

## Addendum:

### Protecting New Zealand's environment and economy for current and future generations

#### Context:

A healthy environment has been the cornerstone of all civilised human societies for the past 10,000 years. Ignoring this maxim has invariably led to societal collapse. About 3500-4000 years ago the following statement was recorded in Sanskrit literature: "Upon this handful of soil our survival depends. Husband it and it will grow our food, our fuel and our shelter and surround us with beauty. Abuse it and the soil will collapse and die taking man with it."

**We are about to join 190 other nations in Copenhagen** to respond to the urgent need to stabilize atmospheric carbon dioxide concentrations at 450 ppm, in order to keep global mean temperatures from rising above two degrees Celsius by 2100 (compared with pre-industrial levels).

#### State of the Environment– what the science is telling us:

- Several global assessments, including the 2005 Millennium Assessment Report<sup>1</sup> and the 2007 UNEP Global Environmental Outlook GEO4 report<sup>2</sup>, have highlighted climate change as one of the most serious of the many examples of a deteriorating planetary environment.
- The most compelling scientific evidence for taking urgent action is provided in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change<sup>3</sup> which shows climate change is accelerating and that human beings are mainly responsible for the temperature increase since the mid 20<sup>th</sup> century (90% probability). More extreme weather, including droughts and floods are occurring, and projected to become more extreme, glaciers are in retreat globally, ice melting is accelerating at both poles, the oceans are acidifying from increasing atmospheric carbon dioxide, and some species extinctions are already evident. The positive note in the IPCC reports, however, is that **we have most of the technologies needed now to take the necessary steps to cut carbon dioxide emissions, provided more sustainable development paths are adopted.**
- Apart from our burgeoning transport emissions since 1990, New Zealand has a good track record of adoption of renewable energy options including hydro, wind, and geothermal sources. **Our biggest challenge is our agricultural emissions**, for which cost-effective mitigation technologies have so far been elusive, despite considerable scientific effort. Over-reliance in the past on our (post-1989) 'Kyoto' forests has hindered rapid progress. **We acknowledge the need for the additional effort** now being made in setting up before the forthcoming Copenhagen meeting in December of the new Agricultural Greenhouse Gas Institute to accelerate progress toward finding solutions for reducing our agricultural emissions

#### Climate change and the economy:

- Global analysis of the economic costs of extreme weather events by IPCC show that these have rapidly increased from US \$4b in the decade 1950–1960 to over US \$45b in 1990-2000. More recently, in two years alone (2004-2005), the destructive damage from hurricanes exceeded US \$150b.

Accelerating economic costs were a major theme of the Stern Report to the UK Government in 2006, which emphasised that **urgent action now, using existing technologies, would be far less costly than delaying action** until later this century, when costs could be on the scale of the Great Depression. The Stern Report estimates that the global costs of climate change may by the middle of the century be equal to an **annual** cost of \$ 20 000 billion! Most costs will arise for adapting to climate change, including resettlement of hundreds of millions of migrants, profound adjustments of industrial structures, repair and rebuilding of existing infrastructure etc. Compared to these incredibly high costs, the costs for keeping climate change within acceptable limits are far smaller, \$ 500 billion, no more than an insurance premium, and much less than humanity spends presently on “defence”.

- Over the past two years the New Zealand economy has lost about NZ \$3.5b from drought in East Coast regions, particularly in Hawke’s Bay.
- **Our ‘clean green’ image under increasing pressure** from our deteriorating water bodies (e.g., Lake Taupo, Manawatu River), and now from potential harm if mining is allowed on class 4 conservation land, risking the annual NZ \$21b income from overseas (and domestic) tourists. These potential costs need to be weighed against the costs of acting decisively now to address our worsening land and water environments, and our burgeoning emissions.
- Economic analyses rarely acknowledge the value of technological advance and innovation, and frequently over-value the price of carbon (or exaggerate the costs of reducing emissions).
- Recent scientific analysis has shown that, globally the **principal causes of rapidly accelerating carbon dioxide emissions since 2000 are economic growth (65%)**. Increasing carbon intensity is mainly from China and India as many more coal-fired power stations have been built, in part to satisfy Western demand for cheap goods like flat screen TVs (17%), and decreasing ocean and land sinks (the latter from e.g., tropical deforestation, in part for palm oil production for biofuels) (18%).
- Dr Pachauri, Chair of the IPCC recently stated, “we have six years to bring about a major change in the way we have been doing business all over the world” to avoid catastrophic climate change later this century.

### **The human costs of climate change:**

- In 2003, 30,000 people died in Europe during the summer heat wave of that year. More heat-waves have followed, with widespread forest fires becoming a feature almost every summer e.g., Australia, Austria, Greece, California. Hurricane Katrina devastated New Orleans in 2005; this category 5 hurricane resulted partly from ocean warming that has caused the frequency of category 5 hurricanes to increase markedly in recent years in both the Western N Pacific and N Atlantic Oceans. In the developing world human costs from climate change are widely evident. For example, the conflict over several years in the Darfur region of Sudan is, according to several detailed studies, the first example of a major regional conflict caused in part by global warming.

