

# Discussion Paper - Climate Change

*Investing in a Changing Climate*

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# Summary Position

Christian Super should seek to adopt an approach that cares for the current generation as well as generations to come. Ideally, this will involve investment in areas that reduce human impact on climate change, and underweighting companies that are involved in activities that contribute to climate change.

## 1. Introduction

Climate Change or Global Warming is a major issue in terms of ethical investment, perhaps the major issue today. But it is important, that while we pay attention to the empirical evidence concerning the consequences of climate change put forward by the

*Intergovernmental Panel on Climate Change (IPCC)*, the *Stern*

*Report, An Inconvenient Truth* and also their detractors, we get our bearings and principles from

Scripture. Archbishop William Temple made an important distinction between primary theological

(view of God's character) and anthropological (view of human nature) principles. We would add

ecological (view of creation/nature) principles that are binding upon Christians and the empirical and

policy issues that are not binding and allow for Christian liberty. In between these principles Temple

sought bridging principles or middle axioms that made the broad principles more specific (e.g. that full

employment should be pursued, but this does not tell us whether increased spending or keeping

inflation low is the best way to do this or whether a centralised IR system or AWA system is).

Nevertheless, Christian socially responsible investment is part empirical science, part art, part risk

management or faith. This paper will:

1. Sketch a biblical perspective on environmental stewardship;
2. Sketch the current state of the scientific debate re global warming;
3. Suggest a way forward based on biblical principle and scientific consensus using the Puritan principle that God's two books, Scripture and nature, will not, finally, disagree.

This paper does not pretend to give a definitive answer to the scientific issues. Instead it stands on the shoulders of the scientific consensus concerning human induced climate change, while seeking to address the questions of those who disagree with it. It is written for those caught in the middle trying to responsibly invest in the context of a complex and sometimes confusing multi-disciplinary debate.

## 2. Biblical Environmental Stewardship

### 2.1 True & False Dominion

Our ethical framework provides a biblical grid of relationships – relationship with God, humanity, and the earth. This is based on God's promises made to Abraham in Gen 12:1-3 and is recognised by a wide range of biblical scholars and theologians<sup>1</sup>.

Of these three relationships, it is the earth that has been the most left out. This has led to (especially Western) Christianity often being scapegoated for our environmental problems because it is, in the famous late 1960s words of Lynn White 'the most anthropocentric religion the world has seen'. Ex US

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<sup>1</sup> Goldsworthy, C Clines, Wright, Wolterstorff etc

“This paper does not pretend to give a definitive answer to the scientific issues,”

President Ronald Reagan is quoted as a spokesperson for this view when he allegedly said: ‘When you’ve seen one redwood tree, you’ve seen them all’.

Reagan and White also fail to realise that while Genesis 1-2 has a high view of humanity made in God’s image to rule the world<sup>2</sup> we are not only *kings* (and queens) over creation but *kin* with it . We are not only set *apart* from it we are *part* of it. We have a common origin and destiny with creation

“The ruling king of Genesis 1 and Psalm 8 is at the same time the priestly servant of Genesis 2, a steward of God’s world accountable always to the Owner.”

‘From dust we are and to dust we shall return<sup>3</sup>’. We do not even ‘have a day of creation to ourselves but share the sixth day with the other land creatures’ as Iain Provan says. Even the breath of life breathed into us so we become living beings is used of the sea-creatures and birds and animals<sup>4</sup>. The ‘commonality of all creatures’ is stressed in our shared

Sabbath rest<sup>5</sup> and Job’s magnificent vision in Genesis 38-41.

While ‘dominion’ is a strong term, in context it is explained in Genesis 2 as ‘earth-keeping’ or stewardship – ‘the earth is the Lord’s<sup>6</sup>,’ not our own. We have the sacred work of serving and keeping and guarding the earth as the Lord blesses and keeps us. We do not lord it over the rest of creation, we sacrificially look after it. ‘The ruling king of Genesis 1 and Psalm 8 is at the same time the priestly servant of Genesis 2, a steward of God’s world accountable always to the Owner...’ The great conservationist Noah is a good model of this<sup>7</sup>.

