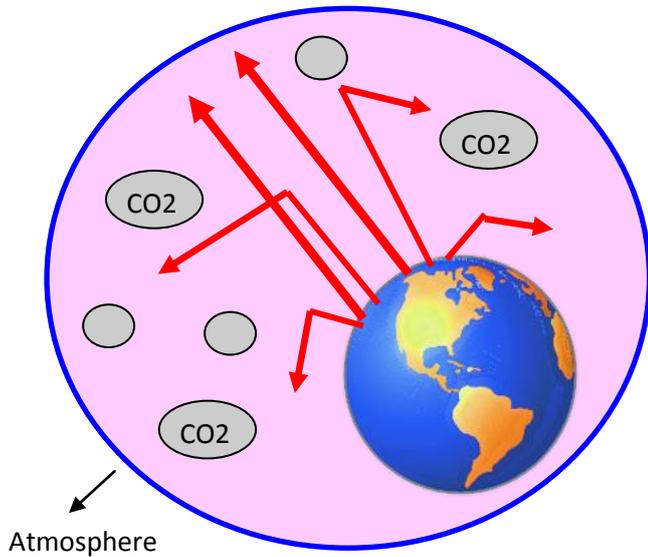
It refers to a change in the state of the climate (alteration of its properties) that persists for an extended period of time whether due to natural processes or as a result of human activity<sup>1</sup>

In order to understand how **CLIMATE CHANGE** works, we need to have clarity about some processes:



The sun's radiation reaches our atmosphere, some is reflected back into space and some passes through and is absorbed by the Earth. This causes the surface of the Earth to warm up.

b. Then, there is the natural and essential process called *greenhouse effect*<sup>1</sup>:



Heat from the Earth is radiated outward and absorbed by greenhouse gases like **CO2** in the atmosphere. This process prevents heat from disappearing into space and keeps Earth warm enough to sustain life.

c. Then, what is the problem?

Human activity releases additional greenhouse gases into the atmosphere, which in turn trap more of the outgoing heat, intensifying the warming of the earth. There are various gases that come from varying sources.

**CO2** registers the greatest concentration in the atmosphere and remains for at least 100 years. Its annual emissions have grown between 1970 and 2004 by about 80%. This rapid growth has mainly been caused by:

- Burning fossil fuels (coal-oil-gas) in cars power plants and industry.
- Loss of forests – trees and plants absorb CO2.
- Intensive agriculture.

Our own contribution to the concentration of carbon dioxide, and so to global warming, is called our carbon footprint.

**Do you know what your own carbon footprint is? You can calculate it by following this link:**  
<http://carboncalculator.direct.gov.uk/index.html>

d. There are four main manifestations of climate change:

**Temperature increase:** it is widespread over the globe and is greater at the Arctic where sea ice extent has shrunk by 2.7% per decade. Mountain glaciers and snow cover on average have declined in both hemispheres.

**Changes in rainfall, or precipitation:** from 1900 to 2005 precipitation increased significantly in eastern parts of North and South America, northern Europe and northern and central Asia whereas precipitation declined in the Sahel, the Mediterranean, southern Africa and parts of southern Asia. Globally, the area affected by drought has increased since the 1970s.

<sup>1</sup> See National geographic website

**Extreme weather events:** they have changed in frequency and/ or intensity over the last 50 years. For example the increase in intense tropical cyclone activity and frequent hot waves.

**Sea level rises:** are consistent with warming. Global average sea level rose at an average rate of about 3.1mm per year from 1993 to 2003.

**Have you seen any of these effects of climate change in your own country or community?**

Climate change is having an impact all over the world: however in some countries, the effects are faster and more devastating. It has been already recognised by the international community that **“the distribution of climate change impacts is inherently unfair: the costs are carried less by those who created the problem than by innocent others elsewhere.”**<sup>2</sup>

### 3. Climate change and developing countries

Developing countries are particularly vulnerable to climate change due to various factors. The Stern review identified three board categories:

➤ **Developing countries are exposed to environments that are already fragile:**

Many developing countries are located in tropical areas. They already endure environmental cycles such as El Niño and La Niña and very high temperatures. Climate change is predicted to make these conditions even more difficult to manage. Even slight variations in the climate can have serious consequences for developing countries as many places are close to the upper temperature tolerance of activities such as crop production.

**Are you aware of the exposure to the effects of climate change of your country?**

➤ **The economies of developing countries are very sensitive to climatic shocks**

**Dependence on agriculture:** Many developing countries have rural economies, and very limited flexibility to switch to less climate-sensitive sectors such as manufacturing and services. The agricultural sector is one of the most at risk to the damaging impacts of climate change. This poses a huge threat to food security.

