

A Report to the General Assembly of the Presbyterian Church of Australia in NSW July 2015

# **CREATION CARE**



#### Introduction

The 2014 Assembly asked the committee to publish a resource paper on climate change. While this was a request which we sought, further reflection led the committee to two conclusions — first, that a discussion of climate change had to be set in a wider discussion of creation care; second that we could not produce a resource paper on either topic without a clearer sense of the Assembly's views.

It is worth reflecting on why the G,S&C Committee asks Assembly to consider ethical issues and make resolutions. Our goal is to assist the church in helping members to understand and respond to issues. We hope that the debate itself helps to clarify issues for members of the Assembly and that it brings important questions to their attention. The resolutions made by the Assembly allow the committee to prepare material which reflects the Assembly's positions. Secondarily, the resolutions allow the committee, and others in the church, to speak to the wider community on behalf of the Assembly. These are our goals in dealing with Creation Care.

As we bring Creation Care before the Assembly, we are aware that it is a potentially divisive issue, one that is often approached in terms of partisan politics. Nevertheless we are hoping to avoid unnecessary division, and are genuinely seeking views which are held by the vast majority in the Assembly. We are also aiming to generate a genuine and constructive moral discussion. Proper responses to complex issues are rarely summarised in a 'sound bite'. They require the discernment which comes from careful discussion, and we present this report and its associated deliverance to the Assembly in the hope of such a discussion.

#### Why address creation care?

Ecological issues, environmentalism, sustainability and climate change have been important issues in our society for at least four decades. The nature and the focus of the discussions have changed, and the intensity has waxed and waned, but the theme of environmental concern has remained constant. In all that time, however, the General Assembly has had very little to say about environmental questions, and has never made a comprehensive statement on the environment.<sup>1</sup> The Committee believes that now is an appropriate time for the Assembly to make a statement.

Environmental issues raise important ethical questions on which the church should give some guidance to members. Christians should have some understanding of our responsibility for the natural environment. How we best fulfil that responsibility is a question which is largely beyond the competence of the Assembly, and will have to be answered by individual Christians as they inform themselves about the issues. The Assembly can, however, present the biblical and theological basis for creation care and can also identify some of the relevant issues.

Further, there are pressing apologetic questions related to the environment. Believers and non-believers alike ask what the church believes, and critique how the church acts, regarding the environment. In a famous article, written in 1974, Lynn White claims that Christianity has taught "that it is God's will that man exploit nature for his proper ends" and sheets home much of the responsibility for environmental destruction to Christianity.<sup>2</sup> This accusation has often been repeated and it requires a response. A part of our own apologetic is being able to say that the Presbyterian Church has made a clear statement about the importance of creation care.





### A theology of creation care

All Christian ethics must have a firm biblical and theological foundation. What follows is a short sketch of a theology of creation care.

God has made a good world, full of fertility and productivity and beauty. It is made as a realm in which humanity and the nonhuman creation can flourish. Psalm 104 portrays creation made for humanity (vv14-15), but includes parts which seem unrelated to humanity (vv17-18, 21-22). All is God's good creation and displays his goodness, power and glory. While it is a good world for humans to enjoy, we must not think that the world exists only for the sake of humans. Bauckham points out that God's speech at the close of the book of Job makes this point:

"God invites Job into a vast panorama of the cosmos, taking Job on a sort of imaginative tour of his creation, all the time buffeting Job with questions. . . . God puts Job in his place. He draws Job's attention to creatures over which he plainly does not exercise dominion. The point is that Job has no bearing on the value or purpose of their existence for their own sake and for God's sake. Job is not the unique reference point for all God's purposes in his creation."<sup>3</sup>

Our assessment of the value of creation is *not* simply dependent on its value for human existence. It is good in and of itself and has value to God and displays his glory.

