

A Christian Guide to
**ENVIRONMENTAL
ISSUES**

Martin J. Hodson
& Margot R. Hodson

Foreword by
Andy Atkins
Friends of the Earth



Includes group study material

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Foreword

This wonderful book should be read by all Christians. Why? Well, as the Bible passages in it make clear, God loves us and nature. We should care for what God loves—from our neighbour to nature and the planetary systems, such as stable climate and healthy soil, which sustain us all. Yet our species is trashing the environment and threatening its own survival in the process. There are solutions, but it will take a movement of people to bring them about. As followers of Jesus and members of humanity, surely Christians should be in the forefront of the movement to understand how the environment ‘works’ and how we depend on it—and to cherish and restore it where we can.

Margot and Martin Hodson combine their biblical and scientific expertise to give us an engaging study-to-action guide. They explain the big environmental issues simply, illustrate the solutions with inspiring vignettes from around the world, point us to the biblical view for reflection and empower us with practical tips for the next steps we can take.

As a Christian activist for social justice and a healthy environment, I long to see Christians everywhere demonstrating their love of God by standing up for the environment in their communities and globally. This book will help to fire up that movement. I’m praying for a Christian philanthropist to donate a boxful to every church in the UK. That might be the single most important thing they could do for God and humanity!

*Andy Atkins, Chief Executive, Friends of the Earth (2008–2015)
and Advocacy Director, Tearfund (2000–2008)*

Prologue: Let the Trees Clap their Hands

In 2014 we were on study leave in Spain and Portugal, exploring environmental issues and writing this book. For much of the time we were in a small apartment in the Alpujarra Mountains of Andalucía. On one day we walked up the beautiful valley of Pampaneira, Bubion, and Capileira. We descended through pastures and into the deep valley, before walking through a chestnut forest. As we entered the wood, the wind came up and blew through the leaves of the trees. For a moment we were transported back to a city concert hall and the applause at the end of a performance. As the applause died away in our minds, the trees continued. They were clapping their hands! Further on, another voice took up the applause as we came across a mountain stream bubbling away and also praising its creator. Isaiah 55:12 describes how the trees of the field will clap their hands and in Psalm 98:8 the psalmist writes of rivers clapping their hands. As we explain the issues affecting the planet and our responsibility to respond, we hope we can provide some guidelines that will help us release the Earth to clap its hands.

Chapter 1

Discovering God's Earth

Starting the journey

Let's take a ferry to Spain! We'd been planning some extra leave for years. Martin had had a sabbatical in the past but I (Margot) had never quite managed it. In the midst of very busy lives, we were longing to have a few weeks out from regular work to think, write and pray. We hoped to be able to stand back and gain a fresh perspective on all that we were doing. Our aims were to see what was happening to the environment in another part of Europe, visit some nature reserves and meet up with Christians and others who are concerned for the natural world. As supporters of A Rocha, a Christian environmental organisation, we regularly visit A Rocha UK in Southall and we especially wanted to return to A Rocha Portugal. We didn't want to fly, so the idea came to take the ferry. We packed a box of all those books that we had bought but never had time to read, gathered things for the journey and headed off to Portsmouth for the crossing to Santander in northern Spain.

Our focus for the trip was to write about the key environmental issues of today. What are the most urgent and what can we do about them? How do we understand them in the light of the Christian faith? For both of us, our concern for nature began when we were teenagers and we both came to a committed Christian faith as young adults. Martin

became a Christian in Jerusalem when he had a research contract in the Botany Department of the Hebrew University. He later moved to Oxford and was a founding member of 'Sage', Oxford's Christian environmental group. My faith and green interests were forged together in the 'Geography Christian Fellowship' of Bristol University. We were a small group of geography students who met once a week to try to understand the human and natural world from a Christian perspective. It was in this group that I discovered how human society, nature and faith all fitted together. At the very heart of everything is a God of love.

As the ferry slid out of Portsmouth harbour, we looked at the horizon and were aware of the vastness of the planet and the enormity of the issues that are spread across it. Humans have had an impact on our world from the depths of the oceans to the upper atmosphere. There is nowhere on Earth that has escaped traces of human activity.

The state of our planet

Lots of people worry about the environment. Whether it is your local community beset by traffic fumes or building on green spaces, or wider concerns about the rain forests and the ozone hole, lots of us have a feeling inside that things just are not the way they should be. So what is really going on?

