COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY

Reference: Future water supplies for Australia's rural industries and communities

WEDNESDAY, 18 JUNE 2003

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY

Wednesday, 18 June 2003

Members: Mrs Elson *(Chair)*, Mr Adams *(Deputy Chair)*, Mr Forrest, Mrs Gash, Ms Ley, Mr Schultz, Mr Secker, Mr Sidebottom, Mr Windsor and Mr Zahra

Members in attendance: Mr Adams, Mrs Elson, Mr Schultz, Mr Secker and Mr Windsor

Terms of reference for the inquiry:

To inquire into and report on:

The provision of future water supplies for Australia's rural industries and communities, particularly:

- The role of the Commonwealth in ensuring adequate and sustainable supply of water in rural and regional Australia.
- Commonwealth policies and programs in rural and regional Australia that could underpin stability of storage and supply of water for domestic consumption and other purposes.
- The effect of Commonwealth policies and programs on current and future water use in rural Australia.
- Commonwealth policies and programs that could address and balance the competing demands on water resources.
- The adequacy of scientific research on the approaches required for adaptation to climate variability and better weather prediction, including the reliability of forecasting systems and capacity to provide specialist forecasts.

WITNESSES

Committee met at 5.10 p.m.

HOOY, Mr Theo, Acting Assistant Secretary, Environment Australia

UGALDE, Dr David, Manager, Greenhouse Science and Agriculture Team, Australian Greenhouse Office

CHAIR—I declare open this public hearing of the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry inquiry into future water supplies for Australia's rural industries and communities. Today's hearing is the 15th in this inquiry. We have previously held public meetings in Queensland, Victoria, South Australia and Canberra. We thank you very much for giving us your time today.

I welcome representatives from Environment Australia. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament and, consequently, warrant the same respect as proceedings of the House itself. We remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Would you like to make a brief opening statement in relation to your submission before we ask questions?

Mr Hooy—I would like to take the opportunity to make an opening statement. This is an important inquiry from the perspective of Environment Australia. Environment Australia encourages progress towards sustainable resource management in Australia, particularly sustainable water resource management, with the aim of improving outcomes to the environment and consumptive uses. While the states and territories have primary responsibility for water resource management, protection and legislation, the Commonwealth's role is one of national leadership and facilitation.

Environment Australia supports a range of initiatives to promote sustainable water resource management and water use efficiency. These include the COAG Water Reform Framework, the $2.7 billion Natural Heritage Trust, and the $1.4 billion National Action Plan on Salinity and Water Quality. These initiatives are covered in our submission which you have before you. Since 1994, through the Council of Australian Governments water reform agenda, important reforms in water management arrangements have been achieved. The states and territories are currently implementing new water allocation arrangements to provide security for users and protection for the environment.

A key triumph of the water reform framework has been the fact that, through it, the needs of the environment are genuinely becoming recognised in water use decisions. The Commonwealth is currently focusing its efforts on addressing issues that have arisen in the transition to sustainable allocation and use of water resources under the COAG Water Reform Framework. Specifically, the Commonwealth is working with stakeholders to ensure that the states address barriers to trade, provide minimum standards of certainty and security in relation to tenure and duration of water access rights, and provide financial assistance to water users whose entitlements are reduced in the public interest.

The Natural Heritage Trust and the National Action Plan on Salinity and Water Quality provide a framework for delivering on the protection of water resources. Under the Natural

Heritage Trust $1.7 billion has been spent since 1996 and a further $1 billion will be spent over the next five years on the environment, including $350 million to improve water quality. The national action plan will provide $1.4 billion of joint Commonwealth-state funds over seven years to support targeted action in catchments or regions highly affected by or at risk from salinity.

Following a landmark decision on River Murray environmental flows by the Murray-Darling Basin Ministerial Council in April of 2002, options are being examined for future flows for Australia's greatest river system. Investment in new water savings infrastructure, technology, and improved irrigation practices is an important way to continue providing water for economic development by ensuring the environmental needs of our river system are met. I welcome any questions that the committee may have.

CHAIR—Thank you. Would you like to add to that, Dr Ugalde?