Humans are given the role of caring for the creation and developing the creation. We commonly use the imagery of 'stewardship' to describe this role. Like the trusted manager in the ancient household, humanity has a responsibility to rule on behalf of the true owner of the creation. This rule involves developing the natural order as well as caring for it. It should not be exploitation, but instead a loving service. Humanity has a special role in world, one which we should carry out responsibly (cf Prov 12:10). We are not restricted to the imagery of stewardship, which itself needs to be supplemented and qualified. We should not imagine God as



the distant landlord, nor forget that humans are part of the eco-system, not merely overseers. We should not imagine that we can direct eco-systems the way a steward may be able to direct a household. Still, 'stewardship' is a useful way of thinking about how humanity is meant to relate to the natural environment.<sup>4</sup>

Humanity is appointed by God to tend for and develop the world and it is just because of our responsibility for creation that our human sin so deeply effects the natural environment.<sup>5</sup> Sin brought a curse on the ground so that production and agriculture became difficult (Gen 3:17-19). The degradation of the natural world as a part of God's judgement on sin is a theme that is repeated in Scripture. In Deuteronomy 28 the covenant curses against Israel present a horrifying picture of the destruction of a fertile land (Deut 28:17-18), of failing crops (v40) and drought (vv23-24), of locusts (38, 42) and worms (39), of disease (vv21-22, 27, 35, 59-60), and of destruction and exploitation by invaders (vv30-33, 51-52). In Isaiah 24-26, the prophet stresses the way in which sin has bought judgement on the land as well as people:

"The earth will be completely laid waste

and totally plundered.

The LORD has spoken this word. The earth dries up and withers, the world languishes and withers, the exalted of the earth languish. The earth is defiled by its people; they have disobeyed the laws, violated the statutes and broken the everlasting covenant." (Isaiah 24:3–5 NIV)

Isaiah's prophecy is about the sin of Jerusalem and the devastation of the land of Israel (e.g. Isa 25:2). Yet just as the promise of redemption is rightly applied to the whole world (e.g. Isa.25:7–8), so the portrayal of the suffering of the land is not restricted to the land of Israel.

Paul echoes these Old Testament themes when he observes that the created order is now disordered, "subjected to futility" and in "bondage to corruption" (Gen 3:17-19; Rom 8:20–21). Just as sin has placed humanity under the power of death, and this is seen in weakness, illness and disease, the same curse has the natural environment in its grip.

Moreover, just as human actions often exacerbate the effects of sin on ourselves, our families and our society, so human actions often make worse the curse on creation. The curses of Deuteronomy are partially effected by an invading army. The famine and death announced by God with the opening of the seals in Revelation 6 are largely the result of war (Rev 6:1-8). We can easily see the same pattern through human history, as the human race has exploited the natural environment for its own greed and destroyed it in war.

Rich, developed nations such as Australia have a far greater impact on the environment, given our population, than do poorer and less developed nations. Yet it is the poor and vulnerable who often suffer most directly from the degradation of the environment. Nations such as Bangladesh face increased flooding due to deforestation as well as changes in the sea-levels. Food and water shortages impact the poor disproportionately, and land degradation has had a severe impact on agricultural production in poor areas of the globe such as sub-Saharan Africa and South Asia. In Kenya, for example, from 1981–2003 productivity declined across 40% of cropland, while the human population doubled. In general, Africa is expected to suffer most from land degradation.<sup>6</sup>



While the effects of the curse on creation are exacerbated by human action, God in his 'common grace' limits the effects of sin and allows the world still to flourish through human actions. He restrains sin (Gen 3:22, 23; 4:15; 20:6), he restrains his own wrath (Gen 6:3; Rom 2:4; 2 Pet 3:9) and he limits the disintegrating effects of his judgement on sin.<sup>78</sup> Civil government has an important role in this (1 Pet 2:14; Rom 13:3, 4; 1 Tim 2:1, 2). God has promised to sustain the world and he does so in his 'common grace' (Gen 8:21-9:11; 2 Peter 3:7).

And so we see God's common grace at work in the natural environment. Despite the curse of sin, the rains still come, the seasons roll on and the animals bear and raise their young. At times we can see how humanity has had a role in this through enhancing the productivity of the world, beautifying it and turning the wilderness into a garden. We have also had a role in guarding and defending the wilderness and its animals. Thus the present status of the natural environment, like human society, is determined by a dynamic of God's curse and common grace. We can certainly see how humans are responsible, but our responsibility is exercised under God's gracious rule.

Humanity cannot restore the world, but God is doing so in his acts of redemption. Jesus' life, death and resurrection redeems God's people, and with them redeems the creation. "The creation waits in eager expectation" for the revelation of the children of God because it will then share in our "glorious freedom" (Rom. 8:19–21).

