# The Cry of the Earth

A Pastoral Reflection on Climate Change by The Irish Catholic Bishops' Conference





### Foreword

God our Father, open our eyes to see your hand at work in the splendour of creation, in the beauty of human life. Touched by your hand our world is holy.

- OPENING PRAYER, Mass of 17th Sunday of Ordinary Time

OD, IN WHOM we live and move and have our being, has given us the gift of this beautiful earth. Creation flows out of the heart of an infinitely loving Creator. Touched by God's hand, our world is holy.

Our earth is also complex. Its systems of life are interdependent and finely balanced. Small changes in one part of the planet's rhythms and systems can have significant, if not dramatic consequences for the whole of the earth and its creatures. This makes global climate change one of the most critical issues of our time. How we respond to climate change will have consequences for the future of every person and every form of life on the earth.

In Caritas in Veritate, Pope Benedict XVI has reminded us that the 'environment is God's gift to everyone, and in our use of it we have a responsibility towards the poor, towards future generations and towards humanity as a whole ... The Church has a responsibility towards creation and she must assert this responsibility in the public sphere' (nn. 48 and 51). In this pastoral reflection, individuals, parish communities and all people of good will are invited to reflect on 'that covenant between human beings and the environment, which should mirror the creative love of God, from whom we come and towards whom we are journeying' (CV n. 50). It is an invitation to reflect on the challenges of climate change and the actions we can take to address its potentially negative consequences.

The first part of this pastoral reflection looks at the science associated with climate change. While acknowledging that not all scientists agree that climate change is associated with human activity, the reflection draws on the analysis of the majority of climate change scientists who believe such a link exists. It includes analysis from international groups of scientists such as the UN Intergovernmental Panel on Climate Change, the Environmental Protection Agency of Ireland and the experts on climate change we have consulted in Ireland. In light of such overwhelming

consensus among credible national and international organisations working in this area, the precautionary principle means that we should react now to the risk of serious harm posed by the plausible link between certain types of human activity and the damaging effects of climate change.

The second part of this reflection takes up the theme of our natural environment as 'a wondrous work of the Creator containing a "grammar" which sets forth ... criteria for its wise use, not its reckless exploitation' (CV n. 48). It offers some reflections on sacred Scripture, key ethical principles and themes from Catholic Social Doctrine, which inspire and guide our vocation as stewards of God's creation.

Finally, this pastoral reflection offers some practical actions, which individuals, parishes and others can take to reduce the impact of many of our day-to-day activities on our natural environment and, consequently, on our global climate.

In addressing the challenge of climate change, everyone has a part to play. Every action taken in favour of a just and more sustainable environment, no matter how small, has an intrinsic value. Action at a global level, as well as every individual action which contributes to integral human development and global solidarity, helps to construct a more sustainable environment and, therefore, a better world.

In the compelling words of Pope Benedict XVI, 'This invites contemporary society to a serious review of its lifestyle, which, in many parts of the world, is prone to hedonism and consumerism, regardless of their harmful consequences. What is needed is an effective shift in mentality which can lead to the adoption of new lifestyles in which the quest for truth, beauty, goodness and communion with others for the sake of common growth are the factors which determine consumer choices, savings and investments' (n. 51).

Grateful to God for the gift of his creation, I encourage all people of good will to reflect urgently on how we can work together to take more responsible care of our planet now and for the sake of generations yet unborn.

CARDINAL SEÁN BRADY President of the Irish Catholic Bishops' Conference



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### Introduction

UR HOME, PLANET EARTH, God's creation, is an extraordinarily beautiful and fruitful place. It is appropriately called 'the garden planet' of the universe. We humans, with every other species, depend totally on the proper functioning of the planet for the air we breathe, the water we drink, the food that sustains us and the multiple other ways in which the earth supports us and every other creature. Though the earth appears very robust, we know that it can be quite fragile and that small changes, over time, can have enormous consequences for life.

Pope Benedict XVI drew attention to this when he spoke to the clergy of the Diocese of Belluno-Feltre and Treviso on 24 July 2007. He talked about the need for 'obedience to the voice of the earth':

Today we all see that humans could destroy the foundations of our existence, the earth ... We must respect the internal laws of creation of this earth, learn from these laws and also obey these laws, if we wish to survive. Therefore, this obedience to the voice of the earth, to life, is more important for our future happiness than the voices of the moment, the desires of the moment.

Earlier, in January 2001, surveying the wider ecological context, Pope John

Paul II called for profound 'ecological conversion'. He wrote that:

[I]f we scan the regions of our planet, we immediately see that humanity has disappointed God's expectations. Man, especially in our time, has without hesitation devastated wooded plains and valleys, polluted waters, disfigured the earth's habitat, made the air unbreathable. disturbed the hydrogeological and atmospheric spheres, and turned luxuriant areas into deserts and undertaken forms of unrestrained industrialisation, humiliating the flower-garden of the universe, to use the image of Dante Alighieri (Paradiso, XXII, 151). We must therefore encourage and support the 'ecological conversion' that in recent decades has made humanity more sensitive to the catastrophe to which it has been heading. Man is no longer the Creator's 'steward', but an autonomous despot, who is finally beginning to understand that he must stop at the edge of the abyss.1

Pope John Paul II, 'God made man the steward of Creation', L'Osservatore Romano, 24 January 2001.



#### PART I:

# What Scientists Say About Climate Change

EFORE REFLECTING ON the ethical and religious dimension of climate change, it is important that we examine some of the fundamental elements of the science involved. As the scientists we consulted explain, the atmosphere of our planet is composed of a thin layer of gases which supports all life on earth. The principle gases, nitrogen and oxygen, are responsible for 78% and 21% of the atmosphere respectively. There are minute amounts of other gases, such as carbon dioxide and methane. If our earth did not have these trace gases in the atmosphere, the average global temperature would be around -18 degrees Celsius, which would be too cold to sustain life. With our present atmosphere, the average global temperature is +15 degrees Celsius, which makes it very conducive for life to flourish.

Scientists also inform us that, at times in the history of our planet, the earth has been almost a ball of ice. At other times, there was no ice on earth and tropical creatures swam in the Arctic Ocean. For 85,000 of the past 100,000 years much of Ireland was covered with glaciers. Other factors such as sunspots can also affect climate, as happened in Europe from the fifteenth to the mid-nineteenth century, causing rivers such as the Liffey to freeze regularly each winter.

Scientists, notably those associated with the Intergovernmental Panel on Climate Change (IPCC), believe that the climate change we are now experiencing goes beyond the range of natural fluctuation and that this is caused by human activity, particularly the burning of fossil fuel. Ice cores taken from the Arctic and Antarctic tell us that for the past 10,000 years, right up to the beginning of the Industrial Revolution 250 years ago, there was roughly 280 parts per million (ppm) of carbon dioxide (CO<sub>2</sub>) in the atmosphere. By 2007, the figure has jumped to 387 ppm and is rising by 2 ppm each year.

