

APPENDIX A

Stewardship of Creation Report on Climate Change

“That the Council for Global Mission, through the Stewardship of Creation Panel, take forward the development of a Biblical position on the causes and effects of climate change and report to the 2017 General Assembly.”

1. INTRODUCTION

The earth is the Lord's and everything in it. Ps24v1. So why are we so sore on the Lord's property? According to the Word of God, the greatest commandment is to love God with all our heart, soul, mind and strength. The second greatest commandment is to love our neighbour as ourselves. How can we say we love God if we treat His earth badly? And if what we do harms our neighbours near or far, should we not stop doing it or at least do it less and less?

The role of this paper is not to determine whether or not climate change is happening. Its purpose is to develop a Biblical position on what a very substantial and significant scientific population believe to be the causes and effects of climate change. The scientific material and the Biblical material will lead us to some principles of stewardship of creation and finally to some practical application of what we can do as a denomination, as churches and as individual members to care for God's world and to reduce our adverse impact on it.

2. CLIMATE CHANGE: CAUSES AND EFFECTS

The 'greenhouse effect' is a natural process which keeps the earth's temperature high enough for people to live comfortably on the planet. Some of the heat from the sun is absorbed by the earth, re-emitted and then trapped in the earth's atmosphere by 'greenhouse gases' such as carbon dioxide, water vapour and methane acting like a blanket around the earth.

Since the beginning of the industrial age, there has been a dramatic increase in 'greenhouse gases' in the atmosphere, trapping more heat and raising the earth's temperature. According to the International Energy Agency 'Global greenhouse gas emissions are increasing rapidly.' [International Energy Agency, World Energy Outlook, Executive Summary 2013]

Many climate scientists believe that the burning of fossil fuels such as coal, gas and oil by industry, for transport and to heat and light our homes is the main cause of this enhanced greenhouse effect. The Intergovernmental Panel on Climate Change (IPCC), a United Nations body, has concluded that climate change is occurring as a result of human activity (IPCC 2013 Working Group 1 Approved Summary for Policymakers p2, 12, www.ipcc.ch) and it predicts temperature rises of between 1.5C and 4.8C by the end of this century. (IPCC 2013 Working Group 1 Approved Summary for Policymakers p15, www.ipcc.ch).

According to the National Aeronautics and Space Administration (NASA) the evidence for rapid climate change, largely humanly-induced, in recent times can be demonstrated by the following nine effects:

1. *Sea level rise: global sea level rose about 17 centimetres (6.7 inches) in the last century. The rate in the first decade of this century, however, is nearly double that of the last century. Several small pacific islands are close to disappearing and other larger countries such as Bangladesh are especially vulnerable as are many coastal cities and communities.*

2. *Global temperature rise: all three major global surface temperature reconstructions show that earth has warmed since 1880. Most of this warming has occurred since the 1970s, with the 20 warmest years having occurred since 1981 and with all 10 of the warmest years occurring in the last 12 years.*

3. *Warming oceans: the oceans have absorbed much of this increased heat, with the top 700 metres (about 2,300 feet) of ocean showing warming of 0.302 degrees Fahrenheit since 1969.*

4. *Shrinking ice sheets: the Greenland and Antarctic ice sheets have decreased in mass. Greenland lost 150 to 250 cubic kilometres (36 to 60 cubic miles) of ice per year between 2002 and 2006, while Antarctica lost about 152 cubic kilometres (36 cubic miles) of ice between 2002 and 2005.*

5. *Declining Arctic sea ice: both the extent and thickness of Arctic sea ice has declined rapidly over the last several decades.*

6. *Glacial retreat: glaciers are retreating almost everywhere around the world – including in the Alps, Himalayas, Andes, Rockies, Alaska and Africa.*

7. *Extreme events: the number of record high temperature events has been increasing, while the number of record low temperature events has been decreasing since 1950. There has also been increasing numbers of intense rainfall events. Prolonged droughts in already vulnerable areas, is becoming an increasingly common feature.*

8. *Ocean acidification: since the beginning of the Industrial Revolution, the acidity of surface ocean waters has increased by about 30 per cent. This increase is the result of humans emitting more carbon dioxide into the atmosphere and hence more being absorbed into the oceans. The amount of carbon dioxide absorbed by the upper layer of the oceans is increasing by about 2 billion tonnes per year.*

9. *Decreased snow cover: satellite observations reveal that the amount of spring snow cover in the Northern Hemisphere has decreased over the past five decades and that the snow is melting earlier.*
(<http://climate.nasa.gov/evidence/>)

There is no doubt that the rich world's extravagant use of oil and gas has a huge effect on the environment. Everyone is affected, but the poor, the old and the young suffer most from pollution, the failure of food production and rising sea levels.