Chris Wright brings out the importance of the redemption of creation in the Biblical presentation of God's redemption (Isa 65:17-25; Rom 8:18-21; 2 Pet 3:10-13; Rev 21:1-4).<sup>9</sup> He also calls attention to themes in Ezekiel and Psalms which may not explicitly teach a renewal of creation in the eschaton, but which find in it their fulfilment. The New Creation brings the real fulfilment of OT promises to Israel (see Heb 11:9-10, 14-16). As Adam was the image of God, ruling creation for God, and Adam's fall affected all creation; so the second Adam reclaims the world. Christ's physical resurrection is the 'pledge' not only of our resurrection, but of the whole new creation.

What does this all mean for our thinking about caring for creation?

This theology of creation underscores the fact that Christianity gives the true basis for creation care. A great deal of contemporary thought about ecology draws on ideologies which view humanity as simply one part of a vast eco-system with no specific significance. This view supports assumptions which deny the value and dignity of humans.<sup>10</sup> It also removes from humanity any real responsibility for the creation. It suggests that humanity may have a major impact on the rest of the ecosystem, but if we are merely the result of an evolutionary process, then there is no reason why we should take moral responsibility for the natural world. The same logic that leads us not to hold animals of prey culpable for hunting, would imply that we can not hold humanity responsible for its destruction of the environment.<sup>11</sup> What's more, on an evolutionary basis, we have no reason to think that we are able to take responsibility for the natural environment. Similarly Eastern worldviews offer no genuine basis for caring for the environment.

The Christian view, in contrast, affirms that humans can, and should, take some responsibility for the natural environment. We certainly can't control it ourselves, for it is Christ in whom all things are held together as he sustains them with his word (Col 1:17; Heb 1:3). Yet, for good or ill, our



actions have an impact on the environment and we've been given the capacity to the develop the wisdom needed to direct those activities.

Further, some secular arguments for environmental care are merely pragmatic and self-serving, appealing simply to what will make life comfortable for this generation. The Christian worldview critiques this by insisting that the natural environment is valuable in its own right, and that present generations have responsibilities to future generations.

As Beisner *et al.* argue, the Christian worldview gives the one truly viable basis for care of the natural environment.

"To reject human stewardship is to embrace, by default, no stewardship. The only proper alternative to selfish anthropocentrism is not biocentrism but theocentrism: a vision of earth care with God and his perfect moral law at the center and human beings acting as his accountable stewards."<sup>12</sup>

Christians should not retreat from environmental concerns simply because we can see that other approaches to environmentalism are flawed. Rather, for this very reason, we should be all the more concerned with the issue. Other worldviews give people some reason to be concerned about the environment, and we can be glad that they do. Like all genuine moral responses, these are signs of God's common grace. We should be ready to enter the debate, to present and to act on the clear Christian reasons for creation care, since they "can provide the metaphysical basis that ecologists are yearning for".<sup>13</sup> As Francis Schaeffer observed 35 years ago, "a truly biblical Christianity has a real answer to the ecological crisis".14

Brunner, Butler and Swoboda list a series of truths which should lead Christians to care for creation:

- Earth-keeping is the primary calling of humanity.
- God has made us as part of the creation, so there is a mutuality between the good of humanity and the good of the rest of creation.
- We recognise creation to be the work of God as the master artist, so to care for it is to respect him.
- Christian virtues of respect, receptivity, self-restraint, frugality, humility, honesty, wisdom, hope, patience, serenity, benevolence, love, justice and courage all support practices of creation care.
- Concern for the poor and underprivileged should lead us to be concerned about environmental degradation.
- God's redemption has the whole of creation as its scope, bringing all things into unity under Christ (Eph 1:9-10), so Christians should seek to promote the harmonious co-existence of the whole of creation.
- We love and serve future generations by preserving the natural environment as well as we can.<sup>15</sup>

Because discussions about environmental issues involves the most basic questions about humanity — the nature of world, moral failure, guilt and hope — it opens many opportunities to present gospel of the Creator who loves his creation and is committed to redeeming it, including the humans who have often abused and exploited it. Discussion of environmental concerns not only gives opportunities for the gospel, but must begin with gospel.<sup>16</sup>

The promise of a new creation is not an excuse for Christians to exploit this creation, nor to be idle while it is exploited. Evangelical Christianity is sometimes accused of taking this view, and we must acknowledge that occasionally it has. Authentic evangelical thought about creation, however, sees just the opposite implication in God's promise. God's redemption and restoration of his world assures us that the created world deserves our care. Just as Jesus' healing miracles and his own resurrection have led Christians to invest in medical care and to nurture bodies, so the nature miracles and the resurrection, with their promise of the new creation, encourage us to care for creation. It is not that creation care, in itself, will bring the new creation, any more than medical care brings resurrection bodies. Rather God's promise sets a direction for Christian service.

