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## APPENDIX 6a

### ANALYSIS OF CSIRO DOCUMENT ENTITLED *'The Science of Tackling Climate Change'* Released October, 2009

This document is part of, and intended to be read in conjunction with,  
all parts of and appendices to the document entitled *CSIROh!*

The *management consultant* report covers, quote: "*climate change scientific theory*". For that reason, the analysis of CSIRO's document entitled '*The Science of Tackling Climate Change*' is limited to the document's pages 1 through 11. CSIRO's statements are assessed for content and a summary conclusion provided.

Beyond page 11, comments on conservation and on curbing pollution discuss worthy aspirations on the proviso that they discuss real pollutants and not political pseudo--*pollutants* such as CO<sub>2</sub>.

The text from CSIRO's document entitled '*The Science of Tackling Climate Change*' was copied and pasted into this document below.

Statements in '*The Science of Tackling Climate Change*' were then analysed and each classified into one of six categories. Although many statements could be categorised into multiple categories each CSIRO statement was assigned only one category. eg, a statement could be false, unfounded, contradict empirical scientific evidence and falsely blame human CO<sub>2</sub> yet was assigned to only one category.

To assist with your request, Steve, each statement in CSIRO's document is assessed and categorised according to the following criteria:

#### Legend:

Statement or assertion falsely implying or claiming human CO<sub>2</sub> production causes or will cause catastrophic global warming or entrenching attribution of a specific claim to human CO<sub>2</sub>

Contradicts empirical scientific evidence

Based on computer models

False

Unfounded

## Meaningless

No comment

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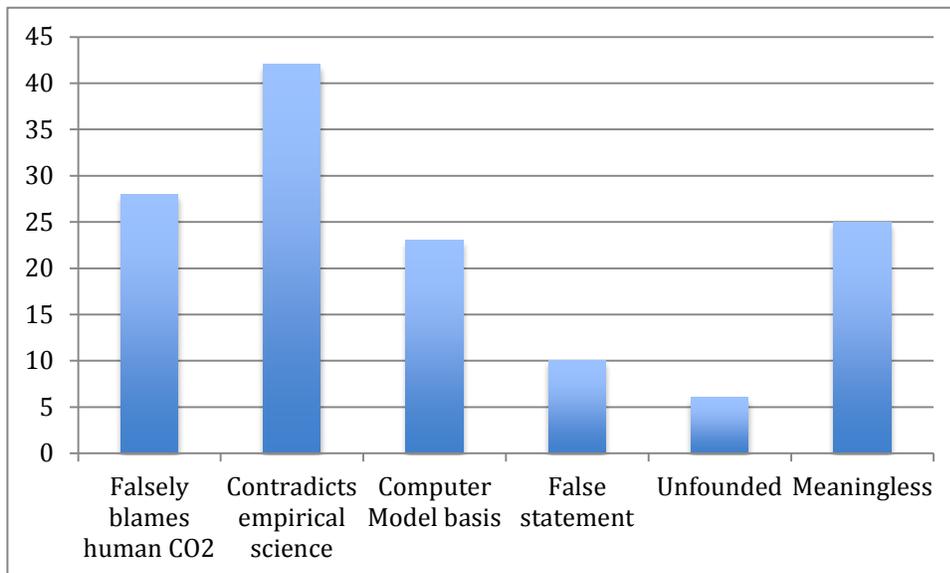
Notes justifying each of my categorisations are provided for each statement categorised.

Pages subsequent to page 11 do not directly discuss climate science. My general comments are made as needed.

The document entitled '*The Science of Tackling Climate Change*' contains no bibliography of references.

Analysis of references cited by other CSIRO documents though reveals that a bibliography provided by CSIRO would be worthless.

This is the summary of statements categorised.



It is amazing that the Foreword by Dr. Andrew Johnson and succeeding ten pages (numbered 2-11) contain so many misrepresentations of science and climate.

Significantly, in the page discussing climate alarm's biggest unfounded scare—projected future sea levels—CSIRO makes 12 statements contradicting empirical scientific evidence. This was followed closely by the page discussing temperature and climate projections with ten contradictions of empirical scientific evidence.

CSIRO knows how to scare people. Appendices 4 and 4a reveal that CSIRO's scares have no supporting empirical scientific evidence of human causation. They often contradict empirical scientific evidence. It takes real effort and graphic artistry skill to cram so many misrepresentations into such short text on each page of the glossy brochure.

# Foreword

Climate change is the greatest ecological, economic and social challenge of our time.<sup>1</sup>

CSIRO is conducting research to help Australia and the world respond to the challenges and opportunities presented by a changing climate.

Our research is contributing to:

- a better understanding of the Earth's climate system;
- identifying ways to mitigate and reduce greenhouse gas emissions;<sup>2</sup> and
- preparing for and adapting to the impacts of climate change<sup>3</sup> that is now unavoidable.<sup>4</sup>

We are not alone in this important work. CSIRO is involved in many significant national and international initiatives. We collaborate with Australian and overseas universities, industry groups and governments at every level to find practical, scientifically-based solutions.<sup>5</sup>

In this booklet, you will see that our science is at the forefront of global understanding of the Earth's climate system and that CSIRO's response to the climate challenge is well under way.<sup>6</sup>

Our scientists are seeking and finding new ways in which Australian communities, industries, ecosystems and economies can minimise the negative impacts of climate change and, wherever possible, benefit from opportunities.

I commend this document to you and **encourage you to engage with your national science agency should you have any questions or wish to seek our scientific input on climate related matters.**<sup>7</sup>

## Comments and Conclusions:

1. CSIRO has no empirical scientific evidence to support this unfounded claim. It contradicts empirical scientific evidence. The term "climate change" is meaningless unless defined and therefore cannot be disproved.
2. CSIRO provides no data that this is needed.
3. CSIRO provides no data that this is needed.
4. Falsely implies reinforcement of the myth that climate change is due to human production of CO<sub>2</sub>. Empirical scientific evidence reveals that Nature controls climate and temperature and reveals that Nature separately controls atmospheric CO<sub>2</sub> levels.

5. Falsely implying many international and Australian groups and governments scientifically confirm that human CO<sub>2</sub> causes a problem needing a solution

6. CSIRO is enmeshed with corrupted UN IPCC bogus '*science*'. CSIRO claims on climate contradict empirical scientific evidence. Falsely reinforces the need to tackle (implied damaging) climate change implied to be due to human CO<sub>2</sub>. It is no doubt true that the CSIRO response is under way, but an undefined and uncostered response to an undefined and undefined problem is meaningless.

7. Why bother? In my experience this statement is hollow since I received no scientific empirical scientific evidence from CSIRO senior executives including Dr. Andrew Johnson, Group Executive—Environment in their responses to my requests. The references they cited provided no evidence of human causation. In my experience they are certainly not informative, factual, or scientific. In my experience and in my view too many CSIRO responses seem evasive, dismissive, and contradictory. My experience is confirmed by others who have similarly sought evidence and/or clarification from CSIRO.