The reason why global warming is called the 'greenhouse effect' is that gases such as carbon dioxide, methane, nitrous oxide and

hydrofluorocarbons trap infrared radiation, which would otherwise pass back out into space. As long as the percentage of the various gases in the atmosphere remains more or less constant, a balance is established, which ensures relatively stable climatic conditions globally. When the percentage of greenhouse gases increase, temperatures begin to rise as human activity, especially burning fossil fuel, increases the amount of greenhouse gases in the atmosphere. The average global temperature in 2008 was only 0.7 degrees Celsius higher than it was in the late nineteenth century, and yet the consequences of this small change have already been considerable.

# SCIENTISTS ON THE CONSEQUENCES OF CLIMATE CHANGE

Some of the likely consequences of climate change for humans were outlined in the second part of the Fourth Assessment of the Intergovernmental Panel on Climate Change, which was published on 6 April 2007. They include:

- Increasing heat waves, floods, storms, fire and droughts, causing death and displacement for hundreds of millions of people. Between 200 and 600 million people will experience extreme hunger.
- By 2080 between 1.1 and 3.2 billion people will face water shortages.

- Flood waters could make life difficult for between 2 and 7 million people in New York and Tokyo alone. The effect would be greater in cities such as Shanghai, Lagos, Rio de Janeiro or Manila.
- A rise of 1 to 2 degrees Celsius could see the extinction of onethird of the species of the world.
- Glaciers retreating in the Himalayas will affect billions of people in Asia. This would create tens of millions of environmental refugees, who would be forced to leave their place because it is no longer habitable.
- Yield from rain-fed agriculture could be down 50% in Africa.

By any standards this is a worrying prospect and yet it is based on a 2 degree Celsius rise in average global temperature. According to the scientitsts we have consulted, a rise of 6 degrees Celsius, which could happen unless we take remedial action soon, would do enormous damage to the life-supporting systems of the planet.

While one cannot conclude that a particular climate event, even Hurricane Katrina in 2005, is a direct result of climate change, scientists say that severe weather patterns will happen more often. A study by the Massachusetts Institute of Technology (MIT) in July 2005, concluded that major storms spinning in both the Atlantic and the Pacific oceans have increased

in duration and intensity by about 50% since 1970. This leads to massive floods often followed by droughts.

With climate change, sea levels are expected to rise significantly because of thermal expansion in the oceans, melting icecaps in Greenland and in the western Antarctic, in addition to run-off from thawing glaciers on the Himalayas and the Andes. A rise of a single metre in the ocean levels would make life impossible for millions of people who live in the delta area of Bangladesh. Many of the low-lying islands in the Indian and Pacific Oceans, such as the Maldives, Tuvalu, and Kiribati. are already feeling the effects of rising sea levels. In the tropics, fish from coral reefs are one of the main sources of protein for poor coastal dwellers. Ecosystems such as coral reefs are bleaching because of warmer oceans. This in turn destroys fish and crustaceans, which live in the reefs

Scientists estimate that climate change could cause the extinction of more than one million species on earth because plants, animals or fish will be unable to adapt to new climate niches. They point out that the future of polar bears is very uncertain because of the speed at which ice is melting in the Arctic.

Climate change is also affecting agriculture. There is growing evidence that many crops will be adversely affected by climate change, which could give rise to more malnutrition, hunger and starvation. On 16 March 2007, scientists at Stanford University and Lawrence National Laboratory published separate studies indicating that climate change is costing 3.5 billion annually in losses to three of the six major food crops, which include rice, maize and wheat. A recent study conducted at the International Rice Research Institute (IRRI) at Los Banos, outside Manila, showed that an increase of 1 degree Celsius would reduce global rice yield by 10%.

#### SCIENTISTS ON CLIMATE CHANGE IN IRELAND

Using models that have been constructed from a massive amount of data, climate change scientists from organisations such as the Irish **Environmental Protection Agency** predict that there will be an increase in temperature in Ireland of between 1.5 degrees Celsius by mid-century, with a further increase of 0.5 to 1 degrees Celsius by 2075. By 2050, the extreme south and south-west coasts may have an average January temperature of 8 degrees Celsius. July temperatures are predicted to increase by 2.5 degrees Celsius by 2050. Maximum July temperatures of the order of 22.5 degrees Celsius are likely to prevail generally, with areas in the central midlands experiencing mean maximum July temperatures of 24.5 degrees Celsius. There are also likely to be more heat waves.

Overall, scientists predict that there will be increases in precipitation, especially in the winter months. The greatest absolute increases are suggested for the north-west. Marked decreases in rainfall during the summer and early autumn months across eastern and central Ireland are predicted. Such rainfall patterns would put huge pressure on public authorities, especially in terms of providing drinkable water for Dublin and other cities and large towns situated in the eastern part of the country.

In terms of agriculture, such changes in climate would make it difficult to grow potatoes. It seems that the west will be too wet and the east will be too dry for this historic Irish crop. Other crops, such as maize, will benefit from the changes.

A study conducted in 2007 for the National Botanical Gardens of Ireland estimates that 171 native plant species, making up 20% of the total Irish flora, are vulnerable to climate change. Natural habitats for many threatened plants may no longer be able to support their indigenous species.



### PART II:

## A Christian Response to the Challenge of Climate Change

HE CALL TO 'ecological conversion' challenges us to look again at our attitude towards the earth we inhabit. God's earth cares for us by providing us with everything we need for our wellbeing. Our responsibility to care for the earth and for each other comes from the call to be stewards of God's creation. This call to stewardship is made clear in Genesis 2:15 when God took man and put him in the garden of Eden 'to till it and keep it'. The verbs 'till' and 'keep' used in this context have overtones of service and commitment. They infer part of a duty of care given to us by God to keep the earth from harm.

This theme is echoed by Pope Benedict XVI in Caritas in Veritate. As he explains: '[N]ature speaks to us of the Creator (cf. Rom 1:20) and his love for humanity. It is destined to be "recapitulated" in Christ at the end of time (cf. Eph 1:9-10; Col 1:19-20). Thus it too is a "vocation". Nature is at our disposal not as a heap of scattered refuse, but as a gift of the Creator who has given it an inbuilt order, enabling man ... "to till it and keep it" (Gen 2:15)' (n. 48).

The verse, 'Be fruitful, multiply, fill the earth and conquer it' (Gen 1:28), is often used to accuse Christianity of being insensitive to the natural world. It is claimed that Christianity has used this text to see other creatures and the earth itself as a quarry, a resource to be plundered and which is exclusively for human use. The text does give humans dominion over the earth, but it is a dominion of service, of responsibility and care, patterned on God's own dominion over all creatures.

As the Compendium of the Social Doctrine of the Church explains: 'God freely confers being and life on everything that exists. Man and woman, created in his image and likeness, are for that very reason called to be the visible sign and the effective instrument of divine gratuitousness in the garden where God has placed them as cultivators and custodians of the goods of creation' (n. 26).

