

Christian ministry in a changing climate

(A report from the Social Issues Executive.)

Introduction

1. At its meeting on 19 February 2007, Standing Committee requested the Social Issues Executive ("SIE") to prepare a report outlining "a Christian understanding of the issues involved [in climate change] and the potential impact on the life of our churches under different climate change scenarios," "recognizing that climate change could create considerable social problems as well as significant opportunities for the Christian mission in Sydney, New South Wales, Australia and around the world".

2. The SIE thanks the Standing Committee for the opportunity to report on these matters. This report is an extended version of the brief report supplied for the August meeting of the Standing Committee.

3. Several factors make it difficult to think about climate change. The issue can invoke fear; but sustained media attention has probably resulted more in 'climate change fatigue'. Furthermore, a cooler Sydney winter and the switch to a *La Niña* cycle of winter rain makes the problem seem much less urgent than during February's heat.

4. We also face a difficult knowledge-problem on climate change. Some knowledge-problems have to do with too little information: a key datum is missing that will unlock the puzzle once found. But when dozens of opinions, studies, rumours, factoids and reactions surround us, there is too much information, and the mystery resides in where to begin and in how to stitch it all together meaningfully. Our human creaturely limitation makes us tend to 'run for cover'.

5. This report will proceed in seven sections:

1. The case for human-induced climate change.
2. The case against human-induced climate change.
3. The IPCC Fourth Assessment Report.
4. Implications for Australia.
5. Christian responses.
6. Climate change and the loving Lordship of Christ.
7. Ministry considerations.

The case for human-induced climate change

6. At the risk of massive oversimplification, let us quickly review the general claims of climate change science. (Contrary claims are listed in §2.)

- The earth is warmed by short-wave energy from the sun. Like all warm bodies, the earth then re-emits long-wave infrared radiation. Much of this radiation goes back into space.
- But further warming occurs when molecules in the atmosphere redirect some of this infrared radiation back to the earth's surface. This effect is highly desirable: it prevents the earth from being a frigid, lifeless rock. But if the atmosphere traps too much of this radiation, 'global warming' (mediated by a 'greenhouse effect') occurs. Changes to climate follow.
- There are straightforward physical reasons why carbon dioxide (CO₂) and the other greenhouse gases trap heat. These molecules are 'tuned' to absorb and re-emit infrared radiation. This radiation is re-emitted in random directions. Some will always be remitted upward and outward into space, but some of this radiation is redirected toward the earth.
- Increased atmospheric CO₂ will redirect more infrared to the earth, so further warming it. But the relationship between CO₂ and warming is logarithmic, not linear: increases in concentration produce progressively less direct warming. (The other main greenhouse gas, methane, is in the atmosphere at less than one-hundredth the level of CO₂. However its warming effect is linearly related to its concentration.)
- But increased water vapour, a reduced 'albedo' or reflectivity of the earth as ice melts, and the release of methane from melting tundras, are among other effects that will amplify warming.
- The post-industrial atmospheric CO₂ concentration has spiked at a rate, and perhaps to a level, not seen in thousands of years. Atmospheric CO₂ has been carefully measured since the 1950s, and scientists have several ice-core samples that can be used to determine ancient levels. See graph, right, although noting the exaggerating effect of each graph's left axis not beginning at zero.

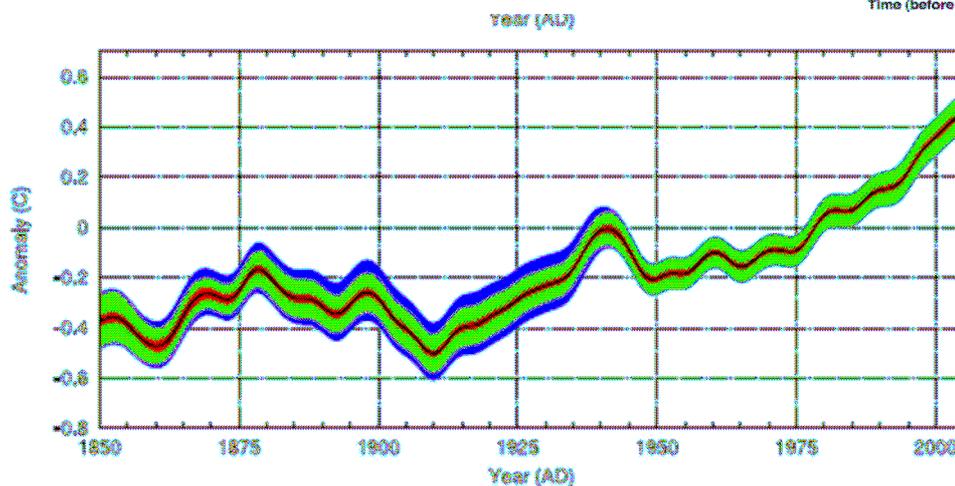
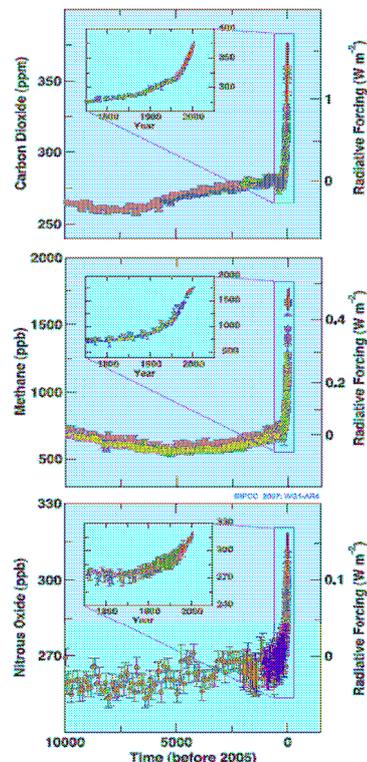
(From IPCC WG1 AR4 Report p3)