**No evidence of unusual global warming (aka climate change) is presented on this page. There is no evidence that human CO<sub>2</sub> caused global warming. This page is characterised by use of unscientific, undefined, vague, and emotive political terms such as “climate change”, “climate challenge” and “social challenge”.**

# CSIRO's three paths to tackling climate change

Scientific research plays a critical role in the provision of information and advice to support decision-making in relation to climate change.<sup>1</sup>

A comprehensive response to climate change requires three spheres of action:

- ongoing research to better understand the Earth's changing climate;
- adaptation to prepare for unavoidable impacts; and
- mitigation to reduce greenhouse gas emissions.<sup>2</sup>

CSIRO scientists have been contributing to the growing body of scientific knowledge about climate change globally and in the Australian region for more than 50 years.<sup>3</sup>

Their monitoring and analysis shows links between human activities and terrestrial, marine and atmospheric processes that are crucial to improving projections of climate impacts.<sup>4</sup> These projections in turn underpin plans for climate adaptation and mitigation.<sup>5</sup>

Climate change adaptation involves taking action to adapt to climate change (such as reduced rainfall), and to plan and prepare for the risk of future change (such as sea-level rise).<sup>6</sup>

Climate change mitigation refers to actions that aim to limit greenhouse gases in the atmosphere, either by reducing emissions or by increasing the amount of carbon dioxide stored in natural 'sinks' such as forests and soil. In many cases, actions that reduce

greenhouse gas emissions also improve preparedness for future climate change.<sup>7</sup>

> Science – impartial, peer-reviewed, rigorous and based on the latest research – has a critical role to play to help equip those who make society’s laws with the information they need to make these decisions.<sup>8</sup>

Regardless of where the climate change ‘policy plank’ rests on the axis there are a range of policy options available to governments at every level with corresponding climate implications.<sup>9</sup> CSIRO research is actively providing decision-makers with the best available science to help them make better, more informed decisions for now and into the future.<sup>10</sup>

## Understanding the Earth’s climate system is the first step in tackling climate change. <sup>11</sup>

### Comments and Conclusions:

1. Normally this would be true. Sadly, like the UN IPCC, CSIRO reveals it is a political organization, not scientific. This statement by CSIRO is vague, scientifically meaningless and based on a false assumption that a problem exists and that the ‘*problem*’ can be, and will be, corrected by CSIRO.
2. There is no empirical scientific evidence proving human CO<sub>2</sub> production needs to be cut. An uncosted ‘treatment’ of unknown effectiveness is being proposed for an unfounded and undefined problem and without other treatment options mentioned. Such an approach cannot accurately be described as “scientific”. Perhaps “political” would be accurate.
3. CSIRO has misrepresented science. Yet many CSIRO scientists do fine work despite CSIRO’s politically motivated climate agenda.
4. This can be true regionally or locally through, for example, land clearing. Yet it is not true globally or nationally, the focus of this CSIRO document. It is vague and meaningless; what reference? What link? What activities? What processes? What supposed impacts?
5. CSIRO’s climate projections are not founded on empirical scientific evidence nor on understanding of global climate drivers. Within CSIRO its climate projections are by unvalidated computer models contradicting empirical data.
6. Falsely implied in this document and by CSIRO to be due to human CO<sub>2</sub>. Empirical data on sea level proves nothing unusual occurring and poses no threat. Based on the assumption that CSIRO can reliably predict the future using models which have consistently failed and whose basis contradicts empirical scientific evidence.
7. No scientific empirical scientific evidence for this false claim. CSIRO find the need to resort again to undefined scientifically meaningless politically correct terms. Assumes unfounded ability to predict the future.
8. On the topic of global warming (aka climate change) CSIRO is demonstrably political. Many documents are not peer-reviewed. As with UN IPCC documents peer-review is of

dubious quality. CSIRO cites many non-peer-reviewed references. CSIRO contradicts empirical scientific evidence. CSIRO refers here to “rigorous” and “impartial” science, not CSIRO science, so statement is true. The science indicates there is no evidence confirming humans are having a significant or alarming impact upon global warming or sea levels. And science also confirms they cannot reliably predict future climate. CSIRO scientists also admit the affect, if any, of humans on climate, has not been verified or quantified. CSIRO says the science is not settled. Should policy be based upon unsettled science and unknowns?

9. CSIRO ‘*advice*’ is demonstrably politically driven and vague, meaningless and irrelevant (see above)

10. CSIRO has no empirical scientific data showing human CO<sub>2</sub> causes dangerous global warming and needs to be cut. CSIRO claims “*Best available science*” when CSIRO ‘*advice*’ in reality is demonstrably politically driven.

11. CSIRO’s contradiction of empirical scientific evidence, its reliance on unvalidated computer model projections masquerading as science and its politically distorted false claims are shamefully destroying science. Statement assumes CSIRO understands climate and is therefore in a position to “tackle” an undefined, unconfirmed problem called climate change. Meaningless.

**No evidence of unusual global warming (aka climate change) is presented on this page. There is no evidence that human CO<sub>2</sub> caused global warming. Preference is again given to vague, unscientific terms and concepts. Such a strategy is typically political, certainly not scientific.**

## Understanding our changing climate

# Globally, observed CO<sub>2</sub> emissions, temperature and sea levels are rising faster than expected<sup>1</sup>

The Earth is warming. In the past century, the global average surface temperature has risen by 0.74 °C. The observed increase in average temperatures is widespread around the globe, with rising trends recorded on all continents and in the oceans.<sup>2</sup>

The warming has been fastest over land and greatest in the higher latitudes of the northern hemisphere. Global ocean temperature rose by 0.10 °C between 1961 and 2003, to a depth of 700 metres.<sup>3</sup> In Australia there has been a 0.9 °C warming since 1950.<sup>4</sup>

A shift of just a few degrees can cause major changes<sup>5</sup>

Average northern hemisphere temperatures during the second half of the 20th century were the highest of any 50 year period in the past 1300 years, based on at least 10 temperature reconstructions.<sup>6</sup>

However, this magnitude of warming is not unusual in the Earth's geological history. For millions of years the planet has experienced a series of ice ages and warmer inter-glacial periods, driven mainly by changes in the Earth's orbit.

During the last major ice age, the global average temperature was only 3 to 5 °C cooler than today and sea levels were more than 120 m lower than present. About 125,000 years ago our ancestors lived through an inter-glacial period in which the polar regions were 3 to 5 °C

warmer than today, and sea levels were about 4 to 6 m higher than in the 20th century. This illustrates that even a few degrees change in global temperatures can create a vastly different environment.

### Sea levels are rising

From 1870 to 2007, the global average sea level rose by close to 20 cm. Sea levels rose at an average of 1.7 millimetres per year during the 20th century, and 3.4 mm per year from 1993–2007.<sup>7</sup>

As water warms, it expands in volume. This thermal expansion of the ocean is the major cause of sea-level rise in the 20th century. The other main contributors are the melting of glaciers and ice-caps around the world, with smaller contributions from the melting of Greenland and Antarctic ice sheets.<sup>8</sup>

> The three long-term global temperature records available – from the UK Hadley Centre, NASA, and the US National Climate Data Centre. All show a clear upward trend in global average temperatures over the last 150 years (calculated using an 11 year running average).<sup>9</sup>

### Comments and Conclusions:

1. Blatantly false statement contradicting empirical scientific evidence and Earth's history. There is nothing unusual occurring. No mention made of atmospheric temperatures since 1998 being cooler than 1998. Assumes there is such a thing as average global temperature and assumes that the significance of such a figure has been established. CSIRO's statement is based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

2. No mention is made of the stasis in atmospheric temperatures since 1998. No mention is made of the periodic cyclic cooling periods during the last 100 years. No mention is made of the far warmer Medieval Warming Period 1,000 years ago. No mention is made of ground-based temperatures showing North American temperatures in the 1930's being warmer than today's. Assumes there is such a thing as average global temperature and assumes that the significance of such a figure has been established. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda. It is not an approach based upon scientific facts.

