

## ***Climate Change Debate Heats Up!***

*This month's article has been prepared by Alice Murray, who has recently joined the Commission and is a doctoral student at St Marks.*

You will probably have heard that erstwhile US Presidential candidate Al Gore is touring Australia talking about his documentary film on the dangers of climate change – ‘*The Inconvenient Truth*’, which has just been released in cinemas across the country. You may also have seen the film ‘*The Day after Tomorrow*’ which sensationalised, and perhaps unfortunately trivialised, a spectacularly rapid onset of an ice age in New York. A more soberly researched yet still alarming account of the possible effects of climate change is available in Tim Flannery’s book ‘*The Weather Makers*’.

What is all the fuss about? If the average temperature increases by 5°C over the next century does that really matter? In our Diocese, emerging from a chilly winter, we may even think that would be a good thing. However the Earth’s climatic conditions are very finely balanced and a small change in averages can produce profound effects.

The world’s climate is controlled by bands of weather systems made up of low and high pressure cells. In low pressure cells the air at the centre is rising and in high pressure cells the air is falling. In general where air is falling the temperature of the air rises and clouds do not form so the skies are clear, whereas in low pressure areas the surface air rises and cools, and the water it contains condenses to form clouds and storm cells. The tropics tend to be dominated by areas of low pressure; this is caused by the land and sea being heated more strongly by the sun and hence the surface air heats up and rises. In central latitudes, 15° - 35° north or south of the equator, there is a band of high pressure cells that moves slowly from west to east providing the fairly stable climatic regime of the trade winds in which rainfall is mainly in east coastal areas. A bit further away from the equator is the regime of the roaring forties, 35°- 60° of latitude, where low pressure cells move quite fast from west to east and in which rainfall is mainly on the western coast. In higher latitudes, the polar areas, high pressure cells dominate. These weather patterns are driven by the Earth’s rotation and radiation from the sun. Ocean surface water temperatures and deep ocean currents play a big part in the Earth’s climate as demonstrated by the Gulf Stream and the La Niña/El Niño events. As the average temperature rises the climatic bands move further toward the pole.

Southern Australia lies in the intermediate zone between the trade winds and the roaring forties and any small move in the weather systems can mean dramatic changes in temperature and rainfall. One of the key indicators for our weather is the central latitude for the high pressure belt, the trade wind regime. In the recorded past this usually moves from about 37° S (Bega) in the summer time to about 27° S (Brisbane) in the winter. In simplified terms the weather will be warm, fine, dry and fairly calm above this line and cold, cloudy, wet and often stormy below this line. This winter the centre of the high pressure belt has been hovering around 35° S (Nowra) so it is not surprising, although totally unprecedented, that southern areas of Western Australia, South Australia and parts of Victoria have had their lowest winter rainfalls on record. It has also been the worst snow season for 20 years, which means little or no run-off from the spring thaw. How would we cope if this becomes the new norm?

At the recent Synod in Goulburn, where they know all about shortage of rainfall, we had a Scripture study based on Micah 6:6-8. The moral of this story is that God requires of us 'to do justice, and to love kindness, and to walk humbly with your God' rather than to provide lavish sacrifices to appease God for our profligacy. In Isaiah 30:15 we are told that 'in quietness and in trust shall be your strength'. This does not mean we are to do nothing and hope for the best but to reflect on what we have done, look for inspiration from the Holy Spirit and think carefully about how we should treat the natural environment justly. It is not just humans who will suffer from climatic change but all life on earth. We must learn to tread carefully and leave a small footprint (see August article).

We are incredibly lucky to have a planet that is so accommodating to a richness and profound diversity of life, it is our responsibility to cherish it as God would have us do, rather than squander its resources and foul our own nest in the process. Even if we were asked to pay double for our electricity, generated in a carbon neutral technology, would we not rather do that than see sea level rise by 7 metres; flooding most of the major cities of the world and driving millions of people to refugee camps. Some people say that global warming is not proven, usually for their own convenience, but the evidence is all around us, and the possible effects are ruinous. We pay to insure our houses even though the chance of total loss is less than one percent; should we not be prepared to pay a bit extra, act thoughtfully and justly and be advocates for global responsibility when the risks of disastrous effects are manifestly much more than one percent. Meditate and pray about this for the consequences for life are profound.

Another El Niño event has now been predicted for the coming summer.