- As theory has predicted, the average temperature of the earth has measurably warmed a little, by a mean of about 0.7C in the past century. This rise can be seen in the graph below, a summary of 3.7 million observations made around the globe on land and sea since 1850. The ‘anomaly’ axis represents the difference between observed and ‘normal’ temperatures (using an average of 1961-1990 temperatures). The coloured banding indicates the possible ranges of all known error-types, which are less than the inexorable rise in temperature.

(Source: Brohan, P., J.J. Kennedy, I. Harris, S.F.B. Tett and P.D. Jones, 2006: ‘Uncertainty estimates in regional and global observed temperature changes: a new dataset from 1850.’ *J. Geophysical Research* Vol. 111, D12106, doi:10.1029/2005JD006548; p. 11 & passim.)

- Many effects of warming are observed. Deposits of ice across the globe are measurably melting; species that live in temperate climates are receding to higher latitudes; and so on.
- The ‘smoking gun’ for all these changes is most likely to be the injection of CO₂ into the atmosphere through sustained use of fossil fuels, changes in land-use patterns, and cement production. On this view, global warming and pursuant changes to climate are ‘anthropogenic’—that is, human in origin.

CHANGES IN GREENHOUSE GASES FROM ICE CORE AND MODERN DATA



The case against ‘anthropogenic’ climate change

7. We noted above the difficulty for limited humans to comprehend a mass of data. Climate change sceptics interpret that mass differently. (It would be fairer simply to list sceptical arguments here; but for the sake of brevity, we add the rejoinders of climate change proponents in brackets.)

- Sceptics point to conflicting data to claim that the earth is not warming in line with theoretical predictions. For example, the 1940-1975 dip in average global temperatures does not match the theoretical predictions. (It is now generally accepted that this dip was an artefact of the ‘global dimming’, caused by the aerosol pollutants that were eradicated from the 1970s.) They also suggest that temperature rises in the past 150 years are not unusual within datasets covering the previous several thousand years, such as are drawn from tree rings, historical records, ice cores, lake sediments and corals.

- Although sceptics generally accept that the earth has undergone post-industrial warming, they believe it can be attributed to natural causes, such as natural global oscillations and/or changes in solar activity. They dispute the claim that climate change is anthropogenic. (Climatologists argue that mathematical and computer-based climate models cannot account for observed global warming using solar inputs alone.)
 - Not all sceptics accept that the current atmospheric CO₂ concentration is unusually high or dangerous. This is an argument in part over the proper interpretation of ice core data, given the complexity of the carbon cycle: CO₂ can produce warming, and warming from other causes can release CO₂ from land sources and oceans. (Whatever we make of this debate, it is probably true that the *rate* of the recent rise is unprecedented, hence likely to continue well beyond any historic level unless mitigated.)
 - Some point to the logarithmic relationship of CO₂ concentration to heat-trapping, and argue for a 'saturation effect': further increases in CO₂ will have a negligible impact on warming. (This theory can only be tested by increasing atmospheric CO₂—a risky proposal. Neither does the theory take into account the complex relationship between CO₂ increases and other factors that may amplify warming, such as ice melt, water vapour, and methane.)
 - The emerging consensus that human activity has triggered climate change is, sceptics believe, a form of 'group-think'—an intellectual fad that will come and go; and some argue that a 'runaway train' of politics and government funding has created a cadre of climatologists, environmentalists and others with a vested interest in climate change. (This suspicion-based *ad hominem* argument easily cuts both ways: climate change sceptics can be portrayed as intellectual dinosaurs, greedy industrialists, or sold out to fossil-fuel interests. Such claims—made by either side—are only a discussion-stopper.)
 - Sceptics worry that action against climate change will cause severe economic damage, a *clear and present* danger that they think outweighs the *possible future* dangers of climate change. (Some climate change proponents agree, and imagine the kind of mitigation and adaptation that can liberate human ingenuity into new markets. Others look forward to a new kind of community life, which is no less 'prosperous' than our present life but is not confined to our current econometrics of 'prosperity'.)
8. The SIE continues to assess, and generally respects, arguments sceptical of human-induced climate change. Sceptical arguments are always important, and should always be weighed carefully by those who seek truth. Climate change sceptics perform the important role of testing the observations and arguments of climate change proponents.
9. However we are not yet persuaded by any of these sceptical challenges. The rebuttals of the sceptical positions (which we have only touched on) seem convincing. History may prove our judgment wrong; but given the present state of knowledge, it would seem imprudent to proceed as if sceptics are correct.