3. No mention of ARGO buoys showing ocean temperature since 2003 being steady or perhaps slightly cooling. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

4. No mention that these are ground-based temperature measurements and contested. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

5. Why raise this out of context? Why omit to mention that science and history prove warming is highly beneficial to people, humanity, civilisation and the natural environment. Is this just to scare people? Alarmist statement with relevance not established.

6. Why not mention that in the nation with the best temperature recording network at the time, the USA, the 1930's were warmer than recent decades? Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

7. Why no mention of recent decelerations in rate of sea level rise? Why no mention that during the last 15 years empirical data reveals annual rates of sea level rise is less than the error of measurement and close to zero, 0.3 mm per year? Relevance of fictitious global average, as distinct from real local levels, not established. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

8. Why no mention that total polar ice has been varying normally and shows a stable flat trend? Why no mention that ocean temperature has been cooling slightly since 2003? Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

9. Why no mention that all three rely on the same raw data and that the database is, according to its own programmer "in a hopeless state"? Why no mention that the raw data is not allowed to be peer-reviewed? Why no qualification of the vast corruption of that database? Why no mention of the statistically significant large impact of the Urban Heat Island effect? Why no mention of selective culling of temperature data from cooler weather stations? Why no mention of the reality that Australian rural temperatures show no major trend over the period 1890 to 1998, with cyclic cooling and warming periods having no net overall effect?

**No evidence of unusual global warming (aka climate change) is presented on this page. There is no evidence that human CO2 caused global warming. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.**

## Rainfall and extreme weather patterns are changing<sup>1</sup>

Globally, in the past 50 years, there have been fewer cold days and nights and more hot days, hot nights and heatwaves. Heavy rainfall events have increased in frequency over most areas.<sup>2</sup>

Since 1900, precipitation has increased significantly over eastern parts of the Americas, northern Europe, parts of Asia and north-west Australia. Reduced precipitation has occurred in central and southern Africa, the Mediterranean and parts of southern Asia. Since 1950, eastern and south-western Australia have become significantly drier.<sup>3</sup>

These long-term global climate trends are occurring alongside normal weather variations that happen naturally over seasons or decades. The interaction of short-term and long-term variations can either reduce or worsen the impacts, making it more difficult to pinpoint the causes of local temperature changes or specific weather events.<sup>4</sup>

## Greenhouse gases from human activities are changing the climate<sup>5</sup>

Greenhouse gases are a natural part of the atmosphere, trapping and re-radiating energy from the Earth's surface. The natural greenhouse effect maintains a surface temperature that can support life.<sup>6</sup>

The main greenhouse gases are water vapour, carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, halocarbons and tropospheric ozone. Greenhouse gas concentrations (excluding water vapour) often are expressed as a carbon dioxide equivalent (CO<sub>2</sub>-e).

Many other natural and human factors\* affect the climate. Natural variability such as the El Niño cycle and variations in solar activity can affect the temperature, while large volcanic eruptions can lead to cooling. Changes in land-use can either reduce or increase the amount of heat absorbed by the Earth's surface. Airborne particles (aerosols) have a net cooling effect.

> The observed increases in global average temperatures cannot be explained by natural factors alone.<sup>7</sup>

> Since 1900, precipitation has increased significantly over eastern parts of the Americas, northern Europe, parts of Asia and north-west Australia.<sup>8</sup>

### **Comments and Conclusions:**

1. BOM data for the last 100 years reveals ongoing natural cyclic variation. No changes in recent decades. Seems to (falsely) assume this is unnatural or controllable by humans.
2. In this context this is implied to be caused by human CO<sub>2</sub>. No empirical scientific evidence for this. Patterns vary spatially with weather station location. Natural variation. Seems to falsely assume this is unnatural or controllable by humans.
3. There exists no evidence that there are any unusual trends occurring and there exists no empirical scientific evidence that cycles are caused by human CO<sub>2</sub>. Some places are drier, some are wetter, and some maybe even normal. Natural variation.
4. So what? CSIRO admits they have no idea of local causes in the real world, yet they only deal with fictitious, fabricated global averages.
5. There exists no such empirical scientific evidence. CSIRO has none. CSIRO presents none. After spelling out the uncertainties and unknowns, especially in the real world at the local level, CSIRO then make this blanket statement stating there is no uncertainty. Contradictory.
6. So what? It is unscientific to refer to them as greenhouse gases.

\* According to CSIRO *the hot droughts and cooler wet periods* over the past century were caused by natural variation such as El Nino (*State of Climate 2012*)

7. They can be entirely explained by natural factors. There are no atmospheric hot spots as '*predicted*' by the UN IPCC's *greenhouse* supposition. Nor are any unusual non-natural trends occurring.

8. So what? In this context it's meaningless.

**No evidence of unusual global warming (aka climate change) is presented on this page. There is no evidence that human CO2 caused global warming.**

## Atmospheric greenhouse gas exceeds pre-industrial levels<sup>1</sup>

Since the Industrial Revolution (about 1750), global CO<sub>2</sub> concentration has risen 37%, methane 150% and nitrous oxide 18%.<sup>2</sup> The increase in CO<sub>2</sub> concentration is primarily due to fossil fuel use<sup>3</sup> and land-use change, while increases in methane and nitrous oxide are primarily due to agriculture. The CO<sub>2</sub> concentration in 2008 of 383 parts per million (ppm) is much higher than the natural range of 172 to 300 ppm that has existed for the past 800,000 years.<sup>4</sup>

The physical and chemical processes involved are well understood and documented<sup>5</sup>, and the likelihood of observed warming being due to natural causes alone is less than 5%.<sup>6</sup>

About 50% of the rainfall decline in south-western Australia since the 1950s is likely to be due to increases in greenhouse gases.<sup>7</sup> The intensification of the Sub-Tropical Ridge (a ridge of high pressure over southern Australia) is associated with about 70% of the recent rainfall decline in south-eastern Australia and this is highly likely to be linked to global warming.<sup>8</sup>

Evidence of human influence also has been detected in ocean warming, sea-level rise, continental-average temperatures, temperature extremes and wind patterns<sup>9</sup>. This conclusion is consistent with the observed melting of glaciers and ice sheets.<sup>10</sup>

## Increased carbon dioxide causes ocean acidification<sup>11</sup>

In addition to climate change<sup>12</sup>, another symptom of increased carbon dioxide levels in the atmosphere is ocean acidification<sup>13</sup>. About 25% of the CO<sub>2</sub>

emitted into the atmosphere is absorbed by the ocean and another 25% is absorbed by the natural environment on land. In water, the CO<sub>2</sub> forms a weak carbonic acid,<sup>14</sup> making the oceans more acidic.<sup>15</sup>

Ocean acidification interferes with the formation of shells and coral, and has far reaching implications for the health and productivity of the world's oceans.<sup>16</sup> Higher CO<sub>2</sub> levels also can increase plant growth and productivity, but this can be offset by changes in climate such as less rainfall or higher temperatures and other effects such as nutrient constraints.<sup>17</sup>

> Pteropods, small marine molluscs common in polar waters, form shells of aragonite, a fragile form of calcium carbonate. Ocean acidification is reducing their capacity for shell formation and maintenance.<sup>18</sup> Photo right: Russ Hopcroft, University of Alaska Fairbanks. Photo below: Foram *Globerigina bulloides*, Antarctic Climate and Ecosystems CRC.