## 2.2 *Jesus as the Servant King of Creation*

Many Christians who are formally Trinitarian informally practice a “Jesus is my friend” theology, ignoring God as Creator. But the first chapter of many New Testament books<sup>8</sup> sets Jesus’ work in the context of the Word’s creative work in the beginning and the new creation now and in the end.

As a human Jesus is also the perfect model of creation stewardship. He does what we haven’t done. Christ or the Son of Man is the crucified servant King, the true Human exercising true Dominion or ruling creation in miracle and parable, crucifixion and resurrection. That is what the resurrected Lord’s claim to have ‘all authority in heaven and on earth<sup>9</sup>’ means. The Great Commission is the fulfilment of the Creation Commission and a crucial part of ‘teaching them to obey everything I have commanded you’. ‘Making disciples’ is making people who rule over the earth in the gentle and just way Jesus does as they ‘go’ about their earthly responsibilities, including ethical investment of their or really His, money.

## 2.3 *Resurrection to dominion in the new heavens and earth*

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<sup>2</sup> See Genesis 1:26-28; Genesis 2:5

<sup>3</sup> Genesis 3:19. See also Genesis 2:17, 19

<sup>4</sup> Mankind in Genesis 2:7; Sea Creatures in Genesis 1:20; Birds Genesis 2:19; Animals Genesis 7:22.

<sup>5</sup> Exodus 20:8-11

<sup>6</sup> Psalm 24:1

<sup>7</sup> Genesis 6:9

<sup>8</sup> John 1, Mark 1:1, Luke 1, Romans 1:20ff, Hebrews 1:3

<sup>9</sup> Mathew 28:18

The Resurrection does not cancel out creation. It renews or renovates creation, like the wonderful restoration of Michelangelo's Sistine Chapel. The term 'new' in 'new heavens and earth' means renovated, as good as new, not brand new or new out of nothing, as if God made a mistake in the first creation out of nothing. The Jesus who is the Last, End or Consummator is also the First or beginning, the Creator<sup>10</sup>.

Jesus is also the true Edenic gardener who breathes the Spirit's new resurrected life into our nostrils again<sup>11</sup>. This resurrected life is bodily life connected to the new heavens and new *earth*, not some kind of Casper the friendly ghost kind of existence or individualistic soul-itary confinement harping around on clouds. It's in our resurrected blood and bones as it was in Jesus.<sup>12</sup>

"The term new in *new heavens and new earth* means renovated, as good as new, not brand new out of nothing, as if God made a mistake in the first creation."

Therefore creation has eternal significance. It is not to be discarded as if it is a set of trainer wheels or worse still, burnt up as if it is evil. Images of burning are images of purification through smelting in a furnace,<sup>13</sup> discarding the dross of evil and revealing the true reality. The cosmic context of the Bible has sadly been forgotten, even in Romans 8 where research shows only 2% of sermons made any effort to set redemption in its full new creation context. In Revelation 21:1-2 the wedding feast of the lamb marries heaven and earth, answering the Lord's Prayer petition for God's will to be done 'on earth as it is in heaven'. The Christian life is not an escapology of going to heaven but an eschatology (last things) of heaven coming down and renewing creation.

To those who find these biblical themes difficult and argue that caring for creation has nothing to do with saving souls we argue that this is a Greek or Platonic view which separates souls from bodies and the earth. It in effect plays favourites within the Trinity, ignoring God as Creator and being either Unitarian or binitarian – focusing on Christ alone or Christ and the Spirit. For many the creation commission to rule and keep creation is the Great Omission.

"The continuing creation-blindness of the church is deeply problematic for those who claim to recognise biblical authority..."<sup>14</sup>

Duane Lifton, President of Wheaton College and a signatory with 85 other evangelical leaders to a 2006 to action on climate change says :

"The evangelical community is quite capable of having some blind spots, and my take is that [climate change] has fallen into that category."

In answer to those who prioritise human needs over environmental needs Lifton says:

"Millions of people could die in this century because of climate change, most of them our poorest global neighbours."