The IPCC Fourth Assessment Report

10. The present state of knowledge has been collated by the Fourth Assessment Report ('AR4') of the Intergovernmental Panel on Climate Change (IPCC). Established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), the IPCC provides at regular intervals an assessment of the state of knowledge on climate change. Three key working groups (WGs) have delivered AR4 in three sections:

- '**The Physical Science Basis**' (WG1) assesses the scientific aspects of the climate system and climate change.
- '**Impacts, Adaptation and Vulnerability**' (WG2) assesses the negative and positive consequences of climate change, the vulnerability of socio-economic and natural systems to it, and options for adaptation.
- '**Mitigation of Climate Change**' (WG3) assesses options for limiting greenhouse gas emissions and otherwise mitigating climate change.
- A '**Synthesis report**', bringing together the findings of all three working groups, is planned for November 2007.

11. The full reports of the first three WGs, numbering thousands of pages, are now available at www.ipcc.ch, along with the more manageable Summary Reports (upon which most media comment is based).

12. In a public seminar at the University of NSW, Dr Scott Power (Australian Bureau of Meteorology Research Centre) described these reports as 'magnificent'. A lead author in the "Impacts" report, Mr Kevin Hennessy (Climate Impacts and Risk Group, CSIRO Marine & Atmospheric Research Centre), described the four-year process behind the report he was involved in. The groups first gathered all the relevant and peer-reviewed studies and datasets that they could find, and put them together over a succession of four draft reports. The first three of these four drafts were reviewed by forty expert scientific review editors; the last two of the four drafts were also reviewed by government representatives. Over 2000 comments were received from governments and scientists, and IPCC responses to these comments are transparent and traceable. Hennessy described this process of review as one of the most comprehensive in the world.

13. It has become harder to maintain scepticism in the light of these reports, and we note that many sceptical arguments have not yet engaged with the Fourth Report and are based on the Third Assessment Report (TAR) of 2001. In the judgment of the SIE, and to the extent of our limited ability to engage with these long and highly technical documents, each is an impressive piece of scientific literature. Conservatively stated claims are argued from massive quantities of evidence. A judicious, transparent and consistent measure of probability is used to summarise and interpret scientific opinion. We have not yet been able to see any merit in various attacks on the IPCC or its work.

14. The first two of the AR4 reports, by WG1 and WG2, are quite unequivocal that the earth is warming, that human activity has significantly contributed, and that many planetary systems have very obviously been affected. The third AR4 report by WG3 contains a quite remarkable compendium of all that is available now, and what could be worked on in future, to mitigate the effects of climate change. As yet, we know of no good reason why Christians would not be guided by this expertise.

Implications for Australia

15. It has long been known that Australian weather patterns pivot on the 'El Nino Southern Oscillation' (ENSO), where a decade (approximately) of hotter weather and reduced rainfall alternates with a similar period of cooler, wetter weather. It so happens that a switch to the cooler '*la Niña*' part of the cycle is probably occurring right now, in the second half of 2007.

16. We should not confuse this cooler period with a lessening of climate change impacts, as the ENSO itself may be exhibiting changes in its extremes.

17. The executive summary of the IPCC's best estimates for climate change impacts in Australia and New Zealand is reproduced overleaf. This section of the IPCC report is authored mainly by Australian scientists.

18. The most salient impact upon south-east Australia is already occurring. Australian rainfall has always been at the lower end of viability for commercial agriculture. Climate change will increase water insecurity and reduce agricultural productivity. Most of Australia has significant adaptive ability, but some communities do not (and the report's authors note remote indigenous communities in this connection). Christians may find themselves offering emergency assistance to affected rural and indigenous communities.

19. For urban communities, knock-on economic effects, extreme fire- and heat-wave events, reduced water supply and weather-related infrastructural damage may create significant anxieties. Christians will find themselves interpreting these events theologically and offering hope. Christian pastors will also need to help worried members of Christian communities.

20. We will return below to the implications of climate change for Christian ministry. Overleaf can be found the summary of the IPCC's estimates for climate change impacts in Australia (and New Zealand).

Executive summary of likely climate change impacts upon Australia and New Zealand, from the IPCC Fourth Report. Reproduced from Hennessy, K., B. Fitzharris, B.C. Bates, N. Harvey, S.M. Howden, L. Hughes, J. Salinger and R. Warrick, 2007: Australia and New Zealand. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 507-540. Online: <http://www.gtp89.dial.pipex.com/11.pdf> (accessed 15/08/2008).