Ocean acidification interferes with the formation of shells and coral, and has far reaching implications for the health and productivity of the world's oceans<sup>19</sup>

### **Comments and Conclusions:**

1. So what? Beck and Jaworowski discuss 90,000 reliable measurements of atmospheric CO<sub>2</sub> levels taken in the last 180 years showing CO<sub>2</sub> highly variable and sometimes 40% above current levels. Refer to main notes including comment by Prof Tim Ball, Canadian climatologist.
2. As for 1, above.
3. Nature alone controls atmospheric CO<sub>2</sub> levels. Nature produces 97% of Earth's annual CO<sub>2</sub> production. Variation in CO<sub>2</sub> levels cited by UN IPCC reveal Nature alone controls and determines CO<sub>2</sub> levels. In Earth's past, Nature has driven far higher and more rapid rises in CO<sub>2</sub> levels.

4. Earth's past reveals CO<sub>2</sub> levels far in excess of those currently recorded. UN IPCC omitted reliable measurements in the past 180 years showing CO<sub>2</sub> levels up to 40% above current levels.
5. This is blatantly false. Even Tim Flannery admits that there are enormous uncertainties involved in concluding human CO<sub>2</sub> drives climate and temperature. It is well documented that natural factors account for *'more than'* 100% of the variation in global temperature.
6. This is a blatant falsity. Claiming 5% is likely a reflection of the UN IPCC's claim of 95% certainty. That figure is not statistically sound. It is assigned by a political committee and has no grounding in science. Refer to the Inter Academy Council report of August 2010.
7. CSIRO has no evidence for this false assertion. According to State of the Climate 2012, natural ***"El Nino and La Nina events during the past century have continued to produce the hot droughts and cooler wet periods for which Australia is well known."***
8. CSIRO has no evidence for this false assertion. See above.
9. CSIRO has no evidence for this false assertion. Vague and meaningless. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.
10. CSIRO has no evidence for this false assertion. Some glaciers are advancing. Total polar ice has varied normally. There is nothing unusual occurring. This is yet another blatantly false claim. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.
11. Oceans are strongly alkali, not acidic. Their level of alkalinity has varied within normal limits and continues to do so quite normally. No unusual trend has been documented or observed. Ocean alkalinity is controlled by other factors.
12. CSIRO has no evidence for this false assertion that contradicts empirical scientific evidence.
13. Oceans are currently alkali, not acidic. Their level of alkalinity is varying within natural limits. Ocean alkalinity is controlled by other factors.
14. So what?
15. Oceans are alkali and are not becoming acidic. Level of alkalinity is varying within natural limits. Ocean alkalinity is controlled by other factors.
16. Irrelevant under current circumstances unless one is trying to falsely cultivate unfounded fear and guilt by falsely implying humans are harming the environment and threatening our food security.
17. Higher CO<sub>2</sub> levels reduce plants' need for water and increase agricultural food productivity and Nature's plant growth.

18. CSIRO has no evidence for this false assertion.

19. CSIRO has no evidence for this false, unfounded and unscientific implied assertion.

**No evidence of unusual global warming (aka climate change) is presented on this page. There is no evidence that human CO<sub>2</sub> caused global warming. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claims and revealing an approach driven by an agenda rather than an approach based upon scientific facts.**

## Measuring the climate: then and now

Today, scientists from many nations work together to run a sophisticated global network of weather stations, ocean buoys, tide gauges, satellites and atmospheric sampling stations that constantly measure and record weather, sea levels and greenhouse gas concentrations.<sup>1</sup>

Researchers also analyse older records such as ships' logs, weather reports, tidal records, and archaeological evidence to build a picture of the Earth's climate over hundreds of years.

To look beyond this time-frame, scientists analyse proxy temperature records such as the annual growth rings of trees and corals, and small fossils in lake sediments. For example, sediment cores can indicate how coastlines have shifted with changes in sea level. Bubbles of air trapped deep in polar ice can reveal temperatures and atmospheric concentrations of greenhouse gases more than 800,000 years ago.<sup>2</sup>

## Climate change will continue worldwide<sup>3</sup>

Greenhouse gas emissions at or above present rates will cause further warming and induce many changes in the global climate system during the 21st century.<sup>4</sup> It is very likely that these changes will be larger than those already seen in the past century.<sup>5</sup>

As well, it is very likely that heat waves and heavy rain events will continue to become more frequent worldwide.<sup>6</sup> Sea-ice and snow cover are projected to shrink.<sup>7</sup> Rainfall is very likely to increase in high latitudes and likely to decrease in

most sub-tropical and temperate land areas.<sup>8</sup> The area affected by droughts is likely to increase and tropical cyclones are likely to become more intense.<sup>9</sup>

Some ongoing climate change is now unavoidable<sup>10</sup>

Concentrations of greenhouse gases are continuing to rise<sup>11</sup>, and warming will continue even if emissions<sup>12</sup> are reduced because some have long lifetimes in the atmosphere.<sup>13</sup> Due to this inertia, the climate changes projected for 2030 are largely unavoidable.<sup>14</sup>

The current rate of greenhouse gas emissions is above the highest scenario developed by the Intergovernmental Panel on Climate Change (IPCC).<sup>15</sup> The scenarios used in the IPCC's most recent report no longer adequately describe emerging emission trends for the next few decades.<sup>16</sup> New estimates accounting for recent emission trends indicate that by 2030, CO<sub>2</sub> emissions may be 17 to 52% higher than estimated by the IPCC in 2007.<sup>17</sup> This means that a global warming of 0.8 to 1.5 °C by 2030 is likely to be unavoidable.<sup>18</sup>

> A monitoring system being deployed to measure ocean currents from inside coastal Antarctic polynyas, areas of open water in sea ice that influence global ocean circulation and heat exchange.

### Comments and Conclusions:

1. It is amazing that given the supposed concern of those fomenting unfounded fear and guilt by spreading unfounded claims of human CO<sub>2</sub> causing future catastrophic damage, all but a handful of weather stations do not measure CO<sub>2</sub> levels. CO<sub>2</sub> levels cited by the UN IPCC are measured at just four stations with considerable doubt about their measurement methods. The UN IPCC deliberately omitted 90,000 reliable measurements of atmospheric CO<sub>2</sub> levels taken in the last 180 years.

2. This page seems to be about fabricating an aura of legitimacy about CSIRO on climate. Note that the document contains no bibliography. As revealed though by analysis of references cited in other CSIRO documents, a CSIRO bibliography would be worthless.
3. This is a true statement. Natural climate change has always occurred on Earth. It's ongoing. In the context though, the statement falsely implies climate change due to human CO2 will continue. CSIRO has no empirical scientific evidence for that claim.
4. CSIRO has no empirical scientific evidence for this claim. It contradicts empirical scientific evidence. It is blatantly false.
5. CSIRO has no empirical scientific evidence for this claim. It contradicts empirical scientific evidence. Based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.
6. CSIRO has no empirical scientific evidence for this claim. It contradicts empirical scientific evidence. There is no quantification of the word '*likely*'. There is no basis for using the word '*likely*'. Based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.
7. Unfounded. Projections provided by unvalidated computer models. Already proven wrong. Based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.
8. Unfounded. Projections provided by unvalidated computer models. Already proven wrong. Based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.
9. Unfounded. Projections provided by unvalidated computer models. Already proven wrong. Based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.
10. This is a true statement. Natural climate change has always occurred on Earth. It's ongoing. In context though the statement falsely implies climate change due to human CO2. CSIRO has no empirical scientific evidence for that claim.
11. Nature alone determines and controls global atmospheric CO2 levels. This is revealed by understanding the variation and time lags in seasonal CO2 levels as seen in CO2 data cited and relied upon by the UN IPCC and in the overall trend that lags temperature change by 1,000 years. It is false to assign this to human causation. There is no evidence for this claim.
12. CSIRO has no evidence for this. Recent global atmospheric temperature measurements since 2006 reveal temperatures appear to be falling. Empirical scientific evidence shows every year since 1998 has been lower in temperature than 1998. Thus temperatures are no longer warming and appear to be falling. Many reputable scientists, including those in Russia and Japan are forecasting cooling. This CSIRO statement is

based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

13. CO<sub>2</sub>'s Residence Time in the atmosphere is considered by many studies to be between 2 years and 18 years, with most estimating 5-7 years. Recent scientific studies reveal it could be less than 12 months. Data on CO<sub>2</sub> levels cited and relied upon by the UN IPCC would indicate it is likely less than 12 months.