This call on us to be stewards for all life is made again and again throughout the Scriptures. Central to the Noah story (Gen 11-9:17), for example, is God's commandment to Noah to conserve nature by taking two of every kind into the ark (Gen 6:19). Later, after the flood, when God renews the covenant, it is not merely with humankind, but with all creation: 'I am now establishing my covenant with you and with all your descendants to come, and with every living creature that was with you ... everything that came out of the ark' (Gen 9:10).

Scripture also witnesses to God's wisdom embedded in the earth (Job 38:2). In the psalms we look at the earth's wonders and praise our Creator (Ps 148). The belief that the earth reflects the goodness, beauty, wisdom and power of God to us is firmly rooted in biblical tradition.

In a sermon to agriculturalists, Pope John Paul II said: 'Within the movement of nature, tranquil and silent but rich in life, there continues to palpitate the original delight of the Creator.' The poet Gerard Manley Hopkins expressed it in these words: 'The World is charged with the grandeur of God.' Acknowledging God's presence revealed through the wonder of all living things has also been a strong theme in the Celtic spiritual tradition. It has featured dominantly in Irish poetry.

I see his blood upon the rose And in the stars, the glory of his eyes, His Body gleams amid eternal snows, His tears fall from the skies.

I see his face in every flower; The thunder and the singing of the birds Are but his voice – and carven by his power Rocks are his written words.

All pathways by his feet are worn, His strong heart stirs the ever-beating sea, His crown of thorns is twined with every thorn, His cross is every tree.

JOSEPH MARY PLUNKETT

### CREATION AS THE WORK OF THE HOLY TRINITY

We believe that this good and beautiful universe has been brought forth by the community of love that is the Triune God, Father, Son and Holy Spirit. Creation itself is an act of Divine love. It is given to us as a free gift. St Paul writes that 'all things were created through him and for him. He is before all things and in him all things hold together' (Col 1:16-17). St Athanasius (296–373) expands on this theme when he writes that 'the Father creates all things through the Word in the Spirit; for where the Word is there is the Spirit also and things created through the Word have their being from the Spirit by means of the Word'. 2

In the Incarnation we believe that God entered into the material world in a unique manner in the person of Jesus Christ. He fully identified himself with our humanity and thus with all creation. The importance of nature in the life of Jesus is highlighted in a particular way in St Mark's Gospel. The Spirit led Jesus into the wilderness. Mark tells us. 'where wild beasts and angels looked after him' (Mk 1:12 and 13). It was during his sojourn in the desert that Jesus came to full awareness of the messianic ministry he was called to embrace. St John sums up the mission of Jesus when he writes. 'I have come that they may have life, and have it to the full' (Jn 10:10).

The Kingdom of God that Jesus preached envisaged a world where peace, justice and human well-being would be promoted and celebrated (Is 35: 1-7; Mk 1: 14-15). We know that human well-being cannot be achieved if the life-systems of the world are irreversibly damaged, because healthy creatures cannot survive on a sick planet.

The resurrection of Christ is the beginning of a new creation (2 Cor 5: 17-19). Through the reality of the resurrection all matter is transformed and taken up into the life of the Trinity. In the words of the Compendium of the Social Doctrine of the Church: 'The entrance of Jesus Christ into the history of the world reaches its culmination in the Paschal Mystery, where nature itself takes part in the drama of the rejection of the Son of God and in the victory of the Resurrection' (n. 454). St Paul states that 'God was in Christ reconciling the world to himself' (Col 1:20). The Easter preface in the Roman Missal echoes this belief when it proclaims: 'In Him a new age has dawned, the long reign of sin is ended, a broken world has been renewed and man is once again made whole.'

The resurrection is also a cosmic sign of hope. All creation is united in Christ and, therefore, has a future in God. This hope is anchored in the presence of the Spirit in our world. We believe that the Spirit, whom we confess in the Creed to be the Lord

and Giver of Life, is inspiring people in our age to dedicate themselves to serve others and, in the words of the well-known prayer to the Holy Spirit, to 'renew the face of the earth'.

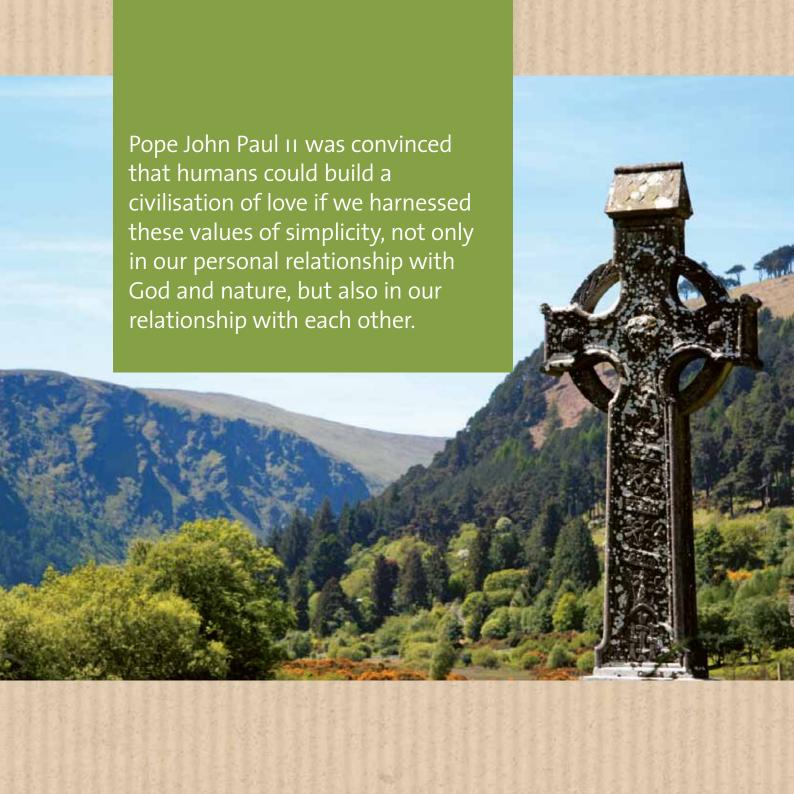
The Spirit calls us to hear what we might describe poetically as the 'cry of the earth' and to give it a central place in our discipleship of Jesus today. This in turn challenges us to look again at our attitude to wealth, to economic growth and how we distribute and consume the good of this earth.

In the words of Pope Benedict XVI in *Caritas in Veritate*: '[W]hat is needed is an effective shift in mentality which can lead to the adoption of *new lifestyles* in which the quest for truth, beauty, goodness and communion with others for the sake of common growth are the factors which determine consumer choices, savings and investments' (n. 51).