**Key industries** like tourism are dependent on the predictability of seasonal weather and the availability of beaches to attract tourists. The rapid erosion of beaches, acidification of the ocean, and bleaching of coral reef affect the attractiveness of tourist destinations.

**Population growth and rapid urbanisation:** Over the next few decades, another 2-3 billion people will be added to the world’s population, virtually all of them in developing countries. This will increase the strain on natural resources, generate more pressure in the provision of basic services, result in more consumption, and also more waste production. Developing countries are undergoing a rapid process of urbanisation, especially in Latin America. More people are being forced to live in cheaper, less safe areas such as floodplains or steep slopes.

**Can you identify other characteristic of the economic structure of your country or community that make it especially vulnerable to the effects of climate change?**

<sup>2</sup> Climate Change and Human Rights: a Rough Guide

➤ **Low income constrains ability to adapt**

To adapt to climate change, countries need a high level of scientific research, resources, a strong knowledge base and a substantial budget. Poor countries may have none of these resources.

**4. Climate change – a human rights based approach**

All these factors together, along with the effects of climate change itself, will have a dramatic impact on the ability of individuals and communities to enjoy their basic human rights. In this paper we propose a human rights perspective to understand the consequences of this environmental degradation but also to implement a strong advocacy campaign. The Anglican Communion has the ability to speak out for those individuals and communities whose basic human rights are being denied as a result of climate change.

**a. Why a human rights-based approach?**

There are powerful reasons to adopt a human rights approach when pressing for more action to deal with climate change:

- It's the reality: the effects of climate change are threatening the enjoyment of many human rights such as to life, self-determination, health, food, shelter, means of subsistence, cultures, among many others.
- *Human face.* There is widespread argument about the science of climate change and its consequences: a human rights approach gives the human face to the debate, and poses the question of who suffers, and why and challenges us all to find a remedy.
- This approach provides the moral and legal force of human rights discourse which has universal acceptability. Also the unfairness related to the debate about climate change can be addressed from a human rights perspective of international responsibility. This is not just an environmental or scientific challenge - it is also a moral one.
- A human rights based approach provides a framework for people who feel disempowered at local level to find a remedy. All states around the world have binding commitments to ensure political, civil, economic, social and cultural rights of their citizens, also to implement the appropriate measures to the extent of their available resources to prevent and to respond to emergencies.
- Human rights empowers the poor and voiceless, it is the discourse of those who are excluded

The following section, will present an example of each of the climate change effects above mentioned and the correspondent human rights affected.

CLIMATE EFFECT	HUMAN IMPACT	HUMAN RIGHT AFFECTED
<p><b>Temperature increase</b> -Reduction in thickness and extend of glaciers -Reduction of ice sheets and sea ice - Changes in ecosystems affecting animal life</p> <p><b>Case:</b> The Arctic: Inuit community</p>	<p>*Change in animals immigration patterns and behaviour (caribou-fish-whale) impacting hunting and harvesting *Changing environment(unpredictable) is affecting traditional knowledge *Erosion and landslides is affecting transportation and the construction of igloos *Changes in insect/pest population</p>	<p>*Food [ICESCR Art 11] *Means of subsistence [ICESCR Art 1] *Education [ICESCR Art 13] *Culture [ICCPR Art 27] *Movement [[ICCPR Art 12] *Health [ICESCR, Art. 12]</p>
<p><b>Change in precipitation:</b> - Drought - Insufficient rainfall or lack of rain during subsequent seasons</p> <p><b>Case</b> Horn of Africa: Somalia Ethiopia, Kenya, Djibouti</p>	<p>*Degradation of vegetation *Impact on crop production and pasture availability *Livestock losses and morbidity *Malnutrition and famine *Lack of water *Outbreak and spread of various diseases: cholera, measles</p>	<p>*Life [ICCPR Art 6] *Food [ICESCR Art 11] *Health [ICESCR, Art. 12] *Water [CEDAW, Art 14/ ICRC Art. 24] *Means of subsistence [ICESCR Art 1] *Standard of leaving [ICESCR Art 12] *Adequate housing [ICESCR Art</p>
<p><b>Extreme weather events:</b> Increase in tropical cyclone activity - Flooding - High winds</p> <p><b>Case:</b> North Atlantic</p>	<p>*Death and limb injuries *Damage to crops *Wind throw (uprooting) of trees *Damage to coral reef *Power outages - disruption in water supply *Destruction of infrastructure</p>	<p>*Life [ICCPR Art 6] *Food [ICESCR Art 11] *Health [ICESCR, Art. 12] *Water [CEDAW, Art 14/ ICRC Art. 24] *Means of subsistence [ICESCR Art 1] *Standard of leaving [ICESCR Art 12]</p>
<p><b>Sea Level Rise</b> - Flooding -Sea surges -Erosion -Salination of land and water</p> <p><b>Case:</b> Small Island States in the Pacific</p>	<p>* Lost of Land * Drowning injury * Lack of clean water, diseases *Damage to coastal infrastructure, homes and property * Loss of agricultural lands * Lost of beaches</p>	<p>*Self-determination [ICCPR, ICESCR -Art 1 *Life [ICCPR Art 6] *Health [ICESCR, Art. 12] *Water [CEDAW, Art 14/ ICRC Art. 24] *Means of subsistence [ICESCR Art 1] *Standard of leaving [ICESCR Art 12]</p>