14. CSIRO lacks evidence for this claim. It is unfounded and false. It is contradicted by empirical scientific evidence. It is contradicted by climate scientists expecting cooler climate. Based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

15. So what, the UN IPCC's climate reports are corrupted and erroneous? Based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

16. Empirical data cited by the UN IPCC reveals that Nature alone controls and determines atmospheric CO<sub>2</sub> levels.

17. Empirical data cited by the UN IPCC reveals that Nature alone controls and determines atmospheric CO<sub>2</sub> levels.

18. CSIRO has no empirical scientific evidence on which to base such nonsense. Evidence to date disproves CSIRO's claim. Based upon unreliable models, extreme scientific bias, and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

**No evidence of unusual global warming (aka climate change) is presented on this page. There is no evidence that human CO<sub>2</sub> caused global warming. This page is based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claims and revealing an approach driven by an agenda rather than an approach based upon scientific facts. Additionally, the recycling of discredited UN IPCC data invalidates CSIRO claims.**

Beyond 2030, the amount of future climate change depends on the level of global greenhouse gas emissions<sup>1</sup>

The trend in greenhouse gas emissions for the next few decades will have a significant influence on climate by 2050 and beyond<sup>2</sup>. To stabilise atmospheric greenhouse gas concentrations, emissions would need to peak, then decline.<sup>3</sup> The stabilisation level would depend on the timing and magnitude of this peak and decline.<sup>4</sup>

For example, to stabilise the CO<sub>2</sub>-equivalent concentration (including greenhouse gases and aerosols) at 445 to 490 ppm, CO<sub>2</sub> emissions would need to peak between the years 2000 and 2015, with a 50 to 85% reduction in CO<sub>2</sub> emissions by 2050 (relative to 2000)<sup>5</sup>. This would give about a 2.0 to 2.4 °C warming relative to 1750.<sup>6</sup> However, in order to stabilise the CO<sub>2</sub>-equivalent concentration at 590 to 710 ppm, CO<sub>2</sub> emissions would need to peak between the years 2020 and 2060, with a 25 to 85% increase in CO<sub>2</sub> emissions by 2050 (relative to 2000). This would give about a 4.0 to 4.9 °C warming relative to 1750.<sup>7</sup>

Achieving peak emissions in 2015 and 3% global emissions cuts annually thereafter gives a 50% chance of exceeding 2 °C of warming. The warming would probably peak in about 2065 at just above 2 °C, but with about a 20% chance of exceeding 2.5 °C. A 10-year delay in mitigative action, achieving peak emissions by 2025, would raise peak warming to about 2.5 °C. A further 10-year delay would mean a warming of about 3 °C.<sup>8</sup>

Sea level is projected to rise

further this century<sup>9</sup>

Ongoing warming of the oceans and melting of ice are expected to lead to continued sea-level rise of 18 to 79 centimetres this century.<sup>10</sup> Due to limited understanding of how ice-sheets in Greenland and the Antarctic will respond to rising temperatures, a rise of more than 79 cm by 2100 cannot be ruled out.<sup>11</sup>

Note: Unless otherwise stated, all sea level projections are relative to the 1981–2000 average<sup>12</sup>.

> Global sea level was stable for about 500 years before starting to rise in the 19th century and the rate of rise has increased since then.<sup>13</sup>

Currently, sea level is tracking near the top of the IPCC projections.<sup>14</sup>

The orange lines show the high (95%) values for six IPCC Special Report on Emissions Scenarios. The blue lines show the low (5%) values for the same six scenarios.<sup>15</sup>

The trend in greenhouse gas emissions for the next few decades will have a significant influence on climate by 2050 and beyond.<sup>16</sup>

### **Comments and Conclusions:**

1. CSIRO has no empirical scientific evidence for this false claim. Contradicts empirical science. Based upon the monstrously deceptive and false assumption that uncertainties and unknowns have been eliminated and climate will behave as predicted by computer models funded by government. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

2. CSIRO has no empirical scientific evidence for this false claim. Based upon the monstrous assumption that uncertainties and unknowns have been eliminated and climate will behave as predicted by computer models funded by government. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

3. CSIRO has no empirical scientific evidence for this false claim. Nature alone controls global atmospheric CO<sub>2</sub> levels. CSIRO claim based upon the monstrous assumption that uncertainties and unknowns have been eliminated and climate will behave as predicted by unvalidated and erroneous computer models funded by government. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

4. CSIRO has no empirical scientific evidence for this false claim. Nature alone controls global atmospheric CO2 levels. CSIRO's claim is based upon the monstrous assumption that uncertainties and unknowns have been eliminated and climate will behave as predicted by computer models funded by government. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

5. CSIRO has no empirical scientific evidence for this false claim. Nature alone controls global atmospheric CO2 levels. Based upon the monstrous assumption that uncertainties and unknowns have been eliminated and climate will behave as predicted by computer models funded by government. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

6. CSIRO has no empirical scientific evidence for this false claim. Based upon the monstrous assumption that uncertainties and unknowns have been eliminated and climate will behave as predicted by computer models funded by government. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

7. CSIRO has no empirical scientific evidence for this false claim. Based upon the monstrous assumption that uncertainties and unknowns have been eliminated and climate will behave as predicted by computer models funded by government. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

8. CSIRO has no empirical scientific evidence for this false claim. Based upon the monstrous assumption that uncertainties and unknowns have been eliminated and climate will behave as predicted by computer models funded by government. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

9. Based on what has occurred in recent centuries this is a reasonable guess for the impact of natural ongoing sea level rises caused by Nature. Based on recent more accurate measurements in the last 15-20 years, the rate of rise in sea level has decreased. Based on state government empirical data on actual sea levels as measured in the last 15 years, the expected rise in sea level over the next century is 30mm, just over one inch.

10. See preceding note (9). Even the UN IPCC's unfounded and shoddy work in its latest Assessment Report (AR4, 2007) based on computer models and then arbitrarily increased in political meetings projects a maximum rise of 0.59 metres (59 centimetres). That's three quarters CSIRO's projection. CSIRO is upstaging even the unfounded and deceptive UN IPCC.