Dr Ugalde—The Australian Greenhouse Office welcomes the opportunity to make a submission. As Mr Hooy said, the submission outlines some information relating to climate change and the impact that it may have on water. There are four key points in the submission that I would like to reiterate. The first is that, on balance, the evidence is that Australia is already experiencing climate change that in no way can be considered normal. The effects are more pronounced in south-eastern Australia and the south-western regions of the continent. The second point is the impact on water. One impact of the projections in climate change is expected to be decreased inflows of water to the managed streams. Concurrent with this will be increased evaporative demands. Climate change is likely to put more pressure on the debate of the allocation of water resources between environmental irrigation and urban uses.

The third point that we make in the submission is that it is essential that processes of water allocation that are looking to managing the water resources into the future need to take into account climate change and climate variability. We believe that this will be important to avoid overestimate of the sustainable yields that we are likely to have in our water resources and, in turn, minimise any overallocation of entitlements. A flow-on from the effects of changes to water supply is changes in catchment hydrology. This has the potential to have profound effects throughout all regional and rural landscapes, with economic, environmental and social repercussions. The last point that we make in the submission is that climate science is necessary to underpin all of our capacity to address climate related aspects of the water allocations to Australia's rural industries and communities. At the moment the national research effort is probably best considered as being suboptimal to provide the sort of data that we need at the moment. In response to one of the terms of reference, which is to identify adequacy of research, we do make the submission that climate science is fundamental to being able to address this issue.

Mr WINDSOR—Theo, you mentioned the COAG arrangements and the involvement of Environment Australia. The original COAG arrangements were put in place in 1994, as I recall.

Mr Hooy—That is correct.

Mr WINDSOR—There were two major issues that were discussed then. One was the establishment of some sort of trading mechanism for water. There has been some progress made

on that and it is being debated again at the moment. The other major point has not been addressed at all: the recognition of a proper definition of property rights. Does Environment Australia have a view on what the definition should mean? Probably more important than that, given that those two things predicated the reform process and the coming together of the states and the Commonwealth, would you be able to proceed in developing a market without some sort of property right which becomes an important article of trade within the market?

Mr Hooy—The Commonwealth position on property rights was best articulated by the Prime Minister in his presentation to the Committee for Economic Development of Australia, I think, in November last year. He pointed to the need for clearly defined, specified property rights that were tradable. He pointed to the difficulty that we have at the moment, using the analogy of the rail gauge system. He raised that analogy because of the issue of trade; the two are interlinked. It is very difficult to have a market where it is not clear what is being traded.

At the moment, across the Murray-Darling Basin, for example, there are some 20-plus different water products. It would be impossible to have a fully functioning free transparent trading market with 20 different water products, all of which have fundamentally different characteristics. There has to be some measure of compatibility between states and jurisdictions to enable trade to occur. The current effort of COAG is to look at the issue of trade and to try and rationalise some of the products that are able to be traded.

Trade within the Murray-Darling Basin is not only the concern of COAG. The Murray-Darling Basin Commission is working quite actively to address the issue of trade and facilitating trade. The commission have been working on this for a number of years and have set up a pilot water trading program. At the last Murray-Darling Basin Ministerial Council meeting, the council once again reaffirmed the importance of trade to ensure, amongst other things, that we get appropriate environmental outcomes. They asked for a proposal to be put before them in November of this year to at least attempt to establish a functioning across-basin trading market in the 2004-05 irrigation season.

Mr SCHULTZ—Following on from what Tony asked with regard to COAG and water trading or tradable rights, how successful in your view has the COAG water reform process been and what are the chief obstacles to that process?

Mr Hooy—I think the COAG water reform process has been enormously successful. In the period since 1994, we have had every jurisdiction review its water legislation to take into account the COAG water reform principles. Obviously the issue that is causing the most interest at the moment is water property rights, and, for example, the requirements in the COAG reform principles that ownership of water be separated from ownership of land. Legislation is now in place in every jurisdiction to enable that to happen. Trading markets in some jurisdictions are yet to be fully developed.

As to the environment and environmental flows, once again all of the states are now required to have and have made provision for environmental flows in stressed river systems. In terms of full cost recovery, any proposal for water resource development has to meet economic and environmental criteria. The whole environment of water in Australia in 2003 is vastly different from what it was 10 years ago.

