



Morris Mwangi from Kenya

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## Using this Resource

This resource has been produced for teachers to use with your students. Information on climate change, development and Trócaire is throughout and on each page, in these red boxes, you will find relevant and creative activities to carry out with your students.

The resource is also supported by a poster and DVD (available from Trócaire). In addition, you will also find in the Education & Action Pack, a Campaigns booklet ADMIT, outlining actions your students can take on the issue of Climate Change.

# Introduction

## Dear Teacher...

Welcome to Trócaire's Religious Education resource for Lent 2008. The theme of our Lenten campaign this year is Climate Change and Water. In particular, we focus on the impact of this on those living in the developing world. Climate change is a growing issue of concern and one that is already affecting the poorest and most vulnerable people in the world. Trócaire staff and partners, who support local communities in developing countries, are already witnessing first hand the devastating impact of changing weather patterns, for example, an increase in the severity and frequency of floods and drought.

Currently, rich nations use and squander vastly more of the world's resources, contributing much more to

the problem of climate change. Yet, it is the poorest countries in the world that are feeling the effects of climate change the greatest. They are also the people least able to adapt. While we in rich nations possess the financial resources, technology and expertise to adapt to a changing climate, those in the developing nations do not. So climate change is really an issue of justice. If we want to create a just world, we need to begin with ourselves and look at how we relate to all other living things. Human beings need to fully understand and appreciate the principle of solidarity; we do not live in isolation. What we have done in the past, what we do today and what we will do in the future has an impact beyond ourselves.

## Overview of Lessons

Lesson Number & Title	Lesson Aim and Learning Intention	Page No.
1. What has Climate Change & Development got to do with Religion?	<i>Aim: to explore the religious and moral reasons why Christians should be concerned with climate change.</i> <i>Learning Intention: students will be able to describe and explain the religious and moral reasons why Christians should be concerned with Climate change</i>	3
2. Climate Change Explored	<i>Aim: to understand what we mean by the terms Carbon Dioxide, Global Warming and Climate Change and to explore how human activities and natural elements have combined to cause Climate change.</i> <i>Learning Intention: students will be able to explain relevant terms and describe the causes of climate change.</i>	4
3. Why is Climate Change a problem?	<i>Aim: to understand the changes occurring as a result of a rapidly changing climate and the effects of these changes on the world.</i> <i>Learning Intention: students will be able to describe and explain why climate change is a serious problem on a global scale.</i>	5
4. Water: A Precious Resource	<i>Aim: to explore the precious nature of water.</i> <i>Learning Intention: students will be able to describe and explain the precious nature of water and investigate how they can be more water friendly.</i>	6
5. Trócaire's Work in Kenya	<i>Aim: to introduce the students to the country and people of Kenya and to explore the impact of climate change on a developing country.</i> <i>Learning Intention: students will be able to compile a fact-file on Kenya and people and locate within the case studies evidence for the impact of climate its change on one developing country.</i>	7 & 8
6. The Impact of Climate Change	<i>Aim: to further identify and assess the impact of climate change on the people of Kenya</i> <i>Learning Intention: students will be able to identify and describe the difficulties and challenges presented by climate change in one developing country and assess the coping strategies of various groups.</i>	9
7. Responses to Climate Change	<i>Aim: to encourage students to analyse and assess various responses to climate change and to explore their own personal response to climate change.</i> <i>Learning Intention: students will describe and explain the various responses to climate change at local, national and international levels and design and implement their own personal response to climate change.</i>	10
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# What have Climate Change and Development got to do with Religion?



*Aim: to explore the religious and moral reasons why Christians should be concerned with climate change.*

We find the creation story in the first book of the Bible, the Book of Genesis. It also tells us that God created human beings and that human beings are made in God's image and likeness. This means that human beings are like God in a special way. Human beings are called to respect one another because this image of God is at the heart of every person. People show that they are made in God's image and likeness when they respect themselves, when they show respect for others and when they show respect for the world.

*'Then God said, And now we will make human beings; they shall be like us and resemble us. They will have power over the fish, the birds and all animals, domestic and wild, large and small.'* (Genesis 1:26)

## God's Covenant With Us

The book of Genesis also tells us that God placed human beings in a position of responsibility to care for the world. The earth is ours but only in partnership with God. This partnership agreement is known as a **Covenant**. Through our Covenant with God we have been entrusted to care for and cultivate the garden that is the earth. God calls human beings to develop the earth and its resources, but only in a way that is in keeping with God's Covenant. Human beings have been chosen to work in co-operation with God and to care responsibly for everything that God called 'good'.

*'God took the man [human beings] and settled him [them] in the Garden of Eden to cultivate it and take care of it.'* (Genesis 2:15)

As part of God's creation, we are invited to live in a certain way. The way that we live should not cause harm to any part of God's creation, including people or the environment. For thousands of years human beings have been living on and developing the earth. Over the last one hundred and fifty years, in particular, human beings have achieved many advances and greatly improved the quality of life on earth. However, scientists are now warning us that human activities are polluting the environment. We are causing rapid changes in the earth's climate and if these changes continue at their current pace, it will have catastrophic consequences for our

planet. It appears that somewhere in the struggle to achieve further human development we have upset the world's delicate natural balance. Climate change is a reminder to us all that genuine development can only happen when we respect the rest of God's creation.

