

A Critical Review
of
"Healthy Planet, Places and People"

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Introduction

On 27 October 2007 Research Australia released a report titled "Healthy Planet, Places and People"¹. This document, somewhat misnamed because the health of a planet or place is a subjective and unrelated to human health, purported to be a report into how changing environmental factors, particularly climate change, will impact the health of Australians in the future

This report is far from satisfactory because it is based on numerous unsubstantiated claims, provides little evidence to support its own claims, and rejects both observational data and the opinions of experts in relevant fields.

It also fails to acknowledge that a considerable body of research shows that certain health benefits would flow from a warmer world, if that dubious prediction does eventuate.

It is hard to escape the notion that the report is based on ideology rather than concrete scientific evidence.

In the review that follows I deal first with three significant general issues before specifically addressing various statements and claims made in the report.

Part A - General Comments

1. Key sources lack validity

The "Healthy Planet, Places and People" report (hereafter "HPPP report") draws heavily on the CSIRO's 2007 Climate Report but as I showed in my analysis² this report has serious flaws. Changes in cloud cover and wind are ignored but have a great influence on temperature. At several points the El Nino Southern Oscillation (ENSO) is noted as a key influence on Australia's climate but is promptly ignored so that the report can make the unsubstantiated claim that human activity has caused almost every change in Australia's climate since 1950.

The Fourth Assessment Report by the Intergovernmental Panel on Climate Change (hereafter IPCC 4AR) provides no support either. As my analysis of the Working Group I (WG I) report³ shows, just 5 reviewers explicitly supported the crucial 9th chapter in which it was claimed that human activity has a significant influence on climate. Four of those 5 came from among the 55 reviewers with direct or potential vested interests⁴ and just 1 from the 7 reviewers who appear to have been impartial. That one impartial supporter made this single comment for the entire 11-chapter report, so the total support for the IPCC's claim is virtually nil.

The IPCC bases its claim on four pillars

- that recent temperatures have risen
- that heat does not appear to have been shifted from one region to another
- that the pattern of warming does not match climate models
- that climate models get the wrong answers unless a "human factor" is added

¹ see http://www.thankyouday.org/content/documents/web_EnviroReportRA.pdf

² see http://mclean.ch/climate/CSIRO_review.pdf

³ see http://mclean.ch/climate/IPCC_review_updated_analysis.pdf

⁴ "direct" = an author of that chapter, author of a cited reference etc, "potential" = likely to be receiving research funding on the assumption of man-made warming or a government appointed reviewer supporting government policy

As I show in my analysis⁵ each of these claims requires numerous assertions and not one can withstand close scrutiny.

The IPCC has no evidence. The CSIRO has no evidence. The much-claimed but entirely unproven consensus is irrelevant, as the medical profession should know (e.g. Ignaz Sammelweiss).

The numerous climate predictions referred to or made in the HPPP report are therefore without foundation and not credence should be attached to them.

While on this subject of climate information, Al Gore's movie "An Inconvenient Truth" is mentioned in the section "find out more" and is probably the basis for some of the quoted remarks. A recent UK High Court decision found that Gore exaggerated 11 key points in that movie, but the court was only concerned about what might be beyond common belief and was not evaluating the science. Christopher Monkton, a person with an established reputation on climate matters, cites 35 factual errors in the movie⁶, and of course Gore based his movie on the IPCC's Third Assessment Report of 2001 which presented even less proof than the IPCC 4AR that I have discredited.

If that's not enough, others⁷ have exposed the genuine health problems that Gore's movie has had on impressionable children. Nightmares are not uncommon and some children have expressed a fear of dying because of climate change. Why did the HPPP report fail to mention such issues?

2. Absence of references

In my experience it is unprecedented to find an absence of detailed references in what is supposedly a significant report.

Readers of the MPPP report cannot access the referenced material and read it for themselves but are forced to rely on the assertions in the report. Some of the referenced material appears to be referring to work in progress with no paper having been written let alone peer reviewed. This means that the reference in the paper is to nothing more than hearsay. Subsequent work or the peer review process may radically alter the paper, if in fact a paper is produced and the work not abandoned for whatever reason.