What remains to be done? Clearly, we are not there yet. Water property rights is an issue that still needs to be resolved. Water markets have yet to be established. The issue of third-party impacts arising from trade and water development have yet to be fully addressed.

Mr ADAMS—Could you elaborate on third-party impacts?

Mr Hooy—As is happening in South Australia, if water is traded into a previously undeveloped area where salinity has not been a problem, as soon as you start putting water in that area you will have salinity impacts. There may be other third-party impacts such as impacts on recreation. Water quality is important here.

Mr ADAMS—It is about having a study before you put water in a new irrigation area?

Mr Hooy—That is right—having a study to be aware of what the impacts may be and then having some mechanism to address those. Obviously, owners of water access would have rights, but there are responsibilities that come with that. Those mechanisms have yet to be clearly worked through and developed. It is an enormously complex area.

Mr SCHULTZ—What about the issue of water trading speculators—sometimes they are referred to as 'Pitt Street carpetbaggers'—who are in the business of acquiring water rights for profit? What contingencies have been put in place or have been considered to stop the outrageous use of legitimate water rights—making people rich at the expense of the ongoing use of water for agriculture and for maintaining the health of the environment from which the water comes and is dependent on?

Mr Hooy—The issue, like almost everything with water, is difficult. We are really at the starting gates in terms of the potential or possibility for people to acquire large amounts of water without having any land associated with those water rights. There are difficulties in trying to regulate that area of ownership. For example, one of the sectors that has been fairly vocal about the issue of water property rights and clear definition of water property rights has been the banking sector.

The property valuers have found it extremely difficult to value a product where tenure, ownership and longevity are uncertain. The banking industry has a legitimate concern. If you introduce fairly bland restrictions on ownership of water by parties other than farmers, for example, it would be very difficult for banks to loan against the water licence, because the normal procedure is that, if a bank loans against property and if there is failure to repay the debt, the bank recalls the land. If the bank cannot claim ownership of the water, it cannot loan against that water right.

You would have to be fairly careful, if you were trying to restrict ownership of water property rights, that you did not end up with a perverse outcome where you were trying to make it easier for people to obtain loans and easier for banks to loan money; the perverse outcome being, of course, that the banks could not loan money against the water right because they could not ultimately hold the water right if there was a default.

Mr SCHULTZ—That would not be an issue for the banks, may I respectfully suggest, if that particular issue was kept within the boundaries of the catchment areas or within the river system

catchment area where the water is being used. My concern is about the manipulation of those rights by outsiders—who have no role to play in that at all, except to make money out of water—who can purchase water rights themselves and create an unrealistic pricing mechanism for the water itself, at the expense of agriculture, the ecosystem and the river system that we rely on for our water. That was my point in raising that. I think there has to be a controlled mechanism through our government systems which allows people who are legitimately involved in agriculture and using water to be able to trade, in a realistic and practical way, that part of their business which is enhanced by the use of and access to water. I do have a very real difficulty. I understand that in the last week or so there are speculators on the Stock Exchange who have opened up businesses calling for shareholders—$1 shares—specifically for what I am talking about now.

Mr Hooy—They would have to be fairly brave investors, if you look at the risks that are already associated with primary production. The risks that would be worn by a water speculator—if I can use that term—would probably exceed those of an irrigator. There are things like carryover provisions. Some states allow for unused water to be carried over into the following year; other jurisdictions do not. If you buy water, to take a small example, in a jurisdiction where there are no carryover provisions and you are a water speculator, you have to make sure that that water is off your books. By the end of every irrigation season you will have had to have sold it. If you have a wet year and you are a water trader—a person who derives income purely from trading—you will be in a pretty difficult position. I am not sure at all that there are windfall profits to be made by water traders.

Mr SCHULTZ—I do not share your views on that. Thank you, Madam Chair.

Mr ADAMS—Climate changes seem to be happening and many scientists now give that a pretty big tap. Evaporation demands that could occur with an increase in temperatures are pretty frightening in some of the stuff that I have seen. What effect will that have on future opportunities to work out water for the environment and also for industry activities like irrigation and productivity for the rural sector?