11. It wouldn't be a government-funded report without raising unfounded fear. Based upon the monstrous assumption that uncertainties and unknowns have been eliminated and the sea will behave as dictated by unvalidated CSIRO computer models. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby

invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

12. Based on unvalidated computer models already proven wrong. Based upon the monstrous assumption that uncertainties and unknowns have been eliminated and the sea will behave as dictated by CSIRO computer models. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

13. The most recent scientific data from the most comprehensive sea level study (***The SEAFRAME study*** (*The Sea Level Fine Resolution Acoustic Measuring Equipment*) shows flat trends, no rise. It reveals the way bogus, unscientific claims on sea levels have been fabricated. As CSIRO points out, quote “*Sea-level rise and fall is nothing new and earlier populations have experienced large fluctuations in sea level.*” Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claim and revealing an approach driven by an agenda rather than an approach based upon scientific facts.

Andrew Ash et al, **Climate Change: Science and Solutions for Australia**, CSIRO, 2011;

14. Blatantly false. Empirical data contradicts this false CSIRO claim.

15. UN IPCC cannot be trusted. Why is CSIRO citing UN IPCC claims based on unvalidated computer models already contradicted by empirical scientific evidence?

16. CSIRO has no empirical scientific evidence for this false claim that contradicts empirical scientific measurements.

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## Australia is highly vulnerable to climate change<sup>1</sup>

Australian average temperatures are projected to rise by 0.6 to 1.5 °C by 2030 and by 1 to 5 °C by 2070.<sup>2</sup>

The projected warming of 1 to 2.5 °C by 2070 is for a low emission scenario (similar to a 500 ppm CO<sub>2</sub>-equivalent path). A high emission scenario (similar to the world's current emissions path) is projected to result in warming of 2.2 to 5.0 °C by 2070.<sup>3</sup>

Warming is projected to be lower near the coast and in Tasmania and higher in central and north-western Australia. These changes will be felt through an increase in the number of hot days. In Canberra, for example, the present annual average of five days with maximum temperatures above 35°C may rise to seven to 10 days by 2030 and eight to 26 days by 2070.<sup>4</sup>

### Average annual rainfall is likely to decrease over much of Australia<sup>5</sup>

Projections indicate that by 2030, southern Australia may receive up to 10% less rainfall while northern areas see changes of -10 to +5%. By 2050, southern areas may get up to 20% less rainfall, with changes of -20 to +10% in the north. Water security problems are projected to intensify by 2030 in southern and eastern Australia as a result of reduced rainfall and higher evaporation.<sup>6</sup>

The frequency and extent of droughts is projected to increase over most of southern Australia.<sup>7</sup> However, it is difficult to determine with certainty how much of the drying of the past

decade is due to human activities.<sup>8</sup>

The pattern of severe weather events is expected to change<sup>9</sup>

The effects of climate change will be superimposed on natural climate variability, leading to changes in the frequency and intensity of extreme weather events.<sup>10</sup>

- It is very likely that extreme fire weather will occur more often in southern Australia, with longer, more intense fire seasons.<sup>11</sup>

- Days with heavy rainfall are projected to become more intense over most areas in summer and autumn and in northern areas in winter and spring.<sup>12</sup>

- Tropical cyclone days are projected to increase in the north-east, but decrease in the north-west, with the strongest cyclones becoming more intense.<sup>13</sup>

- The number of days with large hail is projected to increase along the east coast from Fraser Island to Tasmania and decrease along the southern coast of Australia.<sup>14</sup>

> Early morning mist over the River Murray.<sup>15</sup> Water security problems are projected to intensify by 2030 in southern and eastern Australia as a result of reduced rainfall and higher evaporation.<sup>16</sup>

### Comments and Conclusions:

1. In the context this implies human CO<sub>2</sub> caused global warming. CSIRO has no empirical scientific evidence for that claim. It contradicts empirical scientific evidence. CSIRO has already pointed out on page 4 the uncertainties that make local predictions virtually impossible. Its glossy brochure entitled '*State of the Climate 2012*' has highlighted this problem pointing out that unpredictable natural weather events such as **El Nino and La Nina.... during the past century have continued to produce the hot droughts and cooler wet periods for which Australia is well known.** This uncertainty has been confirmed by Kevin Hennessy of the CSIRO and Scott Power of the Bureau of Meteorology, quote: "*Trends in climate are evident over the Pacific as a whole, including the PCCSP region, however the extent to which these trends are attributable to natural variability and to human activities is not yet well*

*understood.”.....” “Little research has been conducted to quantify the relative importance of human-induced change and natural variability as causes of the observed trends in the PCCSP region.” Blatantly contradictory.*

Kevin Hennessy, Scott Power, *Australian Bureau of Meteorology and CSIRO, 2011. Climate Change in the Pacific: Scientific Assessment and New Research. Volume 1: Regional Overview. Volume 2: Country Reports;*

Kevin Hennessy, Scott Power, *Australian Bureau of Meteorology and CSIRO, 2011. Climate Change in the Pacific: Scientific Assessment and New Research. Volume 1: Regional Overview. Volume 2: Country Reports, Chapter 3: Observed Climate Variability and Trends;*

2. Based on unvalidated computer models already proven wrong. See note 1 above.

3. Based on unvalidated computer models already proven wrong. See note 1 above.

4. Based on unvalidated computer models already proven wrong. See note 1 above.

5. Based on unvalidated computer models already proven wrong. See note 1 above.

6. Based on unvalidated computer models already proven wrong. See note 1 above.

7. Based on unvalidated computer models already proven wrong. See note 1 above.

8. This is a stunning admission. Even more so after the previous seven claims on this page alone. CSIRO is advised to seek advice from State of Climate 2012 and CSIRO's Hennessy and Power, as note 1 above, regarding these uncertainties. Clearly it is ridiculous to base policy advice on unsettled science and uncertainties.

9. CSIRO has no empirical scientific evidence for this claim that contradicts empirical scientific evidence of cyclic climate and weather patterns. Earth's climate has continually changed. Has it ever been consistent? Life as usual. There is no evidence of anything unnormal or unnatural.

10. CSIRO has no empirical scientific evidence of human causation. Vague, meaningless, and unscientific statement. The effects of climate change (? Natural) will be superimposed (? Quantify) on natural climate variability (? Quantify, define, differentiate), leading to changes (? Maybe less?) in the frequency and intensity of extreme weather events. This is not science. This is the language of politics driving a political agenda.

11. No validity for this unfounded claim based apparently on computer models.

12. Based on unvalidated computer models already proven wrong.

13. Based on unvalidated computer models already proven wrong.

14. Based on unvalidated computer models already proven wrong.

15. Is this beautiful picture inserted to evoke wistful supportive emotions?

16. Based on unvalidated computer models already proven wrong.

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## Coastal settlements and infrastructure

By 2050, Australia's growing coastal towns and cities will face heightened risks from sea-level rise and more frequent storms and flooding.<sup>1</sup> Sea-level rise on the east coast may be greater than the global average.<sup>2</sup> In low-lying areas, a mean sea-level rise of 18 to 79 cm or more could lead to coastal inundation tens or even hundreds of metres inland, depending on local topography.<sup>3</sup>

Risks to major infrastructure are expected to increase. These include failure of flood protection, urban drainage and sewerage; increased storm and fire damage; and power failures during heat waves.<sup>4</sup>

## The natural environment

Significant loss of biodiversity is projected to occur as early as 2020 in some ecologically rich sites.<sup>5</sup> For example, rising sea temperatures are almost certain to increase the frequency and intensity of mass coral bleaching on the Great Barrier Reef.<sup>6</sup> Other sites at risk include the Queensland wet tropics, Kakadu wetlands, south-western Australia, sub-Antarctic islands and the Australian Alps.<sup>7</sup>