In 2012, government representatives from around the world gathered in Rio de Janeiro in Brazil for 'Rio+20', where they were assessing progress, or lack of it, since the Rio Earth Summit of 1992 (we will return to Rio+20 in Chapter 9). Back in the UK, I (Martin) was asked by A Rocha UK and Tearfund to design a 15-minute talk that would cover all of the world's environmental problems. This would form part

of a 'Whose Earth?' Rio+20 presentation that would be given at a number of venues in England in the summer of 2012. To say something meaningful about all of our environmental problems in 15 minutes seemed a tall order. I needed to start somewhere, and I chose a picture of our planet. Then, while the opening talk was going on, the problems streamed in across the picture. My list is in the second column of Table 1 below. I am far from the only person who has attempted a list of environmental problems. The American scientist Jared Diamond listed some key issues in his book *Collapse*¹ and these are shown in column 3. Finally, there has been much interest recently in 'planetary boundaries',² and these are shown in column 4. If we cross these biophysical thresholds it could have disastrous consequences for humanity (it is thought that we have already crossed the thresholds for climate change, biodiversity loss and human interference with the nitrogen cycle).

Table 1. *Environmental issues*

Chapter of this book	Martin's list ^a	Diamond's list ^b	Planetary boundaries ^c
2: Biodiversity	Biodiversity loss Habitat loss	Destruction of natural habitats Overfishing Loss of genetic diversity Alien (non-native) species	Biodiversity loss Change in land use
3: Climate change	Climate change	Climate change	Climate change
4: Water	Water	Fresh water availability	Global fresh water use

A Christian Guide to Environmental Issues

Chapter of this book	Martin's list ^a	Diamond's list ^b	Planetary boundaries ^c
5: Human population	Human population Consumption	Human population growth Overconsumption	
6: Energy	Peak oil	Decreased supplies of fossil fuels	
7: Soil	Soil erosion	Soil erosion	
8: Food	Food supply		
9: Environment and Development			
Covered in several chapters	Pollution Political/social instability	Toxic chemicals	Chemical pollution
Not covered	Ocean acidification Ozone depletion Acid rain	Sunlight availability and a ceiling on photosynthetic capacity Ozone hole	Ocean acidification Human interference with the nitrogen cycle Human interference with the phosphorus cycle Stratospheric ozone depletion Atmospheric aerosol loading

- (a) A list of environmental problems put together by Martin for the 'Whose Earth?' presentations in 2012.
 (b) From Diamond, *Collapse*, chapter 16, pp. 486–495.
 (c) From Rockström et al. in *Nature* (2009).

It can be seen immediately that different people, coming from different perspectives, come up with rather different lists. Sometimes people have subdivided problems, or lumped them together. So Diamond lists destruction of natural habitats, overfishing, loss of genetic diversity, and alien (non-native) species, which I covered in just two topics, biodiversity loss and habitat loss; these two are also listed as planetary boundaries. Whichever list you take, though, it all seems fairly daunting. We should also remember that these issues interact with each other in myriad ways, so keeping them in separate 'boxes' is never a good idea.

In a book like this one, we cannot possibly cover everything, so what will we look at? Quite evidently we need to cover biodiversity loss (Chapter 2), and we will consider habitat loss there too, as it is a key driver of biodiversity loss. Everyone is in agreement that climate change (Chapter 3) and water (Chapter 4) need to be included. Human population (Chapter 5) is, in many respects, a driver of other problems, and human (over)consumption is very much a linked topic. These first four topics are often seen as the 'big four' problems.

Energy (Chapter 6), or how we power our society, has always been an important issue, but it seems even more so now, with the advent of new energy sources such as tar sands and fracking, and concepts such as peak oil and stranded assets. One topic that often seems to be neglected is soil (Chapter 7). The problem is not just about soil erosion: soil is the basis for almost all of our agriculture and needs more attention. Food (Chapter 8) is perhaps not truly an 'environmental issue', but it is affected by almost all of the other issues in some way, and is a very important topic for humanity.

The one issue that is not mentioned in any of our lists is environment and development (Chapter 9). It is the world's poorest people who suffer most from environmental problems, and we feel that our book would not be complete without a chapter covering the balance between environment and development. We decided not to give a separate chapter to pollution, but examples occur in several chapters. Political and social instability was an issue mentioned only by me, in the 'Whose Earth?' presentation; it is definitely not an environmental issue but is frequently caused by these issues, at least in part.