Without proper references any report is merely a collection of assertions and in this case many of those assertions can be shown to be wrong.

3. Considerable other research contradicts this report

Website "CO2 Science" has summaries of a considerable number of research papers and review papers⁸ that investigated links between temperature and human health. These papers deal with mortality, respiratory and cardiovascular conditions, and diseases such as malaria, dengue fever and yellow fever. The papers were published across a period from 1990 until today and come from a wide variety of sources.

⁵ see http://mclean.ch/climate/IPCC_evidence.pdf

⁶ see http://scienceandpublicpolicy.org/images/stories/press_releases/monckton-response-to-gore-errors.pdf

⁷ see <http://scienceandpublicpolicy.org/images/stories/papers/reprint/inhofespeech.pdf>

⁸ see http://www.co2science.org/scripts/CO2ScienceB2C/subject/h/subject_h.jsp for index to items

The conclusions from these summaries make it clear that higher temperatures are in fact beneficial to human health. This applies even in Sao Paulo, which is located on the Tropic of Capricorn in Brazil (i.e. at an equivalent latitude to Rockhampton, Queensland)

The absence of any mention of these papers in the HPPP report is highly disturbing and suggests a less than diligent investigation at best, or a deliberate omission at worst.

Part B - Specific Issues

4. Certainty implied where none exists

In the section "Australia's Climate is Changing" the discredited CSIRO 2007 Climate report (see above) is a primary source of information and emphasis placed on the unproven assertion that greenhouse gas emissions are responsible for recent warming.

The discussion in this section often uses the word "will" (eg. "rainfall *will* decrease") when no such certainty exists. These findings are ultimately based on climate models that have not been proven to be accurate. Even if the output of climate models shows some semblance of a close relationship to the real world the ultimate test is whether the internal processing of the model can be shown to be a complete and accurate representation of the real world and even according to the IPCC the level of scientific understanding is inadequate to make that claim⁹.

5. The predicted number of hot days lacks integrity

In the same section as the above the current and predicted number of days with maximum temperature above 35 C is shown but lacks integrity.

Take a look at the range of hot days being predicted for different cities. Hobart apparently can measure days in fractions.

On the other hand Darwin might, if the CSIRO models are accurate, have anywhere between 28 and 69 (or 150% more) such days by 2030. Such a range is scientifically meaningless because the error range is 50% of the mean value. Exact figures for Darwin are not easily available but summer temperatures in the Northern Territory¹⁰ show a decreasing trend since the 1980s.

My analysis of the CSIRO 2007 report¹¹ demonstrated that wind is a key factor in these high temperatures but as I observed earlier the CSIRO report made no mention of changes in wind speed and direction over time. Are we expected to believe that the CSIRO can predict wind characteristics on summer days more than 60 years into the future?

⁹ see Summary for Policy Makers to the IPCC's Third Assessment Report (2001)

¹⁰ see http://www.bom.gov.au/cgi-bin/silo/reg/cli_chg/timeseries.cgi

¹¹ see http://mclean.ch/climate/CSIRO_review.pdf

6. Public opinion does not determine scientific matters

It is extremely unscientific to apply any credibility to the statement "most Australians believe climate change is real and almost half think that environmental problems like climate change have affected their health".

Most Australians are hardly in a position to make an objective judgment about climate change and its health impacts because of constant alarmism from the media. There is even a comment¹², although evidence seems to no longer exist, that prior to the Channel Ten program "Cool Aid - The National Carbon Test" in March of 2007 they did a pool and asked people how much the earth had warmed by in the last century. More than 50% nominated a figure that was 3 times higher than the increase according to thermometer readings near the earth's surface.

In a 2005 survey of scientific understanding¹³ by the public in the USA it was found that the general level was quite poor with only 20% to 25% described as "savvy". Alarmingly 20% of the population believed that the sun revolved around the earth.

In these circumstances it is simply foolish to rely on the public for any matters of scientific knowledge. When was self-assessment a valid statistical or medical process anyway?