Pope John Paul II (1978-2005) in his encyclical *Sollicitudo Rei Socialis* (1987) stressed that development was a moral issue and that human beings must respect the God-given order of nature. He said:

*'One cannot use with impunity the different categories of beings...- animals, plants, the natural elements – as one wishes, according to one's own economic needs. Secondly, one must realise that natural resources are limited, some are non-renewable: to use them as if they were inexhaustible and as if mankind had absolute dominion over them is to deprive others of due access to them. Thirdly, one must avoid all types of development which result in pollution of the environment, with serious consequences for the health of the population.'*

These words from Pope John Paul II remind human beings of our moral responsibility in caring for the earth. While God calls us to develop (cultivate) the earth, we must not treat the earth as if we own it and use its resources selfishly and as if they have no limits. Instead, as part of creation, we must strive to develop the earth in co-operation with God and not abuse it through pollution and misuse. Climate change and development are ultimately about justice. God calls human beings to be just in their dealings with each other and with the earth. Pope John Paul II also reminds us in this encyclical that we are *'all members of a common family'* and therefore,

*'We must commit oneself to the common good, that is to say, to the good of all...because we are really responsible for all.'*

Human beings must realise that they do not live in isolation. No one can exist separately from others. We are all connected to one another and to all of creation. Therefore, we must act in a spirit of solidarity for the common good. We must always remember that the way we develop our world has consequences for future generations.



## Student Activities:

**Game:** Play the 'Tangle Twister'  
**Props:** A large ball of wool.

**To play:** Teacher hands the ball of wool to one student and asks him or her to unwind the wool and to hold on to the end piece. The student says their own name and mentions something they like and then, while holding on to the end piece, passes (throws) the ball of wool to another student. A thread of wool now connects the first student to the second. The second student repeats the action of the first student and so on until every student is holding on to the same ball of wool. The game ends when the last student passes the ball of wool to the teacher. The teacher might like to chat with the students about what it feels like to see everyone in the classroom connected in this way. The teacher can use this activity to demonstrate to the students that no one can exist completely separate from others. We are all connected and what one person does affects all of us. Alternatively, you could complete this game by inviting the students to create stories and/or poems about how people, God and the earth are all connected to one another.

## Talking Points

1. Give examples of how you can live in the image and likeness of God (a) at home, (b) at school, and (c) in your neighbourhood
2. Think of some agreements that you have made in your life, for example at home; with your school/teachers; with your friends. What are those agreements about? Do you ever find it difficult to keep any of these deals? Why?
3. Are you aware of any agreements your country has made along with other countries to help reduce pollution of the environment?
4. There are a number of major global issues facing our planet today. How

many of these issues can you name and what do you know about them?

5. Read again the extract from Pope John Paul's encyclical *Sollicitudo Rei Socialis* (On Social Concern, 1987) and state why you think a Christian should be concerned about development and climate change?

## Why Don't You?

Brainstorm the words *'Climate Change'* and *'Development'* and then as a class try and agree on a definition of each.

Read and copy out Genesis 1:26-31 from a Bible.

The Kyoto Protocol (1997) is an agreement signed by 169 countries, including Ireland and the UK, to help stop climate change. Find out what you can about this agreement and what Ireland has to do in order to keep its part of this agreement. (see page 10 of this resource to learn more about the Kyoto Protocol)

## Debate

*'At present we act more as though we own the earth than as caretakers of it.'* Discuss.

Or

*'Human beings, by their actions, are unravelling the threads of the Covenant between God and the world.'* Discuss

## Prayertime:

Read the following prayer, based on a quotation from the Prophet Micah Ch. 6 v.8 and then, spend a few moments quietly reflecting on what these words might mean for the way you live today.

*'What does the Lord require of you?*

*Live simply,  
love tenderly,  
and walk humbly with your God'*



# Climate Change Explored



*Aim: to understand what we mean by the terms Carbon Dioxide, Global Warming and Climate Change and to explore how human activities and natural elements have combined to cause climate change.*

As you have learned already, God gave human beings a special responsibility to develop the earth and use its resources wisely and justly. However, human beings have developed the earth in ways that are not in keeping with God's Covenant. In our everlasting search for progress, for more and more, for bigger and better, we have damaged God's creation.

Over the last century human beings, by their actions, have greatly increased the amount of gases in the atmosphere. One of these gases is called *carbon dioxide*, also known as CO<sub>2</sub>. Carbon dioxide is an odourless, colourless gas that has existed in the atmosphere for over 4 billion of the earth's 4.6 billion year history. Small changes as a result of human

activities can have a huge impact on this delicate balance. Every time we drive a car, or use electricity from a coal-fired power-plant, or heat our home with oil or natural gas, or cut down a tree, we produce carbon dioxide. Since 1965, global carbon dioxide emissions have more than doubled. High levels of this gas are turning the atmosphere into a heat-trap. Scientists have been warning us for some time now that the earth is becoming warmer. This is referred to as *global warming* and is causing a change in the climate everywhere. If humans continue to produce carbon dioxide at current levels, global temperatures could rise as much as 8°C by the end of the century. This would be catastrophic for our planet.



## Student Activities:

### True or False

List of 8 statements – students say which is True or False.

1. 'Carbon dioxide is a smelly, black gas.'
2. 'When a person breathes, they inhale oxygen and exhale carbon dioxide.'
3. 'Carbon dioxide is stored in trees, plants and fossil fuels.'
4. In the last one hundred years human beings, by their actions, have greatly decreased the amount of carbon dioxide in the atmosphere.'
5. 'High levels of carbon dioxide gas are causing the earth's temperature to fall!'
6. 'Scientists refer to the rise in the earth's temperature as *global heating*.'
7. 'Every time we drive a car, or use electricity from a coal-fired power-plant, or heat our home with oil or natural gas, or cut down a tree we help take carbon dioxide out of the atmosphere.'