For humans who are kin with creation these two sets of needs are inextricably linked. He is backed up by Stella Simiyu, a globally recognised botanist who notes that environmental degradation hurts the

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<sup>10</sup> See Revelation 1:17

<sup>11</sup> See John 20:15-22

<sup>12</sup> See John 20:24-28; John 21:1-14; Luke 24:36-44 and 1 Corinthians 15:35-38

<sup>13</sup> 2 Peter 3:10-13

<sup>14</sup> Peter Harris, citation needed

poor first and most. Foreign policy experts and military strategists are already preparing for water wars and millions of environmental refugees.

People and the planet can't be divided. A division comes more from humanism than a biblical appreciation of our creatureliness. Ecology and economics, environment and employment issues need to be treated together if we are to reflect a biblically integrated world-view of human being and working in the midst of creation. From a biblical perspective Iain Provan shows how earth-keeping and people-keeping flow together. Many island and coastland areas are already preparing to be environmental refugees.

“The impacts of greenhouse gas emissions will disproportionately affect those societies who have contributed the least to the problem. Low-lying Pacific states, collectively responsible for fewer than 0.6% of the world's emissions, face dispossession. Yet the worst offenders, including Australia and the United States, continue to pollute at historically high levels. Justice demands that wealthy polluters should end their reliance on fossil fuels, and embrace a future based on a fair share of resource use for all.<sup>15</sup>”

“Ecology and economics, environment and employment issues need to be treated together if we are to reflect a biblically integrated world-view of human being ... earth-keeping and people-keeping flow together”

### 3. The Scientific Debate

The Intergovernmental Panel on Climate Change (IPCC) released its Fourth Assessment Report, *The Physical Science Basis of Climate Change*, on February 2<sup>nd</sup> 2007. The report collates the views of nearly 2500 global experts. One-hundred or more Australian scientists contributed.

The IPCC report describes scientific progress towards a more accurate understanding of the nature, causes and future consequences of climate change since its third report six years ago. For the IPCC, ‘warming of the climate system is now unequivocal,’ and it predicts temperature rises of between 1.1° to 6.4° C by 2100 and sea level rises of between 18-58 cm by 2100. It predicts more frequent heat extremes and waves, heavy rainfall and intense tropical cyclones.

The IPCC is now certain that human activity is the ‘smoking gun’: it has ‘very high confidence that the globally averaged net effect of human activities since 1750 has been one of warming’<sup>16</sup>

Few laypeople can follow the scientific details of the case for climate change; we cannot easily follow the spin-off arguments about emissions trading schemes, alternative energy sources, and the economic consequences of making changes; and we have little power over the solutions. We can easily feel helpless and depressed about the whole subject, especially when it is subject to political and spiritual spin.

Broadly we can divide opinion on Climate Change into the Boom, Gloom and For Whom Views ie. Optimists, Pessimists, and Realists.

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<sup>15</sup> Ian Provan, Climate Action Network of Australia

<sup>16</sup> Pages 3-4, Intergovernmental Panel on Climate Change, *The Physical Science Basis of Climate Change*

### 3.1 *The Boom View*

Until recently, Prime Minister John Howard has been described as a sceptic on climate change, and his government has been reluctant to accept scientific arguments for it.

‘we do not intend to embrace every gloomy prediction about the future of the planet. ... [W]e intend to respond ... in a way that does not damage the Australian economy or destroy the jobs of hard-working Australian coalminers.’<sup>17</sup>

This falls into the danger of prioritising (some) people or economics over environment without seeing their links. Bad environmental change hurts people, especially poor people. Climate change transcends national interests, boundaries and parochial politics. But facing increasingly compelling scientific evidence, John Howard now describes himself as a climate change ‘realist’.

Some politicians would

‘like us to believe that this crisis can be fixed with a silver bullet (such as nuclear power or carbon sequestration) [but] many of us are deeply sceptical that any one dimensional approach will provide the solution.’<sup>18</sup>.