Executive summary

Literature published since the IPCC Third Assessment Report confirms and extends its main findings (high confidence).

There is more extensive documentation of observed changes to natural systems, major advances in understanding potential future climate changes and impacts, more attention to the role of planned adaptation in reducing vulnerability, and assessments of key risks and benefits [11.1].

Regional climate change has occurred (very high confidence).

Since 1950, there has been 0.4 to 0.7°C warming, with more heatwaves, fewer frosts, more rain in north-west Australia and south-west New Zealand, less rain in southern and eastern Australia and north-eastern New Zealand, an increase in the intensity of Australian droughts, and a rise in sea level of about 70 mm [11.2.1].

Australia and New Zealand are already experiencing impacts from recent climate change (high confidence).

These are now evident in increasing stresses on water supply and agriculture, changed natural ecosystems, reduced seasonal snow cover, and glacier shrinkage [11.2.1, 11.2.3].

Some adaptation has already occurred in response to observed climate change (high confidence).

Examples come from sectors such as water, natural ecosystems, agriculture, horticulture and coasts [11.2.5]. However, ongoing vulnerability to extreme events is demonstrated by substantial economic losses caused by droughts, floods, fire, tropical cyclones and hail [11.2.2].

The climate of the 21st century is virtually certain to be warmer, with changes in extreme events.

Heatwaves and fires are virtually certain to increase in intensity and frequency (high confidence). Floods, landslides, droughts and storm surges are very likely to become more frequent and intense, and snow and frost are very likely to become less frequent (high confidence). Large areas of mainland Australia and eastern New Zealand are likely to have less soil moisture, although western New Zealand is likely to receive more rain (medium confidence) [11.3.1].

Potential impacts of climate change are likely to be substantial without further adaptation.

- As a result of reduced precipitation and increased evaporation, water security problems are projected to intensify by 2030 in southern and eastern Australia and, in New Zealand, in Northland and some eastern regions (high confidence) [11.4.1].
- Ongoing coastal development and population growth, in areas such as Cairns and south-east Queensland (Australia) and Northland to Bay of Plenty (New Zealand), are

projected to exacerbate risks from sea-level rise and increases in the severity and frequency of storms and coastal flooding by 2050 (high confidence) [11.4.5, 11.4.7].

- Significant loss of biodiversity is projected to occur by 2020 in some ecologically rich sites, including the Great Barrier Reef and Queensland Wet Tropics. Other sites at risk include Kakadu wetlands, south-west Australia, sub-Antarctic islands and alpine areas of both countries (very high confidence) [11.4.2].
- Risks to major infrastructure are likely to increase. By 2030, design criteria for extreme events are very likely to be exceeded more frequently. Risks include failure of floodplain protection and urban drainage/sewerage, increased storm and fire damage, and more heatwaves, causing more deaths and more blackouts (high confidence) [11.4.1, 11.4.5, 11.4.7, 11.4.10, 11.4.11].
- Production from agriculture and forestry is projected to decline by 2030 over much of southern and eastern Australia, and over parts of eastern New Zealand, due to increased drought and fire. However, in New Zealand, initial benefits to agriculture and forestry are projected in western and southern areas and close to major rivers due to a longer growing season, less frost and increased rainfall (high confidence) [11.4.3, 11.4.4].

Vulnerability is likely to increase in many sectors, but this depends on adaptive capacity.

- *Most human systems have considerable adaptive capacity:* The region has well-developed economies, extensive scientific and technical capabilities, disaster mitigation strategies, and biosecurity measures. However, there are likely to be considerable cost and institutional constraints to the implementation of adaptation options (high confidence) [11.5]. Some Indigenous communities have low adaptive capacity (medium confidence) [11.4.8]. Water security and coastal communities are the most vulnerable sectors (high confidence) [11.7].
- *Natural systems have limited adaptive capacity:* Projected rates of climate change are very likely to exceed rates of evolutionary adaptation in many species (high confidence) [11.5]. Habitat loss and fragmentation are very likely to limit species migration in response to shifting climatic zones (high confidence) [11.2.5, 11.5].
- *Vulnerability is likely to rise due to an increase in extreme events:* Economic damage from extreme weather is very likely to increase and provide major challenges for adaptation (high confidence) [11.5].
- *Vulnerability is likely to be high by 2050 in a few identified hotspots:* In Australia, these include the Great Barrier Reef, eastern Queensland, the South-West, Murray-Darling Basin, the Alps and Kakadu wetlands; in New Zealand, these include the Bay of Plenty, Northland, eastern regions and the Southern Alps (medium confidence) [11.7].

