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New South Wales Irrigators Council

SUBMISSION TO SENATE STANDING COMMITTEE ON RURAL AND REGIONAL AFFAIRS AND TRANSPORT

CLIMATE CHANGE AND THE AUSTRALIAN AGRICULTURAL SECTOR

March 2008

Member Organisations: Bega Cooperative Limited, Border Rivers Food & Fibre, Coleambally Irrigation Co-Op Ltd, Cotton Australia, Gwydir Valley Irrigators' Association Inc., Hunter Valley Water Users' Association, Lachlan Valley Water, Macquarie River Food & Fibre, Murray Irrigation Limited, Mungindi-Menindee Advisory Council, Murray Valley Water Diverters' Association, Murrumbidgee Groundwater Preservation Association, Murrumbidgee Horticultural Council Inc., Murrumbidgee Irrigation Ltd, Murrumbidgee Private Irrigators' Inc., Namoi Water, NSW Farmers' Dairy Committee, NSW Farmers' Association, Ricegrowers' Association of Australia, Richmond Wilson Combined Water Users Association, Riverina Citrus, Southern Riverina Irrigators, South Western Water Users', West Corrgan Private Irrigation District, Wine Grapes Marketing Board.

Background

New South Wales Irrigators Council is the peak body representing irrigation water users across our state. Twenty six organisations are direct members, including regional groups, commodity groups and irrigation corporations. We represent over 12,000 individual irrigators in all corners of the state.

Scope

The NSW Irrigators Council are not Climate Change experts. We do not have in house scientific resources and do not seek to provide scientific advice.

Aside from general comments with respect to agricultural production, this submission concentrates on policy implications for water users.

Specific comments with respect to the Terms of Reference are made at the conclusion of this submission.

Introduction

Climate change is not new.

Climates – and climatic systems – are not regular.

In fact, the only regular aspect of climate is irregularity.

Irrigation sits at the very forefront of climate change policy. The availability and reliability of water is clearly at the heart of irrigation. It is also at the heart of climate change.

Variability as Against Change

A clear distinction needs to be made between climate *variability* and climate *change*.

Climate *variability* is an issue that agricultural producers have been dealing with for millennia. Some years are wet, some years are dry.

The only certainty is volatility.

Prolonged dry periods are commonly recognised as drought. The severity of drought is measured both in terms of water availability (low or none) and also length. The wet-dry cycle can be readily charted on a simple scale.

Climate *change*, on the other hand, is an entire shift of that scale. That is, the wetter end of the cycle potentially occurs less frequently, or the dryer part of that cycle appears more frequently or for a more prolonged period. Consequently, the amount of water available on average due to a shift in the wet-dry cycle potentially decreases.

Climate variability is a well known issue that can be planned for with a degree of certainty. Irrigators build risk-management structures into their businesses. They know that in years of plentiful supply of water, they must make cash flow provision for years where allocations are significantly lower.

Climate change is markedly different. Its impacts are not known. What scientific evidence has been gathered offers a wide range of potential impacts – far too wide a range currently upon which to base long term policy.

The Position of Irrigators

Irrigators are not climate change sceptics – we deal with the uncertainties of weather and climate on a daily basis as an integral part of risk management within our businesses. We can see through empirical and anecdotal evidence that things are changing.

We recognise – and encourage others to recognise – that climate change is a long term process that has been ongoing for millennia. The change from the last ice age has, in logical terms, been global warming. We recognise that human impacts have had a definite impact on the continuing cycle and study with interest the forward estimates of climate variability.

We have recognised that there are multiple users of water – human needs, stock needs, the environment and irrigated agriculture.

We have recognised that those users must share the available water resources – and that some needs are more critical than others.

We have recognised that water must be distributed based on sustainable yields over the longer term.

All of these recognitions have been negotiated, agreed and documented in New South Wales via Water Sharing Plans (WSP's). That is, NSW irrigators have been proactive in working with government to establish a system specifically designed to take into account the changing nature of water availability due to climate variability and climate change.

An Available Water Determination (AWD) pursuant to the WSP is made on a regular basis stating the total amount of water that can be used in a delineated time period by all users. In the event that climate variability or change result in less water being available, the AWD method set out in the WSP will distribute that water which is available in a pre-determined method.

That is, NSW irrigators have ensured that a method is in place already to deal with the consequences of variability and/or change.

Sustainability

Groundwater irrigators actively engaged with government to equitably determine the sustainable yield of groundwater systems through NSW. The sustainable yield determinations were based on scientific studies.

