



Do Justice

"Do justice, love kindness and walk humbly with your God." Micah 6:8

A Newsletter on Social Justice Issues

Welcome to the September edition of Do Justice as we continue to discuss issues of social justice from a Christian perspective in the tradition of Micah and St Francis.

The changing weather and who benefits

Through most of June and July, the weather seemed to dominate local as well as international news, and it continued to do so throughout August. The Al Jazeera news bulletins reported about forest fires in various parts of Europe and North America, floods in China, India, Nepal, Malaysia, Sri Lanka, Australia and New Zealand and, perhaps most concerning, record high temperatures in so many different countries around the world – over 40°C in England, and 50°C in the Middle East. Yes, the weather is changing, and we have collectively contributed.

Up until the beginning of the 19th century, our main source of energy was wind and water – windmills and watermills. Power for transport was provided by wind for ships on the sea and horses on land. Horses were ridden and pulled carriages, but mainly only for rich individuals; everyone else walked. Fossil fuels, mainly coal and peat, were used for heating, with wood, again, only for the rich.

In the 18th century the power of steam was slowly beginning to be understood, resulting in steam locomotives for trains and steam engines being used to drive pumps to keep water out of mines. The steam engine powered the Industrial Revolution. But to convert water into steam and then heat the steam to temperatures needed to drive engines required energy, and lots of it. Coal was discovered to be a much better source of energy than wood to heat water into high pressure steam, resulting in more efficient steam engines. But coal, when burnt, gives off the gas carbon dioxide into the atmosphere – not a problem!

Towards the end of the 19th century came the internal combustion engine and the diesel engine using oil as their basic power source, again with carbon dioxide as the main byproduct. Still not a problem. The 'people' got cars and motorbikes and buses and lorries; society was transformed at least in some countries, and within 10 to 15 years horse-drawn wagons and carriages had virtually disappeared from the streets of London and New York. Change can come very quickly!

But no one in those days, not even scientists, understood the full impact of carbon dioxide on the earth's atmosphere. The concept of sustainability was yet to be understood on a global scale. Scientists understood that there were finite amounts of fossil fuels – coal, oil and natural gas – in our world. But more and more deposits of fossil fuels were being found and used, particularly for transport. From the 1950s the concept of 'peak oil' was being discussed, initially by M. King Hubbert.¹ The estimated date of 'peak oil' varied widely depending on estimates of discoveries and usage. We are now in the region of 'peak oil' but loss of oil supplies from one major source can cause a dramatic increase in the price as we have seen this year.

In the 1960s, concern was being raised in some scientific circles that the ever-increasing amounts of carbon dioxide getting into the atmosphere were having an impact on the global average temperature as the carbon dioxide limited the amount of heat that could be radiated into space. As the number of satellites circling the earth rapidly increased and more and more accurate measurements of atmospheric temperature were taken, it became clear that our atmosphere was getting warmer, and this would have a profound impact on our weather, as we are now seeing. To date, the increase in global temperature has been about 1.1°C since the beginning of the industrial age and this year we have seen what that increase has already done to our weather. Scientists are forecasting increases of over 2°C if nothing is done, but the world's governments have collectively agreed to reduce emissions by 2050 so the global temperature will only increase by 1.5°. Collectively we should be responding, but are we?

In parallel with the development of the use of fossil fuels beginning in the 18th century has been the development and refinement of the concept of 'capitalism' – *an economic and political system in which a country's trade and industry are controlled by private owners for profit, rather than by the state.*² Capitalism has managed to ignore some of the costs of providing the goods and services that are sold for a profit. The damage done to the earth and atmosphere when resources are extracted and used is not considered, nor the cost of disposing of products when broken and no longer useable, and the disposal of packaging is also increasingly a problem.

¹ [Peak oil - Wikipedia](#)

² [capitalism definition - Search \(bing.com\)](#)

The concept of sustainability has only begun to be understood in recent years.

Capitalism is all about 'profit' and it is not surprising that this is the major, and in many cases, the only factor driving capitalists. In some areas, capitalism has made a major contribution to our lives today, although many of the technological advances we enjoy have been the result of research funded by our governments, that is through our taxes, but exploited by the capitalists.