## Primary industries

Production from primary industries is projected to decline by 2030 over much of southern and eastern Australia due to increased drought, reduced water resources and higher temperatures.<sup>8</sup> Changes in the distribution and abundance of commercial fish species may create new opportunities in some coastal regions although some very significant risks remain for the fishing industry.<sup>9</sup>

## Human health

One of the major health impacts is likely to be an increase in heat-related deaths.<sup>10</sup>

Without preventative action, the number of heat-related deaths in people aged above 65 could rise from 1115 per year at present in the major capital cities to between 4300 and 6300 per year by 2050.<sup>11</sup> Some mosquito-borne diseases, such as dengue fever, may move south.<sup>13</sup>

> Commercial fish species are likely to change<sup>14</sup> in abundance and distribution.<sup>15</sup>

Rising sea temperatures are almost certain to increase the frequency and intensity of mass coral bleaching on the Great Barrier Reef.<sup>16</sup>

### Comments and Conclusions:

1. Based on unvalidated computer models already proven wrong. Based upon extreme scientific bias and total exclusion of conflicting scientific evidence thereby invalidating the claims and revealing an approach driven by an agenda rather than an approach based upon scientific facts.
2. Based on unvalidated computer models already proven wrong.
3. In itself the statement is true. The possibility of it happening is remote and if it occurs entirely natural. CSIRO has no evidence that human CO<sub>2</sub> is causing or will cause sea level rise. CSIRO has no evidence of any kind indicating that sea levels will rise by up to 79 centimetres due to factors that humans control. In context this is another wild, unfounded assertion falsely blamed on human CO<sub>2</sub> while contradicting empirical science.
4. Based on unvalidated computer models already proven wrong.
5. Based on unvalidated computer models already proven wrong.
6. Based on unvalidated computer models already proven wrong. Contradicts empirical science.
7. Based on unvalidated computer models already proven wrong. In falsely fomenting unfounded fear by naming Aussie icons, CSIRO omitted Bondi beach.
8. Based on unvalidated computer models already proven wrong. What would a CSIRO report be without an unfounded food production scare? In Earth's recent past, warm periods have been 1-2 degrees warmer than Earth's latest modest cyclic global atmospheric warming that ended in 1998. History and science reveal such periods are blessings for plant productivity. That's why science labels such periods as '*climate optimums*'.

9. So what? CSIRO has no evidence linking this to human CO2.

10. Based on unvalidated computer models already proven wrong. Contradicts empirical scientific evidence showing human CO2 does not determine CO2 levels and climate/temperature. Previously the Dutch PBL enquiry has exposed these types of exaggerated claims from heat deaths (7). One of the errors the edited PBL report draws attention to is the UN IPCC prediction that Australia will experience (7) “**3,000 to 5,000 additional heat-related deaths projected for 2050**” and these “**would be dependent on an increase in temperature.**” In reality however, according to the facts, “**a large part of this increase is solely due to changes in population size and age distribution.**” Interestingly, the gross inaccuracy of the IPCC report in this regard is highlighted by Figure 4 in the CSIRO 2002 report (8). In addition to this, convincing scientific evidence confirming the methodology used to separate death caused by AGW from those due to natural climate variation or severe weather events has yet to be provided. Without this evidence such claims are more accurately described as irresponsible, fabricated, alarmist quackery. Why would CSIRO feel the need to resort to such claims?

Refer to Williamson’s report on CSIRO, here:

<http://www.galileomovement.com.au/docs/CSIROpaperFinalNoLink.pdf>

11. Based on unvalidated computer models already proven wrong. Unfounded. See preceding item (10).

12. May? Is this based on unvalidated computer models already proven wrong? Who knows, there is no reference cited and no reason given.

13. Contradicts empirical scientific evidence showing human CO2 does not cause global warming.

14. ‘Likely’? Is this based on unvalidated computer models already proven wrong? Who knows, there is no reference cited and no reason given.

15. Contradicts empirical scientific evidence showing human CO2 does not cause global warming.

16. CSIRO has no empirical scientific evidence for implying this is due to human CO2. On what basis does CSIRO make this unfounded claim contradicting empirical science? Guesswork or clairvoyance? Certainly not facts.

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## Seals dive deep for data

Elephant and Weddel seals are helping scientists detect change in Southern Ocean circulation and sea ice production. University of Tasmania and CSIRO scientists, with international colleagues, fitted elephant seals with oceanographic sensors to record the first observations of large areas of ocean under winter sea ice.

The seals dived repeatedly to an average depth of more than 500 metres and a maximum depth of nearly 2000 m.

Their sensors delivered a 30-fold increase in observations for some previously data-sparse parts of the Southern Ocean and provided critical environmental information relevant to seal health and food systems.<sup>1</sup>

Changes in the polar regions are important because several feedbacks involving ocean currents, sea ice and the carbon cycle have the potential to accelerate the rate of global climate change.<sup>2</sup>

In the southern hemisphere, the limited observations available suggest<sup>3</sup> that the circumpolar Southern Ocean has warmed more rapidly than the global ocean average and that the dense water formed near Antarctica and exported to lower latitudes has freshened in some locations and warmed in others.<sup>4</sup>

> Sensors fitted to elephant seals are generating new data on the Southern Ocean ecosystem and changes in ocean conditions that may influence global climate. Photo: Mike Fedak, St Andrews University<sup>5</sup>

### **Comments and Conclusions:**

1. Can this be taken as an admission by CSIRO that in reality it lacks sufficient fundamental data for making comparisons with the past? Based on limited data to date, that would make it impossible to make accurate projections for the future, wouldn't it?
2. Assumes human CO<sub>2</sub> caused global warming. CSIRO has no empirical science supporting this false assertion.
3. Another suggestion is that CSIRO is jumping to conclusions with evidence and reinforcing its unscientific bias.
4. In the context CSIRO is implying yet another false assertion by implying human CO<sub>2</sub> warmed the circumpolar Southern Ocean and freshened and/or warmed some waters.
5. This will be impressive if CSIRO scientists are allowed to use the data and if they choose to use it scientifically and in context.

**No evidence of unusual global warming (aka climate change) is presented on this page. There is no evidence that human CO<sub>2</sub> caused global warming.**

## Emissions rising faster this decade<sup>1</sup>

Through the Global Carbon Project, CSIRO provided an update of trends in the global carbon budget to 2007, including ocean and land sinks, and anthropogenic emissions from deforestation and the combustion of fossil fuel. The results showed global emissions are tracking at the high end of the IPCC emission scenarios released in 2000, and above the average of the most carbon-intensive emission scenarios.<sup>2</sup>

Atmospheric carbon dioxide growth has been outstripping the growth of natural carbon dioxide sinks such as forests and oceans.<sup>3</sup> The stabilising influence that land and ocean carbon sinks have on rising carbon emissions may be gradually weakening.<sup>4</sup> Forests, grasslands and oceans are absorbing carbon dioxide from the atmosphere faster than ever, but they may not be keeping pace with rapidly rising emissions.<sup>5</sup>

For more information visit: [www.csiro.au/resources/GlobalCarbonProjectFigures.html](http://www.csiro.au/resources/GlobalCarbonProjectFigures.html)<sup>6</sup>

> Atmospheric carbon dioxide growth has been outstripping the growth of natural carbon dioxide sinks such as forests and oceans.<sup>7</sup>

## Step change in climate prediction

CSIRO and the Bureau of Meteorology, through The Centre for Australian Weather and Climate Research, are working with Australian universities and the UK Meteorological Office's Hadley Centre to build the Australian Community Climate and Earth System Simulator (ACCESS).