Christian responses

21. It may be helpful to pause and consider some Christian responses to climate change science. The following table simplifies and summarises some recent debate among U.S. evangelicals:

<i>Global warming is mainly natural, and policy initiatives should protect the economy:</i>	<i>Global warming is mainly anthropogenic, and policy initiatives should seek to halt it:</i>
Interfaith Stewardship Alliance (ISA) http://www.interfaithstewardship.org <i>Key document:</i> 'A Call to Truth, Prudence, and Protection of the Poor: An Evangelical Response to Global Warming.'	Evangelical Climate Initiative (ECI) http://www.christiansandclimate.org <i>Key document:</i> 'Climate Change: An Evangelical Call to Action.'
Authors of an open letter to the NAE http://www.citizenlink.org/CLNews/A000004114.cfm Main spokesman: Dr James Dobson	National Association of Evangelicals (NAE) http://www.nae.net Main spokesman: Rev. Richard Cizik

22. It is worth noting where ECI and ISA agree. Both groups think that global warming is occurring; both are concerned for the plight of the poor; both want to be guided by scientific evidence; and both think that humanity is called to rule and to nurture God's creation. However they disagree on:

- the causes of global warming;
 - the best way to assist the poor (ECI wants to halt rising sea-levels and changes to rainfall patterns, whereas ISA prefers the kind of abundant economic activity that will raise standards of living); and
 - the way to read the scientific evidence.
23. They also appear to have a more subtle disagreement about Genesis:
- Genesis 1 emphasizes humanity's mandate for a monarch-like dominion over the creation. The commands to 'subdue' and 'rule' in Genesis 1:28 are very strong words (so much so that they offend some environmentalists). But does this command envisage us bending every aspect of the earth to our will, or does it simply acknowledge the way humans are able to use the earth to their advantage to meet their basic needs (as vv29-30 imply)? Both groups seem to lay a different weight upon the concept of 'dominion', and to draw different conclusions from it.
 - Genesis 2 emphasizes humanity's mandate to work the earth and watch over it. The man, and later the woman, remain embedded in and dependent upon the earth from which they are taken. The ECI and the NAE therefore speak of 'creation care' to describe this relationship, whereas the ISA speaks of 'stewardship' to describe it. Again, the emphasis is subtly different: we 'care' for things as an end in themselves, but we are 'stewards' of what we may use for human purposes.

24. In an interesting cameo of these differing views, the BBC's Washington correspondent Matt Frei visited two evangelical universities in Virginia and found these two completely different positions on climate change represented in each place. 'Two evangelical universities use the same quotations from the same Bible to make exactly opposite points of view about global warming. What could give a clearer insight into the opposing souls of America?'¹

25. These divided Christian communities reflect, he suggests, political divisions in the wider US community. But in the United Kingdom, a political consensus in favour of mitigating action against climate change seems to have found a greater uptake among UK Christians than among US Christians. An example can be seen in the Church of England's recent booklet, *How many Christians does it take to change a light bulb?*, which promotes grass-roots amelioration of climate change.

26. Christians do tend to reflect their political milieu. That need not always be a problem; however we do well to keep seeking for an authentically theological response that may differ from that of all other participants in the discussion.

27. Here is the SIE's view at this time:

1. Much Christian debate, and much skeptical response, has not engaged with the IPCC's

¹ Frei, Matt, 'Evangelicals split on global warming,' *BBC News* 15 May 2007. Online: <http://news.bbc.co.uk/2/hi/americas/6648265.stm> (accessed 15/8/2007)

- AR4, mainly asserting gaps and deficiencies in the 2001 TAR. There do not seem to be strong reasons to doubt the IPCC finding that climate change is happening, that it is serious, and that human activity has been a significant cause.
2. Even if global warming is not anthropogenic, as some still argue, it makes no sense to add to it by continuing to quickly load up the atmosphere with the very high levels of a known heat-trapping substance. To do so would amount to a vast and recklessly uncontrolled experiment.
 3. Simply that our neighbour is worried is due cause to think and act seriously. But worse, some neighbours live in regions that will be disastrously affected by climate change, such as the islanders losing lands to a rising sea, or African farmers under intense new pressures due to changing rainfall. Care for all these neighbours is reason enough to get involved.
 4. In every area of life, we pass a point where some scepticism becomes too much scepticism. Whether or not we can trust our work colleagues; whether our loved ones really love us; whether Christian faith is really true – in all these areas, too little scepticism is gullibility, but there comes a time when too much scepticism is a crippling disconnection from reality. We believe that such a time has arrived when it comes to interpreting the evidence to conclude a human contribution to climate change.
 5. The pressure for change is unlikely to be a passing fad. Extensive consideration, argument and disagreement is inevitable on the next steps to be taken; and suggestions and solutions will be tried and will fail. But this matter is on the agenda for the foreseeable future. We see no reason why Christians, confident in God and with love for their neighbours, wouldn't participate in what lies ahead.
 6. In the event that proponents of climate change are wrong, carefully effected mitigation and adaptation strategies (such as careful use of fossil fuels, development of renewable energy sources, energy efficiency and conservation of water) are not imprudent. For Christians, such practices will simply reflect a rejection of wastefulness and a return to older habits of appropriate frugality which have, until recently, been a mark of contented Christian lives.

28. However the SIE's current position could be taken as reflecting an emerging consensus within the wider Australian political community about climate change. Is it a bad thing when Christians seem to be shaped by the discussion that surrounds them? The only way to tell is by reference to a theological position shaped by the Bible.