- The Pacific Conference of Churches urged Pacific Island Forum leaders to call for an ambitious and forward looking agreement in Denmark – Conference of Parties 15th session [COP15] in December 2009.
- In New Zealand, we are also vulnerable to the arrival of new pests and diseases that could become established here as temperatures increase. These include mosquito-borne diseases like Dengue Fever, already well established in the Pacific Islands, Australia and Asia, that would add millions to our already stretched annual health costs. New Zealanders have a range of views about climate change, from indifference or denial to firm commitment for action. **A survey taken in 2007 in New Zealand on climate change** showed that 8% believed it was not a problem, 13% saw it as a future problem, **42% believed it was a problem now, and 35% saw it as an urgent and immediate problem.** A combination of factors, including lack of reliable information, no coordinated public education programs, a largely ill-informed media, and indifference, all contribute to New Zealanders being generally less well informed about climate change than people in most other developed countries.

#### **Government policy on climate change:**

- New Zealand's first climate change policy announced by the National party in August 1990 included a commitment to reduce net carbon dioxide emissions by 20% from 1990 levels by 2005. This target date was later revised to 2000 remaining policy until 1994 and was unconditional, not dependent on what other countries do.
- Current government policy aims to reduce emissions up to these same levels by 2020, well below those recommended by the IPCC report (25-40%) to have even a 50/50 chance of avoiding a global temperature increase of 2°C. Moreover, the targeted 12-20% emission reductions are conditional on the efforts of other developed countries, and an adequate response from developing countries.

#### **What the churches are doing about climate change:**

- Christianity is the largest religion in the world. The **New Zealand churches** work with world-wide Christian environmental networks.
- The World Council of Churches in their recent meeting in Bad Boll, Germany, recognized that, regardless of the outcomes from Copenhagen, **climate change** would continue and its consequences **will continue to affect the most vulnerable communities.** Focus groups have been formed on adaptation, ethical and theological considerations, and equity to take practical steps towards and beyond COP15.<sup>4</sup>
- This year, at a number of Christian conferences around the world addressing the current economic crisis, there have been **numerous calls for changing the current economic model based on production and consumption** that fails to take account of the environmental costs and benefits. Economic growth under this model is shown to be the main cause of the escalating carbon dioxide emissions since 2000. A more sustainable and just model that includes a deep respect and reverence for the environment is being called for worldwide.

- The **New Zealand churches** have been actively promoting a similar message and have passed numerous policies within our own church bodies: For example, in 2006 the **Anglican Bishops** called for serious, concerted efforts to grapple with climate change, arguing that ethics and the environment were closely linked. They committed themselves to commending a policy of carbon neutrality, and called upon governments, local governments, businesses and faith communities to work together to both contain and reduce climate change. In 2008 the **Presbyterian Church** issued a Declaration of the Care of Creation and encouraged all its parishes to audit their environmental footprints, to study the issues of climate change and the environment and take practical action. Over the past 30 years the Catholic Church has expressed strong messages of care for the environment. The 2006 New Zealand **Catholic Bishops** Conference called on all Catholics to lessen their impact on the environment by using less energy, buying locally made goods, changing the kind of car they drive, and avoiding water waste and excess packaging. In 2005 the **Salvation Army** called on people and communities to make active investments in regeneration.
- The **Interchurch Bioethics Council** developed a Christian approach to climate change (Real, Urgent and Personal) in 2008 that includes study guides for an ethical response, which is being widely used by parishes, and as a teaching resource in at least one university. The Churches national commitment to tackling climate change is part of an ongoing process of finding the most effective ways for parishes to be good stewards of the Earth. There are many examples of work in progress.
- A poignant call for urgent action to adopt a more sustainable way of living is encapsulated in the Moana Declaration from the **Pacific Conference of Churches**: As peoples of the Pacific, we acknowledge that the land and sea are God's gifts to us – gifts to be used for the livelihood and well being of not only the present generation but all generations to come. We are, therefore, called upon to respect and care for these gifts as children of God through Jesus Christ. In caring for these gifts we acknowledge that human life is vitally connected to all other lives in the land and sea. Together we are a living community in God.<sup>5</sup>



Notes:

1. [www.MAweb.org](http://www.MAweb.org)
2. [www.unep.org/geo/geo4](http://www.unep.org/geo/geo4)
3. IPCC, see [www.ipcc.ch](http://www.ipcc.ch)
4. [www.oikoumene.org/en/resources/documents/wcc-programmes/justice-diakonia-and-responsibility-for-creation/climate-change-water/05-2009-wcc-working-group-on-climate-change-meeting.html](http://www.oikoumene.org/en/resources/documents/wcc-programmes/justice-diakonia-and-responsibility-for-creation/climate-change-water/05-2009-wcc-working-group-on-climate-change-meeting.html)
5. [www.presbyterian.org.nz/speaking-out/ecumenical-and-inter-church/pcc-climate-change-petition](http://www.presbyterian.org.nz/speaking-out/ecumenical-and-inter-church/pcc-climate-change-petition)