## Talking Points

1. List all the electrical appliances that you use in a day. Does the length of the list surprise you? Why/Why not?
2. In what ways could you reduce the amount of energy (electricity) you use in a day?
3. Ireland is the second worst polluter in the European Union, emitting over 10 tonnes of carbon gases per person per year. Does this surprise you? Why/Why not?
4. Make a list of ten things you can do to help Ireland meet its targets for reducing carbon emissions under the Kyoto Protocol.

## Why Don't You?

Look around your home. Make a guide for your family itemising all the ways in which you could reduce energy consumption in your home.

## Debate

*'As countries become more developed they require more fossil fuel use to produce electricity, heating and provide more transport. Climate change is changing our vision of what it means to be a developed country.'*

Or

*'Energy consumption has always been viewed as a sign of progress and development in a country. Now it is seen as a threat to our very existence.'*

## Writing

*Write the following article for the 2008 edition of Trócaire's Development Review.*

*Renewable energies, derived from wind, water, the sun and the earth are a real and sustainable way forward.'*

## Did You Know?

Carbon dioxide was first identified in the 1750s by Joseph Black, a Scottish chemist and physician.

Solid carbon dioxide is also known as dry ice.

Carbon dioxide is put into drinks to make them fizzy.

Carbon dioxide stays in the atmosphere for over 100 years.

Ireland is emitting over 10 tonnes of carbon gases per person per year making us the second worst polluter in the European Union.

The climate is now 0.76 degrees Celsius warmer than pre 1850.

11 of the 12 warmest years recorded since 1850 have occurred in the last 12 years (IPCC 4<sup>th</sup> Assessment Report)

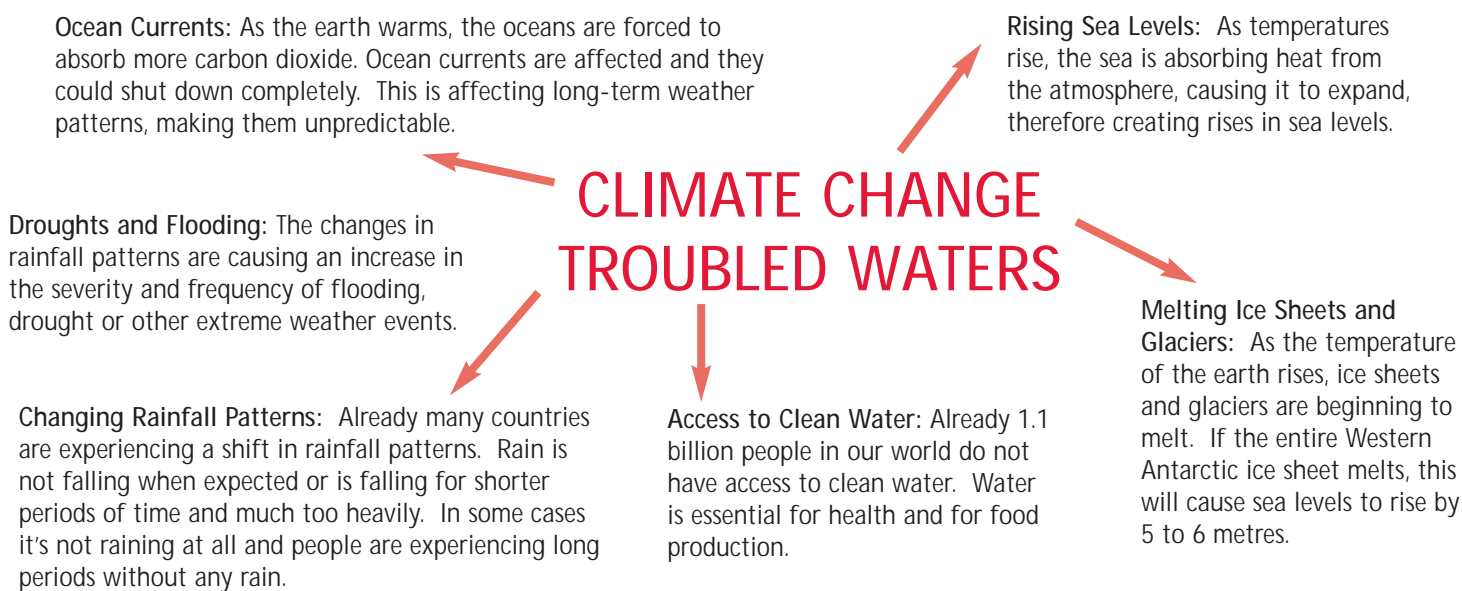
# Why Is Climate Change A Problem?



*Aim: to understand the changes occurring as a result of a rapidly changing climate and the effects of these changes on the world.*

Scientists across the world are looking at the evidence of climate change and are trying to find out what likely changes there will be as a result of a rapidly warming climate. They have identified water as an enormous consideration. Scientists are telling us that as human beings continue to produce more and more carbon dioxide and warm the earth, the oceans are being forced to absorb additional CO<sub>2</sub>. This is expanding the oceans and affecting ocean currents. This, in turn, is affecting long-term weather patterns all over the world. Rainfall patterns are changing. Some countries are already experiencing more extreme weather events. Many

countries are seeing flooding or continuous droughts. As a result of the expanding oceans, sea levels are rising. The warming of the earth is causing ice sheets and glaciers to melt and this could cause sea levels to rise even further. All of this combined means that more people in the world today are experiencing water shortages through drought or flooding. This is set to get much worse in the next twenty years. Climate change is making us all realise how far humankind has strayed from God's original Covenant by harming the earth. It is also causing human beings to realise how precious the gift of water is and how we need to act now to avoid a disaster on a global scale.