Indeed, Christian hope provides encouragement for creation care in the face of predictions of planetary disaster. Christians can rest on God's promise to sustain the world (Gen 8:21-9:11; 2 Pet 3:7) until Jesus' return and the revelation of his glory in creation. This promise doesn't mean that the earth is disaster-proof and

that we don't have to worry about the consequences of our actions for human life. It does mean that we don't have to be overwhelmed by doomsday scenarios which predict the eradication of humanity. We can trust in God's good faithfulness and live in the light of hope. Many people in the environmental movement portray crisis in apocalyptic terms and experience severe despair.<sup>17</sup> The Christian hope, however, is grounded in God's faithfulness, not human capacity. In light of God's promise to keep the world and bring a new creation, we can affirm that in creation care, as in all other area of service, our "labour in the Lord is not in vain" (1 Cor. 15:58).

Some Christians wonder if there is any point attempting creation care on a small scale, when the challenges are global. What difference can my small changes in lifestyle make? Or, what is the point of recycling in our suburb, when there is so much waste in other parts of the world? Certainly, the large scale problems should not be ignored. At the same time it is important to recognise that on these issues, as on others, Christians and churches are called to be signs of the coming kingdom, living in the light of the future. That is, we don't measure our actions merely by their effects. We seek to live in a way which reflects the coming kingdom of God, whether or not our actions 'make a difference'.

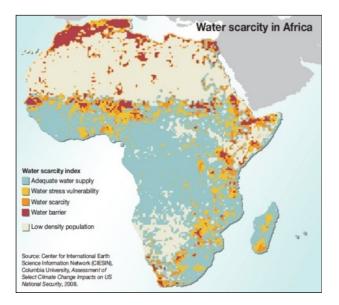


### The pressing issues of creation care

Creation care is a timely moral issue, perhaps the most timely. Francis Schaeffer called the attention of evangelicals to this in 1970 in his prophetic work *Pollution and the Death of Man:* 

"The simple fact is that if man is not able to solve his ecological problems, then man's resources are going to die. It is quite conceivable that man will be unable to fish the oceans as in the past, and that if the balance of the oceans is changed too much, man will even find himself without enough oxygen to breathe. So the whole problem of ecology is dumped in this generation's lap."<sup>18</sup>

In the last 35 years the crisis has only intensified. The Lausanne Global Consultation on Creation Care and the Gospel issued a *Call to Action* in November, 2012 in the following terms:

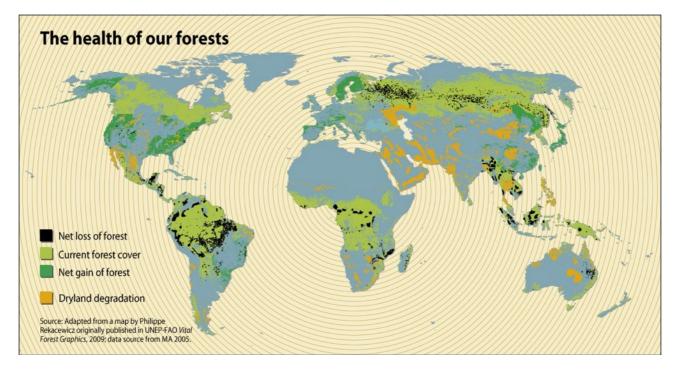


"Many of the world's poorest people, ecosystems, and species of flora and fauna are being devastated by violence against the environment in multiple ways, of which global climate change, deforestation, biodiversity loss, water stress, and pollution are but a part. We can no longer afford complacency and endless debate. Love for God, our neighbors and the wider creation, as well as our passion for justice, compel us to "urgent and prophetic ecological responsibility (CTC I.7.A)."

Some of the key issues are noted below.

