THE HON PETER GARRETT AM MP

MINISTER FOR THE ENVIRONMENT, HERITAGE AND THE ARTS

Luncheon Seminar hosted by Bureau of Meteorology & IPAA Victoria
Carillon Room, Sofitel Melbourne
Wednesday 16th April

[CHECK AGAINST DELIVERY]

‘Australia’s climate future’

Thanks everyone for your welcome. To Dame Beryl Beaurepair, thank you for attending to be part of this centenary event for the Bureau and also for giving probably one of the funniest pre-speech speeches I have heard for a long time. To Professor David Griggs, thank you for yet again, focusing our minds on the daunting challenge of addressing climate change.

I want to acknowledge the Aboriginal people of this country and pay my respects to their elders. I want to acknowledge Dr Geoff Love and his colleagues. And I want to say that on the occasion of the centenary of the Bureau of Meteorology it is a great pleasure to be here with you to talk about Australia’s climate future.

It’s well accepted now that one reason the Rudd Government was elected last year was because of community concern about our future climate. It is the case that the previous Government had failed to act or recognise the seriousness of global warming and its potentials. That was the community sense - a sense that Australia’s interests – our environmental health and our economic health, even our security interests - were jeopardised by the failure to act resolutely on climate change.

I think, as well, we witnessed a rapid transformation in Australians’ understanding that a stable climate actually underpins an environment that is healthy, ensuring a sustainable economy and the lifestyle that we have and want coming generations to enjoy as well.

And whilst it is the case that Australians have always been weather aware, I would argue now that they’re increasingly climate aware too.

Today I would like to share with you the Rudd Government’s plans for protecting Australia’s climate now and into the future. And also on this occasion pay tribute to the important role that the Australian Bureau of Meteorology has played, and will continue to play in the future.

As you know, 2008 is the 100-year anniversary of the formation of our national meteorological organisation. Like the ABC, the Bureau is one of those national institutions with which all Australians have a day-to-day relationship.

It helps us with simple decisions like: Should I take an umbrella or wear a coat?

And the Bureau's work informs business decisions like: Should I harvest today? Should we start building work today?

We check in on what the weather is doing at any given moment, using the Bureau's information-rich website, including its fantastic online radar. It's one of Australia's most popular websites.

But I also want to point out the other roles of the Bureau are less well known are equally important, particularly the significant contribution it makes in monitoring, recording, analysing, researching and predicting our climate.

It is the case that the Bureau's work no longer deals only with weather and climate, but extends to understanding and protecting the oceans, monitoring the air we breathe, and the assessing the data around the management of water resources.

The first step in doing all these things is "observing" what is actually happening – with the weather, the climate, the oceans, the air and water.

These observations tell us about the past, and from that enable us to better predict the future. So I guess the first question to ask is what we know about Australia's climate past?

First of all, we know that the Australian climate changes a lot from year to year and from decade to decade. Through the research of the Bureau and its partners, we're starting to better understand these changes.

For example, from 1910 to 2004, the average maximum temperature rose 0.6 degrees Celsius and the minimum temperature rose 1.2 degrees. Most of that change, dramatic as it is, occurred after 1950 – in our lifetimes - and it is very likely that increasing greenhouse gases contributed to that warming trend.

We also know that over the past 50 years, rainfall has increased in north-western Australia and decreased in southern and eastern Australia. The decrease in the south-west is probably due to a combination of increased greenhouse gas concentrations, natural climate variability and land-use change.

Some of the changes are already substantial. Streamflow in the south-western corner of Western Australia has decreased by 50 per cent since the mid '70s.

That is an extraordinary statistic given the importance of a reliable water supply to our health, the environment and agriculture.

The changes in the climate are accompanied by other signs in the natural world.

Rainforest is expanding at the expense of eucalypt forest and grassland in the Northern Territory, Queensland and New South Wales, linked to changes in rainfall and fire regimes.

Snow gums are encroaching into sub-alpine grasslands at higher elevations and more feral mammals are intruding into alpine areas.

And in a region that is one of this Government's priorities, the Great Barrier Reef, the dangers noted are extreme. Before 1979, no serious coral bleaching events had been observed. Since 1979, there have been eight mass bleaching events, triggered by unusually high sea surface temperatures.

Taken together, the changing climate and along with other observations informing our understanding – this picture invites us to look seriously to Australia's climate future.

And for Melburnians it will be serious.