## Student Activities: Talking Points

1. In terms of people, their work and occupations, who might be affected most by changing rainfall patterns? In what ways might they be affected?
2. Have you seen any evidence to suggest that rainfall patterns are changing in this country? If so, describe this and say what you think it will mean for people here in the future.
3. Have you heard any reports of countries experiencing drought or flooding in the news recently? Summarise the report stating where this is happening and the effect that the drought or flooding is having on the people/country.
4. Some people have suggested that future wars will be fought over access to water. Are you aware of any countries where there is already conflict over water? If so, name the countries and describe what is happening there.
5. Write down six good reasons why water is so important to human life.

## Group Work

In groups, search through recent newspapers/website information on droughts and water shortages. Create a collage under the following heading (or choose your own): *'Climate Change: Troubled Waters.'*

## Why Don't You?

Keep a record of all the activities you and your family do each day that use water. Think of ways you can change these activities to conserve water. Make a list of these and display it in your house.

Create your own list of *Facts About Water*.

Check out how environmentally friendly you are – see page 6 for a student worksheet

Check out the following website and arrange to view the film *'The 11th Hour'* <http://wip.warnerbros.com/11thhour/>

## Prayertime

### Read quietly the following prayer:

St Francis of Assisi prayed in gratitude for water. He said, 'Be praised my God for Sister Water who is useful, humble, precious and pure.'

We too pray in thanks for the gift of water.  
Its mysterious beauty captivates us  
and brings with it life and growth.  
Water cleanses, refreshes and quenches our thirst.  
It reminds us of life because everything  
and everyone needs water in order to live.  
Forgive us Lord for the times we have wasted water  
or used it selfishly.  
Help us to use water wisely  
and to cherish it as a precious resource.  
Guard us against causing pollution  
or disrespecting the gift of water.  
Free us from anything that would cause us to fail  
to appreciate the wonderful gifts you have given us.

We pray this prayer in the name of God, our loving Creator and Jesus who is the 'living water'.  
Amen

# Student Questionnaire: HOW WATER FRIENDLY ARE YOU?

1. When brushing your teeth do you always leave the water running?

- (a) Always  (b) Sometimes  (c) Never

**Did You Know?** Running the tap can use 10-14 litres of water a minute – which would give enough for a small bath in just 5 minutes. (Source: Environment Agency - Water Wise)

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2. When washing do take a shower instead of a bath?

- (a) Never  (b) Sometimes  (c) Always

**Did You Know?** Take showers, not baths and save enough water each week for 1000 cups of tea. (Source: DETR)

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3. When watering plants around the house or in the garden do you use a watering can with nozzle attachment?

- (a) Never  (b) Sometimes  (c) Always

**Did You Know?** You should never use a full hose when watering your garden/plants. Using a watering can with a nozzle attachment saves water. You only need to water your lawn once a week, even in the hottest weather. Over-watering can weaken your lawn by encouraging roots to seek the surface. (Source: Thames Water website)

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4. If you noticed a tap dripping in your house would you:

- (a) Ignore it;  (b) Only turn it off after grumbling because it wasn't you who left it dripping;

- (c) Turn it off immediately

**Did You Know?** One drip per second wastes around 1200 litres of water in a year; that's around 4 litres a day; and 90 litres of water if the drips are breaking into a stream. (Source: Environment Agency - Water Wise)

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5. When you use the washing machine do you make sure that there is a full load and use the economy setting if you have one?

- (a) Never  (b) Sometimes  (c) Always

**Did You Know?** A single washing machine cycle uses up to 100 litres of water (22 gallons) - and the average family uses their washing machine five times a week. That's 26,000 litres (5,720 gallons) in a year. (Source: Southern Water website) A full load in the washing machine uses less water than two half loads. (Source: Thames Water website)

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6. If there's not a full load for the dishwasher, would you wash the dishes by hand?

- (a) Never  (b) Sometimes  (c) Always

**Did You Know?** Washing a mug under a running tap uses about a litre of water; six mugs use about the same as a whole basin of washing up – so be smart and use a basin to wash cups/plates. (Source: Bristol Water plc) Only use the dishwasher when you have a full load. If you have an economy cycle, then use this. (Source: Watersmart)

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7. When using a dual flush toilet, do you ever use the short flush?

- (a) Never  (b) Only sometimes, because I prefer the long flush  (c) As often as possible

**Did You Know?** A third of an average family's water use is flushed down the toilet (Source: Save-a-flush) The average family uses the equivalent of two baths of water per day when flushing the toilet. (Source: Save-a-flush) So it makes sense to install a water saving device in your toilet cistern.

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8. You're having a picnic by a lake. Would you dispose of your rubbish by throwing it into the water?

- (a) Always  (b) Sometimes  (c) Never

**Did You Know?** Water pollution from agriculture, industry and domestic waste water is making water resources, including surface water and ground water increasingly scarce and decreasingly poor in quality. It is estimated that we will have 33% less water by 2020 (Source: UN Water)

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9. Do you use a water butt to collect rain water for watering plants or washing the car?

- (a) No, I never collect rain water  (b) I try and remember to do this  (c) Yes, I collect rain water when it rains

**Did You Know?** Using a water butt to collect rain water is a really smart way to save water. Using a hose to wash your car wastes up to 300 litres or 33 bucketsful of water. (Source: Southern Water website).

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10. Do you keep a jug of water in the fridge so that you don't have to run the cold water tap in order to get a glass of water to drink?

- (a) Never  (b) Sometimes  (c) Always

**Did You Know?** Running the tap can use 10-14 litres of water a minute – which would give enough for a small bath in just 5 minutes. (Source: Environment Agency - Water Wise)

If you have ticked;

mostly As – you need to think about your eco footprint! Find out from your classmates how you can improve!

mostly Bs – not bad. You try to be water friendly, but maybe you could do even more...

mostly Cs – well done – you are an eco warrior! Let others know how you did so well!