Climate change and the loving Lordship of Christ

29. The loving Lordship of Jesus Christ is deeply relevant to climate change. But in addition, our human creaturely limitations are at work in our thinking and response. Our enjoyment of Jesus' Lordship does not lessen that knowledge-problem we share with frail humanity, where so *much* information about climate change is difficult to stitch together meaningfully.

30. Hence Christians may respectfully listen to and be guided by the work of scientists, economists, governments, oppositions and others in the discussion about climate change. But our joy in the loving Lordship of Jesus Christ puts us in a position to bring something unique to this discussion. Indeed anyone who truly cares about the environment does themselves and the environment a very great deal of good, also to care deeply about Jesus.

31. Consider this moment in the Gospel of Luke [Luke 24:39]: "Touch me and see; a ghost does not have flesh and bones, as you see I have." A fantastically significant datum and possibility is buried here.

32. The ancient Hellenistic milieu, in which the Gospels were written, had almost the reverse sensibility about the physical environment than our own. The transitory nature of the material world, and physical existence in a body, were not considered impressive. The best thing that could happen (so they thought) was for a person to throw off the shackles of material nature and ascend to a better, more real and more 'spiritual' continuum. Indeed a story designed to impress people about Jesus would not in the first instance have reached for a bodily resurrection, just as the evidence for it would not be made to pivot upon the testimony of women.

33. But like the testimony of those women, the physicality of Jesus is squarely at centre-focus, and his return from death takes the same form as his physical, real, material walk through life. **Jesus' resurrection endorses and affirms the stuff of our embodied existence**, and the affirmation of God's creation seen here continues to be a central element in Christian reflection about the Lord Jesus Christ. That can be seen in the hymn of Colossians 1:15-17.

He is the image of the invisible God, the firstborn over all creation. For by him all things were created: things in heaven and on earth, visible and invisible, whether thrones or powers or rulers or authorities; all things were created by him and for him. He is before all things, and in him all things hold together.

34. These extraordinary claims reflect a synthesis of what was gradually revealed about Jesus in his extraordinary life, then death, then resurrection; and these claims only become possible after the Resurrection. The one who created all now also holds it together. He has the most seriously vested interested in the creation, because not only is it made by him, it is *for him*. This is the best news our environment could ever have: that someone over and under it all continues to care.

35. It would also mean that the one who cares also rules every throne or power or ruler or authority – or corporation, or developer, or government, or lobby group, or energy industry representative, or fossil fuel vested interest. We could equally list here those environmentalist vested interests that climate change sceptics worry about.

36. This sovereignty by the one who in rising from death *retained* a real, material body, means that Christianity's own Lord Jesus Christ is the best news there is for planet earth.

37. But anyone who cares about the natural world and who has looked into the social complexities of the climate change debate, does not always see evidence that there is one who holds it together and rules all people. From the perspective of our creaturely limitation, we see human beings running amok, often exploiting the environment for short-sighted ends. But we find that there is more to the story of Jesus Christ's Lordship [Col. 1:19-20]:

For God was pleased to have all his fulness dwell in him, and through him to reconcile to himself all things, whether things on earth or things in heaven ...

38. Jesus Christ not only holds it together, but is 'reconciling' and healing what is broken. The grandest story-arc of the Bible has Jesus Christ not in the business of rescuing people *from* creation, but of *rescuing* creation (and we who are a part of it).

39. We snatch a glimpse of ourselves in the story of planetary brokenness when the apostle speaks of what breaks the human relationship with the planet. Christ reconciles to himself all things, "whether things on earth or things in heaven by making peace through his blood, shed on the cross" (v20). That method of reconciliation, given in the Christian shorthand of 'the cross', is then explained a little further [Col. 1:21-22]:

Once you were alienated from God and were enemies in your minds because of your evil behaviour. But now he has reconciled you by Christ's physical body through death to present you holy in his sight, without blemish and free from accusation ...

40. Here we see in a nutshell what is wrong with the planet, and what it needs. Alienation from God and mental hostility toward God are intricately interwoven in the aggregate called 'our evil behaviour'—also a biblical shorthand for the way human beings are driven by voracious desires to rapaciously consume whatever we fixate upon as good. Human concupiscence knows no bounds: whatever strikes us as good, we must have it, and have more of it, seemingly without limit. This biblical diagnosis of the cancerous nature of our idolatrous cravings for what is basically good lies at the human heart of climate change debate.

- No matter how much coal and oil is taken from the ground, we want more.
- No matter how much forest is chipped and land cleared, we need more.
- No matter how abundant the earth is for grain and crops, we must have more yield.
- No matter how many trinkets an individual has for comfort, we must have more.

41. Christianity's diagnosis of utter human rapacity, and of basically good desires gone haywire, is a fundamentally necessary contribution to climate change debate. Accordingly, Jesus Christ's starting point for repairing the planet is to change the *individual human hearts* that drive this excessive consumption.