Fossil fuels are not the only contributor to climate change and global warming. Carbon dioxide is one of several greenhouse gases that are collecting in our atmosphere. Methane is one such gas and in New Zealand it is a major contributor to our greenhouse gas emissions. The primary source of methane in New Zealand is from agriculture, which uses the capitalism model and conveniently ignores some of the costs of production.

Collectively we have all contributed to this situation and we all benefit to some extent. But most people have benefited and contributed only marginally – particularly the poor in less developed countries but also the poor in our country. The major beneficiaries are the rich, particularly the 1% that own 50.1% of the world's resources.³ Hence it only seems reasonable that the 1% should contribute to addressing the climate crisis in proportion to their benefit. But that does not seem to be happening to any great extent.

Much of the opposition to policies designed to alleviate climate change seems to come from the rich who have benefited the most. Opposition comes from extractors and processors of fossil fuels (the oil companies) who have denied for many years that the earth is warming and climate change real. They, probably correctly, saw any changes to address climate change as negatively impacting on their profits, although this year a war in Ukraine has sent most of the oil companies' profits to new heights!

On the other hand, car manufacturers have responded with a range of electrically driven vehicles complete with batteries capable of giving vehicle ranges like internal combustion engines. It should have happened at least 20 years ago. The scientists, particularly those working through the Intergovernmental Panel on Climate Change (IPCC), have been warning us since 1988, over 40 years ago.⁴ By the 2130s most countries should be able to have a majority of their vehicles powered by electricity and this will help limit global warming as long as the electricity is generated sustainably. This does leave us with the question: Are cars the most sustainable way for people to get from place to place? The thousands of people who use Auckland's trains each day contribute very little to our emissions compared to the many more thousands who use petrol or diesel driven cars.

There are five main options for sustainable generation of electricity: solar power, wind power, hydroelectricity, geothermal electricity, and tidal power. None of these electricity-generating methods result in carbon dioxide

emissions or toxic byproducts. In New Zealand we have had hydroelectricity as our major generating source since early in the 20th century with coal and natural gas, both fossil fuels, since the 1970s. Now the cheapest form of electricity generation is solar and wind power.⁵ The sun shines everywhere some of the time and the wind blows everywhere some of the time. So, electricity can be generated close to where it is needed, rather than where either hydroelectric or fossil fuel plants have to be built. Today local generation is both cheaper to build and cheaper to distribute as long transmission lines will not be required except in emergencies. So why are we not being encouraged to put solar cells on the roofs of our houses and other buildings including our churches? Why are windfarms not being built off our coasts; if they can be built in the English Channel and North Sea, surely they can be built off our coasts. Profit is again a barrier to these developments as all our electricity generators and distributors are for-profit companies, but they used to be publicly owned and operated. If we started generating electricity on our roofs the electricity companies' profits would likely fall. So, emission reduction hurts profits.

In human memory there have always been floods, fires and droughts but what has happened in the last few years has been a rapid increase in the number and severity of adverse weather events as the impact of greenhouse gases in the atmosphere has increased. If the result of a 1.1°C rise is what we have recently experienced, then a 2°C rise or even more (which seems likely if we, as a world, cannot get our act together) is going to be catastrophic.

Floods, fires, storms and heatwaves all cost money, as does coastal inundation. Insurance companies are now making it clear that they will no longer be prepared to cover houses in precarious locations, be it on shorelines likely to be threatened by sea level rise, close to rivers subject to flooding or areas possibly subject to earth slips. It just seems common sense not to build in such areas, yet our Government is reported to be considering settling an 'Earthquake Commission equivalent' to provide such insurance. Rather than encourage foolhardiness, the Government should make it clear that no one should build in such risky areas. Surely that is why we have 'planning'. Maybe those who bought houses in threatened areas say 15 years ago should receive some help preferably to move away from the danger. Those who bought more recently should have been more than aware of the risks.

One thing that we have learnt from the pandemic is that most governments will take account in a crisis, and not worry about the cost. With climate change, the costs are becoming very apparent. In Aotearoa, this year's costs will probably reach close to one billion dollars to replace roads and homes wrecked by storms and floods.

As a country we are going to have to spend many billions of dollars to reduce emissions, as will the rest of the world. And those who have benefited most should pay the most – that's only fair. But will they?

³ [how much do the 1% in the world own - Search \(bing.com\)](#)
⁴ [Intergovernmental Panel on Climate Change - Wikipedia](#)

⁵ [Electricity Generation Cost - an overview | ScienceDirect Topics](#)