In his 1990 World Day of Peace message, Pope John Paul II also reflected on the link between certain approaches to affluence and ecological devastation and human deprivation:

Modern society will find no solution to the ecological problem unless it takes a serious look at its lifestyle. In many parts of the world society is given to instant gratification and consumerism while remaining indifferent to the damage which these cause ... If an appreciation of the value of the human person and human

<sup>2.</sup> St Athanasius, Epistle to Seraphim, 3.4.



life is lacking, we will also lose interest in others and the earth itself. Simplicity, moderation and discipline, as well as a spirit of sacrifice, must become part of everyday life, lest all suffer the negative consequence of the careless habits of a few. (n. 13)

True stewardship, therefore, requires a conversion of heart and a change of attitude. Our Christian faith has always placed great value on the virtue of self-control and moderation in the use of material goods. As well as promoting an internal spiritual and moral freedom, a life less focused on material gain and conspicuous consumption would contribute to a more just and sustainable world economy.

The power of Trinitarian love is captured by the poet Patrick Kavanagh in 'The Great Hunger':

Yet sometimes when the sun comes through a gap These men know God the Father in a tree:
The Holy Spirit is the rising sap,
And Christ will be the green leaves that will come
At Easter from the sealed and guarded tomb.<sup>3</sup>

In such an economy self-sacrifice would no longer be an unpopular concept. Such restraint and self-sacrifice would remind us that we are more than what we possess in terms of material goods. It may even contribute to a better quality of life with people having more time to spend with family and friends, to make volunteer commitments to their local community and engage in health promoting activity. A simpler lifestyle may also be a less stressful lifestyle, making inner contentment and peace more possible.

Pope John Paul II was convinced that we could build a civilisation of love if we harnessed these values of simplicity, not only in our personal relationship with God and nature, but also in our relationship with each other.

In the words of Pope Benedict XVI: 'Every violation of solidarity and civic friendship harms the environment, just as environmental deterioration in turn upsets relations in society' (CV n. 51).

The celebration of the Eucharist also challenges us to share the goods of the earth with everyone, especially the poor, and to be concerned for the well-being of all creation. In the Eucharist we do not use raw wheat or grape juice, but bread and wine, which involve a cooperative relationship between the fruitfulness of the earth and human

skills of farming, milling, baking and winemaking. In the Eucharist we give thanks to God for the blessings of both creation and redemption. As the bread and wine are transformed into the Body and Blood of Christ for our nourishment, we are challenged to promote this harmony between humans and the rest of creation by the way we live our lives.

There is nothing new in this approach: the celebration of the Eucharist in the early church emphasised the importance of the created world. For example, the liturgy associated with St Basil (330–379) used language and prayers about the gathering of the grain for the making of bread and the activity of viniculture for making the wine. The bread 'which earth has given and human hands have made' and the wine which is 'fruit of the vine and work of human hands' are changed into the very substance of the crucified but risen and glorified body of the New Creation.

#### KEY ETHICAL PRINCIPLES

In recent years we have become more aware that we cannot have life to the full on a plundered, polluted and ailing planet. While climate change is a technical, scientific and economic issue, it is also a moral one. The core of the moral issue is that actions

<sup>3.</sup> The lines from 'The Great Hunger' by Patrick Kavanagh are reprinted from Collected Poems, edited by Antoinette Quinn (Allen Lane, 2004), courtesy of the Trustees of the estate of the late Katherine B. Kavanagh, through the Johathan Williams Literary Agency.

which we take today can undermine the well-being of millions of people now, especially the poor, and condemn further generations to live in an inhospitable world.

Catholic moral tradition and social doctrine, based on the revelation of God's love for all creation in the Scriptures and on the inherent dignity of every person, offer a number of core principles that can guide our response to the challenge of climate change. These include:

THE COMMON GOOD. The earth is our common home. We are intimately interconnected with one another and with all the life-systems of the planet. Humans are part of, and have a unique responsibility for, the interaction between all living creatures and the atmosphere, land and water. Actions which undermine this well-being, such as the unnecessary and excessive burning of fossil fuel, have to be evaluated in light of our responsibility for the global common good. The common good of society is not an end in itself; it has value only in reference to attaining the ultimate ends of the person and the universal common good of the whole of creation' (Compendium, n. 170).

In Caritas in Veritate, Pope Benedict XVI emphasises this principle of the 'universal common good' highlighting the need for greater global solidarity and civic friendship around the question of energy consumption in

particular. 'What is also needed', he explains, 'is a worldwide redistribution of energy resources, so that countries lacking those resources can have access to them. The fate of those countries cannot be left in the hand of whoever is the first to claim the spoils, or whoever is able to prevail over the rest ... everyone must responsibly recognise the impact they will have on future generations, particularly the many young people in the poorer nations, who ask to assume their active part in the construction of a better world' (n. 49).

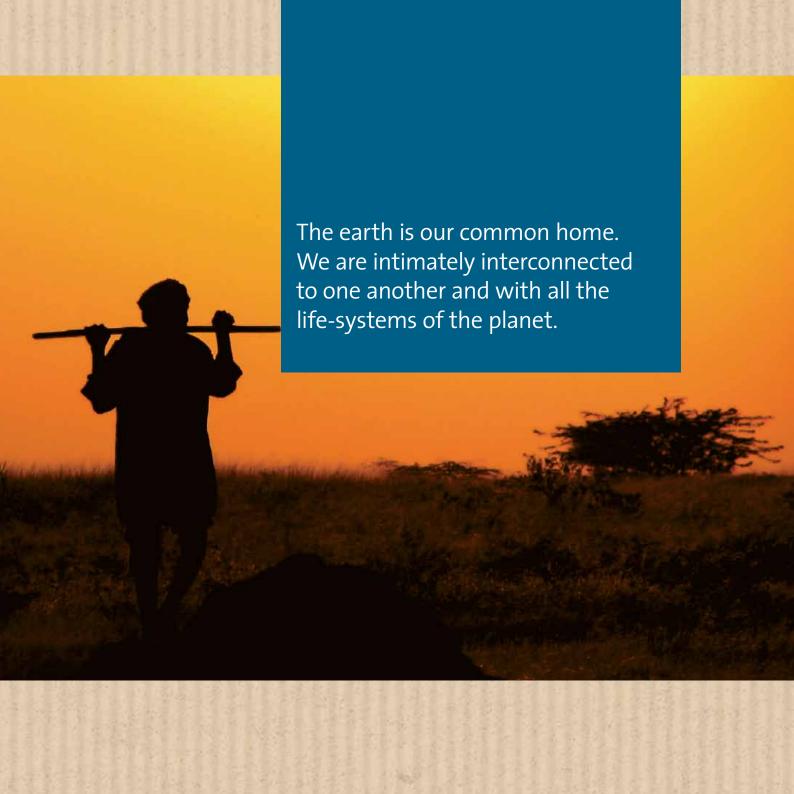
agreed legally binding limits greenhouse gas emissions. As essential contribution to the common good it is appropria richer countries have commit themselves to reducing their emissions by between 23% and by the year 2020. We share the of others who have a concern future viability of the earth the treaty to replace Kyoto will be at the forthcoming UN Frame Conference on Climate Chang which will take place in Cope in December 2009. We encount to the common good it is appropria richer countries have commit themselves to reducing their emissions by between 23% and by the year 2020. We share the forthcoming UN Frame Conference on Climate Chang which will take place in Cope in December 2009. We encount to the common good it is appropriated themselves to reducing their emissions by the year 2020. We share the future viability of the earth the treaty to replace Kyoto will be at the forthcoming UN Frame Conference on Climate Chang which will take place in Cope in December 2009. We encount to the common good it is appropriated the countries have commit to the common good it is appropriated to the countries have commit to the countries have commit to the countries have commit to the countries have cou