Bob (Robert) White, Professor of Geophysics in the Department of Earth Sciences at the University of Cambridge and a member of Christians in Science says:

"It is increasingly clear that our use of oil and gas in the West is driving rapid climate change in the whole world.... The effects of more extreme weather events will fall disproportionately on the very young and very old, on the poor and the marginalised in places such as sub-Saharan Africa. One quarter of the planet's population lives in poverty and is extremely vulnerable to changes caused by drought or flooding, to the failure of agricultural crops or to rising sea levels. If we take caring for our global neighbour seriously, we need to consider the impact of our lifestyles on them. "

As these effects take place on God's good creation, life in the sea, on the land and in the air is affected including vegetation, animals and humans. Many development agencies are working on climate change because they see its impact on poor communities.

Tearfund's partners in the developing world are reporting changes to their climate. A partner in Mali said, 'The climate has changed and the rainy season has become unpredictable. The water levels fall year by year and some kinds of animals and vegetation have disappeared. The future is bleak for farmers.' And from Mexico; 'We expect the impacts of a changing climate to increase, with a greater area of our country becoming desert, more woods and jungle being lost, torrential rains, hurricanes and greater seasonal instability.' [Tearfund: Climate change Q&A October 2013]

It isn't just developing countries that are affected. The hurricanes which passed through the Caribbean in September 2017 wrecked not only poor island communities but also large parts of Texas in the USA. In Ireland an agricultural scientist Dr. Ethel White has said, "Agriculture in Ireland is already being detrimentally affected by changing weather patterns, creating difficulties for farmers in 2017 and in recent years."

Not everyone agrees about the causes or effects of climate change and there is not agreement among scientists either. Scientific ideas are always being reviewed and revised. For example a recent study has found that computer modelling used to predict how quickly global average temperatures would rise may have forecast too much warming (published in Nature Geoscience September 2017). In addition while the NASA study referred to earlier states that Antarctica lost about 36 cubic miles of ice between 2002 and 2005 a more recent NASA study of satellite data published in October 2015 in the Journal of Glaciology states "the Antarctic

ice sheet showed a net gain of 112 billion tons of ice a year from 1992 to 2001. That gain slowed to 82 billion tons of ice per year between 2003 and 2008.”

It is difficult for lay people to judge between conflicting assessments and interpretations of scientific data. Christians too have different views about not only God’s World, but also God’s Word. One certainty however is that God does not change nor does His Word. And regardless of the degree of climate change, Christians can be in agreement that the earth belongs to God and if we love Him, we will treat his property with care and respect. In addition, Christians who love God will also love their global neighbours by behaving in ways that will be good for them or at least not do them any harm.

Having looked at what is happening to God’s World, we turn now to God’s Word which should be our source of faith and practice.

3. BIBLICAL POSITION

The Christian Church in general and the Presbyterian Church in Ireland in particular derives its authority from the Bible, the Word of God which from beginning to end, witnesses to God’s glorious purposes in creation and redemption. The Biblical narrative is concerned, first, last and throughout, with God’s will to bless, renew and perfect creation as a whole.

The Old Testament, in all its diversity, bears witness to the sovereignty of God over all aspects of His good creation, and in particular in the history of Israel, His covenant people. In the New Testament, the sovereignty of God finds definitive expression in the Lordship of Jesus Christ, thus giving His new community, the church, the missionary mandate to proclaim this good news to all people in the power of the Holy Spirit. Jesus Christ is the incarnation, and the inaugurator of God’s new creation in which redemption, reconciliation, restoration and eternal life is established in triumph over evil’s manifold forms.

The Old Testament begins with the most comprehensive context for God’s loving purposes, the entire creation in all its wonder, beauty, intricacy and diversity. The first verse of the Bible is one of the most majestic statements ever made: In the beginning God created the heavens and the earth. Genesis 1v1

Humanity is the special recipient of God’s blessing (Genesis 1:26; Psalm 8:5) and the first human being is given the name ‘Adam’ which means ‘of the dust’ (Genesis 2:7), indicating his kinship with God’s good earth as well as God.