Then there are a number of issues that we have decided to leave out. We do not wish to imply lack of importance, but space is limited. Diamond included 'sunlight availability and a ceiling on photosynthetic capacity' in his list, suggesting that this could limit agricultural productivity. This idea is controversial and is not now seen as very likely to be important.³ Ocean acidification is a topic related to climate change as both are (largely) caused by atmospheric carbon dioxide. In the case of the oceans, the carbon dioxide dissolves in the water, making a dilute carbonic acid solution and increasing the acidity. This has the effect of making it more difficult for organisms such as coral, plankton and sea urchins to make their calcium carbonate shells. Ocean acidification is one of five planetary boundaries that we decided not to cover, at least partly because they are complex issues requiring a fair amount of knowledge of chemistry. They have been well covered by Mark Lynas in his book *The God Species*.⁴ We spent some time looking at acid rain as a case study in our previous book.⁵ This is, in some ways, related to the atmospheric aerosol loading boundary.

Looking at the whole of Table 1, sadly we have to say that in only two cases do we have much of a handle on the problems: acid rain and ozone depletion. On both of these issues, world governments have taken action and the problems, if not solved, are at least under some control. All of the other problems are far from in hand.

As we were on sabbatical in Spain and Portugal, we took the opportunity to investigate some of the environmental issues and problems in those countries. In the following chapters we will include some of our findings.

Orca

Lists of environmental problems can get a bit depressing. It is always good to balance the problems by looking at something positive. On our ferry journey to Spain, we were delighted to find a wildlife charity called Orca on board. Orca uses ferry crossings to conduct wildlife research on cetaceans (whales, dolphins and porpoises).⁶ Because ferries travel at the same times and speeds on the same routes through the year, they make ideal platforms from which to observe wildlife. In season, Brittany Ferries gives passage to two Orca wildlife guides on their crossings from England to Spain, who spend the trip scanning the horizon and recording all sightings of cetaceans. They are building up systematic data on these animals for the first time in the Bay of Biscay and have shown that there are higher populations than were previously thought, with 31 species of cetaceans in the European Atlantic.

Sadly, these animals, like many others, are under threat from the activities of humans. Fishing gear and propellers are both hazards. Plastic is a major problem for ocean species, who mistake it for food. In March 2014, we walked on the

Gower Coast in South Wales and saw how the major storms of the previous winter had left a nasty 'plastic tide line' of worrying proportions. It is frightening to realise that plastic and other rubbish has been found at depths down to 4500 metres in European waters.⁷ Humans have even left rubbish on the moon!

God's love for the natural world

Very often we read the Bible with questions about ourselves and the human world around us. This means that we sometimes skim over passages about the natural world, or even blank them out. God's creation is assumed to be a kind of wallpaper, his real interest being people.

There is a different approach. If you read the Bible looking for nature, you will find God's love for his creation at every twist and turn of the biblical drama. Things start in Genesis with the creation of the universe. As God forms each part of his creation, he declares it to be 'good'. We find wild and domestic animals being given a place in the ark. God makes sure that every species is able to survive the downpour.

God's love does not stop at animals. He also sees plants as 'good' and two trees in the story of Eden are shown to have special significance: the tree of life and the tree of the knowledge of good and evil. The resurrection of Jesus takes place in a garden and the tree of life reappears at the end of Revelation (see Chapter 4). There is an unusual passage in Deuteronomy (20:19), which contains instructions about conducting a siege. It says that you should not cut down the fruit trees around the city because you can eat their fruit: 'Are the trees of the field people, that you should besiege them?' One of the sad truths about the environmental destruction

that is happening today is that we are destroying our very means of survival. Humans will suffer the consequences alongside the rest of nature.

Care for creation is central to the Christian faith

Looking at the Bible with fresh eyes is both exciting and scary. It is exciting because new vistas are opened up and we find we understand things in new ways. It is scary because this discovery can be very challenging. We realise that the complacent way we have been living may need some re-examination. It raises questions about how God wants us to live as individuals and as churches. When I (Margot) was a student, the book *Rich Christians in an Age of Hunger* was relatively new.⁸ It was hotly discussed in our Geography Christian Fellowship and led a generation of Christians in the West to face the reality of world poverty and our obligation to respond to it.