Irrigators have supported Commonwealth moves to engage the Commonwealth Science and Industry Research Organisation (CSIRO) to undertake sustainable yield studies in surface water catchments throughout NSW. The first few of that series of reports have been released. These reports have

served to underscore the current lack of understanding of the impact of climate change. For example, the report on the Warrego River suggested a range in excess of 60% variance.

It is critical that long term policy decisions be based on accurate science. NSW Irrigators Council urges decision makers to support the WSP's with their inbuilt protection mechanisms

It would be incorrect, however, to assume that science alone should guide decision making in this field. It is vital that the impact of policy changes on rural and regional communities be considered. To that end, NSW Irrigators Council insists that government undertake social and economic impact studies to be considered alongside the CSIRO studies so that the full implications of policy options can be considered.

National Water Initiative – Risk Sharing Arrangements

The National Water Initiative (NWI) addressed the issue of risk associated with reductions in availability of water to irrigators. NWI recognised that a reduction in availability could occur due to three possible reasons:

- (i) Climate change;
- (ii) Changes to government policy; and/or
- (iii) Bone fide new knowledge.

Depending on which of the three was responsible for a reduction – or a mix between them – compensation provisions have been determined between irrigators, state and federal governments.

Importantly, the NWI recognises “new knowledge” and has allocated significant funding to scientific studies of catchments and likely future yields.

In light of that, it is vital that the current system in NSW of Water Sharing Plans and Available Water Determinations is not altered prior to its expiry date (2014) as we wait for good scientific, social and economic data upon which to base long term policy.

There is a significant unfinished matter in the NWI risk sharing arrangements. At present, a reduction in availability due to “climate change” sees 100% of risk borne by irrigators. Irrigators submit, however, that a reduction due to “climate change” will encompass both a change to government policy (to account for sustainable yield) and bona fide new knowledge (which is, after all, what the funding for scientific study is designed to achieve). It is important that both the Commonwealth and NSW Governments discuss this matter with irrigators in the short term to achieve a definitive resolution prior to the risk sharing provisions being required.