That assessment is almost certainly true. We should be suspicious of such silver bullet strategies in our investment policies. We should also be wary of conspiracy theories such as Michael Crichton’s fiction book *Climate of Fear* well-refuted by Mick Pope.

### 3.2 *The Gloom View*

Richard Lovelock, the famous father of the Gaia hypothesis (seeing nature as Gaia, a vengeful Greek goddess) believes that we are very close to irreversible catastrophes such as the polar ice-caps melting, and that nuclear energy is the only way to buy time. Others, however, note that nuclear energy takes considerable time (10-15 years) to get on line, possibly too much time itself. While Al Gore is not nearly as extreme as Lovelock, his vivid visual portrayals of glaciers and polar icecaps melting have had a similar effect, which is now being questioned even by some who accept global warming. Globalisation advocate Bjorn Lomborg in *Project Syndicate* argues that the 2007 IPCC report is in two key respects less dire than its 2001 report. The IPCC’s 1990s predictions of average sea-level rises of 67cm by 2100 are now down to 38.5 – still a problem but last century’s sea levels rose by half that with very little disruption.

Lomborg rejects *An Inconvenient Truth*’s graphic portrayal of a 6 metre rise in sea level inundating much of Florida, Shanghai and Holland. The report also shows the high improbability scenario, depicted in *The Day after Tomorrow*’s Gore’s movie, of a Gulf Stream shutdown, whereby Siberia would spread across Europe. Some even argue that a weakening of the warm Gulf Stream would be good, leading to less net warming over land areas. The tendency to try to get action by trumping the catastrophic level of other predictions should be resisted lest, like the Club of Rome’s population and famine predictions a few decades ago, it leads to a boy who cried wolf scenario. It is also biblically and pastorally important for Christians to maintain a non-complacent sense of hope because of the biblical hope for a new earth and because research shows that too much gloom leads to despair and despair leads to inaction as ‘nothing will make a difference.’

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<sup>17</sup> John Howard, as quoted by Katherine Murphy; citation needed

<sup>18</sup> Janet Hartz-Karp; citation needed

### 3.3 *The For Whom View*

This view sees that all science is value-laden. It asks whom is it for? Who funds it? Who will benefit? Who will lose? etc. Disturbing stories about the funding of anti-climate change research by vested interests with bad records like Exxon and the cigarette lobby raise serious questions about some of the climate-change sceptics. The ‘trick’ will be for society to move along many interlocking fronts so as to serve the best interests of as many people and groups as possible.

“Few laypeople can follow the scientific details of the case for climate change ... the Christian Super Ethics Committee recognises that there is near unanimity that climate change is taking place.”

In the USA, Christian opinion over climate change has been divided, with some Evangelicals urging for greater care toward God’s creation while more conservative others (Dobson, Colson) claim that moral issues like homosexuality and abortion should be prioritised. The latter are in my view selectively pro-life, limiting Scripture’s concern to a narrow band of hot-button

issues. A consistently pro-life view like that of John Stott, Ron Sider or the late Cardinal Bernadin sees these as important issues but not the only issues, and less prominent scripturally than care for the poor and the earth. Others warn of the consequences for the poor if too radical a change is made to current industry and trade practices. We suspect the Christian community in Australia is similarly divided. It is therefore important to try to work from some basic consensus out to the areas of disagreement.

The Christian Super Ethics Committee recognises that there is near unanimity that climate change is taking place. The debate is whether this has been caused by human activity, as well as whether climate change is purely or predominantly negative. However, there is very strong evidence that human activity has been a cause of climate change, as per the IPCC report. In fact, the levels of consensus across the global scientific community concerning human caused global warming are very rare.

“There is value in applying a precautionary principles in relation to an issue where consequences are very significant.”

There is a value in applying a precautionary principle in relation to an issue where consequences are very significant, even possibly catastrophic. The UN environment conference in Rio in 1992 stated ‘Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation’.

Against this Global Warming sceptic or agnostic Prof. Bob Carter of James Cook University sees the science argument being subordinated to the public risk and policy argument in the precautionary principle. Carter argues that:

‘the precautionary principle is oftentimes a moral precept masquerading under a scientific cloak. True scientific principles acknowledge the supremacy of experiment and observation, and do not bow to untestable moral propositions’.