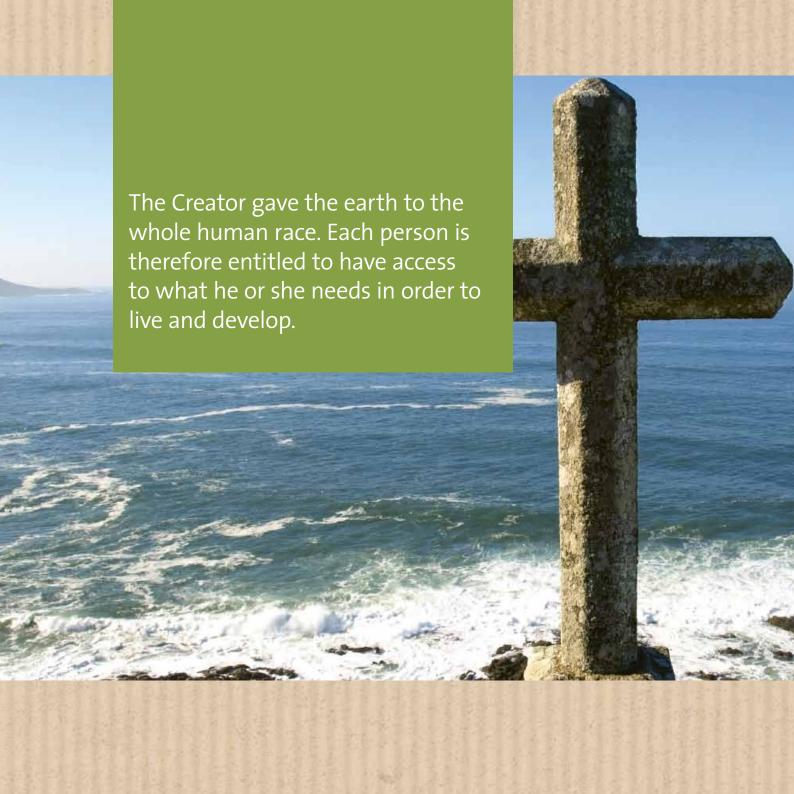
As we explained in our pastoral letter. Towards the Global Common Good: Nations which embrace such solidarity soon recognise that commitment to the common good requires a change of mindset. It requires going beyond a model of international relations in which nations seek their own advantage often at the expense of others, to one in which national advantage will sometimes be limited by the need to find common solutions to common problems. This in turn requires a spirit of cooperation and a willingness to sacrifice short-term gains, or even national interest, for the sake of the global common good' (n. 4).

In the light of the more recent reports from the Intergovernmental Panel on Climate Change, we therefore support the position taken by the European Union at the UN Climate Change Conference in Bali in December 2007. This Conference

agreed legally binding limits for greenhouse gas emissions. As an essential contribution to the global common good it is appropriate that richer countries have committed emissions by between 23% and 40% by the year 2020. We share the hope of others who have a concern for the future viability of the earth that a new treaty to replace Kyoto will be ratified at the forthcoming UN Framework Conference on Climate Change, which will take place in Copenhagen in December 2009. We encourage government representatives to strengthen their commitment to these vital international agreements. With many others around the world we hope and pray that the political leaders meeting in Copenhagen in December will take the courageous decisions needed to fulfil 'our grave duty to hand the earth on to future generations in such a condition that they too can worthily inhabit and continue to cultivate it' (CV n. 50).

There are important moral dimensions to the criteria which will be used for allocating global emissions targets among nations in the future. Care must be taken to ensure that the most economically, politically or militarily powerful nations of the world are not in a position to take advantage of those countries which have fewer resources. Christians across the world have a vital role in forming the conscience of their governments on this issue.





In the race to secure the diminishing amount of fossil fuel and other resources in the world. we must ensure that the poor are not trampled under foot.

THE UNIVERSAL DESTINATION OF THE GOODS OF THE EARTH. God, the Creator, gave the earth to the whole human race. Each person is therefore entitled to have access to what he or she needs in order to live and develop.

Pope Paul VI emphasised this truth when he reminded us that: 'God intended the earth and everything in it for the use of all human beings and peoples. Thus, under the leadership of justice and in the company of charity, created goods should flow fairly to all. All other rights, whatever they may be, including the rights of property and free trade, are to be subordinated to this principle. They should in no way hinder it; in fact, they should actively facilitate its implementation. Redirecting these rights back to their original purpose must be regarded as an important and urgent social duty' (Populorum Progressio, n. 22).

In the words of the Compendium of the Social Doctrine of the Church: 'The climate is a good that must be protected and reminds consumers and those engaged in industrial activity to develop a greater sense of responsibility for their behaviour' (n. 470). Governments, industry and individuals have a responsibility to promote and protect the

environment. 'God gave the earth to the whole human race for the sustenance of all its members. without excluding or favouring anyone. This is the foundation of the universal destination of the earth's goods' (Compendium, n. 171).

The universal destination of goods requires a common effort to obtain for every person and for all peoples the conditions necessary for integral development, so that everyone can contribute to making a more humane and sustainable world. In the words of the Compendium of the Social Doctrine of the Church, this 'requires that the poor, the marginalised and in all cases those whose living conditions interfere with their proper growth should be the focus of particular concern. To this end, the preferential option for the poor should be reaffirmed in all its force' (n. 182).

**SUBSIDIARITY.** This principle holds that each person or group should take the appropriate action at a personal or local level when addressing an issue common to all. In our earlier pastoral letter, Towards the Global Common Good, we wrote that, where climate change was concerned, 'it is a moral imperative that the measures set out in the National Climate Change Strategy 2000 are implemented with greater speed'. All of us have our part to play in implementing that strategy: homes, schools, seminaries and theological institutes, parishes, businesses

and governments. In this pastoral reflection we renew that appeal. As part of this document we have outlined practical steps which every individual, family and parish can take to help achieve this objective.

We also said in Towards the Global Common Good that 'whether it is the type of energy we use to heat our homes, the method we use to dispose of our waste, or the form of transport we use to get to work, every decision we make in favour of a more sustainable environment is a decision in favour of the global common good' (n. 7).

**SOLIDARITY.** As Christians we cannot consider ourselves or our obligations in isolation from others or from the endangered earth and its creatures. Solidarity gives expression to this interdependence between individuals, the wider human community and all creation, which has never been as evident as it is today. But this solidarity is not a vague feeling of compassion. Rather, in the words of Pope John Paul II, it is a 'firm and persevering determination to commit oneself to the common good of all ... because we are all really responsible for all' (Sollicitudo Rei Socialis, n. 38).

