Climate and Biodiversity Crises: It’s our Call

‘Boundless consumption, short-sighted reliance on fossil fuels and our unsustainable use of nature’¹ are cited by Robert Watson, chair of the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES), as the cause of our increasing environmental distress. He emphasises that the twin crises of the loss of biodiversity and human-induced climate change are ‘not just environmental issues, but development, economic, social, security, equity and moral issues as well.’

These issues have motivated over a million students in 125 countries to participate in climate strikes to demand action on climate change. Young people are also in the vanguard of groups calling on governing bodies around the world to declare climate emergencies.

With such declarations, hundreds of countries and cities in Europe, North America, Australia and New Zealand have signalled the imperative with which we need to act to prevent more disastrous climate change. But is there some hypocrisy in our local councils declaring climate emergencies while building new convention centres (Auckland and Wellington) and runways (Wellington) to bring more people to New Zealand by air²? And might we question councillors’ overseas travel when other sectors use Skype and Zoom to avoid both the financial and environmental cost of flying?

Meanwhile, on the central government front, the Climate Change Response (Zero Carbon) Amendment Bill was introduced to Parliament in May and is intended to be passed into law by the end of 2019. It was delayed from last October to allow for negotiations among political parties. Bipartisan agreement was deemed critical after the disastrous gutting of Labour’s 2008 Emissions Trading Scheme by the subsequent National government³.

The new bill is a compromise. It establishes targets for the reduction of greenhouse gas emissions, but there are separate lower targets for methane produced in our agriculture sector⁴. This is an attempt to buy time, both for changes in what we grow and further developments in technology, e.g., cattle feed, breeding and other ways of reducing methane emissions.

The legislation also establishes a Climate Change Commission, which will suggest how the government can meet its targets. How can we lessen carbon emissions of ground, sea and air transportation; change agricultural products or ways of production; retire fossil fuel extraction and its use for power production – while still providing employment and maintaining our economy?

The Commission is modelled on a similar one which has enabled the UK to cut its emissions to 39 percent of 1990 levels since 2008⁵ (while New Zealand’s have grown 19.6 percent since 1990)⁶. We are committed under the 2018 Paris Agreement to bringing our emissions to 30 percent below 2005 levels by 2030⁷. The Paris Agreement commits all ratifying countries to reducing emissions enough to limit global temperature rise to below 2°C above pre-industrial levels, while pursuing efforts to limit the rise to 1.5°C. New Zealand is believed to be the first country to be making a legally binding commitment to this lower temperature threshold.

¹https://www.theguardian.com/commentisfree/2019/may/06/biodiversity-climate-change-mass-extinctions
³ https://www.newsroom.co.nz/2019/05/09/575599/zero-carbon-bill-lives-or-dies-on-politics
⁵ https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12228995
⁶ https://www.newsroom.co.nz/2019/05/09/575599/zero-carbon-bill-lives-or-dies-on-politics
⁷ https://www.mfe.govt.nz/node/22055
A Government response is expected soon to the Productivity Commission’s 2018 report on our transition to a low-emissions economy. The suggested transition requires three key changes: limiting fossil-fuel use in industrial processes and transportation; rapid afforestation; and changes in agriculture toward horticulture and cropping. Emissions pricing also needs to increase. The sooner emissions are reduced, the less costly the transition will be.

Globally, the Climate Action Tracker shows the world still on track for a temperature increase of 3°C based on global pledges, though current policies will result in a 3.3°C rise. To limit global temperature rise to 1.5°C (which we are likely to reach around 2040), emissions must begin to decline in the coming decade.

The need to prevent more than a 1.5°C rise was frighteningly illustrated in the 2018 report by the Intergovernmental Panel on Climate Change (IPCC), Global Warming of 1.5°C. The difference in sea level rise in a scenario of a 2°C rise compared to a 1.5°C rise is 0.1m. It may not sound like much, but it is enough to expose more than 10 million more people to the effects of sea level rise – loss of fresh water and food crops due to salt water incursion, and greater destruction of infrastructure from higher tides and more intense storms.

With a 2°C rise as compared to a 1.5°C rise, the livelihoods, health and food availability for hundreds of millions more people inland would be threatened by drought, wildfires, floods, storms, changes in viable crops and increased insect disease vectors. An additional 420 million people would be exposed to extreme heatwaves, and up to 50 percent more people would experience water scarcity. Coral reefs would suffer a 99% loss with a 2°C rise, or a further 70-90% with a rise of 1.5°C.

The IPBES Global Assessment Report on Biodiversity and Ecosystem Services published in May this year demonstrated that ‘nature is declining globally at rates unprecedented in human history’, with one million species threatened with extinction. Biodiversity (the variety of plants, animals, fungi and micro-organisms on Earth) is ‘humanity’s most important life-supporting ‘safety net’. Whether it is ocean plankton supporting fish and marine mammals, or terrestrial plants in the forests which are our planet’s lungs, this web of life supports human life. Land use change, direct exploitation, climate change, pollution and invasive species have all driven earth’s ecosystems to their current threshold of collapse.

At present, with temperatures 1°C above pre-industrial levels, we are already experiencing increased heat waves, droughts, floods; conflicts over limited water supplies; loss of fisheries, plants and animals of all kinds; more virulent plant and animal disease; millions of displaced persons moving from drought-stricken areas, disappearing islands and submerged coastal areas. At 1.5°C, we will experience much more. At 2°C, human ability to cope with major environmental, social and economic upheaval will be stretched. Beyond that we would have to question human survival.

Where is our human responsibility and Christian call in all this? Submissions on the Climate Change Bill can be made by 16 July (https://www.parliament.nz/en/pb/sc/make-a-submission/document/52SCEN_SCF_BILL_87861/climate-change-response-zero-carbon-amendment-bill). The School Strike 4 Climate invites us to join in local actions from 20 Sept to the next national walkout 27 Sept. We can pray for the results of the UN Climate Action Summit of world leaders on 23 Sept.

Individual action is also crucial. Each of us – whether a busy student, struggling millennial or aging baby-boomer – has to be willing to make life changes in the way we travel (stop using fossil fuels wherever possible); the way we eat (minimise red meat consumption and purchase local fruit and veg); and the way we consume other goods (reduce, re-use, recycle clothes, electronics, household goods). The fate of our Earth requires economic, social and moral change. Pope Francis reminds us in Laudato Si: ‘all is not lost. Human beings, while capable of the worst, are also capable of rising above themselves, choosing again what is good.’

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9 https://climateactiontracker.org/global/cat-thermometer/
10 https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/