Certainly clarity is needed but along side charity for those who could be most seriously affected. Scientific certainty is sometimes a luxury when the waters are rising. While noting the dangers Carter seems to draw too strong a distinction between empirically verified facts and values.

The absence of absolute proof does not imply that there is no reason to act. Proof of the mathematical  $2+2=4$  type is almost impossible to get in any area of empirical debate. Similarly it is often difficult to get absolute proof of causation as opposed to correlation. In the meantime, as with marijuana usage and psychosis, cigarette smoking, asbestos and cancer, generations can be affected adversely while we await absolute proof of harm before intervening. This leads to Martin Luther King’s ‘paralysis of analysis’.

Andrew Cameron's recent article is worth quoting at length:

"The current situation of the world in relation to the climate problem is that we're in a car with bad brakes driving toward a cliff in the fog, and the fog is the scientific uncertainty about the details that prevent us from knowing exactly where the cliff is. The climate change sceptics are telling us that the fog is a consolation and that we shouldn't worry because we're uncertain about the details.

But of course any sane person driving a car toward a cliff in the fog, and knowing that the brakes are bad [and] that it takes the car a long time to stop, will start putting on the brakes, trying to slow the car, without knowing exactly where the cliff is—but just in the hope that by putting on the brakes we'll be in time to keep from going over the cliff.

You don't have to be sure that you can still avoid going over the cliff to put on the brakes; you want to do it in any case. And that's what the world should be doing with respect to the emissions of greenhouse gases that are causing this climate problem. There's a chance we'll go over the cliff anyway but prudence requires that we try to stop the car."

So says Professor John Holdren, President of the American Association for the Advancement of Science. Holdren's scientific expertise is not in climate science, but he speaks for a general consensus among the members of his Association. (The 'cliff' in his metaphor refers to a condition feared by climate scientists, when climate systems 'flip' into a new mode—a 'runaway greenhouse effect'. Scientists have no idea when this alarming scenario might occur, if at all.)

Let us quickly review the general themes of climate-change science:

- There are straightforward physical reasons why CO<sub>2</sub> absorbs and re-emits long-wave infrared radiation that is emitted by the earth after it has been warmed by very short-wave energy from the sun; so theory suggests that increased atmospheric CO<sub>2</sub> will warm the earth.
- Post-industrial atmospheric CO<sub>2</sub> concentration has spiked at a rate and to a level never seen in hundreds of thousands of years.
- As theory has predicted, the average temperature of the earth has measurably warmed a little; 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 CO<sub>2</sub> into the atmosphere through sustained use of fossil fuels.

But the amount written on climate-change presents us all with a difficult knowledge-problem. Some knowledge-problems are to do with *too little* information: some datum is missing that will unlock the puzzle. This knowledge-problem is the opposite: there is *too much* information, and the mystery resides in how to meaningfully stitch it together. Sceptics respond to this mass of information in their own way.

How much scepticism is too much scepticism? We face this problem in every area of life, from whether or not we can trust our work colleagues, to whether our loved ones really love us and whether Christian faith is really true. Too little scepticism is gullible, but there comes a time when too much scepticism is a crippling disconnection from reality.

Humans can be wrong: maybe the problem has been overstated. That is unlikely in the case of the IPCC, which is an inherently conservative body whose processes have the effect of stripping out all but the most agreed-upon claims. But if it turns out that a false alarm has sounded, have we done wrong to respond to an alarm? Of course not; only fools ignore alarms.

When an alarm turns out to be false, we may roll our eyes; yet the wise continue to sound alarms and respond. Holdren's position therefore sums up the SIE's current view. An alarm has been sounded, and it is prudent to trust those sounding it and work with them...<sup>19</sup>

We should note too that the virtue of prudence is one that is central to the insurance and superannuation industries, embodied in names like Prudential etc. It should be a virtue embodied by CS in its investment policies, particularly concerning climate change.