42. His death frees people in the grip of this evil behaviour, and through Christ, people are made 'holy in God's sight' 'without blemish' and 'free from accusation'. In other words, a new start with the Lord of creation begins to tame crazed desires. We begin to learn contentment, and the possibility of a life of joy, where each person is no longer defined by his or her acts of productivity or consumption. Those who have been reconciled by God can begin to lead the way in this.

43. Even for unbelievers, the possibilities if this account is true are simply breathtaking. In this respect, the onset of climate change actually opens important new evangelistic opportunities. By pointing to the

Jesus of Christianity, Christian leadership can bring hope to Australians, because Jesus is by far the best ally that our planet could hope for.

44. In a movement as large as Christianity, there will be the need for respectful disagreement with those Christians who have somehow concluded that the planet exists primarily for human consumption. They live in a culture that endlessly magnifies human desire, and (the SIE would argue) haven't quite escaped it yet. Christians need to *gently* remonstrate with those other Christians who do not as yet see any need for environmental care.

45. But Christians hold out to the world a joyful hope in the Lord Christ, who does not abandon his world and who continues to uphold it daily, and continues to work his plan of reconciling all things. Human folly can do much damage, but this Lord keeps caring nonetheless. He keeps giving skilled people to help, such as the scientists of the IPCC. He forgives and changes foolish, greedy people.

46. Many are the moments in the biblical story God the Father or Jesus Christ declare, 'do not be afraid'. There are good reasons to think that God still wants us to trust him as we think and act on climate change, and not to be afraid.

Ministry considerations

47. Given the Lordship of Christ, yet given our human creaturely limitation, we will now consider some possible modes of ministry that we might engage in.

The obvious: mitigation debates.

48. The most obvious point we might think we should raise our voices will be the mitigation debates. These are public policy debates about what should be done in response to climate change, and concern such questions as the best emissions trading schemes, energy alternatives, land management practices, city planning practices for energy efficiency, and so on. We will briefly touch upon just two of these.

- **Emissions trading:** the Prime Ministerial Task Group on Emissions Trading proposes that emissions trading be in place by 2012, in order to effect market-based abatement of those emissions that are the least costly to eliminate first. This 'softly-softly' approach has many details yet to be decided. It is designed not to scare the (business) horses offshore, and is very much less radical than the Labor Party's plan to commence emissions trading in 2010 for a 60% cut in emissions within 50 years.

It is easy for proponents of climate change to be negative about the Task Group's delicate handling of the matter. Yet we do need to respect the expertise of those who have a real sense of the mess that can be made of real people's lives if we suddenly implement the wrong kinds of economic change.

- **Energy alternatives:** tangled up in the discussion of emissions trading is the possibility of introducing new energy sources and cleaning up old ones. Possibilities range from a big new nuclear infrastructure, and carbon capture and storage on coal-fired power stations, through to local distributed solar, wind, tidal and geothermal options. (In reality we may end up with mix of all of these.)

49. Do Christians have something to say in these mitigations debates? Nothing is untouched by the Lordship of Jesus Christ, but everything is touched by our creaturely limitation. Wisdom may make apparent some important thing that needs to be said; yet we may also watch while some of these debates are played out by those who have the technical skill to conduct them, since one way that the Lord Christ cares for his world is to enable different people to become skilled in different aspects of his world. Christian leaders have not abdicated their role to humbly watch them and learn for a time.

50. It may become evident, however, that moral questions need to be raised about the propriety of some emissions trading scheme, the prudence of some power station, and so on.

The not so obvious: hidden people.

51. But to minister the loving Lordship of Jesus to modern Australia will take less obvious forms among the following kinds of people.

- **The excluded:** There will be significant social changes in response to climate change, whether by adaptation to it, or by mitigation of it. Those changes will result in social exclusion for some. We have already observed the way Christians might be called upon to offer assistance to struggling rural or indigenous communities. Beyond Australia, the islander's home may be swamped (e.g. in Tuvalu or the Maldives); the agriculturalist's arable land is already diminishing (e.g. in Darfur); and severe weather events will create hardship and suffering for whoever lives in poor tropical areas.

Refugees from environmental changes are likely to become the next major focus of need for governments and NGOs.

But closer to home and less obvious might be the rural NSW farmer, or the Newcastle coal-miner or power-station worker. On some scenarios, their options shrink to nothing and climate change has claimed them as surely as a developing world victim. Christians will be those with the eyeballs to see the excluded.

- **The despairing:** We do not have to look far to see those who are already given over to helpless, hopeless apathy about climate change. One study has found that alarmist messages about climate change, which have been calculated to stiffen political resolve, are actually self-defeating.² Christians, who know the folly of humanity but also the loving lordship of Jesus, are those who can acknowledge that there is a serious problem but that there are good reasons to hope, and that working together to mitigate it can be a good and appropriate thread within all our lives.