You can expect up to 84 more hot days over 35 degrees by 2050 and up to 32 fewer frost days.

So the Bureau will be delivering the science that informs these startling figures and then of course will relay the news to the city around the clock, daily, monthly and yearly.
It is a dual role that the Bureau now has and one that is critical.

It is also likely that evaporation will increase while soil moisture and runoff decreases over most of Australia. Now that seem like a bland enough statement but when we look more deeply at it, it means that droughts, already a feature of our climate pattern, will likely be more frequent and certainly more intense.

And those plant and animal communities and, critically, human communities living in these areas and thus affected will really be facing considerable challenge.

Fire danger is likely to increase - more frequent fires, increased fire intensity, a decrease in fire extinguishments and faster fire spread.

On the coast, we can expect more inundation and wave damage from storm surges, exacerbated by sea level rise.

For Australians, we've got a number of "hotspots" which are especially vulnerable to climate change and they include:

- Kakadu. One of our most important national parks and world heritage listed, where rising sea level may push saltwater into freshwater wetlands,

- South-western Australia, where drying may lead to water shortages, less cropping land and fragmented natural habitats,

- And of course the Murray-Darling Basin, where reduced water supply we know is expected to affect irrigation, cities, industries and environmental flows, so necessary for the health of the river system.

So I don't think it is any wonder the Australian people gave the Rudd Government a mandate to take serious action on climate change. Frankly, ignoring dangerous climate change was no longer an option.

The Bureau's role in climate science may not be as well recognised as its role in forecasting weather, but what we know about our climate in the past, the present, and the future, stems directly from the daily actions of its meteorologists, hydrologists, and oceanographers.

Australia is fortunate to have the detailed climate record that it has.

There may be some quibbles from those of us in political life or students of our history about the Constitution, but I think it has to be said that the framers of the Constitution had the foresight to lay the basis for Australia's climate record. They gave Parliament the power to make laws with respect to meteorological observations, among many other things.

In that nation-building spirit, meteorology was put on a national footing – with offices in each State and Territory, and a set of consistent standards by which to measure and record temperature and rainfall.

Early observations were manual, haphazard and mainly taken near populated areas.

A century on, the observing networks and the people who operate and maintain them span the entire continent and extend to all our territories, from the Indian Ocean and Coral Sea islands to Antarctica.

They are supported by a vast network of volunteer observers whose dedicated efforts provide the remarkable delivery of a community service every day.

In the early days, as now, the Bureau used the data it collected to forecast the day-to-day weather across Australia.

Then, as now, its attempts were often criticised as highly inaccurate – but I am in no doubt that this was a more valid concern in those days, than now. In those days meteorological science was in its infancy. Now the Bureau delivers meteorological science of technological sophistication and correspondingly of fine and more accurate forecasting.

One of the first policy uses of the Bureau's climate data was to demonstrate the desirability of Australia as a place to settle, to attract new migrants.

So part of the Bureau's history is in helping to shape the culture and the demography of the settler nation, Australia.

These early efforts have produced a great legacy – the nation's climate record.

Because of this record, we now know that climate is not static as initially thought but constantly varying on all time scales like the weather itself.

Hence the observing and data management systems that provide us with the weather data and the long-term climate record are a critical part of the nation's infrastructure. Without them we would be ill-equipped to cope with the challenges that nature deals us day after day and also the dangers of climate change too.

The Rudd Government's climate change policy is built on three pillars: reducing Australia's greenhouse gas emissions; adapting to climate change that we can't avoid; and helping to shape a global solution.

In developing a strategy to achieve deep reductions in emissions that are needed, the Government will be mindful of the economic challenges we face.

It is critical to settle on measures which aim to be delivered at least cost, and with greatest potential to drive new growth, create jobs and develop new industries.

Emissions will be reduced by the development and implementation of an emissions trading scheme. This will enable a greater reduction of emissions as a carbon price is established for carbon in the system.

There are also many opportunities for us all to reduce our own climate footprint - driving less, installing energy rated appliances, and turning them off at the switch. Bearing in mind the strong desire Australians have shown to take action at home.

When we went to the election in 2007, we promised a number of measures like providing low interest loans for people to make their homes more energy and water efficient.

Over the coming months I want to progress not only that initiative but a number of others. The provision of energy efficient insulation and rebates to achieve that, particularly in rental properties. Cost saving new standards for household appliances.