Dr Ugalde—You are quite right in the assumptions that you are putting forward on which to base the question. We need to move into a modelling phase to be able to do this. At the moment we do not have sufficient information to be able to adequately project what is going to be the absolute impact of climate change on a number of parameters. Of course, the impact of climate change on regional rainfall still has a high degree of imprecision. We do not have good figures to be able to model the effect on surface flows which stem from both the rainfall and the water content of the soil on which the rain falls throughout the catchment area. Undoubtedly the premise is true that climate change will reduce the amount of available water, both through reduced inflows and—

Mr SECKER—That is if it is actually occurring.

Dr Ugalde—That is true. On balance, amongst the science community at the moment, I do not think there is a great deal of doubt that there are changes.

Mr SECKER—I think that is going a bit far. There are plenty of scientists on the other side, especially if they are not part of the system, who are getting their wages out of predicting all sorts of things—dire warnings and global warmings.

Mr ADAMS—That is a bit harsh.

Mr SECKER—I am dubious.

Dr Ugalde—I do not share that view. I would like to maintain that, on balance, the projections are showing that there will be a drying throughout Australia and across the Australian continent. That will be brought about through impacts on rain and evaporative potentials. The way in which we need to model the impacts on environmental flows, together with urban and irrigation uses, certainly provides a good challenge for those who need to manage water resources in the future.

Mr ADAMS—Do we measure the water flows in and out of the Ramsar sites? Do we keep good measurements now of their levels? They are usually lagoons, aren't they?

Mr Hooy—Yes. Ramsar sites are essentially managed by the states in which they occur. Obviously the level of attention to the various Ramsar sites varies quite considerably. Ramsar sites such as the Narran Lakes, Macquarie Marshes, Chowilla, as you would imagine, are very closely monitored by the states. Depending on where they are in the system, they are also monitored by the Murray-Darling Basin Commission. There are some strategies in place to ensure appropriate watering of those Ramsar sites, depending on management plans that have been developed for those sites.

A very good example, I think, is the Barmah-Millewa Forest where there is a specific environmental allocation for that Ramsar wetland. Water has been cleverly used in the past to ensure that we have had fairly good bird breeding events in the Barmah-Millewa by the process of, let us call it, trading with irrigators. Irrigators have used the water over a number of years and then in a moderately wet year that water has been given back to the environment. In that moderately wet year, where you would have a fairly indifferent bird breeding outcome, with the additional water that has been provided there have been very significant water breeding outcomes.

In New South Wales there is a group called the Wetlands Working Group, which manages an environmental allocation on behalf of the New South Wales government. It has been able to trade—I think the rules have been relaxed now—about 50 per cent of its annual allocation. In those circumstances, it can sell that water for environmental outcomes and, presumably, buy that water back in a wetter year when, as in a similar case to the Barmah-Millewa, that water can be used for enhanced environmental outcomes. The flexibility to manage wetlands with a proper water property rights system and trading system is markedly increased.

Mr ADAMS—There is a need to radically change the way we use our land—our management, farming and irrigation practices. We need to have a radical change of mind in Australia so that we can move into another mind-set from where we have been for 150 years. Is there much of that going on? Is there another mind-set starting to take place?

Mr Hooy—I think so. In the context of the River Murray, there is a realisation now—

Mr ADAMS—It does dominate a little bit, doesn't it?

Mr Hooy—It does dominate quite a bit. There is a realisation that it is no longer possible to go back to the pristine days when we had 23,000 gigalitres of inflows and 11,000 gigalitres going out through the mouth. There is a realisation that we do not have that, that the river is now highly regulated, and that the target for the River Murray itself, which has been set by the Murray-Darling Basin Ministerial Council, is for a healthy working river. That means that, rather than sit back and hope you get environmental outcomes, the river will be worked to produce not only income for irrigators, agriculturalists, recreationalists and what have you but also environmental outcomes. Water is now starting to be deliberately moved around the system for environmental benefit, for environmental outcomes.