While human beings are given the subordinate role of dominion of the earth (Genesis 1:26, 28) this is not to be construed as domination or exploitation but stewardship demonstrated in tending and cultivating what is essentially a divine gift. The Lord God took the man and put him in the Garden of Eden to work it and take care of it. (Genesis 2:15). The Hebrew word for care is ‘shamar’ and can be translated as keep, tend, guard, take care of, look after – essentially, the stewardship of creation.

The fall of humanity which ensues (Genesis 3) is contrary to God’s will yet its evil consequences affect every dimension of creation, human and extra-human (Isaiah 24; Hosea 4:1-3)).

The unfolding of the biblical narrative involves the mutual involvement of two great realities: divine sovereignty and human responsibility expressed in Psalm 115:16 “The highest heavens belong to the Lord; but the earth he has given to humanity.” In effect, God remains the landlord of the earth while we are the tenants not the owners and therefore ought not to defy God’s commands by doing as we please without regard to the consequences (Leviticus 25:23).

The promises, visions and actions of God to save and renew are therefore articulated in terms of creation as a whole and not just humanity in isolation.

Leviticus 25 is a command for Israel to renew its corporate life by letting the land rest every seventh year (the Sabbath Year) and then having a celebratory year of restoration every fiftieth year (the Year of Jubilee).

Psalms 8, 19, 65, 67, 104 and 148 express the glory of how God ordains and sustains the intricate interactions of humans and the rest of creation to their mutual benefit and blessing.

Job witnesses to the awesomeness of God's handiwork in the often overwhelming powers of nature's intriguing features and strange creatures, above and beyond human comprehension or utility.

Hosea 14 and Amos 9 articulate God's promise to restore human happiness in conjunction with earth's replenishment.

Isaiah writes with prophetic insight and poetic sensibility in the artistry with which he conveys God's stupendous visions of comprehensive blessing for humanity as part of a new creation in all its fruitful splendour (Isaiah 35, 55, 65).

In the New Testament, we read of how God's plan of renewal, restoration and salvation reached its climax in the incarnation. God's words and works of re-creation were now embodied in divine/human form on the earth. As John put it, The Word became flesh and made his dwelling among us. (John 1v14).

Before Jesus began His ministry, He spent 40 days and nights in the primal purity of the wilderness, in the company of wild animals but unaccompanied by humans.

In his summary of the Old Testament Law, Jesus indicated that loving God with all our heart, soul, mind and strength, and loving our neighbour as ourselves are both necessary for entry into the Kingdom of God (Luke 10v25-28). Jesus taught that the responsibilities of God's people to both God and fellow human beings are continued from the Old Testament era to the New.

Jesus' parables and other teachings about the kingdom of God make use of analogies from nature at large as well as human actions in natural settings. He even refers to Himself as the true or real vine (John 15) and the bright morning star (Revelation 22) a chapter in which He is also called the Lamb.

Paul speaks about 'the whole creation groaning' as it awaits its sure redemption in Jesus: human salvation to be sure, but not without the rest of creation (Romans 8). The apostle opens his letters to the Ephesian and Colossian churches with doxologies to Jesus Christ through whom and for whom creation has been made, kept together and brought to final completion.

John's great vision brings the Biblical witness to a fitting climax in his vision of a new heaven and a new earth in which God dwells with his servants in a setting where human beings, city streets and nature's garden all conjoin (Revelation 21-22).

The Biblical narrative is therefore concerned, first, last and indeed, throughout, with God's will to bless, renew and perfect creation as a whole.

4. PRINCIPLES OF STEWARDSHIP OF CREATION

Given the above Biblical meta-narrative it is therefore incumbent upon the Presbyterian Church in Ireland to consider how we live on the earth and use its resources as well as respond appropriately to whatever threatens the well-being of God's good creation.

The following principles will help to provide a transition from scientific information about climate change in our world today and theological information from God's Word about His view of Creation, to practical action for individuals, churches, communities and nations.

[i] God made the earth and the universe. They continue to be good, very good.

[ii] The earth is still the Lord's and everything in it. If we love him with all our hearts, then we will love and respect His Creation too.