## Water degradation

Water, and especially fresh clean water, is essential for human life. Fresh water supplies are under increasing pressure due to growing populations and many of the poorest communities in the world lack access to clean water. About 10% of the world's population does not have sustainable access to safe drinking water. This is a significant improvement compared to the figure of 25% in 1990. However regions with rapidly increasing populations are those which have the worst access to water, and also those in which it is most difficult to address the problem. Moreover, 2.5 billion people do not have access to improved sanitation facilities which hygienically separate human excreta from human contact.<sup>19</sup> This year the World



Economic Forum's Global Risk Perception Survey surveyed 900 leaders from business, academia and the public sector, and rated water crises as the global risk with the greatest potential to impact society, and the eighth most likely to have significant impact in the next 10 years.<sup>20</sup>

Rainfall patterns are changing, with wet areas becoming wetter and dry areas becoming drier. This reduces water supplies in many areas and exposes other to greater risks of flooding.<sup>21</sup>

The 2014 Global Ocean Health Index gave the overall ocean health a score of 67/100. The supporting report comments that the score "needs to be much higher if the ocean is sustainably to help meet the needs of our rising human population". It observes that the score "does not indicate that the ocean is dying", but that acidification, oil spills, plastic trash, dead zones and overfishing "will become worse if their causes are not reduced or eliminated"<sup>22</sup>.

### Deforestation and land degradation

Nearly 85% of the ice-free land surface of the planet has been directly influenced by humans.<sup>23</sup> A 2014 report found that land degradation hotspots cover about 29% of global land area in all landcover types, but especially in grasslands. About 3.2 billion people live in these areas, though a larger number of people depend on them for food and other services.<sup>24</sup>

#### Loss of biodiversity

Present extinction rates are an estimated 1000 times higher than the normal background level.<sup>25</sup> White and Moo point out that Christians should be concerned about this because it represents a loss of the inherent beauty and fruitfulness of the God's creation as well as that fact that "we rely on living systems to keep our air

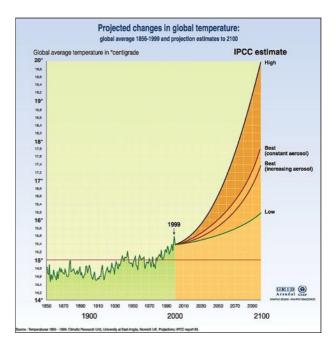
breathable, our water drinkable, and to provide us with sufficient food ... loss of biodiversity makes the ecosystems vulnerable to diseases and other disasters that could wipe out species on which we depend".<sup>26</sup>

### Climate change

There have been warnings about the impact of human activity on the earth's climate since the 1970s and serious concern since the 1980s. The Intergovernmental Panel on Climate Change (IPCC) was formed in 1989 (see http://www.ipcc.ch/) and released its 5th Assessment Report in 2014. It concluded that:

"Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and are now higher than ever. This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and are extremely likely to have been the dominant cause of the observed warming since the mid-20th century."27

The IPCC and its reports have been seen as controversial in some circles. While we need to acknowledge the fallibility of all



scientific research and the possible effects of prejudices and ideologies, there is no reason to be more sceptical about the IPCC warnings than about those who criticise it. White and Moo offer a sober Christian assessment.

"Practically all scientists who have investigated this believe that it almost certainly is. However, it is fair to say that there is an outside possibility that the temperature changes are simply fluctuations in the climate caused by the normal processes of the earth system. But every year that goes by makes the influence of humans on global warming more apparent and renders other possible explanations less and less likely. And we cannot afford to wait and wait before we take action. Even if by some chance the temperature rise were due to other causes, the changing climate would still be just as disastrous for many people and ecosystems. We have a good understanding of the physics of how greenhouse gases like carbon dioxide cause warming. So whatever the cause of the warming we are currently observing (though, again, nearly all climate scientists are now convinced it is due largely to human causes), reducing the volume of greenhouse gases in the atmosphere will serve to slow and reduce the warming."<sup>28</sup>

The most widely accepted predictions are that unless the impact of human activity is reduced temperatures will rise by 4°C by the end of the century (and by 2°C even if we take strong action now). These increases are also likely to cause an increase in the occurrence of severe storms and severe drought, creating weather that is less predictable and more extreme. Predictions warn of sudden and/or irreversible effects as warming increases.