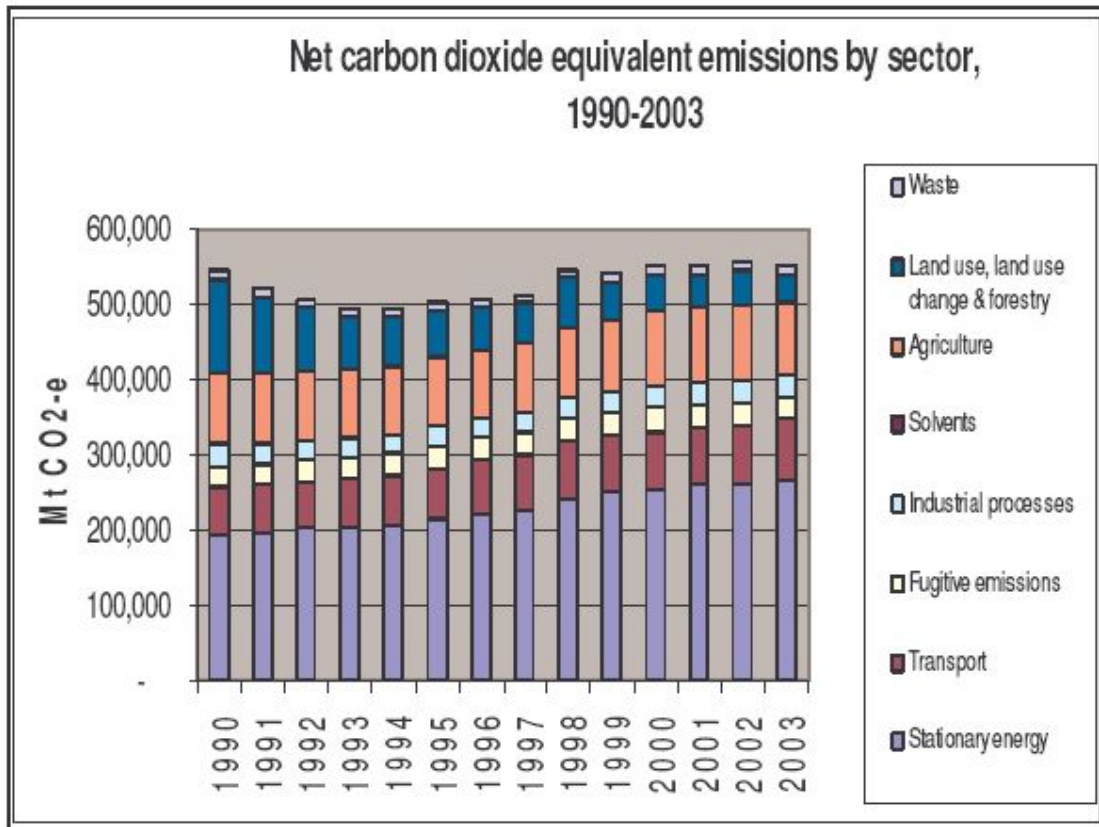
A Word on Carbon Emissions

Any consideration of climate change must have a focus on carbon.

Agriculture is responsible for a significant amount of Australia’s CO2 emissions. Australia is criticised for being a significant producer of CO2 – when measured on a per capita basis. Such measurement, and the resultant criticism, does not take into account the fact that around 80% of Australia’s agricultural production is exported. In light of this, 80% of the CO2 emissions created by agricultural production in Australia ought be accounted for in the per capita figures of those countries importing our production.

Along with this consideration, it should be noted that agriculture is certainly not the largest emitter of carbon in Australia. Figure one (below) shows relative emissions of CO2 by sector between 1990 and 2003. Stationary energy is by far the largest contributor of greenhouse gasses.

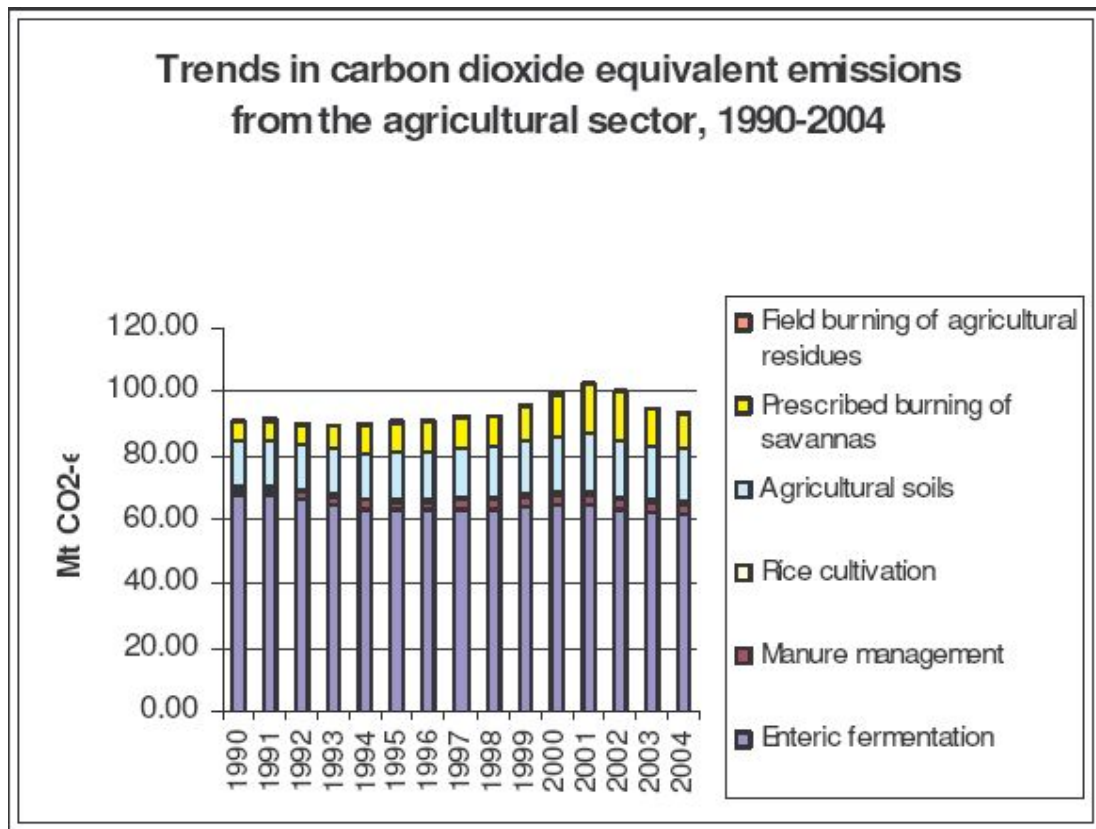
Figure One



Note specifically that agriculture is one of the few sectors where emissions are actually *decreasing*.