The ministerial council last year agreed to endorse a $150 million program of works in the River Murray to address a whole range of issues—from modification of lochs, establishment of fish ladders, drying of certain areas that have been permanently inundated as a result of using the river as an irrigation channel; that sort of thing. There has been a real change of mind-set. We cannot sit back. If we actively manage the river, we can optimise outcomes for irrigators and the environment as well.

Mr SCHULTZ—What about the issue that was raised by Richard Pratt in relation to the real problem that we have with evaporation in this country because of the temperature and the open irrigation channels? In the work that you have done or that done by others, has much emphasis been placed on the issue of evaporation and consideration given to what appears to me to be a very sensible approach to reducing the wastage of the amount of water that we use in irrigation. I know that is only one aspect of it, but there appears to be some very sound arguments for Pratt's initiative in raising that mater in the interests of looking after our most precious resource. It is our most precious resource—there is undoubtedly no argument about that.

Mr Hooy—That is right. You would be aware, Mr Schultz, that the Commonwealth and New South Wales governments are providing $5.3 million to facilitate investigation of water efficiency savings in the Murrumbidgee River by Pratt Water. Pratt Water has established a pretty impressive team to manage that program. There are a number of private sector initiatives to look at reduction of evaporation: covering or tenting of water storages. There are different methods being trialled all the time. I am aware of at least three commercial companies that are now actively involved in that area. I understand there is some additional research going on. There are a range of mechanisms: tenting with plastic materials; chemicals can be added to the water to provide a film over the surface of the water to reduce evaporation; flexible flues—the use of a very flexible hose, almost a fabric hose, that can be wound up and unrolled and used in certain circumstances. There is a lot of work being done right across the board to look at reduction of evaporation.

CHAIR—Data collecting seems to be a very serious issue with a lot of groups that we have talked to in rural towns right through to government offices. What does Environment Australia do about data sharing and data collecting? Is it ad hoc, like a lot of other things we have seen, or is there a building up on your records so that we can see the big picture? For instance, at times I have rung your office to get a list of groups in my electorate with an interest in a certain area and they have been unable to give me a list. I have thought that they would be the first people who would have been able to give the list of the groups within my electorate with certain interests.

What is the data sharing like in Environment Australia? If you cannot give me the name of an interest group within my electorate or any electorate in Australia, where do I get the figures from? What base do I touch in order to get the information you have on your data?

Mr Hooy—It depends on the type of data. With respect to water data, in my branch we manage the Waterwatch program which is a very successful community driven water monitoring program. We have at any one time 50,000 people across the country involved in the Waterwatch program.

CHAIR—From what I can understand of the Waterwatch program, the community collects data for you.

Mr ADAMS—And schools.

Mr Hooy—That is right. We collect that data. The data is managed, quality controlled, and accessible to any researcher, council or individual that wants to look at water quality parameters in their particular area. Hopefully there is some sort of Waterwatch program in the area collecting data. That is one example. The Commonwealth has data sharing arrangements with the states.

Within EA we have an entity called ERIN—Environmental Resources Information Network—which has very good data sharing arrangements with the states. ERIN can build some fairly impressive profiles of natural resource management parameters around the country. But it really does depend on the particular data that is being sought. For example, we would not hold any flow data for the River Murray. When we have a query about River Murray flow data, we contact the Murray-Darling Basin Commission. A lot of the data that they use is held by the states and there are sharing arrangements there. With the electronic interconnection now between various natural resource data management organisations, it is possible to get ready access to a very large amount of data. But you have to be clear on what you need and what the end use is.

Mr ADAMS—Is that getting better? States are sharing?

Mr Hooy—Yes. There is always the issue of intellectual property rights and ownership. There are always discussions and dialogue about accessing that. It costs money to collect and store data. A lot of organisations, at the very least, want cost recovery, which is understandable.

CHAIR—What does Environment Australia see as the main source of pressure on our water resources?

Mr Hooy—Where do we start?

CHAIR—Just give me a brief overview of how you see it.

Mr Hooy—The issue is one of too many end users, or shall we say overallocation. In south-eastern Australia—northern Australia is a completely different paradigm—we have overallocated water resources, surface water resources, ground water resources. Nationally, 26 per cent of all our water systems are stressed, the majority of which are in south-eastern Australia and south-western New South Wales.

Mr ADAMS—Is that in the Environment Australia report?