# Trócaire's Work In Kenya



*Aim: to introduce the students to the country and people of Kenya and to explore the impact of climate change on a developing country.*



Kenya 2007	Ireland 2007
<b>Population:</b> 35 million	Republic of Ireland: 4.2 million Northern Ireland: 1.7 million
<b>Capital:</b> Nairobi	Republic of Ireland: Dublin Northern Ireland: Belfast
<b>Language:</b> English, Kiswahili, numerous, indigenous languages	English, Gaeilge
<b>Religion:</b> Christianity, Islam	Christianity
<b>Life Expectancy:</b> 47 years	76.9 years
<b>Area:</b> 225,000 square miles	In total: 32,590 square miles



In 1973, just after it was founded, Trócaire began working in Kenya on the east coast of Africa. Kenya is bordered by Ethiopia, Somalia, Tanzania, Uganda and Sudan. It is renowned for its scenic beauty and its abundant wildlife and is a very popular destination for safari holidays. Kenya is inhabited by a number of diverse ethnic communities and is known for its vibrant culture.

Kenya became a Republic in 1964 and is considered politically stable. Its main exports are tea, coffee and flowers. In Kenya, large numbers of people live in urban slums and have no access to basic services and amenities. Over fifty per cent of Kenyans live below the poverty level of \$1 a day. Life expectancy is just 48 years for men and 46 years for women. Official statistics

show that around 1.3 million people are living with HIV, including 100,000 children.

Trócaire staff and partners have witnessed first hand what climate change means for Kenya. The usual rains have become insufficient and irregular. A long-running regional drought has left 3.5 million Kenyans in need of food aid. Trócaire is working towards developing a long term strategy to support communities adapt to climate change. Initiatives include, water catchment projects, new and better dams, encouraging farmers to grow different crops that are more resistant to drought and more.



## Student Activities:

**Group Activity:** Give each group of students either Morris's or Mary's story to read (Page 8). Ask them to discuss the story and to consider the following talking points:

1. List 3 things that strike you most about the story you are reading. Give reasons for your choices.
2. Describe how life is different now for the people you are reading about compared to years ago?
3. Make a list of all the ways in which climate change is affecting the lives of the people in the two stories.

**Whole Class Activity:** Invite one student to share Morris's story and one student to share Mary's story. As a class decide what issues are the same and what issues are different for both of them.

Morris, in his story, described a number of things which his family are doing to cope with the recurring drought and unpredictable rainfall patterns. List these. What can we learn from this? What do you think life will be like for Morris or Mary in the future if our earth keeps warming? Compare how you spend your day with either Morris or Mary. What differences or similarities are there?

## Why Don't You?

Write a diary entry as if you were Morris or Mary.

Check out [www.nationmaster.com](http://www.nationmaster.com) and do some further research on Kenya and the Kenyan people. You might like to look up things like: national flag, currency, language, climate, food, famous Kenyans including athletes/sporting personalities. Then, create a leaflet or design a brochure promoting the country and its people.

Create your own top ten list of '*Interesting Facts About Kenya*':

## Learn Some Ki-Swahili Words:

- 'Hello' – 'Jambo';
- 'Goodbye' – 'Kwaheri';
- 'Please' - 'Tafadhali';
- 'Thank you' – 'Asante'

Do you know what this Ki-Swahili phrase means: 'Hakuna Matata' and can you remember which film it comes from?

Visit [www.trocaire.org/education](http://www.trocaire.org/education) and complete the Kenya and Climate Change Quiz .

Look up the following famous Kenyans: Professor Wangari Maathai, Kip Keino, Tegla Loroupe, Jomo Kenyatta.

Find out more about Trócaire's work in Kenya. Check out the Trócaire website [www.trocaire.org](http://www.trocaire.org) and click on '*where we work*' and '*Kenya*'.

## Prayertime

Read the following Kenyan prayer

May God raise you up  
Above everything.  
Spread out like water of a lake.  
Be abundance that never ends,  
That never changes.  
Be like a mountain.  
Be like a camel.  
Be like a cloud that brings rain always.  
And God promises that it would be so.



# Case studies

## Morris Mwangi

I am Morris Mwangi and I am 15 years old. I live on a small farm in Mirere, Kenya. There are 11 people in my family including my nephew Dan who lives with us. We also have 2 cows, 1 bullock, 3 chickens, a few chicks and a dog called Simba.

Our house has four small rooms, three bedrooms and one sitting room with a sofa and chairs. The kitchen is situated in an outhouse, close to the main house. We only moved in to this house last year. It's a much bigger house than the one we used to live in. My mother borrowed money through a small credit scheme to buy the wood and pay for a builder. Unfortunately, we ran out of money, so the windows and doors are not finished. But, one day...

Life has got much more difficult for us because of drought. Before, we used to get two rains every year. The short rains between October and December when it would rain for a short time most days and the long rains between March and April when we would get heavier and longer lasting rains. Now, life has become so uncertain and unsure. My father is a member of a group of about twenty farmers who receive training and help from Caritas Nyeri\*. They learn how to improve their farming techniques and make the most of the soil and the rain when it comes. We have two acres of crops, including maize, beans, snow peas, tomatoes and onions and we depend on the rain to water these crops.

We eat the maize and the beans and the rest goes to market to be sold. We have to do everything we can to save water. My father has constructed a water pan in one of the fields. A water pan is basically a small hand-made pond which catches and holds all the rain water. We use the water from the pan for the animals and for the crops. Without this we couldn't grow anything. My father has learned a lot from Caritas Nyeri. For example, we plant a much wider range of crops than we used to. When we water our crops we use a

sprinkler head on the hose as this uses less water and we always plant the crops in slight hollows so that the water doesn't run off. We also have a water tank that catches water from the roof of our house. We use this water for cooking, cleaning and drinking. The drought has taught us that we need to be very clever about catching and keeping the rain whenever it falls.