Figure Two (overleaf) shows total agricultural emissions of CO2 between 1990 and 2004 broken down into sectors.

Figure Two



Agriculture can contribute to the carbon issue in two ways – it can engage in methods that produce less emissions in the first instance and it can engage in practices which sequester carbon into soils in the second instance.

Both methods will involve significant expenditure on research and development of practices best suited to production and to carbon results. Given the massive expenditure on research in the energy sector for the minimal results shown to date, it is both logical and reasonable to expect that funds should be attributed to agriculture.

Rather than focusing on *less* use of natural resources as the sole answer, a *more efficient* use of natural resources, particularly in terms of carbon emissions, ought form part of the focus.

Agriculture has the potential not only to lower its carbon emissions, but to dramatically increase its capacity in carbon sequestration. With the same (or lower) use of natural resources, agriculture (particularly irrigated agriculture where inputs and outcomes are so closely measured) has the capacity to be a significant part of the CO₂ solution.

Response to Specific Terms of Reference

(i) The scientific evidence available on the likely future climate of Australia's key agricultural production zones, and its implications for current farm enterprises and possible future industries;

This submission commenced by recognising that NSWIC is not a scientific expert. Whilst we have assisted government and government agencies (and will continue to do so) in the collection and collation of data, we do not retain in house scientific skills to assist the enquiry in this way.

In reviewing the scientific evidence that has been presented to date – particularly the CSIRO studies as part of the NPWS – it is very clear that significant further work needs to be undertaken to provide the accuracy necessary for long-term policy making.

The implications for agriculture of policy made without respect to well researched and accurate scientific information are far reaching and serious. It is for exactly this reason that NSWIC insists that social and economic impact studies need to be undertaken and considered along with scientific work to ensure that policy is made for the good of the entire community.

(ii) The need for a national strategy to assist Australian agricultural industries to adapt to climate change;

Scientific Data

It is a difficult task to develop an assistance strategy without knowing the scope of climate change in the first instance. Any strategy must be cogniscent of the fact that very little solid scientific evidence specific to the impact of climate change exists in Australia. To make policy – via assistance strategies or otherwise – in the short term risks serious and potentially unnecessary long term impacts.

NSW Water Sharing Plans

In particular, any strategy must take into account the work that has already been done by government and irrigators in NSW to introduce a sustainable system via Water Sharing Plans and Available Water Determinations. NSW has led Australia in this regard. The Water Sharing Plans, not due to expire until 2014, should not be altered by any national strategy.

Efficiency Programs

A strategy that produces positive impacts regardless of the scope of climate change would be a wise approach. Infrastructure projects to improve water use efficiency both on and off farm, such as those under the NPWS, must be a key part of any national strategy.

Public Education

It seems likely that federal policy dealing with climate change will result in increased compliance measures and possibly decreased production. Whilst it appears that the Australian public are prepared, given the election result, for increased costs of agricultural produce as a necessary effect of dealing with climate change, further consideration needs to be given to the ramifications of decreased production.

In the event that water availability for irrigation is reduced, production is likely to decrease. Where costs of production increase and there is not an equivalent increase in farm gate price as a result, production is likely to decrease.

Recall that 80% of Australia's agricultural production is exported. Should the overall volume of production decrease, it is probable that Australian consumers can afford to pay more in a limited supply scenario. Overseas consumers, particularly those in developing economies, are therefore likely to see a reduction in availability of food. Of course, it is those countries that can least afford to see such a reduction.

Consideration must be given to international demand for agricultural production – food – and to the impacts that climate change mitigation policies will have on the capacity of Australia to fulfil its role as a net food exporter.

It is vital that any strategy to deal with climate change takes this situation into account.

(iii) The adequacy of existing drought assistance and exceptional circumstances program to cope with long-term climactic changes.

Existing drought support and exceptional circumstances programs do not adequately support irrigated agriculture in the current environment. Regardless of climate change, it is necessary at present to carry out a full and thorough review of drought assistance and exceptional circumstances programs to allow at least part of them to be directed to irrigated agriculture.

Whilst the recent \$20,000 irrigation assistance grant was extremely welcome, the requirements for that program to be activated with little lead time and incomplete details is evidence of the failure of the current system to adequately deal with irrigated agriculture.

It will be important to recall in any review that drought support and exceptional circumstances programs are to deal with exactly that. They should be short term programs to deal with circumstances that occur rarely and cannot be foreseen.

In short, these programs should deal with climate variability and not climate change.