Mr Hooy—That is correct. Overallocation, to a large extent, has been because of the states overallocating water to irrigators. There are a lot of losers as a result of that. Irrigators and environments have been badly affected. As a result of the COAG water reform arrangements and the arrangements being put in place by the states, we are now in a transition phase where we are trying to get into balance with our water resources. That is causing a lot of pain and anxiety.

I just made the comment that we are trying to get into balance with our available water resources and that is a moot point. As David pointed out, we are in a period of climate change: rainfall change possibly unrelated to climate change on top of climate change. By that I mean, if you look at the first half of last century, it was much drier than the second half of last century. From about 1949 onwards, we have been in a significantly wetter period than we were before then. We may now be in the position of another transitional phase to something. The problem is that we do not have decent climate records much beyond 1890, but we do know that the last 50 years, compared to the previous 50 years, have been fairly wet. If for whatever reason the climate flipped back to the situation in the early part of the 20th century, it is fairly clear that the irrigation systems were not designed for those sorts of rainfall patterns. They were primarily built in the second half of the 20th century. The vast majority of water resource use and development has occurred in that period. There may be factors outside of even the issue of climate change which will significantly impact on where we will be in the future.

There is the issue of ground water use and the linking of ground water use with surface water use. Up until very recently, I think it would be a fair thing to say that most of the states were not looking at water use in its totality. Fortunately, at the last meeting of the Murray-Darling Basin Ministerial Council, the commission was asked to address the issue of ground water use and the interaction between ground water/surface water use. There are significant implications there, because there is fairly good evidence that ground water and surface water, in a reasonable part of the Murray-Darling Basin, are interconnected. With the introduction of the 1994 cap on surface water diversions in the basin, we have seen a very significant increase in ground water use. I think you could say that the cap is based on the premise that there is a firewall between ground water and surface water and we know that there is not.

On the issue of land-use change, it is quite obvious that wholesale reafforestation may impact on available inflows into rivers. We have a situation now where most states are actively encouraging the establishment of plantations. To go back to the Murray-Darling Basin, the most profitable place to put those plantations is in the upper reaches of the basin where the rainfall is highest. The statistics, I think, are broadly correct. About two or three per cent of the Murray-Darling Basin catchment area provides about 40 per cent of the inflows to the River Murray. That very limited catchment area is being heavily planted with trees. From the information we have seen, there is no doubt that the wholesale planting of trees where there is currently pasture will impact on surface water run-off and ground water flows and will reduce inflows into streams.

Mr ADAMS—Can you give us a reference there? I know there has been some work done in Victoria in the catchment area.

Mr Hooy—That is right. That is where most of the work has been done.

Mr ADAMS—Has there been any other work done? Is Environment Australia doing any other work?

Mr Hooy—We have not commissioned any work ourselves. I can provide you with a submission that we provided to the recent Senate inquiry into plantations. We did raise that and we did provide sources for our information.

Mr ADAMS—That would be very helpful.

Mr Hooy—Once again, there is the promise there of significant impacts on inflows and—

Mr ADAMS—Sorry to interrupt you, Theo. We do not seem to have models to that effect. There used to be trees in some of these areas and there are indicators that trees bring rain. I know there has been some work done in Victoria, but there seems to be a lot of comment being made about that without too much other work having been done to qualify the amount of water that is going to be used by plantations.

Mr Hooy—That is right. The work done relatively recently goes some way towards quantifying the impacts of possible expansion of the plantation estate in the high rainfall areas in the Murray-Darling Basin. The impacts seem to be fairly significant.

Mr SECKER—I have a few questions, Madam Chair. You may have noticed my scepticism, and I think it is a healthy scepticism, about global warming. I can remember in the eighties people were saying that we were facing an ice age and now we are going in the opposite direction. Plenty of scientists were saying that we were going into an ice age. I come from an area which is not drought prone, but in the short time I have been in parliament we have had a drought and a flood in New South Wales and that is a natural part of Australia's climate. Last summer was about average and the summer before was the coolest summer we had had for about 30 years. Perhaps global warming does not come to South Australia, but we are part of Australia and I have this healthy scepticism. You state in your submission that 'most of Australia may warm 0.4 to 2.0ºC'. Two degrees would be substantial; 0.4 would have some effect but not a huge effect. The actual water balance may reduce by 15 millimetres or 160 millimetres, and 15 millimetres or 60 points a year is not going to have a drastic effect.