**Abbreviations: (International treaties for the protection of human rights)**

**UDHR:** Universal Declaration on Human Rights

**ICCPR:** International Covenant on Civil and Political Rights

**ICESCR:** International Covenant on Economic, Social and cultural Rights

**CEDAW:** The Convention on the Elimination of All Forms of Discrimination against Women

**ICRC:** International Covenant on the rights of the child

**Can you identify other human rights at risk because of climate change?**

## Is there a human rights-based approach to adaptation and mitigation?

**Adaptation**, “refers to actions taken to adjust lives and livelihoods to new conditions brought about by warming temperatures and associated climate change.”<sup>3</sup> However, as was previously mentioned, adaptation requires knowledge and access to information, both of which are concentrated in wealthier countries. Little research is being done in the poorer countries which have the greatest need. A human rights approach to adaptation requires that there should be a minimum core obligation to ensure that the basic essentials are in place to protect the public’s human rights, and also that these minimum standards should always be included when formulating adaptation policies.

**Do you know whether there is any adaptation plan in place for your community?**

**Mitigation** refers to actions and policies to prevent global warming from human interference with the environment. It has two dimensions from a human rights perspective. *The first* is related to the **inherently unfair** way in which climate change affects the world. There is agreement in the international community that developed countries have greater obligations to mitigate through diminution of greenhouse gases than developing countries. However, no all these powers are into formal agreements for reductions and they cannot agree on future more drastic reductions.

Developing countries continue emitting greenhouse gases to achieve greater economic growth and provide a better quality of life to their citizens (economic, social and cultural rights). There is a real tension between pro-poor development and reduction in carbon emissions, with difficult choices over the rate of growth, or investment in low-carbon technologies.

**Which is your position regarding the unequal contribution to the environmental degradation and the unfair distribution of its effects?**

*The second* human rights perspective on mitigation relates to the nature of mitigation policies. One example is the development of biofuels as a low carbon alternative to fossil fuels. The production of biofuels consists in the cultivation and conservation of crops such as corn, sugar cane or palm oil to be converted into ethanol as source of energy - rather than for food production. This puts food security at risk and pushes up foodprices. Likewise, there are some biofuel crops such as jatopha that might be “invasive species” and damage other food sources.

**Do you have examples from your country regarding the production of biofuels? Which has been the impact?**

A second example is the international policy to limit destruction of rainforests, the green lungs of the world which absorb greenhouse gases. The international community has developed sophisticated policies to limit deforestation as a result mostly of large-scale unsustainable logging. However according to the World Bank, “forest resources directly contribute to the livelihoods of 90 percent of the 1.2 billion people living in extreme poverty.”<sup>4</sup> Therefore, it is important to propose alternatives for those who depend on the forest to fulfil their basic human rights and at the same time protect the environment. It is also very important to promote access to information and wider participation when the decisions are made in relation to the forest - either to maintain it untouched or to exploit its resources.

<sup>3</sup> Climate Change and Human Rights: a Rough Guide P 21

<sup>4</sup> A Revised Forest Strategy for the World Bank Group 2001

## 5. The impact on regions

The Intergovernmental Panel on Climate Change in its report of 2007 includes some predictions of the impact of climate change by regions which we reproduced below:

### Africa



By 2020, between 75 and 250 million of people are projected to be exposed to increased water stress due to climate change.

By 2020, in some countries, yields from rain-fed agriculture could be reduced by up to 50%. Agricultural production, including access to food, in many African countries is projected to be severely compromised. This would further adversely affect food security and exacerbate malnutrition.