But what is public opinion really worth? Surely if one wishes to draw a connection between climate and health then medical and climate statistics would be the only valid sources from which a correlation could be considered.

7. No evidence that changes to the natural environment present "new and larger-scale risks to health"

Despite the alarmist heading this section is merely a collection of unsupported assertions.

A tenuous connection between expanding cities and stress might be claimed on the basis of total time away from the family but it would ignore the fact that at least for Melbourne and Sydney a lower percentage of the population actually works in the heart of those cities.

Numerous diseases might be spreading more rapidly but the dominant reason is very obviously the mobility of people, not something ephemeral about "land clearance and environmental pressures". Prior to the explosion in air traffic diseases tended to be contained to specific areas but one has to only look to the worldwide influenza epidemic spread by soldiers returning home after World War I to see that transport plays a key role.

The apparent rise in mental health problems may simply be that these matters are now better diagnosed and more closely monitored than they were 50 or even 30 years ago.

A subsequent HPPP comment about ocean acidity adversely impacting fish stocks is likewise highly dubious. To the best of scientific knowledge the change in the last 50 years has been a tiny change in the pH of seawater but that's based on the questionable accuracy of historical measurements of acidity. We might also genuinely ask "so what?" because carbon dioxide concentration in the oceans is impacted by sea surface temperature and varies around the world.

¹² see <http://www.abc.net.au/rn/scienceshow/stories/2007/1867444.htm>

¹³ see <http://www.nytimes.com/2005/08/30/science/30profile.htm>

8. Distorted claims about climate change and its impacts

The HPPP report seems totally unaware that there are many good reasons to doubt that recent average global temperatures, as used by the IPCC 4AR, are accurate. These near-ground temperatures are very likely subject to a host of local factors, especially the "urban heat island" effect around cities. Satellite-based measurements show a plateauing of temperatures over the last 6 years at a level well below the warm year of 1998 that was greatly influenced by a strong El Nino.

Trying to apply "current trends" is pointless unless one knows exactly how the current conditions were created and can confidently predict how every contributing factor will change in future, that no actions or interactions will change and that no new factors will appear. This is simply impossible with the current levels of scientific knowledge.

The severe heatwave in Europe during 2003, which I believe is what the report is alluding to, was caused by a stationary cell of high pressure feeding warm air from North Africa into Southern Europe, according to reports from the UK Met Office at the time. Researchers at the University of Reading¹⁴ have shown that there is good reason to consider that the situation was exacerbated by a particularly dry spell of weather that removed surface water that would otherwise use the heat during evaporation. Despite popular mythology there is no reason to associate that event with climate change.

A significant number of deaths from that heatwave were elderly people in France whose children had gone on holidays without leaving adequate support for their parents. It seems logical that had the children been around to care for those people the death toll would have been substantially lower. The French deaths therefore predominantly had a social rather than meteorological cause.

9. Research indicates heart attacks less likely under warmer temperature

The selective and undocumented references in the HPP report are to be deplored for their obvious bias. It claims that each year 1500 people die from heat extremes (hot or cold?) in Australia's capital cities but it fails to mention that cold weather may be a significant killer.

Bjorn Lomborg, well known for his detailed research, recently quoted¹⁵ from his forthcoming book, "Cool it: The Skeptical Environmentalist's Guide to Global Warming", saying

Research shows that although 298 extra people die each year from it being too hot in Helsinki, some 1,655 people die from it being too cold....

Again, the death toll from excess heat in Athens is 1,376 people each year, whereas the death toll from excess cold is 7,852....

When 2,000 people died from heat in the United Kingdom, it produced a public outcry that is still heard. However, the BBC recently ran a very quiet story telling us that deaths caused by cold weather in England and Wales for the past years have hovered around 25,000 each winter, casually adding that the winters of 1998-2000 saw about 47,000 cold deaths each year....