[iii] God has given humanity the privilege and responsibility to care for the earth and its resources. He is the Landlord, we are the tenants and are accountable for how we use His property.

[iv] Sin including selfishness, greed, indifference, sins of both commission and omission have brought untold suffering and sadness to God, to His Creation and to His creatures.

[v] The people of God are His representatives, His image bearers in the world and on the earth. They seek to do what God would do if He were on the earth as they relate to His world including people, animals, plants and planet. They ask, 'what would Jesus do?' They try to love their neighbours both near and far, both present and future by being good stewards of creation now.

[vi] Being a disciple of Jesus means to obey Him in all aspects of discipleship, including prayer, church involvement, evangelism and in care of creation.

[vi] The theology of the end times gives believers the incentive, not to abuse God's world before the end of the age since we are accountable to Him, but to prepare for the new heaven and the new earth by treating it carefully now.

5. CLIMATE CHANGE AND STEWARDSHIP OF CREATION

At the end of the day, it is what we do or don't do that matters. Everything we do has an impact on God's wonderful world. Everything we buy has been made using materials and energy provided by God. So just by living a 'normal lifestyle' in a consumer based society we are automatically responsible to God for the care of His earth. We have an effect on God's creation simply by spending our money, driving our cars, heating our homes, watching our TV's and spending time on our computers and smart 'phones. We don't have to 'do' anything (more) to affect God's earth, we are already doing it by just living!

But there are many actions we can take to reduce our negative impact on the created order. The very first step must be repentance for abusing and mistreating God's World and all that is in it, for all that we have done and do to feed our greed rather than our need. This will involve prayer, a turning away from sinful, selfish paths to the paths of righteousness and to a change of attitude and behaviour involving everyday lifestyle choices.

This will involve both prayer and care, our words and actions. Our talk must be matched by our walk. Prayer, resolutions and conferences are important; so too are everyday actions, life-style choices and behaviour which is mindful of our global neighbours. As James said, Faith without works is dead.

The following are some suggestions for practical action for churches and members of PCI.

[A] CHURCHES

Download a copy for the Environmental Audit of the Congregational Consultation from the PCI website, fill it in and see what your congregation can do to reduce the damage to God's Creation, reverse the trend of wastefulness and help restore God's wonderful world.

[B] MEMBERS

[i] *Remember it's God's World.* Always be aware that the earth is the Lord's and everything in it. That includes people, animals, the soil, plants, everything. Despite Climate Change, it's still a wonderful world. God takes joy in His creation and His disciples can do so too. So enjoy a regular walk in the great outdoors and thank God for the wonder of His creation.

[ii] *Reduce, reuse, recycle.* Do we really need all the 'stuff' we have? If we're finished with it, could it go to a charity shop so that someone else can use it? Recycling a tin can saves 75% of the energy needed to make steel from virgin materials.

[iii] *Transport.* Use public transport if feasible; for short journeys walk or cycle if possible. Lobby politicians to promote the development of shared use paths along more roads so that more people can feel safe to walk and cycle. If we must use a car, use it as little as possible and get the most energy efficient one you can afford.

[iv] *Home.* Can we reduce our carbon footprint by improving the insulation properties of our homes? Could we turn the heating down several degrees and wear an extra layer of clothes in the home? Switch to a renewable

energy provider, use low energy light bulbs. Would it be possible to add some renewal energy source to our homes such as solar or photo-voltaic panels?

[v] *Be a Steward of Creation.* Pray for those badly affected by climate change, for governments to work hard to tackle the problem and for all of us to respond by changing our lifestyles. And make sure the prayer leads on to action; prayer and care go together.

6. SUMMARY AND CONCLUSION

Whatever the extent of climate change, God's Word is clear that:

1. This earth belongs to God,
2. He has given human beings the privilege and responsibility to use and care for His creation, and
3. We must love our neighbours as ourselves by not behaving in ways which harm them, and by behaving in ways which help them and contribute to their well-being.

Now is the time to prepare for Jesus coming again, back down to the earth to complete the work of re-creation. The Good News is that ultimately creation will be reconciled to God in and through the saving power of the Cross.

For God was pleased to have all his fullness dwell in him, and through him to reconcile to himself all things, whether things on earth or things in heaven, by making peace through his blood, shed on the cross.
(Colossians 1 v 19,20)