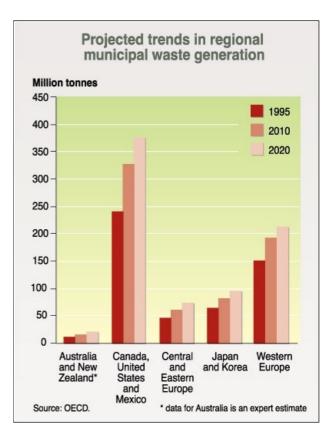
## The accumulation of pollution

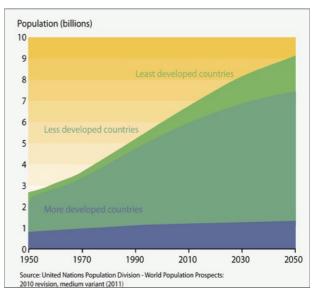
Humans have polluted the environment in all sorts of ways. Solid waste generated by those who live in cities is a very obvious example, and toxic chemical waste, air pollution and nitrogen on land and in the water all have a major impact on environmental health.

## Population growth

The human population of earth has increased very rapidly in the last century,

from 2 billion in 1927 to 4 billion in 1974 and then 7 billion in 2011. The rate of growth has slowed since about 1970, but the population is still expected to continue to grow: to 9 billion in 2043 and 10 billion in 2083.<sup>29</sup> This growth is likely to exacerbate the other challenges listed above.





#### The church's response

In considering the church's response it is important to acknowledge the limits of our role. The church, as an institution, is not called by God to provide public policy solutions, nor is it gifted for such. We are not in a position to direct members of the church on their views of environmental issues and especially on their approaches to environmental policy. The complex relationships of environmental science, economics and politics means that the church cannot give detailed directions in this area.

While observing the proper limits of our authority and competence, the church can:

- call attention to the biblical mandate to creation care,
- call attention to the timeliness of the issue,
- encourage members to take their environmental responsibility seriously,
- encourage members to support and participate in ministries which seek to address environmental issues,
- affirm the work of members who are engaged in creation care in various ways,
- teach the biblical virtues which are important in creation care,
- consider its own actions so as to limit unnecessary impacts on the environment.

This report is a first step toward the Presbyterian Church of Australia in NSW offering a considered position on creation care. There is far more than can be said, and certainly far more to be done. As a conclusion to this report the committee draws attention to the following as actions deserving the attention of Christians:

- seek to limit the "environmental footprint" of the individual, household, congregation or organisation;
- seek to live simply, consuming less resources and resisting the allurements of a consumer culture;
- develop and use sustainable agricultural practices;
- support campaigns for water security and the reduction of waste;
- support organisations which address global poverty, since poverty both exposes people to higher risks from environmental degradation and also increase degradation;
- support organisations, including Christian organisations, which aim to maintain biodiversity and healthy eco-systems;
- pray for God to sustain the created order, for responsible human care of the environment, for protection of poor and vulnerable and for wisdom for those whose work may have a major impact on the environment — primary producers, business owners, scientists, public servant, politicians.

#### Resources

Lausanne Global Consultation on Creation Care and the Gospel: Call to Action http:// www.lausanne.org/content/statement/creationcare-call-to-action

R. Bauckham *The Bible and Ecology: Rediscovering the Community of Creation* (Waco: Baylor University Press, 2010)

J.A. Davies, "Toward a biblical theology of the environment" *RTR* 51/2 (May 1, 1992): 42-49

J.J. Davis, *Evangelical Ethics: Issues Facing the Church Today* (P & R, 2004, 3rd ed.), 263-74.

M.J. Hodson and M. R Hodson *The Ethics of Climatic Scepticism* Grove Booklets 177 (Cambridge: Grove, 2015).

J. Foster, "The ecology of John Calvin" *Reformed Perspectives* 7/51 (Dec. 2005):1-23.

J. Merritt, R. A., Mohler, Jr and E. Calvin Beisner. "How concerned should Christians be about environmental care?" *Christianity Today* 54/6 (June 1, 2010): 46-47.

J. Moo & R White, *Hope in an Age of Despair: The gospel and the future of the earth* (Nottingham: IVP 2013)

R. D. Moore, "Heaven and Nature Sing: How Evangelical Theology Can Inform the Task of Environmental Protection, and Vice-Versa" *JETS* 57/3 (2014):571–88

F. Schaeffer and U. Middleman, *Pollution and the Death of Man* (Wheaton: Tyndale, 1970; repr. Wheaton: Crossway, 2011)

R. S. White ed, *Creation in Crisis: Christian Perspectives on Sustainability* (London: SPCK, 2009)

"Christians and Climate Change" A statement from the Australian Evangelical Alliance www.ethos.org.au/site/Ethos/filesystem/ documents/in-depth/public%20policy/Climate %20Change.pdf Some Christian organisations and ministries involved in creation care