¹⁴ see http://www.met.reading.ac.uk/~swrmethn/summer2003/heatwave2003_reading_incfigs.pdf

¹⁵ see <http://www.canada.com/nationalpost/news/issuesideas/story.html?id=d4b3016d-ecae-4f99-a685-44b01913e859>

In Europe as a whole, about 200,000 people die from excess heat each year. However, about 1.5 million Europeans die annually from excess cold. That is more than seven times the total number of heat deaths. Just in the past decade, Europe has lost about 15 million people to the cold, more than 400 times the iconic heat deaths from 2003.

While the HPPP report failed to produce any statistics to support its claim that heat waves often cause deaths from heart attacks, strokes and respiratory illnesses there is other research that appears to refute this.

In 1992 an investigation of the effects of extremes of temperature and rainfall on the number of coronary events, fatal and non-fatal, in the Hunter region of New South Wales¹⁶ found that coronary events decreased with warmer weather

With respect to seasonal effects, the authors report that "fatal coronary events and non-fatal definite myocardial infarction were 20-40% more common in winter and spring than at other times of year." With respect to daily temperature effects, they found that "rate ratios for deaths were significantly higher for low temperatures," noting that "on cold days coronary deaths were up to 40% more likely to occur than at moderate temperatures." Effects of humidity and rainfall were negligible.

Why did the HPPP report fail to mention this report? Could it be that it would refute the claims made elsewhere in the document?

10. Natural causes of climate variation are ignored

Rainfall in eastern Australia, and in many other countries bordering the Pacific, is strongly influenced by the state of the Southern Oscillation, a very large air circulation system operating over the Pacific. There is no mystery to this and it has been happening for at least 125,000 years.

The Bureau of Meteorology website¹⁷ says

El Niño is not a freak of climate, it's not a rogue weather phenomenon, and it isn't in any way abnormal. Furthermore it is not a scourge, and as far as Australia is concerned, it shouldn't be thought of as a synonym for drought, although it's often linked to reduced rainfall in eastern and northern Australia.

The BoM expands on this in a separate brochure¹⁸ and notes the impact on both temperature and rainfall. Two senior staff at the BOM's National Climate Centre, David Jones and Blair Trewin authored¹⁹ a paper on the link between the El Nino Southern Oscillation (ENSO) and temperature and in that paper they cited several studies into the link between ENSO and rainfall.

¹⁶ Enquessellie, F., Dobson, A.J., Alexander, H.M. and Steele, P.L. 1993. Seasons, temperature and coronary disease. *International Journal of Epidemiology* **22**: 632-636. discussed at <http://www.co2science.org/scripts/CO2ScienceB2C/articles/V6/N33/B3.jsp>

¹⁷ see <http://www.bom.gov.au/climate/enso/>

¹⁸ see <http://www.bom.gov.au/info/leaflets/nino-nina.pdf>

¹⁹ Jones, D, and B Trewin (2000), On the Relationships between the El Nino-Southern Oscillation and Australian Land Surface Temperatures, *Int. Journal of Climatology*, **20**, pp 697-719 (June 2000)

The Southern Oscillation was negative (i.e. towards El Nino conditions) for most of the period from January 2002 to May 2007²⁰, so dry weather in eastern Australia is no surprise at all.

If the Southern Oscillation is the major influence on Australia's climate then we can expect climatic variations in line with that variation but not beyond it, at least not while any significant link to carbon dioxide emissions remains unproven. Dire predictions of continuing deterioration are simply without merit.

11. Discussion of obesity and community design fails to consider all causes

Although this analysis is directed at climate issues it would seem that other matters in the report are also treated somewhat selectively, which of course gives reason to consider if climate matters might be treated likewise.

In the section headed "community design linked to obesity" we are told that parent drive their children to school only because of traffic safety issues. That's rather odd given the recently introduced traffic control measures around schools or on popular routes to school.

Why no mention at all of the parents being concerned about their children's physical safety in light of prominent media reports about pedophiles? Surely the thought of children disappearing not only on their way to school but also when at play in public parks is a very major concern

12. An unsupported link between climate change and asthma

The HPPP attempts to draw a link between climate change and asthma but provides only an unsourced estimate and hearsay from two research projects currently in progress.