Towards the end of the 21st century, projected sea level rise will affect low-lying coastal areas with large populations. The cost of adaptation could amount to at least 5 to 10% of GDP.

By 2080, an increase of 5 to 8% of arid and semi-arid land in Africa is projected under a range of climate scenarios (high confidence).

By the 2050s, freshwater availability in Central, South, East and South-East Asia, particularly in large river basins, is projected to decrease. Coastal areas, especially heavily populated megadelta regions in South, East and South-East Asia, will be at greatest risk due to increased flooding from the sea and, in some megadeltas, flooding from the rivers.

Climate change is projected to compound the pressures on natural resources and the environment associated with rapid urbanisation, industrialisation and economic development.

Endemic morbidity and mortality due to diarrhoeal disease primarily associated with floods and droughts are expected to rise in East, South and South-East Asia due to projected changes in the hydrological cycle.

### Asia



### Small Islands



### Australia and Pacific

Sea level rise is expected to exacerbate inundation, storm surge, erosion and other coastal hazards, thus threatening vital infrastructure, settlements and facilities that support the livelihood of island communities.

Deterioration in coastal conditions, for example through erosion of beaches and coral bleaching, is expected to affect local resources.

By mid-century, climate change is expected to reduce water resources in many small islands, e.g. in the Caribbean and Pacific, to the point where they become insufficient to meet demand during low-rainfall periods.

With higher temperatures, increased invasion by non-native species is expected to occur, particularly on mid- and high-latitude islands.

### Australia and New Zealand

By 2020, significant loss of biodiversity is projected in the Great Barrier Reef and Queensland Wet Tropics.

By 2030, water security problems are projected to intensify in southern and eastern Australia and, in New Zealand, in Northland and some eastern regions.

## **Europe**



Climate change is expected to magnify regional differences in Europe's natural resources and assets. Negative impacts will include increased risk of inland flash floods and more frequent coastal flooding and increased erosion (due to storminess and sea level rise). Mountainous areas will face glacier retreat, reduced snow cover and winter tourism, and extensive species losses (in some areas up to 60% under high emissions scenarios by 2080).

In southern Europe, climate change is projected to worsen conditions (high temperatures and drought) in a region already vulnerable to climate variability, and to reduce water availability, hydropower potential, summer tourism and, in general, crop productivity.

Climate change is also projected to increase the health risks due to heat waves and the frequency of wildfires.

## **Latin America**



By mid-century, increases in temperature and associated decreases in soil water are projected to lead to gradual replacement of tropical forest by savanna in eastern Amazonia. Semiarid vegetation will tend to be replaced by arid-land vegetation.

There is a risk of significant biodiversity loss through species extinction in many areas of tropical Latin America.

Productivity of some important crops is projected to decrease and livestock productivity to decline, with adverse consequences for food security. In temperate zones, soybean yields are projected to increase. Overall, the number of people at risk of hunger is projected to increase (medium confidence).

Changes in precipitation patterns and the disappearance of glaciers are projected to significantly affect water availability for human consumption, agriculture and energy generation

## **North America**

Warming in western mountains is projected to cause decreased snowpack, more winter flooding and reduced summer flows, exacerbating competition for over-allocated water resources.

In the early decades of the century, moderate climate change is projected to increase aggregate yields of rain-fed agriculture by 5 to 20%, but with important variability among regions. Major challenges are projected for crops that are near the warm end of their suitable range or which depend on highly utilised water resources.

Cities that currently experience heat waves are expected to be further challenged by an increased number, intensity and duration of heat waves during the course of the century, with potential for adverse health impacts.

Coastal communities and habitats will be increasingly stressed



**Polar Regions**



**The Polar Regions**

The main projected biophysical effects are reductions in thickness and extent of glaciers, ice sheets and sea ice, and changes in natural ecosystems with detrimental effects on many organisms including migratory birds, mammals and higher predators.

For human communities in the Arctic, impacts, particularly those resulting from changing snow and ice conditions, are projected to be mixed.

Detrimental impacts would include those on infrastructure and traditional indigenous ways of life.

In both Polar Regions, specific ecosystems and habitats are projected to be vulnerable, as climatic barriers to species invasions are lowered.

**What are the most effective measures for dealing with climate change in your region?**

**6. The international response to climate change**

The international community has responded to climate change with a series of treaties, protocols, and continuing negotiations to limit carbon emissions and mitigate impacts. However, progress has been slow and limited. Some of the world’s biggest polluters have been reluctant to take action, and some of the emerging economies have been reluctant to jeopardise their economic growth.