This responsibility extends to the whole of creation and to all the finely balanced life-systems of our world, which may be threatened by even marginal changes in the earth's climate and by human behaviour.

This includes having a humane and responsible attitude towards the well-being and sustainability of other species. As Pope Benedict XVI points out: 'Just as human virtues are interrelated, such that the weakening of one places others at risk, so the ecological system is based on a plan that affects both the health of society and its good relationship with nature' (CV n. 51).

**DISTRIBUTIVE JUSTICE.** This principle challenges rich nations, which over the past 150 years have been responsible for most of the greenhouse gas pollution, to provide adequate compensation for any unpreventable climate change damages they cause. An example of this principle at work is the Adaptation Fund, set up under the United Nations Framework Climate Change Convention (UNFCCC) to help poor nations adapt to climate change that is already occurring. It is important that this Adaptation Fund is properly resourced. Similarly, resources and carbon-free technologies must be made available to poor countries to enable them to achieve sustainable development without these countries having to opt for a carbon-intensive route to economic growth.

Unfortunately, our missionaries and development workers suggest to us that little of substance is happening in this vital area of making clean, non-carbon based (CDMs) technologies available to people in developing nations.

In the words of Pope Benedict XVI: 'The technologically advanced societies can and must lower their domestic energy consumption, either through an evolution in manufacturing methods or through greater ecological sensitivity among their citizens' (CV n. 49).

A key dimension of distributive justice in this context is what is sometimes known as the 'Polluter Pays Principle'. This principle stipulates that those most responsible for causing environmental pollution ought to be held most liable for its consequences.

For example, it is projected that Africa, which is responsible for less than 3% of global greenhouse gas emissions, will suffer most from the impact of climate change with more droughts, disrupted water supplies and sea level rises. This would be a massive injustice to the people and ecosystems of that continent.

In addition, countries such as Ireland, which are major polluters, need to drastically cut their carbon emissions as quickly as possible. This must involve serious cuts in greenhouse gas emissions, through mandatory caps, carbon taxes and, possibly, cap-and-trade programmes. Care is also required about policies of switching areas of agriculture to biofuel production. This will contribute to hunger and

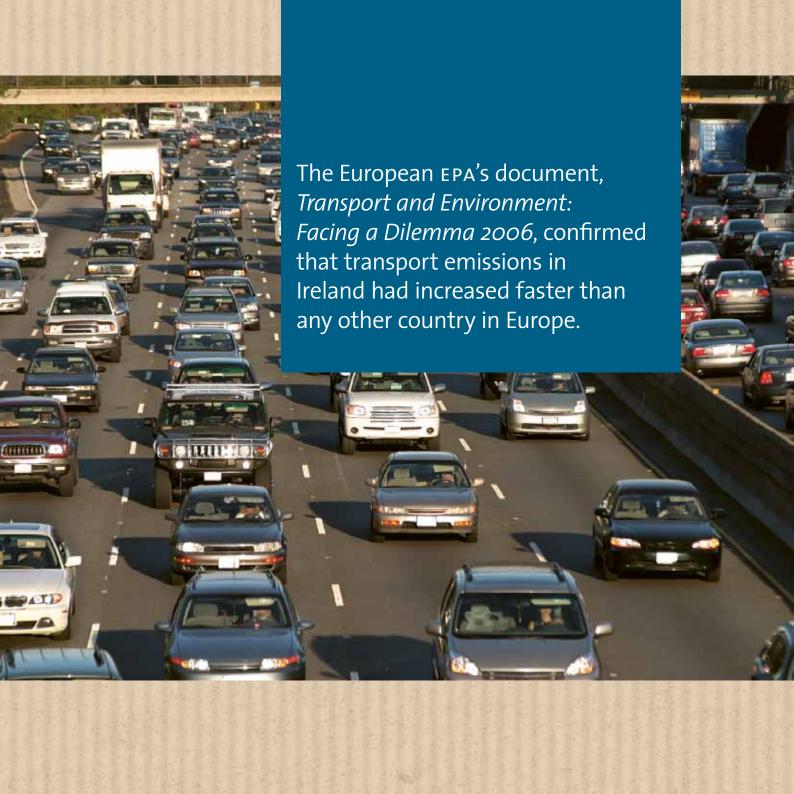
starvation. There is a fundamental moral dilemma to be faced in any policy which involves burning food crops to supply energy for the rich and developing nations of the world, when hundreds of millions of people are suffering from hunger.

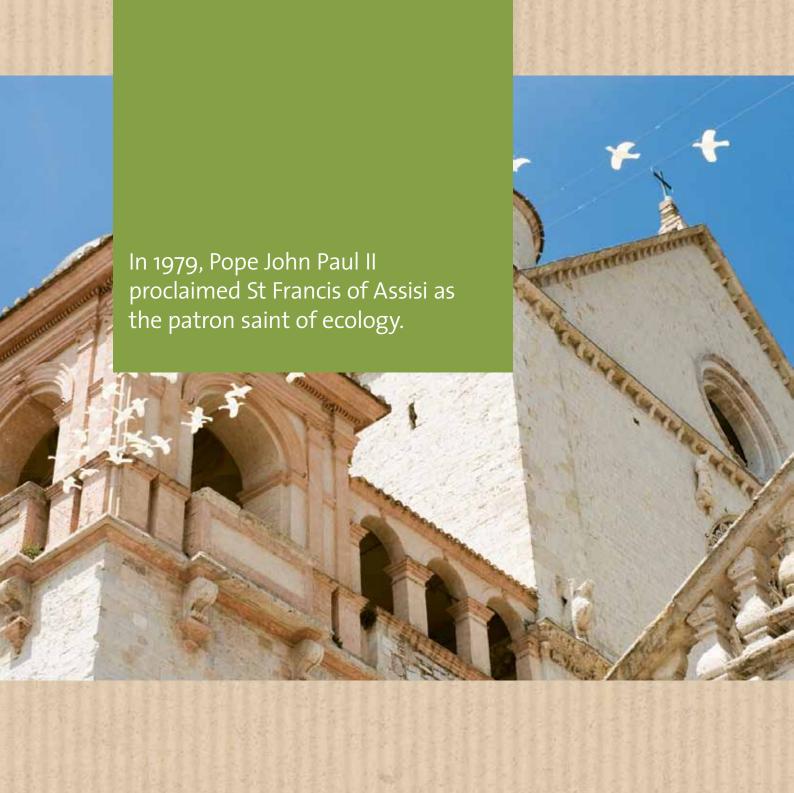
Similarly, '[T]he hoarding of resources, especially water, can generate serious conflicts among the peoples involved. Peaceful agreement about the use of resources can protect nature and, at the same time, the well-being of the societies concerned' (CV n. 51).

'The protection of the environment, of resources and of the climate obliges all international leaders to act jointly and to show a readiness to work in good faith, respecting the law and promoting solidarity with the weakest regions of the planet' (CV n. 50).

