



NSW IRRIGATORS' COUNCIL

Level 6, 139 Macquarie Street
SYDNEY NSW 2000

ACN: 002 650 204

ABN: 49 087 281 746

Tel: 02 9251 8466

Fax: 02 9251 8477

info@nswirrigators.org.au

www.nswirrigators.org.au

New South Wales Irrigators Council

SUBMISSION TO LEGISLATIVE ASSEMBLY STANDING COMMITTEE ON NATURAL RESOURCE MANAGEMENT (CLIMATE CHANGE)

December 2007

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 Corugan Private Irrigation District, Wine Grapes Marketing Board.

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 know. 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 of water availability.

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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 Water Sharing Plans (WSP's). That is, 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, irrigators have ensured that a method is in place already to deal with the consequences of variability and/or change.

Sustainable Yield

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.

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

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 of Water Sharing Plans and Available Water Determinations is not altered prior to its expiry date (2014) as we wait for good scientific 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

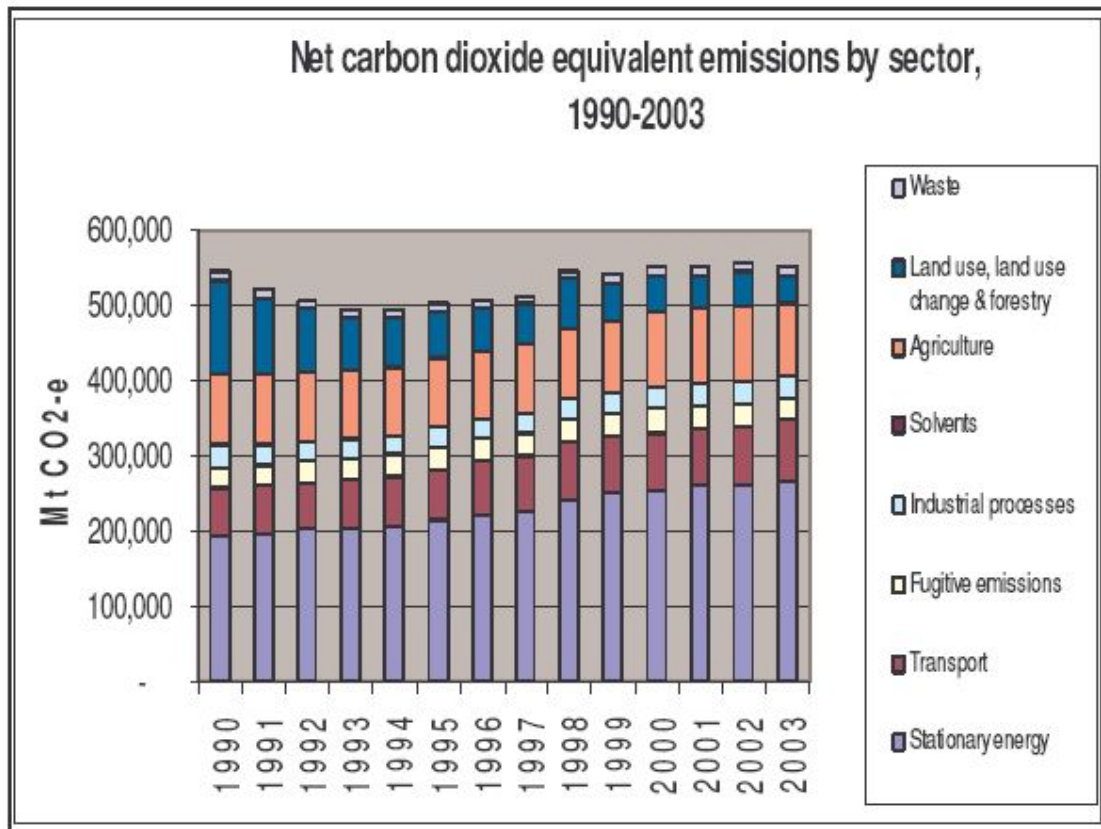
Any consideration of climate change must have a focus on carbon.

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.