The biblical reflections in this book aim to explain just how central a concern for the environment has become and how urgent the need is to respond. We aim to provide a Christian perspective on each of the environmental themes, by exploring the environmental dimension to key ideas in Christian understanding. These build together to provide a biblical basis for Christian action. Our central theme is 'covenant', which runs through the book. At the end of this chapter, we offer a Bible study on 'Love and the greatest commandment'. This goes to the heart of the Christian faith and is a suitable starting point. Many writers have looked at the Genesis creation passages,⁹ so Chapter 2 considers the related theme of intrinsic value in the light of creation. This is linked to biodiversity and challenges the way we value the living world. The core idea of 'covenant' is the focus of the

reflection in Chapter 3, where we look at this with regard to climate change. If our relationship with the Earth is one of covenant, then our response to climate change is a spiritual issue and one that Christians need to address urgently. Covenant leads on to salvation, which is paired with water in Chapter 4, because many of the salvation images in the Bible use water.

As we consider population and consumption in Chapter 5, so we look at the twin issues of God's sovereignty and human responsibility. How much are we responsible for changing our lifestyles? Where is God's sovereignty in the population debate? These themes interact with the concept of sabbath, a subject that links with energy in Chapter 6. In a 24/7 society, can the principle of sabbath help us to reassess our priorities? In the Hebrew Bible, breaking the covenant led to exile, and this in turn motivated God's people to return to him and his promise of salvation. Exile is the biblical theme in Chapter 7, as we consider not only the serious implications of soil degradation worldwide but also the potential for the world when soil is managed well.

A crucial environmental truth of the Christian faith is that Jesus was physically born among us and resurrected in a physical (bodily) form. Both these key teachings affirm the material world and challenge us to engage with it. These concepts are explored in the light of food in Chapter 8 and environment and development in Chapter 9. We consider justice as we look at the disparity between the wealthy West and the greater poverty in the majority world. Early Christians were characterised by hope, and this is the theme of our final chapter as we draw everything together and point a way forward.

Alongside the Christian themes, we have stories and examples from many parts of the world. Some of these are from organisations that we have supported as we have made the journey of discovery on how to care for God's fragile world. We have asked some of our friends and colleagues to write short pieces on their work, and we are very grateful to them.

Introducing A Rocha and the John Ray Initiative

In 1983, Peter and Miranda Harris left their home in England to be mission partners with Crosslinks in southern Portugal. Peter and Miranda had a lifelong love for wildlife and felt called to find a way to conserve nature as part of their mission for the church. They set up a small field centre in the Alvor estuary in the Algarve and named their work 'A Rocha', which is Portuguese for 'The Rock'.¹⁰ They developed a bird observatory and began to build up vital scientific data on the biodiversity of the Alvor peninsular. On our sabbatical trip we visited this centre once more (see Chapter 10).

For many years, A Rocha's work was confined to Portugal, but then people who had been to the centre in Portugal started gradually to catch the vision, and other centres were established. It was not until 2001 that A Rocha UK¹¹ was founded by Dave Bookless in Southall, a very multicultural part of west London. A Rocha UK was involved in a large project to reclaim an area of west London heathland and turn it into a country park. They run the Living Lightly programme and the Eco-Congregation scheme (in England and Wales), and have several associated projects. Margot is on the management board of A Rocha UK and acts as the link person between them and the John Ray Initiative.

It is now over 30 years since the Harrises first stepped out to start an environmental centre as Christian mission. A Rocha currently has active ministry in many nations around the world. They have helped Christians grasp the need to understand nature as something that has value in its own right because it is created by God and valued by him. A Rocha put an emphasis on community, and they teach and live out a sustainable Christian lifestyle that is built on simplicity and a respect for all that God has created. We will look in more detail at some of the aspects of A Rocha's work around the world in later chapters.

The John Ray Initiative (JRI)¹² was founded in 1998 by Sir John Houghton and other senior scientists who were concerned at the scale of the environmental crisis and wished to give a Christian response. JRI has concentrated on running courses, putting on conferences and publishing papers and books. Margot is on the Operations team for JRI and Martin has been their Operations Manager since April 2009, running the small staff team. A Rocha UK and JRI have different strengths and often collaborate on projects.

All creation worships God

One of our favourite Psalms is 148, where each part of creation is called to worship God. Worship indicates relationship and, if God calls creation to worship, then he must have a relationship with the stars, sea creatures, fruit trees and wild animals. As we begin to consider our relationship with creation, we start with the wonderful understanding that God loves his creation, rejoices at its worship and has relationships with parts of it that we can only dream of.

ECOtip

Plastic bags are very dangerous to animals, so why not make plans to avoid using them? Cotton bags are easily available and there are space-saving foldaway reusable bags that you can always keep handy for when you need one. Can you go a week without using a new plastic bag? You might also see if you can avoid clingfilm. Using containers with lids, or covering food with a saucer or a plate, can often do the job just as well.