INTERGENERATIONAL JUSTICE. Climate change points to the ethical issues involved in *inter-generational justice*. 'Projects for integral development', Pope Benedict XVI reminds us, 'cannot ignore coming generations, but need to be marked by solidarity and inter-generational justice, while taking into account a variety of contexts: ecological, juridical, economic, political and cultural' (CV n. 48).

At a concrete level this issue is very clear. When parents or grandparents look into the eyes of their children or grandchildren





and ask themselves if the way this generation is using fossil fuels, or managing the other precious resources of the planet, is going to have a detrimental effect on the lives of future generations, the answer can only be yes. Failure to act now could cause immense suffering for future generations.

This principle is closely connected to the precautionary principle and the virtue of prudence. We need to take action now to ensure the viability of the earth for future generations. It is 'incumbent upon the competent authorities to make every effort to ensure that the economic and social costs of using up shared environmental resources are recognised with transparency and fully borne by those who incur them, not by other peoples or future generations' (CV n. 50).

### HONOURING INTERNATIONAL COMMITMENTS

Many of these principles, drawn from Catholic moral tradition and Social Doctrine, are reflected in various international agreements which have been made on climate change since 1990.

Since climate change affects every part of the earth, adherence to these international agreements is critical if the challenge of climate change is to be addressed. Climate change figured frequently in the speeches of the heads of state at the Earth Summit in Rio De Janeiro in 1992. As

a result, 154 nations signed the UN Framework Convention on Climate Change. No mandatory limits on carbon emissions were set at this stage. This did not happen until the meeting at Kyoto in Japan in 1997.

Even though the IPCC scientists said that greenhouse gas emissions needed to be cut by between 60% and 80% to stabilise the global climate, the signatories to the Kyoto Protocol, as it became known, could only agree to cut carbon emissions by between 5.2% and 7% below their 1990 levels. Ireland was one of the few rich countries to receive permission to increase greenhouse gas emissions by 13% on our 1990 levels. The expansion of the Irish economy during the decade of the 'Celtic Tiger' has resulted in Ireland overshooting its target.

By 2008 we were 24% above our 1990 levels. It is estimated that Ireland's emissions today run at 70 million tons of carbon per year, which is 7 million tons above our Kyoto commitment.

The scientists we have consulted say the main reason we have failed to meet our agreed target is the steep rise in transport emissions in Ireland. The European Environmental Protection Agency's document, Transport and Environment: Facing a Dilemma 2006, confirmed that transport emissions in Ireland had increased faster than any other country in Europe. Between 1990 and 2003, it had increased by 130%. The

average increase in the rest of Europe was 23%. The present recession will, of course, reduce greenhouse gas emissions quite significantly. It is unlikely, however, that this will be sufficient to reach our agreed Kyoto target.

Between 1997 and 2007, very few policy decisions were taken to reduce Irish greenhouse gas emissions. In fact, the opposite was often the case, especially with regard to transport and building policies.

There are a number of positive elements in the programme for government which was negotiated in the summer of 2007 in Ireland. The new government committed itself to a number of initiatives which would reduce greenhouse gas emissions by 3% each year. These included the publication of a Carbon Budget each year in conjunction with the annual budget. The government has promised to introduce appropriate fiscal instruments, such as a carbon levy, and a motor taxation regime which favours vehicles with lower emissions. It has committed to subsidizing energy efficiency measures in households and in generating electricity through non-carbon technologies. All this is intended to wean us away from a carbon-based economy as quickly as possible.

Welcomed progress has been made on these issues in the intervening two years. We all have a responsibility to ensure that meeting our international targets and developing more environmentally sensitive ways to progress our economy remains a key collective priority for each of us as well as for government policy.

#### **DEVELOPMENT AND ENVIRONMENT**

Ireland has a proud record of missionaries as well as development personnel working to alleviate poverty in many countries across the world. We realise that sometimes, in the past, development was promoted without taking due account of its impact on the environment. Concern for development and environmental protection must go hand-in-hand. The focus which Trócaire, the Irish Catholic Agency for World Development, and many Irish missionary communities have placed on climate change in recent years will continue into the future as a vital part of the Irish Christian contribution to integral human development.

As Pope Benedict XVI points out, the road to authentic and integral human development implies a concern for the overall moral tenor of society: 'The book of nature is one and indivisible: it takes in not only the environment but also life, sexuality, marriage, the family, social relations: in a word, integral human development. Our duties towards the environment are linked to our duties towards the human person, considered in himself and in relation to others. It would be wrong to uphold one set of duties while trampling on the other' (CV n. 51).

#### ST FRANCIS OF ASSISI

A model and source of inspiration for many in their Christian vocation towards the environment is St. Francis of Assisi. In 1979, Pope John Paul II proclaimed St Francis of Assisi the patron saint of ecology. Three years later, on 28 March 1982, World Ecology Day, the Pope wrote that St Francis ought to be an example for Catholics today, 'not to behave like dissident predators where nature is concerned, but to assume responsibility for it, taking all care so that everything stays healthy and integrated, so as to offer a welcoming and friendly environment even to those who succeed us'.

Francis did not look at the natural world from a utilitarian perspective. He did not see it as merely providing food, clothing and shelter for humans. Rather, his response to the gift of creation was joy, wonder, praise and gratitude. One of the great legacies of Francis is that he expanded the concept of 'neighbour' to include not only the human race, but the whole of creation and its creatures.

In his 'Canticle of the Creatures', Francis shows a kinship with and deep insight into the heart of all creation – animate and inanimate

– which, with the exception of the Celtic saints, is probably unique in the whole European Christian tradition.

#### RESPECT FOR CREATION IN IRISH CHRISTIAN TRADITION

Celtic saints such as Patrick, Bridget, Ciarán, Gobnait, Kevin, Imy, Columba and Columban were very sensitive to the presence of God in creation. Many legends grew up around Columban, especially at the monastery in Luxeuil in eastern France. Squirrels and doves were pictured playing in the folds of his cowl. Birds also approached him and nestled in the palms of his hands. Even wild beasts were said to have obeyed his commands. In his sermon 'Concerning the Faith' he wrote, 'If you wish to understand the Creator, learn about his creatures.'

In the Celtic tradition, creation itself and each creature, however small, testfies to God as the source of all life. This was also a dominant theme in the life of another great Celtic and Franciscan theologian, Blessed John Duns Scotus. Last year we celebrated the 700th anniversary of his death in AD 1308. For Scotus, the universe was so wondrous as to be compared to a beautiful canticle, a symphony of joy and harmony.



I arise today: in vast might, invocation of the Trinity, belief in a Threeness confession of Oneness meeting in the Creator.

I arise today: might of Heaven brightness of Sun whiteness of Snow splendour of Fire speed of Light swiftness of Wind depth of Sea stability of Earth firmness of Rock.

Christ with me,
Christ before me,
Christ behind me,
Christ in me,
Christ under me,
Christ over me,
Christ to right of me,
Christ to left of me,
Christ in lying down,
Christ in sitting,
Christ in rising up,

Christ in the heart of
every person, who may
think of me!
Christ in the mouth of
everyone, who may
speak to me!
Christ in every eye, which
may look on me!
Christ in every ear, which
may hear me!