*The John Ray Initiative* — a Christian environmental education charity in the UK. http://www.jri.org.uk

A Rocha — an international Christian organization engaged in scientific research, environmental education and community-based conservation projects. http://www.arocha.org/ Evangelical Environmental Network — a US ministry dedicated to the care of God's creation, it seeks to equip, inspire, disciple, and mobilise God's people in their effort to care for God's creation. http://creationcare.org

*Cornwall Alliance* — a conservative Christian ministry in the US which advocates environmental stewardship and concern for for poor, while being dubious about anthropogenic climate change and many of the proposed responses. http://www.cornwallalliance.org/ TEAR Australia — a movement of Christians in Australia responding to the needs of poor communities around the world, with a clear concern for environmental issues. http:// www.tear.org.au/

*Care of Creation* — an evangelical organisation in the US which aims "to pursue a God-centered response to environmental challenges that brings glory to the Creator, advances the cause of Christ, and leads to a transformation of the people and the land that sustains them." http://www.careofcreation.net/

In response to the report of the Committee on Gospel, Society and Culture, brought to the General Assembly of the Presbyterian Church of Australia in NSW in July 2015, the Assembly resolved to affirm the above principles of Creation Care, and to circulate them and this accompanying report to presbyteries and sessions (GANSW 2015 BB Min 69).

For more information about The Gospel, Society and Culture committee see www.gsandc.org.au .

The research and writing for this report was conducted by Rev Dr John McClean. John is the Convener of the GS&C Committee, and lectures in Systematic Theology at Christ College in Sydney, where he also serves as Vice-Principal. His area of teaching includes ethics and he writes a regular a column on ethics in Pulse. John and his family are members of Springwood-Winmalee Presbyterian church.

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Infographic page 10 (water scarcity): United Nations: http://www.grida.no/graphicslib/detail/water-scarcity-in-africa\_9d72 Infographic page 11 (forest health): United Nations: http://www.grida.no/graphicslib/detail/the-health-of-our-forests\_a7f0# Infographic page 12 (global temperatures): United Nations, http://www.grida.no/publications/vg/climate/page/3076.aspx Infographic page 13 (population growth): United Nations, http://www.grida.no/graphicslib/detail/world-populationgrowth-1950-2050\_0aaf

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## Endnotes

<sup>1</sup> In 1978 the Assembly raised concerns about nuclear power generation and requested the Federal government "to give high priority to the funding of research into the use of solar energy" (Min 156, 1978). In 1992 the Assembly dealt with "energy conservation", recognising that it was important and urging members of the Church "to consider the environmental implications of different means of transport, and to practice Christian stewardship" in the area and calling on governments to "encourage research into the development of renewable energy resources" and to "discourage the use of non-renewable resources" (Min 30. 1992). In 2000 the Assembly asked members of the church to make investment decisions which, among other things, "reflect Biblical priorities for environmental stewardship" (Min. ? 6 2000).

<sup>2</sup> L. White Jr, "The Historical Roots of Our Ecologic Crisis", *Science* (10 March 1967): 1203-1207

<sup>3</sup> R. Bauckham, *Living with Other Creatures: Green Exegesis and Theology* (Waco, TX: Baylor University Press, 2012), Kindle, chap. 1.

<sup>4</sup> J. Moo, R. White, *Hope in an Age of Despair: The gospel and the future of the earth* (Nottingham: IVP, 2013). Kindle Loc. 2227.

<sup>5</sup> See M. Smith, "Did God enter into a 'covenant of works' with Adam?" unpublished paper for a discussion which highlights the relationship of the traditional formulation of "the covenant of works" with humanities location in creation.

<sup>6</sup> Nellemann, C. *et al*, eds , *The environmental food crisis – The environment's role in averting future food crises* (United Nations Environment Programme: Nairobi, 2009), 42.

<sup>7</sup> See J. Murray, "Common Grace", Westminster Theological Journal 5/1 (Nov 1942): 6-12.

<sup>8</sup> Murray, 12.

<sup>9</sup> C. J.H. Wright, *The Mission of God: Unlocking the Bible's Grand Narrative* (Nottingham: IVP, 2006), 407-12.

<sup>10</sup> See C. Beisner, "'Imago Dei' and the Population Debate" *TrinJ* 18:2 (Fall 1997): 173-97, although this report does not endorse Beisener's claim that "continued population growth will result not in the depletion but in the increased abundance of resources" (p. 190).