The United Nations Framework Convention on Climate Change and the Kyoto Protocol constitute two important instruments for limiting carbon emissions. However future reduction targets have not yet been agreed, and some of the most rapidly growing and polluting countries are not signed up to the agreements.

Anglicans around the world have already started to address the effects of climate changes in the most vulnerable communities, the following are just some examples:

#### **Anglican Board of Mission and Church of Melanesia**

Jointly with the Anglican Church of Melanesia (ACOM) are implementing a Climate Change Adaptation project which focuses on vulnerable populations in Solomon Islands and Vanuatu. The aim of the project is to keep people on their home islands, with their culture intact and without deterioration of their standard of living or environment. There are three main parts to the project: environmental preservation, ensuring access to drinking water, food and fisheries and health and sanitation strategies.

#### **AngliCORD**

Among the programmes run by the Australian agency ANGLCORD is an innovative programme providing solar-powered lamps to Pacific partners.

#### **Episcopal Relief and Development**

Episcopal Relief & Development is supporting efforts to shrink carbon dioxide emissions in the United States and other industrialized nations, as well as the fast-growing economies of India and China. Putting policy into practice at the local level, Episcopal Relief & Development, in partnership with the Amity Foundation, is supporting an innovative pilot project to provide solar power to 400 homes and three schools in Qinghai Province, which is north of the Tibetan Autonomous Region.

#### **Anglican Church of Melanesia**

The Anglican Church of Melanesia has implemented a training programme for farmers on the effects of climate change; effects of salt water intrusion; salt resistant crops; need to diversify crops; Need to improve water catchment and harvesting; Legume plants; green manuring; composting and mulching; new appropriate technologies; agro forestry; atoll p ermaculture

#### **Church Of Bangladesh Social Dev. Programme (Cbsdp)**

The church of Bangladesh has formulated a new policy named “Integrated climate change and Disaster Management policy.” This initiative is aimed to respond proactively to the increasing frequency and severity of natural disasters as well as other manifestations of climate change. This policy is moving beyond relief and rehabilitation into institutionalized preparedness, risk reduction and management interventions as well as long term adaptation strategies

There are many more examples of good practice collated by the Anglican Communion Environmental Network at <http://acen.anglicancommunion.org/index.cfm>

### **7. Priorities for action:**

The Africa consultation in Nairobi in April of this year agreed that climate change would be the focus of the Anglican Alliance’s global advocacy in 2012 in the run-up to the G20 in Mexico. At the same consultation the Latin America and Caribbean steering group members identified climate change as one of the key development strands for discussion at the consultation in Sao Paolo.

This section of the paper sets out suggestions for how these two mandates can be carried forward. They are for discussion at the consultation.

#### **Advocacy**

Mexico is hosting the 2012 G20. It has not yet announced its priorities, however, a number of development NGOs are pressing for these to include climate change. It is recommended that the Anglican Alliance supports these moves by:

- Working with NGO partners – both those within the Anglican family of aid agencies, and also with the wider NGO community, both on getting climate change onto the agenda for the G20 and also on the details of the strategy.
- Lobbying G20 governments, including Mexico, to press for climate change to be on the agenda at the 2012 meeting.
- Developing an advocacy strategy based on two approaches:
  - o a rights based approach to highlight the needs of the communities in the most fragile environments: ensuring that the voices are heard of Anglicans working in these communities, such as those on the threatened islands of the Pacific, the endangered delta communities in Bangladesh, the drought-stricken pastoral communities of north east Africa and those dependent on the Amazon and other rainforests.
  - o A development approach focussing on supporting adaptation strategies and investment in clean technologies for developing countries.

### **South to south learning**

The Anglican Alliance is not a funding or programme agency. The promotion of development strategies is through south-to-south learning, bringing together participants from at least two regions to develop programmes that can apply to existing funding streams. This means that the south-south learning strands must be focussed on the development priorities of the major donors. The Anglican Alliance can fund one south-to-south learning arising from each consultation. A south-south learning exercise on climate change could link up Latin America with other regions to look at, for example, identification of alternative crops or livelihoods, the practical needs of climate change refugees or rainforest issues. A decision needs to be taken only on the general way forward – the details would be worked out in negotiations between the regions.

**Do you support climate change being on the agenda for the Mexican G20? Do you support the rights-based and development approach to climate change advocacy for the 2012 G20? Would you like there to be a south-south development project on adaption to climate change?**

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