ACCESS uses the latest computer models of the land, atmosphere, oceans, and glacial and polar regions to produce high-quality, short-term and seasonal weather forecasts, and future climate scenarios spanning decades to centuries. Its forecasts will assist in the management of air quality and renewable energy resources, extreme weather events, agricultural production and public health.

The first operational weather forecasts produced by ACCESS are now available, and the system will produce detailed climate projections for the globe and Australian region by 2012–2013.<sup>8</sup>

For more information: [www.cawcr.gov.au/file/access2007.pdf](http://www.cawcr.gov.au/file/access2007.pdf)

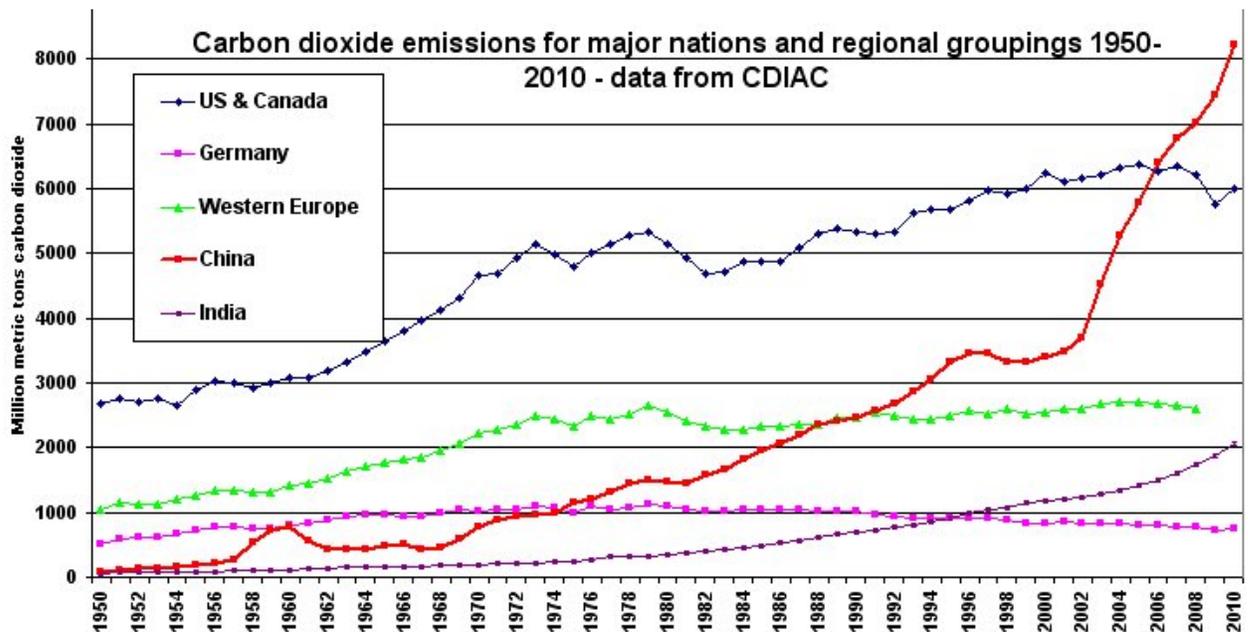
> ACCESS will deliver reliable, timely and accurate weather forecasts, as well as future climate scenarios spanning decades to centuries. Photo: Bruce Miller

### Comments and Conclusions:

1. So what? Meaningless statement.

China is now the world's biggest producer of human CO<sub>2</sub> and will soon be by far the biggest producer of human CO<sub>2</sub>. The annual increase in China's CO<sub>2</sub> production is greater than total Australian CO<sub>2</sub> production.

<http://www.warwickhughes.com/blog/?p=1574>



2. So what? CSIRO has no evidence of any need to cut human CO<sub>2</sub> production. See above. If CSIRO is responding to science rather than politics it will have a risk based approach targeting China. Why is CSIRO's response based on Australian per-capita CO<sub>2</sub> production? Why is it not risk based? Why is it not in accord with the evidence of global human CO<sub>2</sub> production?

3. Data cited and relied upon by the UN IPCC reveals Nature alone determines and controls global atmospheric CO<sub>2</sub> levels.

4. May? So what? Data cited and relied upon by the UN IPCC reveals Nature alone determines and controls global atmospheric CO<sub>2</sub> levels.

5. May? Data cited and relied upon by the UN IPCC reveals Nature alone determines and controls global atmospheric CO<sub>2</sub> levels.

6. Why bother? In their responses CSIRO's Chief Executive and Group Executive—Environment fail to provide empirical scientific evidence of human CO<sub>2</sub> causing alleged global warming.

7. Nature alone determines and controls global atmospheric CO<sub>2</sub> levels.

8. The apparently new scientific methods listed in both preceding paragraphs will be useless if simply plugged into unvalidated computer models based on the unfounded, unscientific and false notion that human CO<sub>2</sub> drives and determines climate. If that assumption remains the basis for CSIRO science it will hinder science and waste taxpayer funds?

**No evidence of unusual global warming (aka climate change) is presented on this page. There is no evidence that human CO<sub>2</sub> caused global warming.**

## **General Comments on Remaining Pages in CSIRO's Glossy Brochure**

Page 12 starts with a sensational yet unfounded statement that is contrary to empirical science. It makes a bold assertion that stabilisation is needed. That seems to falsely imply that the current situation is not stable.

Pages 13, 14, 15 and various other pages raise tantalising new technology and discuss CSIRO's facilities. Yet given the lack of any scientific evidence for CSIRO's underlying assumption and core claim that human CO<sub>2</sub> is projected to cause future catastrophic global warming at some unspecified date, one cannot help but consider the opportunity cost of the funds being wasted on mitigating a non-problem.

Some laudable fuel efficiency efforts, if successful, will improve resource utilisation and energy efficiency providing important cost savings. Yet as attractive and beneficial as these could be, if they are developed within a CSIRO culture serving political goals they will likely lead to ineffectiveness and disillusionment of talented scientists.

The pages often serve as baseless propaganda reinforcing CSIRO's unfounded core claim that human CO<sub>2</sub> caused global warming. In places CSIRO incites unfounded and baseless fear and (quote) "*vulnerability*". Yet nowhere does CSIRO provide any evidence in support of its false unfounded, unscientific claim that contradicts empirical science.

### **Overall:**

After analysing the document I feel concerned about the state of CSIRO's climate '*science*'. I conclude that the document is simply more politicised advocacy contradicting empirical science and contradicting logical scientific reasoning. I feel concerned for scientists working in an environment that can produce a glossy brochure making false claims dressed as science yet largely devoid of logical scientific reasoning and empirical scientific evidence.

Given the nature and frequency of its deceptive and false statements I conclude that the purpose of this CSIRO document is to deliberately misrepresent climate and science.

Given your statement in your email of February 11, 2010, Steve, I conclude that Dr. Megan Clark is either grossly incompetent and gullible or dishonest. Given her intelligence, education, positions and apparent conflicts of interest I conclude that she deliberately misled you in accord with what seems to be her political agenda.

Steve, I hope this exercise in fundamental analysis of the brochure meets your needs and expectations.

Given the context provided by preceding and succeeding sections I invite you to decide whether I am a keyboard crank or an informed protector of freedom and science.

In her statement on your program was Dr. Megan Clark pushing science or is she a liar corrupting science and likely pushing a global agenda? My conclusion is the latter. What's yours?