In recent times the prevalence of asthma has been linked to excessive cleanliness of parents not permitting their children's bodies to develop immunity but the HPPP mentions neither this research nor any other research. The report apparently wants to blame the increase asthma solely on climate change.

It is however interesting that the research by Dr Bambrick is investigating a possible link between El Nino events and asthma because as shown above, the El Nino Southern Oscillation is recognised as a dominate force on Australia's climate.

However either Dr Bambrick or the authors of HPPP report claim that climate change will cause El Nino events will be more frequent and more intense but the IPCC 4AR WGI report contradicts this claim by saying (chap 9, pg 709)

"... as yet there is no detectable change in ENSO variability in the observations, and no consistent picture of how it might be expected to change in response to anthropogenic forcing."

Where did the claim for an increase in the intensity of El Nino events come from if the IPCC report shows such uncertainty?

²⁰ see <http://www.bom.gov.au/climate/current/soihtml1.shtml>

13. Poorly described link between climate change and water-borne diseases

Despite the opening sentence, which claimed a link between climate and the spread of water-borne diseases, not one sentence of this section supported the contention.

A more accurate description is that climatic factors can impact the *prevalence* of certain water-borne diseases because water is more likely to become contaminated during excessively dry or excessively wet climatic periods. The issue here is the prevalence, not the spread, because the problem lies within the water.

14. Poor link between climate and contaminated food

The heading for this section is "Climate Change and food production" but it's a clear misnomer when the emphasis is on the quality of food.

The noted - although unattributed - claim that Australia's population of 20 million currently presents with 5.4 million cases of food-borne disease may be correct but we are not told if the percentage of the population presenting has increased or decreased over time, whether seeking medical help is more common now than 50 years ago, or whether that figure is merely an estimate (of a rounded 15,000 people/day).

Surely one should consider also if the levels of hygiene (e.g. food storage) being practiced are a major factor rather than simply assume that climate is a significant cause.

15. Caution needed about claims about mosquito-borne diseases

The HPPP claims that several mosquito-borne diseases will become more prevalent but is apparently unaware that there is little connection between temperature and mosquito activity.

In the northern hemisphere mosquitoes are prevalent in summer in Iceland and even above the Arctic Circle in Lapland. Malaria was once common in America and Europe and one of the worst outbreaks occurred in Murmansk, on Russia's northern coast.

The HPPP discusses dengue fever in some detail and asserts that the predicted climate change in northern Australia will be advantageous to mosquitoes but then acknowledges that any increases risk from variations in climate is uncertain. The report seems very uncertain as to whether climate change will have any impact at all.

On the other hand, Dr Paul Reiter, of Institut Pasteur, Paris and a world expert on mosquito-borne diseases is rather more certain. In 1998 he made it very clear that there is no correlation between climate and mosquitoes²¹, and declared that epidemics of such diseases would be more likely in unsanitary conditions.

To sum up, I believe that if global warming comes to pass, it is unlikely to give rise to epidemics of mosquito-borne disease in the United States. Unless, of course, society collapses. If we go back to the living conditions of the 17th century, the picture would certainly change, but I suspect we would be able to prevent that happening. I imagine that if it gets warmer, Americans will spend more time in air conditioned rooms, not less. I also think it likely

²¹ see <http://www.cei.org/gencon/014%2C01520.cfm>

that if the mosquitoes get more dangerous, society will take extra care to suppress them. In other parts of the world, the picture gets more complicated, but again, we are not helpless. If we treat the problems seriously, we can tackle them effectively. Let me repeat: economic factors, not climate, are likely to be the most important parameter.

In 2005 Reiter gave a written statement to the Select Committee of Economic Affairs in the United Kingdom parliament²². In this statement he soundly refuted the claims in the IPCC's Third Assessment Report that mosquito-borne diseases would become more common under warmer conditions. He also said;

The scientific literature on mosquito-borne diseases is voluminous, yet the text references in the chapter were restricted to a handful of articles, many of them relatively obscure, and nearly all suggesting an increase in prevalence of disease in a warmer climate. The paucity of information was hardly surprising: not one of the lead authors had ever written a research paper on the subject! Moreover, two of the authors, both physicians, had spent their entire career as environmental activists. One of these activists has published "professional" articles as an "expert" on 32 different subjects, ranging from mercury poisoning to land mines, globalization to allergies and West Nile virus to AIDS.