Another thing I would like to talk about is Ramsar. You did not mention to me the most important Ramsar agreement, because it is in my electorate—the Coorong. I have spoken with people from Ramsar and they say that the Coorong is not dying. I have been watching the Coorong and I have been fishing there for 30 years and, frankly, I think it is dying. Environment Australia actually opposed fresh saline water coming from the Upper South-East Management Drainage Scheme into Coorong at Salt Creek, where it used to come in historically.

The Coorong is now quite substantially below sea level. I went out to the Murray mouth, which feeds into the Coorong, a month ago. My guesstimate is that the water level is 40 feet lower at the mouth than it was 20 years ago when I went fishing there. I was amazed at the difference. How do we fix it up? Do we get environmental flows coming down over the man-made barrages? We do not have the water to do that, and we probably will not have for at least 12 months, so we are trying to open up the Murray mouth which is only a bandaid solution.

The people I have spoken to at Ramsar—although the locals will tell you differently—say, 'We're not interested in looking at other solutions such as inlets from the sea,' which could come in basically by gravity because it is lower than the sea. I have this scepticism, as do the locals, about what is happening to the Coorong. You will not fix it up for at least 12 months, unless we get a flash flood, but it still takes a long time for it to get down here anyway. What do we do about the Coorong? How hard is it to change the mind-sets? We should be looking at different ideas to try to help the Coorong.

Mr Hooy—It is a difficult issue. Before I get into some discussion on that, the Murray-Darling Basin Ministerial Council at its last meeting agreed not only to continue the dredging of the Murray mouth but also, before next summer, to the cutting of a channel through to the Coorong.

Mr SECKER—Scabs Channel.

Mr Hooy—That is right. You would have a better understanding of the locale than I do. There is at least a decision to do something before next summer.

Mr SECKER—The locals say that Scabs Channel should have been done two years ago but I suppose it takes a bit of time.

Mr Hooy—That is right. One thing I am aware of is the complexity of the wave and ocean patterns in that part of the world. There have been a number of studies and quite an amount of research into littoral drift of sand across the Murray mouth. Before you started any proposal to dig a channel through to the other end of the Coorong, you would need to do a fair bit of modelling to see whether or not you could keep that channel open for any length of time. You may be locked into a similar sort of situation where you have a dredge going at either side of the Coorong just to keep a passage of water. I think you would have to invest a fair amount of money into looking at whether or not that would be a viable option.

Mr SECKER—As far as the Coorong goes, if it costs $1 million, that is a hell of a lot cheaper than sending down $200 million worth of water every year.

Mr Hooy—The idea of additional environmental flows is not solely for the Coorong. It is also for the Murray-Darling—

Mr SECKER—I know it is not solely for the Coorong. Lake Alexandrina, of course, is down because we do not have the flows.

Mr ADAMS—The bird life is coming down as well.

Mr SECKER—Yes, it is, and the fish life. The fish are not breeding this year.

Mr ADAMS—What Patrick is saying is that there is sometimes a reluctance to look at other solutions to help in an environmental issue like the Coorong. I have never been there—I have it in my mind and from reading and pictures—but if it is 40 feet below sea level, it needs some water. I would have thought if you got some water in there, that would have been a help. But you will get resistance about keeping channels open and not doing anything because it is not a

natural flow—all arguments that we have all heard. We get a bit sick of that when you see there are opportunities to do things and you come up against a bit of a purist line that says you cannot do anything. I take your point: keeping things open is not easy. We know a lot more about the sea and sand flows but—

Mr Hooy—I think you will be relieved to hear that, as part of the Living Murray process, the ministerial council identified a number of icons—I cannot call them icon sites. Murray cod was included in the list and river red gums were an honorary addition to the icons.

Mr ADAMS—Living icons.