<sup>11</sup> J.A. Davies, "Toward a biblical theology of the environment" *RTR* 51/2 (May 1, 1992): 44, "If we consider ourselves merely as one mammalian species which has managed to achieve a temporary dominance in the evolutionary struggle, the degradation of our habitat becomes simply the mechanism for our ultimate replacement by some other life-form better adapted to living in whatever our planet may become. On this view, we have no rationale, apart from selfishness, for preserving an environment to which we'happen to be adapted, when fee world has known innumerable climatic changes, some of which are less conducive to human life, but more so to other life forms."

<sup>12</sup> E. C. Beisner, M. Cromartie, T.S. Derr, D. Knippers, P.J. Hill, T. Terrell, "A Biblical Perspective on Environmental Stewardship", *Acton Institute* see <u>http://www.acton.org/public-policy/</u>environmental-stewardship/theology-e/biblical-perspective-environmental-stewardship

<sup>13</sup> J. Beer, "Ecology and ideology: an introduction" kategoria 4 (1997): 44. See also D. Clugston, "Even 'Deep Ecology' is not deep enough", *kategoria* 6 (1997): 9-25, D. Clugston "Genesis and genocide *Environmentalists and the Bible*" *kategoria* 14 (1999):11-23.

<sup>14</sup> F.A. Schaeffer, *Pollution and the Death of Man* (1970), in *The Complete Works of Francis A*. *Schaeffer*: Vol 6 *A Christian View of the West* (Wheaton: Crossway, 1982), 47.

<sup>15</sup> D.L. Brunner, J. L. Butler, A. J. Swoboda, *Introducing Evangelical Ecotheology: Foundations in Scripture, Theology, History, and Praxis* (Grand Rapids: Baker Academic, 2014), chapter 2.

<sup>16</sup> "Biophilia and the Gospel: Loving Nature or Worshiping God?", 153-176, in *Living in the Lamblight: Christianity and Contemporary Challenges to the Gospel*, edited by H. Boersma (Vancouver: Regent College Publishing, 2001)

<sup>17</sup> See famously J. Macy, "Working Through Environmental Despair," in *Ecopsychology: Restoring the Earth, Healing the Mind*, T. Roszak, M.E. Gomes, A.D. Kanner, ends (San Francisco: Sierra Club Books, 1995), 240-59.

<sup>18</sup> Schaeffer, Pollution, 4.

<sup>19</sup> See *Progress on sanitation and drinking-water - 2014 update*, World Health Organization and UNICEF

<sup>20</sup> <u>http://reports.weforum.org/global-risks-2015/press-releases/</u>

<sup>21</sup> S.P. Ogburn and ClimateWire, "Climate Change Is Altering Rainfall Patterns Worldwide", *Scientific American* (Nov 12, 2013) see <u>http://www.scientificamerican.com/article/climate-change-is-altering-rainfall-patterns-worldwide/</u>

<sup>22</sup> The 2014 Global Ocean Health Index, see http://www.oceanhealthindex.org/

<sup>23</sup> J. Moo, R. White, *Hope in an Age of Despair: The gospel and the future of the earth* (Nottingham: IVP, 2013). Kindle Loc. 656.

<sup>24</sup> Q.B. Le, E. Nkonya and A.Mirzabaev, "Biomass Productivity-Based Mapping of Global Land Degradation Hotspots", ZEF-Discussion Papers on Development Policy No. 193 (Bonn, July 2014), abstract.

<sup>25</sup> S.L.Pimm et al "The Biodiversity of Species and Their Rates of Extinction, Distribution and Protection" *Science* 344/6187 (30 May 2014).

<sup>26</sup> J. Moo, R. White, *Hope in an Age of Despair: The gospel and the future of the earth* (Nottingham: IVP, 2013). Kindle Loc. 427-501.

<sup>27</sup> Climate Change 2014 Synthesis Report, Summary for Policymakers Chapter, p. 4. See <u>http://</u>www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5\_SYR\_FINAL\_SPM.pdf

<sup>28</sup> J. Moo, R. White, *Hope in an Age of Despair: The gospel and the future of the earth* (Nottingham: IVP, 2013). Kindle Loc. 494.

<sup>29</sup> P. Gerland, *et al*, "World population stabilization unlikely this century" *Science*: 346 (6206) 10 October 2014, 234-237. Published online 18 September 2014 DOI:10.1126/science.1257469