Among the contributing authors there was one professional entomologist, and a person who had written an obscure article on dengue and El Niño, but whose principal interest was the effectiveness of motor cycle crash helmets (plus one paper on the health effects of cell phones).

If the IPCC report was the source of information about the spread of mosquito-borne diseases then I suggest that it should have been ignored.

16. No credence to claims that extreme weather events are likely to increase

The HPPP report states that tropical cyclones are on the increase but that statement is contradicted by the CSIRO 2007 climate report, which says they have decreased in number in eastern Australia and a small upward trend is noted for specific categories of cyclone off western Australia but no mention of total numbers in western Australia²³.

The claim is also unsupported by the IPCC 4AR, which reported that in many regions hurricane numbers are falling. That report also concentrated on a post-1995 increase in two specific areas but admitted that changes to the local air circulation patterns may be the cause.

So where did the HPPP report obtain its information that tropical cyclones were increasing?

17. Nonsense claims about the benefits of low carbon dioxide emissions

There is no reason to believe that changes to a lower-emission urban transport system will have any significant impact on physical activity or improve mental well-being. Many people currently drive to work because public transport is slow and inadequate. Demanding that people spend more time on public transport is far more likely to increase their total travel time and thus increase family stress and reduce their social contact.

²² see <http://www.publications.parliament.uk/pa/ld200506/ldselect/ldeconaf/12/12we21.htm>

²³ see page 22 of the CSIRO's report "Climate Change in Australia - Technical Report 2007"

An implication that reducing the consumption of meat from ruminants is unlikely to have a substantial impact on greenhouse gas emissions (aside from the question of whether they have any impact on temperature). Ruminants contribute methane to the atmosphere but methane levels have been falling for the last 5 years. Further, native ruminants have been on earth for thousands of years so why place an emphasis on ruminants for human consumption? Animals and humans breathing probably add far more greenhouse gas than the actions of ruminants.

More energy-efficient housing will come at a cost and so too will the costs and subsidies to various renewable power generation systems that would otherwise be commercially unviable. Money is a primary cause of stress within families so it could be argued that moving to low-emissions systems is likely to increase that stress, not decrease it.

18. Nonsense claims about other environmental factors

Climate change is in no way related to the ozone layer. The cause of the hole in the ozone layer is highly disputed with some scientists pointing to it being actually a displacement of ozone to other regions, highly seasonal, greatest in the least populated hemisphere of the earth and probably due to natural causes.

Deforestation and land clearance have tenuous connection to "new infectious agents" and equally plausibly will remove breeding areas for other disease agents (e.g. mosquitoes)

Climate change may cause some depletion of freshwater supplies but at the same time certain regions of the globe are experiencing greater rainfall. Water management is a key issue here, not merely rainfall per se, because Australia's cities have often failed to keep water storage capacities in line with water demand.

Another key point about Australia's rainfall is that annual averages appear to be falling back to levels typically experienced between 1910 and 1949, and perhaps the period 1950 to 1995 were the abnormal years.

As noted earlier, even if we assume that earlier figures are accurate the acidification of ocean waters has been marginal and extremely unlikely to be beyond the range of normal variations. Most marine creatures will be oblivious to the difference and the additional carbon will actually be beneficial to some. Why did the HPPP report fail to acknowledge that the greater threat to fish stocks is over fishing?

Summary

The HPPP report is based on a variety of unsupported claims from other sources, and in making its own claims it rejects observational data and statements from those more expert in many fields. It refers to a variety of material but fails to provide complete citations to those works. Any beneficial aspects of warming, if indeed that is what is happening, are completely ignored and yet the respective numbers of fatalities under cold and warm conditions in other regions show that warming is clearly beneficial.

Overall the report appears to be based on assumption and ideology rather than on any clear scientific evidence for many of its assertions.