Mr Hooy—They identified a number of icons to be investigated as part of the Living Murray process and as part of modelling these reference points—350, 750 and 1,500 gigalitres. Coorong, Chowilla and Barmah-Millewa were a few. About five different wetlands, as well as Murray cod and river red gum, will be investigated, along with a whole host of other things, to see whether or not there are specific management scenarios of opportunities that can be undertaken as part of trying to improve the overall health of the River Murray system. Obviously a range of mechanisms would have to be looked at in terms of amount and timing of water required—and potentially even engineering structures, I would imagine.

CHAIR—To go back to something I think you said earlier—and excuse me if I have not recalled this correctly—did you say that in the last 25 years we have had the most rainfall?

Mr Hooy—Yes, since about 1949. If you look at the rainfall records, there is a bit of a jump around 1950. I cannot remember the magnitude, but it was relatively significant. The data I have seen on a return to that dry period would have some significant impacts on the environment and on irrigators. The point I was trying to make there was that we are trying to plan in something that is a very dynamic system and, whether or not you give any credence to the issue of climate change, there is a clear record of—CSIRO has used this term—'interdecadal variability'. Over that 50-year period—it is a bit hard to talk about 2002-03—up until now it has been measurably wetter than it was in the first half of the 20th century.

CHAIR—Has Environment Australia looked at the urban use of water? Are we moving our farmers from where the rainfall occurs, where they could have grown more crops using less water, and pushing them further inland which means that they have to use a lot more water for crops? Has that resulted in our water resources reaching crisis point at the moment, or is it because of urban or industrial usage? Do you categories of who uses the most water? What causes it?

Mr Hooy—The statistics about who uses the most water are available. I think there is a whole range of things which cause it.

Mr ADAMS—Do we have that anywhere? I think 70 per cent of the water is used by irrigators—

CHAIR—If we looked at it 25 years ago, how much of the water was being used by irrigators? If we are going to push our farmers further out and we are forcing them to use water

that they would not normally have used in the past, what do we do to repair it then? Do we compensate them? You cannot bring them back inland after we have developed inland.

Mr Hooy—What has really influenced water use, I suppose, even since the mid-eighties, is the dramatic increase in irrigation in south-eastern Australia. A large part of that was the realisation by farmers that they could substantially increase their viability and profitability by getting into irrigation and by investing in irrigation infrastructure. Australian farmers are pretty good business people, and available irrigation water that was not being used properly was a wasted opportunity. People have availed themselves of that.

CHAIR—On the other hand, we have dams that were built especially for irrigators so that they could control and know exactly what they were using. Those same dams now cannot be touched by those irrigators. They are forced to use the river system again because rural towns have turned around the use of dam water for urban use, instead of using tank water as they did before. We are forcing the farmer again to move further out.

We have seen it in the small time that this inquiry has been going in one of the most lush areas of Queensland where they grow crops. Farmers are being forced further out of this valley and development is taking over. In certain areas of my electorate these were typical farmers who had good water resources. These farmers are being taken off these areas and forced further out. What worries me most is that we are getting them onto barren land and they are being forced to use more water. Has Environment Australia looked at the water usage over a period of many years?

Mr Hooy—No.

CHAIR—We seem to blame the irrigators for using more water, but I think we are pushing them into that situation.

Mr Hooy—I thought I was accusing them of being sensible, prudent business people.

CHAIR—They are. But governments are pushing them out of that sensible, prudent area.

Mr Hooy—A large part of it comes down to land-use planning. This is where it is really the responsibility of the states.

CHAIR—That is exactly what I thought.

Mr Hooy—I mentioned plantation establishment. We are not saying that plantations are good or bad; we are saying that they will have an impact on available water and that needs to be taken into account.

CHAIR—On behalf of the committee, I thank you very much for appearing before us today. We would have loved to go on for another hour but we have had a difficult day in parliament.

Resolved (on motion by Mr Secker):

That this committee authorises publication of the proof transcript of the evidence given before it at public hearing this day.

CHAIR—I sincerely thank you very much. I think we could have gone into this a lot deeper.

Mr Hooy—That is true.

CHAIR—Should we find the need, I am sure you will be happy to come back and see us before the inquiry finishes.

Mr Hooy—We would. Thank you for the opportunity to talk with you.

Committee adjourned at 6.10 p.m.