I also go to school. School begins at 7 am and finishes at 4.30pm. There are 300 students at the school and we have 8 teachers and 8 classrooms. At school I study Maths, Science, English, KiSwahili, Social Studies and Religious Education). My favourite subjects are Science and Maths. I like these because it is through these subjects that you learn good farming practices. When I'm older I would like to have my own farm like my father.

My other great love is sport. I exercise regularly by running 14km (8.6 miles) three times a week. My teacher says that I will make an excellent long distance runner. In local competitions I have come first in the 10,000 metres, the 5,000 metres and the 3,000 metres. I would love to be a world class athlete and someday represent my country at international level. This is my dream. My father thinks I should spend more time learning good farming techniques instead of running about. He's 60 years old now. I wonder what life will be like here when I am his age.

\*Caritas Nyeri is one of the local organisations supported by Trócaire.



## Case Study: Mary Amodoi

My name is Mary Amodoi and I am 18 years old. I am from Turkana in northern Kenya and live with my father, my grandmother, my 3 younger brothers and our herd of about 40 goats. Our home dwelling is located in a very rural and isolated part of Turkana with the closest town 50kms (31 miles) away. It consists of two small huts, a store for some food and basic medicines, a pen to keep the goats in at night and a small cooking area. At night, we usually sleep outside, on mats made from animal skins, as there are too many mosquitoes inside the huts.

My mother died last December during childbirth and since then, I have had to take on a lot of responsibility for my family and our home. My grandmother helps me and also my father and my brother, Nangiro, who is 12 years old. I have never been to school as it is not the tradition for Turkana girls who live in rural areas to do so.

During the day, my first job is to go and fetch water from the river, which is about 1km (just over half a mile) away. I do this twice a day. Sometimes, when there is drought, we must dig deep down to find some water we can use. I milk the goats and also make sure that there is firewood

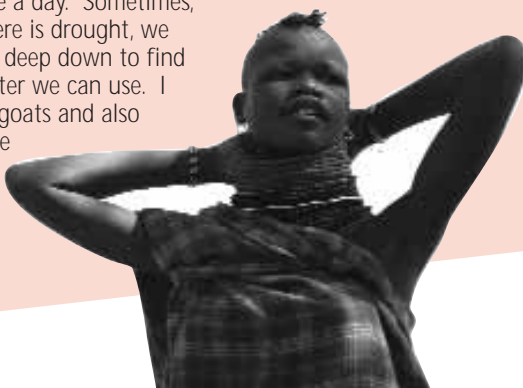
and keep the floor swept and home tidy. Some days I have to walk to the market to buy food. In the evening, I prepare the meal for my family. In good times, we will eat twice a day. We eat a dish called posho, which is like a porridge made from maize flour

Here in Turkana, most of the people are pastoralists (farmers who raise animals only and do not grow crops). The area and land is very dry. It used to be a semi-arid area, now it is arid. People say that in time, it will be classified as a desert. Because it has always been dry in my region, traditionally we depend on our livestock to survive and provide us with milk. It is Nangiro's job to look after the goats and ensure they get enough pasture to eat so that they will produce enough milk for the family.

Life is hard for us because of drought. When my grandmother was my age, she says life was so much smoother. People knew when there was going to be drought so they could prepare. Also, droughts didn't occur so often, so people had time to recover from one before the next drought hit. Nowadays, there is much more drought and fewer trees and pasture. Lake Turkana, which isn't too far from our home, is slowly drying up. Sometimes, we have no food at all and we depend on the food relief distributed through our community\*.

My grandmother is now about 75 years old. I wonder what our land will be like when I am her age.

\* This food relief is funded by Trócaire



# The Impact of Climate Change



*Aim: to further identify and assess the impact of climate change on the people of Kenya.*

Most people in Kenya have never heard of the term climate change. Many have probably never driven a car, heated their home with gas or oil or used electricity from a coal-fired power plant. Yet it is the people of Kenya and other developing countries who are feeling the effects of climate change on a daily basis. Morris Mwangi and his family were finding life increasingly uncertain and difficult. They have had to find new ways to cope with the recurring drought and the

problem of unpredictable rains and crop failure. Mary, in the second story, was spending a lot of time each day collecting water and food and this was adding to her already heavy workload and depriving her of time to get involved in other activities. In order to help you learn more about the impact of climate change in Kenya and on its people, read the section 'Kenyan Voices' below and then complete the activities on the impact of climate change.

## KENYAN VOICES

**Alex, Caritas Nyeri, Local Development Agency**

*As a result of the constant drought and crop failure, farmers are being forced to adopt negative ways of coping. For example, many of them are cutting down trees to produce charcoal. Farmers do this so that they can sell the charcoal to buy food. Other farmers are leaving their farms in order to go to other areas where they may find work that will allow them to buy food. Another thing that farmers are doing is selling off their livestock. They hope to buy new animals when a good harvest comes.*

**Principal of Naibor Village Primary School**

*When there is drought the children don't attend school because they are accompanying their animals to water sources far away.*

**Francis, Pastoralist**

*'Last year I lost many goats due to the drought. I have not been able to replace them. Life is getting more difficult for us. I don't know how much longer my family and I can survive here.'*

**Stephen, Caritas Nyeri, Local Development Agency**

*Between 2000 and 2003 we had massive droughts. We provided food relief to 200,000 people for a period of three years. Then in 2005 we experienced another huge drought. We supported 97,000 people with food relief. Now in 2006 and 2007, we are just coming out of another drought...we are now realising that we cannot afford to provide relief food on a continuous basis.'*



### Student Activities Talking Points

1. Why might cutting down the trees to make charcoal not be a good way for the farmers to cope with the drought and crop failure?
2. Alex also talked about the farmers leaving their farms to go away to find work in another area. Why might this not be such a good thing for them to do?
3. Alex said the farmers are selling off their animals in order to get food and that they plan to buy new animals when the harvest is good. What do you think might happen if the next harvest is not good?
4. What evidence is there that climate change is negatively affecting (a) the education of young people in Kenya; (b) the lives of pastoralists; (c) local development agencies such as Caritas Nyeri, in Kenya?