I will broaden and extend the Solar Cities concept and make every school in Australia a solar school.

The success of these measures will inevitably require the support of the Bureau of Meteorology at many levels and on many timescales.

For example, information from the Bureau will help to identify where solar panels and solar hot water may be most successful, or the optimum size of rainwater tanks.

The second pillar of the Government's approach is adapting to the climate change that we cannot avoid.

We know now that climate change resulting from human influences is already underway, so we must prepare ourselves for the inevitable changes already built into the climate system.

The Bureau's role is critical and it has been expanded recently to allow it to provide the same information and support on the water challenge as it has on weather reporting generally, and it is critical to the climate challenge.

In future decades, as the climate scenarios unfold, we will need to keep pace with new, more efficient ways of monitoring not only the climate but consequent environmental impacts such as water availability.

So the linkage from understanding what the weather will be to understanding where the climate has been and where it is going, to understand the impacts of changes in the climate on Australia, its people and its environment, will underscore the work of the Bureau.

As those of you who work there would know, new technology is already playing an increasing role, with observations now routinely taken from satellites, radars, instrumented weather balloons, commercial aircraft, and automatic observing stations.

Like any organisation with a long and distinguished history, the Bureau will adapt to the times and to the new challenges. And it must, in a period of intense climate interest with its new responsibilities for monitoring our water supplies and with the opportunities presented by new technology, the Bureau is clearly evolving.

But it is also a period of fiscal restraint for governments and these changes will need to be put in place carefully with a clear eye on the services the Bureau provides, in the public interest.

I am sure that by continuing to provide a world class weather forecasting service and acknowledging and understanding the needs of the community it serves, the Bureau will chart a successful path into the new century.

The third pillar of the Government's approach to climate change is helping to shape a global solution.

That's why the first act of the Rudd Government was to ratify the Kyoto Protocol.

Ratifying Kyoto put Australia back on the map. It meant that for the first time we were a full negotiating partner in all key international climate change forums.

And because international collaboration is critical in addressing climate change and has been essential to developing our understanding of Australia's weather and climate, the Bureau's role in international collaboration remains critical.

Understanding meteorological activities in other parts of the world depends critically on Australia's observations here. So to this extent, since the establishment of the World Meteorological Organisation in 1950, members have worked tirelessly toward a common goal to produce comprehensive, integrated global observing, weather, climate, and research programs.

The Bureau has always been a significant player in this forum. In 1988 the then Director of Meteorology, Dr John Zillman, became the first Vice-President of the World Meteorological Organization, becoming President for eight years from 1996. And I want to acknowledge Dr Zillman who is with us today.

At that time, Australia was closely involved in the establishment of the most authoritative source of scientific advice on the state of the global climate, the Intergovernmental Panel on Climate Change.

Australia's role in this extraordinary international effort has been highly significant.

From 2002 to 2003 the current Director of Meteorology, Dr Geoff Love, was Secretary of the Panel. Australian scientists, including many from the Bureau, have contributed to the Panel's assessments of scientific findings on climate change for the past twenty years, helping to bridge the gap between the technological community and the policymakers. The 2007 Nobel Peace Prize acknowledged the significance of their work.

The Bureau also represents Australia in the Group on Earth Observations which is coordinating international efforts to build a Global Earth Observation System of Systems.

This emerging public infrastructure connects a range of systems for monitoring and forecasting changes in the global environment, to support policymakers, resource managers, science researchers and many other experts and many other decision-makers.

The observations collected by the Bureau of Meteorology since its establishment 100 years ago have played a key part in developing our current knowledge.

Observations fuel research. Research leads to understanding. Understanding leads to the development of models of what we observe. Models allow us to test that understanding and to predict. In this way science and policies derived form it, move forward.

The observations and the output of climate models tell us that climate change is occurring and that our actions are contributing. That is clear. That is plain.

However, there are now practical programs underway to help combat the challenges posed by climate change and I have outlined some of the Rudd Government's responses today.

Climate change offers new possibilities – new industries, new development, new ways of thinking.

We do have time to act and this Government is acting.

After 100 years, the Bureau of Meteorology has emerged at the beginning of this century an accomplished organisation – not only providing Australian's with the best, up to the minute weather information they need to plan and build their lives, but able to respond to the many environmental challenges facing Australia, especially in a time of climate change.

I am confident the next 100 years will build on the past centenary of the Bureau's eminent success.

Thank you.

ENDS