In the light of the biblical concern for the poor, vulnerable and weak, we should protect those who would be disastrously affected in the event that climate change occurred. The subjective concerns of those worried about global warming should also be treated seriously and lovingly and not simply put on hold until we get absolute mathematical proof<sup>20</sup>.

#### **4. Potential and Priority areas for the Fund to practically implement**

Despite the scepticism of some concerning global warming,, there are other reasons such as general current levels of environmentally produced hunger, pollution, levels of asthma and respiratory diseases etc that mean we should consider rewarding companies that promote renewable energy and avoiding those that over-use carbon. Encouraging clean coal technology research as well as a range of renewables –solar, wind, tidal etc helps us not fall into the trap of putting all our eggs in the one basket – the magic bullet view. It is a wise strategy given the uncertainties of the prospects of various technologies and the inevitable hype used to raise investment capital.

“We have some sympathy [for the] ... argument for investing in more immediate and certain problems”

We have some sympathy with member Doug Brewer's argument for investing in more immediate and certain problems, giving a priority to the relatively certain present environmental and humanitarian needs over relatively uncertain and future needs. He cites Lomberg's *The Skeptical Environmentalist*:

“if we had a fixed amount of money to spend on solving global problems - eg., 10 billion dollars - which global problems should we try to fix in order to deliver the greatest measurable benefit to the greatest number of people? Stopping global warming? Or (for example) providing clean water for the many people who do not have access to it?”

However, it is not an either or question but a both/and – how do we care both for our (generation's) children and grandchildren? The IPCC's 2006 report argues that we have less than a decade to arrest global warming or risk possibly catastrophic climate change. If this is so, then it is not a case of playing off short-term versus long-term. We should invest in clean water technologies and alternative energy forms. Good stewardship also entails prevention, 'a stitch in time saves nine'. We should seek to meet the UN's Millenium goals taken up by the Make Poverty History campaign and the challenge of Climate Change. The two are interconnected.

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<sup>19</sup> Sydney Anglican Social Issues Briefing *Climate Change 3: How sceptical is too sceptical*, 4 May 2007

<sup>20</sup> See also 1 Corinthians 8-10 in relation to those with a weak conscience, and also the Christian Super Posotion Paper on Alcohol.

Given Australia's privileged position among the world's wealthy, our refusal to sign up to the Kyoto agreement despite being offered special deals, our profligate levels of carbon emissions per capita (highest in the world), our last place performance among OECD countries in improving energy efficiency in recent decades (International Energy Agency figures), the highly expensive and likely too late kick-in times for newer, cleaner, nuclear and coal technologies and likely worsening water shortages across southern Australia and massive bleaching of the Barrier Reef if average temperatures rise beyond 2 degrees it is in both Australia's interest and in line with her global citizenship obligations to act promptly to address climate change. Our climate, accessibility and track record in solar and wind power and the (debatable) possibility of bio-fuels means that the idea that we would lose economically to gain ecologically is not true. We could well be ahead of the game if we invest in a range of alternative energy systems now.

The IPCC says that the greatest reduction in greenhouse gases in the next 23 years will come not from new nuclear or coal technologies but from efficiency savings. This means investing in more energy efficient housing (e.g. without automatically included clothes driers and no clothes lines), heating and cooling, energy-saving appliances, public transport, non-motorised transport (we have the 4<sup>th</sup> highest rate of car-ownership world-wide). Our eating habits need looking at also: we need to reduce meat and dairy production and consumption (e.g. a chain of Veggie bars). The world's and particularly Australia's livestock are the fastest growing source of agricultural greenhouse emissions, already producing more than all the world's planes, trains and automobiles. This is through cows' methane gases and land-clearing. Cutting meat from our diets saves an average 1.5 tonnes of greenhouse emissions per person p.a. This doesn't mean we must all become vegetarians, as if we can return to Eden. But reductions in our meat and dairy reliance could make a major difference as would more sustainable agriculture and improving degraded land.

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*Note:* Visit <http://www.sydneyanglicans.net/socialissues> and to receive it free by email, follow the link ['Sign up for our free weekly briefing!'](#)

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### ***Document History***

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