I arise today: in vast might, invocation of the Trinity belief in a Threeness confession of Oneness meeting in the Creator.

> From The Lorica of St Patrick

#### IS THERE HOPE?

Is there hope? The Fourth
Assessment of the IPCC, published in
May 2007, claims there is hope. The
report argues that the world has
the technology and wealth to act
decisively to stop global warming.
Extreme climate change can be
avoided, but it is clear that if we are
to act prudently, in the interests
of future generations, serious
and concerted action involving
governments, businesses, scientists,
theologians, inventors and all sectors
of civil society must begin now.

It is clear from the Fourth Assessment report of the IPCC that we are at a critical moment in the history of our planet. The potential implications of climate change are such that it can be aptly described as a crisis. If this generation fails to tackle climate change, then it is unlikely that any future generation will be able to undo the damage. Every human being and every creature in successive generations will suffer. As Cardinal Seán Brady said in his Christmas message for 2007: 'Then there is the challenge of global warming and climate change. The future of children born in Bethlehem, Belfast, Dublin or Dubai this day is by no means certain unless we alter our behaviour towards the environment as a matter of urgency. The simplicity of the stable into which the Son of God was born should challenge us all to a

lifestyle which is more sustainable.'

Yet in the midst of this crisis there is also a wonderful opportunity. It is an opportunity to create a more just and sustainable world, to develop a more simple and balanced style of life. In short, it is an opportunity to become more Christ-like, especially in our attitude to the poor and to the goods of this earth.

Catholics can rejoice in the fact that the Holy See is taking a leadership role in promoting environmental awareness. In 2007, the Holy See promised to create a forest in Hungary to offset all of its carbon dioxide emissions. It has installed photovoltaic panels on the roof of the Pope Paul VI audience hall in the Vatican. Every Catholic institution, diocese, parish and school should follow this good example by measuring their current carbon footprint over coming months and then devising ways of reducing their use of carbon by a specific amount per annum.

The challenges posed by environmental sustainability and climate change also provide an opportunity to build a more peaceful, just and sustainable human society while, at the same time, protecting crucial ecosystems across the globe. It opens up the possibilities for bringing forth a new civilisation of love, based on solidarity, where the needs of others, especially the poor, are met and

humanity develops a new love and respect for the earth and all the peoples of the earth.

If this happens, many of the changes will be positive. New work opportunities will present themselves as we move from a carbon-intensive economy to a low carbon one. Ireland is ideally situated for researching, developing and implementing alternative sources of energy from wind, waves and the tidal movement of the sea.

Responding to climate change will also provide opportunities for working with other Christians and people of other faiths as we confront together a problem which will affect everyone, but especially the poor.

However, time is running out. We need to act NOW for ourselves, for future generations and for the integrity of God's creation. We 'must defend not only earth, water and air as gifts of creation that belong to everyone. [We] must above all protect mankind from self-destruction' (CV n. 51).



God, our Creator, You have given us the earth, and the sky and the seas.

Show us the way to care for the earth, not just for today but for ages to come. Let no plan or work of ours damage or destroy the beauty of your creation.

Send forth your spirit to direct us, to care for the earth and all creation. Amen.

### What Can Our Parish Do?

- Set up a group in the parish to study the Bishops' pastoral reflection. The following resources may be helpful:
- A copy of this pastoral is also available online, with other supporting resources, at www. catholicbishops.ie.
- The parish pack also contains a ten-minute video reflection on DVD on the theme of caring for God's creation. This can be viewed as one reflection or broken into three shorter reflections on the following general themes:
  - → The beauty of God's Creation;
  - → Caring for God's Creation;
  - → The Celtic tradition of respect for God's creation.

A ten-minute reflection on the link between caring for God's creation and the needs of the developing world, produced by Trócaire, is also available as part of the special feature on the Pastoral Reflection on Climate Change on the website of the Irish Catholic Bishops' Conference, www. catholicbishops.ie.

- Support the Trócaire Climate Change Campaign by signing and returning the postcard which accompanies the popular version of this pastoral. Trócaire is calling on rich countries to do more to support poorer countries in adapting to the devastating impacts of climate change in certain parts of the developing world. The campaign is an important expression of the principle of solidarity outlined in the pastoral.
- Conduct an 'Environmental Audit' of your parish. This might include:
  - → Establishing a group with responsibility for auditing current environmental practice;
  - → Drawing up an environmental policy;
  - → Monitoring targets and promoting good practice in the parish.
- Invite families, schools and individuals in your parish to calculate their carbon footprint and to set targets for reducing carbon emissions. A number of

- 'carbon calculators' are available online, including at www.change. ie and www.carboncalculator. co.uk.
- Join with 'Churches Together in Britain and Ireland' (CBTI) each year in celebrating the 'Creation Time' initiative. This runs from 1 September to the Sunday following the Feast of St Francis of Assisi. Information and resources are available at www. cbti.org.uk.
- Enrol in the Eco-Congregation Ireland environmental programme for Churches. This programme offers resources and practical suggestions for Churches and individual Christians who wish to live out their 'vocation' to care for God's creation as part of their Christian faith.
- Include the theme of care for God's creation in homilies, prayers of the faithful and examinations of conscience.
- Have occasional displays and other activities in your parish on the theme of caring for God's creation. Regularly include details of initiatives being taken or proposals for action in your parish newsletter.
- Some practical actions you might take at home, in the parish, in parish organisations and in parish schools include:
- Monitor and improve the efficiency of your energy use having first completed an energy audit:

- Explore how more use could be made of renewable energy sources:
- Assess your level of waste generation and set targets for reducing waste;
- Use recycled and recyclable materials wherever possible. For example:
  - → Refrain from using disposable plastic cups and other utensils at parish functions;
  - → Use recyclable shrine candles. Ask your supplier to provide them;
  - → Use environmentally friendly cleaning materials;
  - → Use recycled paper. Assess your use of bulletins and missalettes and explore the viability of more environmentally efficient options;
  - → Use more of your page when typing letters or other documents. Review the default margin settings on your computer software to use more of the page.
- Look at shared spaces in the parish, in the local community, around your home and consider how they might be used to promote tree planting or conservation projects.
- Engage with statutory, voluntary and community groups in your area to explore ways of working together to improve the local environment and promote good environmental practice.

Display an energy certificate in a prominent place in parish buildings. Since 1 January 2009 all public buildings in Ireland over 1,000 square metres in size are required by law to display a 'DEC' (Display Energy Certificate) showing their energy efficiency rating. For further details see www.sei.ie or contact 'Sustainable Energy Ireland'.

These are only some of the practical actions you might consider taking. In deciding what actions you can take it is worth recalling the words of Cardinal Brady in the Foreword:

Every action taken in favour of a just and more sustainable environment, no matter how small, has an intrinsic value. Action at a global level, as well as every individual action that contributes to integral human development and global solidarity, helps to construct a more sustainable environment and, therefore, a better world.