Of course as we mentioned above, the loving Lordship of Jesus is also the best possible news for the planet, and the churches' central calling to point to him and invite people to know him remains the greatest blessing we can offer. To speak of the evangelistic possibilities that emerge from climate change is very far from opportunism or consequentialism, for at its worst, the spectre of climate change catastrophe becomes a kind of false eschatology that destroys hope.

We should also note in this connection that **reactionary Christian climate-change denial** (unless based in scientific fact) **only increases this lack of hope, because it implies that the prospect of climate change is to be feared.** We do better to admit its possibility and to assist in its amelioration—but always joyously pointing to the One in who truly grounds our hope.

- **The voiceless:** That our neighbour is worried is cause enough to think and act seriously about climate change. In this instance, 'our neighbour' includes our children and youth, who are growing up in fear of this spectre in the same way that many of us once endured the fear of nuclear annihilation. That fear had to be endured because it was real, and this fear was used by God to preserve humanity from itself.

Christians owe it to children to tell the truth, and the truth might include an admission (and even an apology) about greedy adults who have failed; and the truth might include a promise (and even some repentance), that adults are now trying to fix it, and won't just dump the problem on kids.

If we may cautiously convey an impression: people over 50 are often dismissive of environmental concerns in general, and climate change in particular. But people under 30 are in general absolutely convinced that these are the defining problems for their future. It follows that older Christians, particularly those in leadership, may have to think carefully about their tone and message if they are not to alienate younger Christians, and lead them effectively.

In this connection the SIE commends lessons on the environment such as that found in the CEP publication *Connect* (for upper primary), which exemplifies a theological treatment of this issue of such great concern for many children. We hope examples of it can be multiplied for youth and young adults.

- **The paralysed:** Never in human history have governments been asked to make such long-sighted policy than in response to climate change. We are asking and expecting our leaders to think and act in ways that may affect human society decades from now. But they are frail human creatures, and sometimes given to folly. Christians are the best friend of government at this point. We are whistle-blowers on folly, whether its take the form of paralysed indecision, or the paralysis that comes from craven sell-out to vested interest—or even perhaps panic-driven overreactions to climate change that may do more harm than good. We are also the ones who pray for, thank and support our leaders when they make the judgment calls that are needed for the distant future, whether or not we agree with the policy specifics.
- **The forgotten:** Widespread moral interest in climate change sometimes seems to give people permission to forget other very serious moral failures in our society. For example the treatment of prisoners in the state of NSW is a problem that few are willing to address; and the profoundly disabled and their carers always remain relatively unsupported.

² Ghosh, Pallab, 'Climate change messages are "off target",' *BBC News* 15 May 2007. Online: <http://news.bbc.co.uk/2/hi/science/nature/6655449.stm>.

Life goes on in many areas, and Christians may be the ones to point to what is being forgotten. Serious attention to climate change needs to be complemented by proper attention to other important concerns.

The non-negotiable: church and agency environmental policy.

52. Ministry responses to climate change will also have to include appropriate implementation of mitigation and adaptation strategies.

53. Churches and diocesan agencies will need to reduce their 'carbon footprint', conserve water, and adopt environmentally aware practices. These changes will require organisational and culture-change that will seem burdensome and unpleasant at first, and our human creaturely limitation will cause us to want to run for cover (often disguised under dismissive statements of contempt).

54. However there is no point fighting this eventuality: community expectation will quickly catch up with our organisations. It makes more sense for a denomination's organisations simply to join together 'ahead of the curve', sharing advice and ideas on how such changes can be implemented.

55. But a theological problem (and opportunity) presents itself. Our community is already resorting to a blunt moralism, where all acts of fuel-burning are denounced as intrinsically evil. We may strenuously resist this claim: burning a fuel is *not* an evil, since fuel itself is another of God's good gifts. Yet we may still concede the problematic *cumulative* effects of a whole society's fuel-burning (much as we now accept that there are good social reasons not to use backyard incinerators in cities).

56. The SIE plans to produce a short guide listing changes in graduated order, beginning with those that are easy and free, then those that are inexpensive, and those larger capital improvements that may require extra expense. The easy initial changes will quickly generate a sense of achievement that will make subsequent changes easier. Over time of course, churches and agencies will be rewarded with significant savings in utility costs.

57. Sydney Anglicans will also have to decide together to what extent the Church Property Trust will be involved in environmental policy.

58. Not all Christians may agree that environmental necessity demands such changes. But all of these changes will create immediate community goodwill.

59. More importantly, they can easily be construed as a simple commitment not to be wasteful, expressing a kind of prudent and appropriately frugal life that has always commended itself to Christians (until relatively recently). As such they represent a reversal of the voracious human desire that drives sinful human hearts, and which as we observed above, is the cause of much environmental damage.

60. Churches and agencies living 'sustainably' are simply a tangible expression of each Christian community's willingness to live more contentedly. For rather than being defined by our acts of productivity and consumption, our real hope lies elsewhere.

For and on behalf of the Social Issues Executive.

ANDREW CAMERON
Chairman, Social Issues Executive

28 August 2007