### Why Don't You?

Create a table displaying all the information you have on the 'Impact of climate change'. Use the following headings to guide you. Women and Girls; Small Farmers; Education of Young People; Pastoralists; and Development Agencies.

### Drama

Get into groups and choose one of the voices above. Illustrate the impact of climate change on that person in the form of a mime,

freeze frame or drawing. Then, present your illustration and explain the central meaning of your message to the whole class.

### Prayer time

Something to think about...

Read the story of 'Jesus feeds the 5000' Mark

Just as Jesus recognised the needs of the people in the Gospel story, we pray that we too would act out our Christian responsibility by sharing our resources and standing up and speaking out against injustice towards the most vulnerable.

We pray for the people of Kenya, and our brothers and sisters in other countries of the world, who are living with the effects of climate change. May they experience the compassion and love of Christ through the support given by organisations like Trocaire.

We pray for ourselves, that we would have the courage to take the lead on changing our own lifestyles to have a positive impact on other people and the planet.

We pray for world leaders, that they would use their power for the good of all in the world, especially those in the developing world. We pray that all governments play their part in finding the resources to help developing countries adapt to the threat of climate change.

# Responses To Climate Change



*Aim: to encourage students to analyse and assess various responses to Climate Change and to explore their own personal response to Climate Change.*

Trócaire realises that tackling climate change requires unprecedented levels of cooperation and commitment from everyone. Efforts need to be made at every level if we are to even stabilize the concentrations of greenhouse gases in our atmosphere. International institutions, rich and poor countries

and individuals need to realise the impact they are having on the environment and make concerted efforts to ensure that this impact is a positive one. Currently, there exist two internationally recognised responses to Climate Change: **Mitigation** and **Adaptation**.

*Mitigation involves finding ways to lessen or improve the problem. A major part of the problem is the levels of greenhouse gases in our atmosphere. These gases, particularly carbon dioxide, need to be stabilized, and where possible, dramatically reduced.*

*Adaptation involves helping people already affected by climate change to learn how to adapt so that drought or unpredictable rains does not hinder their ability to secure food through agricultural production*

## Timeline Of What Has Happened!

- **1992 Earth Summit** in Brazil. It was here that rich countries finally recognised their historical responsibility to act first to curb their pollution.
- **1994** The United Nations Framework Convention on Climate Change (UNFCCC) was established.
- **1997**, the Kyoto Protocol was agreed by 169 countries. Each participating country agreed to limit their emission of greenhouse gases by a legally-binding amount. The Kyoto Protocol came into force in February 2005.

- Under the **United Nations Framework Convention on Climate Change** (UNFCCC), there exist a number of adaptation funds to help the developing world adapt to climate change.
- As of May 2007, rich countries have *pledged* a mere \$182 million to a **Special Climate Change Fund**.  
Ireland has pledged and delivered approximately, \$5 million to the UNFCCC's adaptation funds (April 2007).

## What About Ireland?

Ireland has a shocking record in greenhouse gas emissions. Per capita, we are the second worst polluter in the European Union and the fifth worst polluter in the world. Taking carbon emissions alone, Ireland emitted 10 tonnes per person in 2003, while people in Africa are responsible for less than 0.1 tonnes per person. Under the 1997, Kyoto Protocol, Ireland agreed to limit the growth of our emissions to 13% above 1990 levels by 2008-2012. To date however, we have failed to curb our emissions. In fact the EPA (Environmental Protection Agency ([www.epa.ie](http://www.epa.ie))) recorded that in 2005, Ireland was polluting at twice the level of its target. Ireland's shocking performance on a per capita emissions level, makes a strong case for individuals to look at our own lifestyles and our impacts on and responsibilities towards the environment. How environmentally friendly are you?

## What is Trócaire doing?

Trócaire too, is looking to how best we can work with our partners and beneficiaries overseas to cope with the increasingly frequent and severe changes to their climate. A number of initiatives include;

- addressing water management through supporting irrigation systems at household and community levels and supporting water harvesting projects that capture rainwater to use during dry seasons.
- Supporting communities to look at the risk of drought and how they might be ready to respond
- Supporting communities to diversify their crops and improve their access to food and land
- Supporting initiatives aimed at improving environmental management such as terracing to prevent soil erosion and drip irrigation.