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Figure One

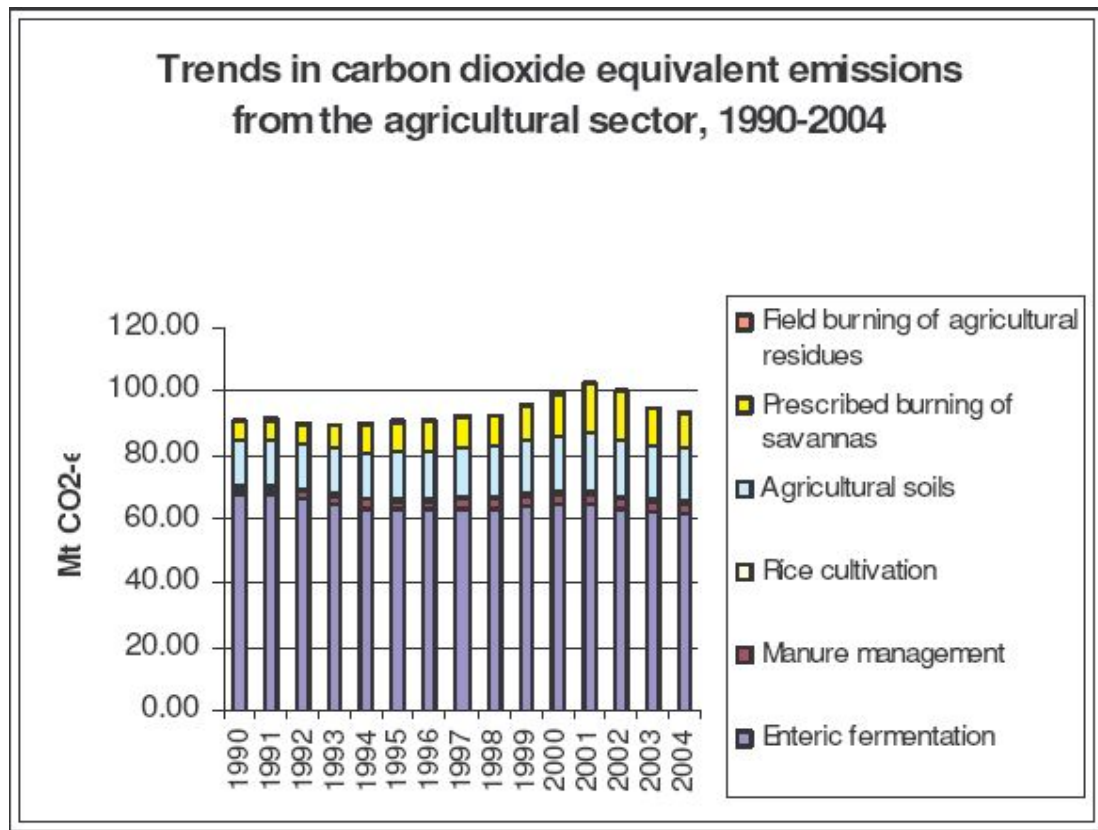


Note specifically that agriculture is one of the few sectors where emissions are actually *decreasing*.

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

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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.

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Response to Specific Terms of Reference

(a) The likely consequences of human-induced climate change on land (including salinity), water and other natural resources.

The National Water Initiative and the National Plan for Water Security recognised the critical need for extensive research and scientific evidence in order to plan policy outcomes with respect to climate change. Significant funds have been invested into that program – a large part of which is to determine the likely consequences of human induced climate change (if any).

It is important that long term policy decisions are not made without the backing of solid scientific evidence. Only in cases where a clearly identified and agreed immediate problem exists should action be taken. Irrigation is an excellent example of this – where WSP's, sustainable yield management and AWD's have been combined as a policy response to manage water in the medium term.

(b) Options for ensuring ecologically sustainable natural resource use, taking into particular account the impacts of climate change.

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.

(c) Approaches to land and water use management practices on farms and other natural resource management practices, having regard in particular to the role of such practices in contributing to climate change or as a tool in helping to tackle climate change;

Irrigators are among the most efficient users of water in Australia. A market in water has directed the resource to the highest value user. With value dramatically increasing during dry periods, irrigators strive for practices that use the most efficient delivery methods and the lowest amount possible to provide agricultural outcomes.

Infrastructure expenditure, such as that under the NPWS, is always welcome to improve delivery methods. On farm efficiency programs are also welcome – as would be research to assess methods

(d) The effectiveness of management systems for ensuring that sustainability measures for the management of natural resources in New South Wales are achieved, having particular regard to climate change.

The management systems for water used in irrigation – sustainable yield, WSP's and AWD's – are particularly effective.

(e) The likely consequences of national and international policies on climate change on natural resource management in New South Wales.

Until the detail of national policy is fully understood, given the recent change of government, the consequences cannot be definitively considered.

It seems likely that federal policy 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 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.