Bible study: the greatest commandment

If you were given a blank postage stamp and asked to write down the most important thing to you, what would you write? In Jesus' day, asking for summaries of the law was common. With the whole of the biblical text to work through, what was the most important message? A popular tool for Bible study was to combine two texts that had a common word, to bring out a special insight. Jesus uses this tool to combine two verses that have the common word 'love'. We will now explore this passage.

Read Matthew 22:34–40.

1. Jesus ranks his commandments: how can the second be derived from the first?
2. Can you think of examples of teaching in the Bible that hang on these two commandments?
3. What about principles in your own church today?
4. How do we 'love God' in the light of our environmental crisis?
5. How do we 'love our neighbour'?

Read Luke 10:25–37

The parable of the good Samaritan is one of the most famous passages in the Bible. It is a fantastic story and has inspired Christians down through the ages. Jesus told the parable in response to the question, 'Who is my neighbour?' When we look at the environmental crisis today, we can ask that question afresh.

6. Should we consider 'our neighbour' to include the creatures of this world alongside humans?
7. Does that make any practical difference to our action to care for the environment?

Summary

These passages go to the heart of our motivation and standards for worship, relationships and ethical living. As we start to consider how we should live as Christians in a fragile world, we can look again at how we love God and love our neighbour. Taking a fresh look will influence our worship, relationships and the way we live.

Notes

- 1 J.M. Diamond, *Collapse: How societies choose to fail or succeed* (Penguin, 2005).
- 2 J. Rockström et al., 'A safe operating space for humanity', *Nature* 461 (2009), pp. 472–475.
- 3 I. Angus, 'The photosynthetic ceiling: Don't duck your head just yet', *Climate and Capitalism* blog (16 March 2008): <http://climateandcapitalism.com/2008/03/16/the-photosynthetic-ceiling-dont-duck-your-head-just-yet> (accessed 14 May 2015).
- 4 M. Lynas, *The God Species: How the planet can survive the age of humans* (Fourth Estate, 2011).
- 5 M.J. Hodson & M.R. Hodson, *Cherishing the Earth: How to care for God's creation* (Monarch, 2008), pp. 48–52.
- 6 D. Walker & G. Cresswell, *Whales and Dolphins of the European Atlantic* (2nd edn) (WildGuides Ltd, 2008).
- 7 C.K. Pham et al., 'Marine litter distribution and density in European seas, from the shelves to deep basins' *PLoS ONE* 9 (4) (2014): <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0095839>.
- 8 R. Sider, *Rich Christians in an Age of Hunger* (IVP, 1977).
- 9 See, for example, R. Bauckham, *Bible and Ecology: Rediscovering the community of creation* (DLT, 2010) and Hodson & Hodson, *Cherishing the Earth*.
- 10 A Rocha: <http://arocha.org> (accessed 8 June 2015).
- 11 A Rocha UK: <http://arocha.org.uk> (accessed 14 May 2015).
- 12 The John Ray Initiative: www.jri.org.uk (accessed 14 May 2015).

Environmental sustainability is a major issue in society today. While Christian response was generally slow in the 1980s and '90s, concern has grown rapidly in the 21st century across the church. In this book, two environmental experts consider eight of the key contemporary issues, offering eco-tips to enable practical response, as well as Bible-based reflections to deepen understanding. Among the issues covered are climate change, food, biodiversity and population, and the relationship between environmental problems and issues relating to world development.

Dr Martin J. Hodson is a plant scientist and environmental biologist, who writes and speaks widely on environmental issues. His recent publications include *Climate Change, Faith and Rural Communities* (with Margot Hodson) and *Functional Biology of Plants* (with John Bryant).

The Revd Margot R. Hodson ministers in rural Buckinghamshire. She has taught Environmental Ethics at Oxford Brookes University and has written several books, including *Cherishing the Earth* (with Martin Hodson) and *Uncovering Isaiah's Environmental Ethics*, as well as writing for BRF's *Guidelines* notes.

'We belong to a human community which must come to terms with new ways of living: extremely rapid environmental changes now impact us ever more directly, and this book is a comprehensive guide to some of the ways forward we must take. It is accessible, practical, even hopeful, and its biblical wisdom means it is indeed a Christian guide to environmental issues.' **Peter Harris, Founder of A Rocha**

'This book looks straight in the eye of the most serious set of environmental challenges humanity faces. Drawing together in accessible ways scientific evidence, biblical reflection and practical ideas, it will provoke you to think, act and pray for the renewal of creation.' **The Rt Revd Graham Usher, Bishop of Dudley**



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