# CURRICULA AND SYLLABUS LINKS

## **NORTHERN IRELAND KS3 Religious Education Core Curriculum:**

**The Revelation of God:** b. God's relationship with the chosen people (Pg.3)

- Morality:**
- a. The concept of creation in the image of God (Pg.3)
  - b. Relationships, Rights and Responsibilities (Pg.3-5,9-10)
  - c. Choices – The Environment (Pg.3-5,9-10)

## **The Fully Alive Programme:**

### **Fully Alive 2**

Term.1. Lessons 4-14, Caring for the Earth (Pg.3-5, 9-10)

### **Fully Alive 3**

Term.1. Lesson 13, My Choices Affect My Future (Pg.3-5)

Term 2: Lesson 2, Jesus' Attitude to the World  
Lessons 14-16, Justice/Trócaire. (Pg.3-10)

## **KS4 Religious Education Core Curriculum:**

**The Revelation of God:** a. Wealth and Poverty

**Morality:** b. Life and Global Issues: Human Rights and Responsibilities, Wealth and Poverty; Environment – Issues of Stewardship (Pg.3-10)

## **GCSE - AQA Specification:**

**Option 2B: Effects of the Roman Catholic Tradition Upon Aspects of Christian Lifestyle and Behaviour:**

World poverty; Issues of Development; the work of Trócaire. (Pg.3 -10)

## **GCSE - CCEA Specification:**

### **Section C: Christian Morality**

3.3 Christian Teaching on Justice and Right Relationships (Pg3-5, 9-10)

## **ADVANCED SUBSIDIARY (AS) AND ADVANCED LEVEL (A2) CCEA N.I.**

**AS 6 Religious Ethics: Foundations and Principles/A2 6 A Study of Ethics and Contemporary Issues**

## **REPUBLIC OF IRELAND**

### **Junior Certificate Religious Education Syllabus (JCRES)**

#### **Section A: Communities of Faith**

Part 1: Community – explore the tension between individual and community responsibility (Pgs 3-5,10)

Part 2: Communities at Work (Work of Trócaire and challenges for Communities of

Part 3: Communities of Faith Faith in the Modern World) (Pgs 3-10)

#### **Section D: The Question of Faith (Pg.3,10)**

Part 4: The Expression of Faith

#### **Section F: The Moral Challenge (Pgs.3,5,10)**

Part 1: Introduction to Morality

Part 2: Sources of Morality

Part 3: Growing in Morality

Part 4: Religious Morality in Action

### **Leaving Certificate Religious Education Syllabus (LCRES)**

#### **Section D: Moral Decision Making (Pgs 3,5,10)**

1 Thinking about morality

1.3 The common good and individual rights

2 Morality and Religion

2.2 Morality and the Christian tradition

4. Moral Development

4.3 Decision making in action

#### **Section F: Issues of Justice and Peace (Pgs 3 -10)**

1 Reflecting on Context

1.1 Social analysis

1.2 Social analysis in action

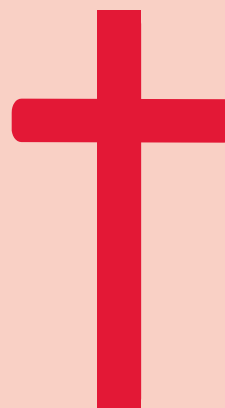
2 The concept of Justice and Peace

2.1 Visions of Justice

3 The Religious Imperative to act for Justice and Peace

3.1 Religion and the Environment

3.2 Religious Traditions and the Environment



For more information on climate change:

### Trócaire Online

Check out [www.lent.ie](http://www.lent.ie) for more activities, photos and quizzes on Kenya and Climate Change. Check out the actions we are encouraging people to take in response to climate change and its impact on people in the developing world

[www.trocaire.ie/education](http://www.trocaire.ie/education). This section of our website contains information about all our educational materials and activities. Resources are available to download for free.

### Web links- on Kenya & Climate Change

[www.nationmaster.com](http://www.nationmaster.com)

For country profiles and information on Kenya

[www.un.org/climatechange/youth.shtml](http://www.un.org/climatechange/youth.shtml)

This UN site on climate change for youth has data and stats on individual countries; a water quiz and other games

[http://news.bbc.co.uk/2/hi/science/nature/portals/climate\\_change/default.stm](http://news.bbc.co.uk/2/hi/science/nature/portals/climate_change/default.stm)

The BBC site on climate change is also good for a general level interest:

[www.ipcc.ch](http://www.ipcc.ch)

IPCC - main scientific body on climate change:

<http://unfccc.int/>

UNFCCC - main political body leading response to climate change (including Kyoto protocol):

[www.epa.ie/whatwedo/climate](http://www.epa.ie/whatwedo/climate)

Environmental Protection Agency - the organisation in Ireland that monitors Irish emissions and feeds into the Kyoto Protocol



[www.stopclimatechaos.ie](http://www.stopclimatechaos.ie)

Stop Climate Chaos (Ireland): campaigning to stop climate change and help poor countries adapt. Visit the site to find out more and to campaign on-line:

[www.cultivate.ie](http://www.cultivate.ie)

The Cultivate Centre (Ireland): a sustainable living and learning centre. Learn how to live more sustainably in Ireland, with links and information on where and how to do this, as well as courses, ethical goods etc

[www.foei.org/en/campaigns/climate](http://www.foei.org/en/campaigns/climate)

Friends of the Earth International

[www.cnaf.or.ke/index.htm](http://www.cnaf.or.ke/index.htm)

Climate Network Africa:

## RESOURCE CENTRES

### MAYNOOTH

Maynooth, Co. Kildare.

Tel: (01) 629 3333

Fax: (01) 629 0661

e-mail: [info@trocaire.ie](mailto:info@trocaire.ie)

### DUBLIN

12 Cathedral St., Dublin 1.

Tel/Fax: (01) 874 3876

e-mail: [resources@trocaire.ie](mailto:resources@trocaire.ie)

### CORK

9 Cook St., Cork.

Tel: (021) 427 5622

Fax: (021) 427 1874

e-mail: [corkinfo@trocaire.ie](mailto:corkinfo@trocaire.ie)

### BELFAST

50 King St., Belfast, BT1 6AD.

Tel: (028) 9080 8030

Fax: (028) 9080 8031

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