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, 8 OCTOBER 2003

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY

Wednesday, 8 October 2003

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

Members in attendance: Mr Adams, Mrs Elson, Mr Forrest, Mrs Ley, Mr Schultz, Mr Secker, Mr Sidebottom 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 5.05 p.m.

COSIER, Mr Peter, Member, Wentworth Group; Director of Conservation, World Wildlife Fund Australia

CULLEN, Professor Peter, Member, Wentworth Group; and Visiting Fellow, Commonwealth Scientific and Industrial Research Organisation, Land and Water Division

WILLIAMS, Dr John, Member, Wentworth Group; and Chief, Commonwealth Scientific and Industrial Research Organisation, Land and Water Division

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 14th for the inquiry. I welcome representatives of the Wentworth Group. It has been many months since we last saw you here and no doubt there are committee members who wish to ask you some further questions. We have seen a lot in the time between when we saw you last and now. A lot has happened, of course, with the COAG agreements and I know you had a leading role in some of the recommendations made. When you first came to see us your top concern was water rights and I think that is on the top of the list today. We hope to resolve that issue.

Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of parliament and they warrant the same respect as proceedings of the House itself. We like to remind our 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 some opening remarks before we enter into our questions?

Mr Cosier—Chair, we are in your hands. Our suggestion is that we make a couple of remarks about the national water plan document we released prior to COAG and what we think are some of the implications of the COAG reforms for the inquiry. The reason we released our report was that we felt it was necessary for a set of solutions to be put on the table for debate. For many years there have been discussions around the issues of the environmental health of rivers and the economic use of water by regional communities. We felt that if we, as a group of concerned individuals, were able to put some document on the table, it might provide the focus for debate and that was the intention behind what we did.

Primarily we were saying that there is a major need, particularly in our southern rivers, to restore river health if we are to have longterm, viable, economic communities and also healthy river systems. But we felt the debate had stalled, because regional communities were fearful that their rights had being taken away and, until we restored the faith of communities that their rights were being protected, we could not get on with the debate and the discussion about the reform process.

One of the key recommendations we were making and strongly advocating was the need for a new water title system for Australia which would give water users a far greater security of resource than they have at present. When that is put in place we believe the debate will open up about how we can best move together, as a partnership, to restore river health. The blueprint we

released has a 13-point package which, if it is fully implemented, we believe will pave the way for that reform process.

Subsequent to the release of our report, COAG released a communiqué which, in our opinion, had some very profound recommendations for change in the way Australia manages its water resources. We are quite pleased with many of those recommended reforms. We have a couple of concerns about the reform process. It is one thing to get the principles and the template right, but it is another thing altogether to get the actual mechanisms working. That is where we still have some concerns about the COAG process. I could take you through some of our points, if you wish, but otherwise we are happy to take questions.

CHAIR—We all have your points here with us, so we can ask questions from that. Did you want to add anything, Professor?

Prof. Cullen—Do you have a copy of the water blueprint?

CHAIR—Yes, we have.

Prof. Cullen—Then you should lead us with the issues you would like us to talk about.

CHAIR—John, do you feel the same way?

Dr Williams—Yes.

CHAIR—The inquiry received much evidence in calling for the Commonwealth to take a leadership role in coordinating the water issue. Given the constitutional constraints, what is the Wentworth Group's view on the Commonwealth's role in water issues?

Prof. Cullen—We have seen a situation where the states have been unable to seriously address these issues because there is a lot of pain for communities in the reform that has to be undertaken, and states were feeling they did not have the financial resources to even start on this journey. The Commonwealth has the role of providing some funding. But, more importantly, we have demonstrated that you cannot manage the Murray-Darling Basin as a series of isolated lumps. There are some areas where we have to be able to work across state borders and therefore there is a Commonwealth role in that coordination, especially when you have cross-border rivers. Also, the Commonwealth has an opportunity to provide leadership here, so that we do build a system of water management for the 21st century, rather than just keep putting bandages on 19th century approaches to these problems. They are the three areas where I would hope the Commonwealth could assist.

CHAIR—Do you think it is necessary that there should be a federal minister for water and a dedicated department? Do you think it is such a serious issue at present?

Prof. Cullen—I believe water is a very serious issue for Australia. The last drought has shown that it is not just a rural issue; it is an urban issue as well. There is going to be a lot of tension in both urban and rural Australia as we work our way through this and become more efficient in our use of water. I have not thought too much about the institutional arrangements at the Commonwealth level.

I certainly think there is a case to have an integrated ministry looking at the water issues. Looking at the agricultural uses of water, the environmental uses of water and the urban uses of water in a disconnected way is probably going to lead to some non-optimal solutions. So the idea of integrating that so that people can balance those different agendas seems to me to be perhaps a desirable way to go forward.

Mr Cosier—There are some distinct advantages in having a water ministry or a water department. But to emphasise what Peter just said, if water management is not integrated with land management—through an integrated land management process—then you will be creating silo solutions for water which will be detached from land use. One of the great outcomes from the COAG process was a recognition that if you are managing a landscape for sustainability, you are managing it as a whole. Water resources are part of the landscape.

The best example is that water in rivers comes from somewhere. It comes from the sky, from rain, it falls on landscapes and enters river systems. If that is not managed as an integrated whole and you start managing the river channels as rivers, the implications for how much water actually ends up in the rivers is dictated by how the land is managed as well. It is not a simple question of creating a ministry for water, although that has some advantages. More importantly, the whole natural resource management system should be managed as an integrated whole.

Dr Williams—I endorse that very strongly. We really need to make sure we keep water as part of a whole system. That is absolutely important. We have to make sure we integrate clearly the groundwater and the surface water systems and recognise that the water use in either irrigation or urban and the linkage to the river needs to be treated as a whole system. What we do in an urban centre or an irrigation system has a profound impact on the flow regime in the river. What we do on our land in our irrigation, or in our urban areas, has a profound effect on the actual contaminants that arise at that river. It is the flow regime, plus the contaminant and the loading, which is so important to the biochemistry that must exist in that river system to keep it healthy. It is the balancing of those two things. It is about water resources, at the end of the day. In the present institutional structures, between federal departments of AFFA and EA, water sits in both. How to find integration at a Commonwealth level, as whole systems, is something which is worthy of a lot more thought.

Ms LEY—Thank you to the members of the Wentworth Group who are appearing before the committee today. I have been critical of the group in previous hearings of the committee and I would like to give you a chance to answer that criticism. I believe that in being critical I have reflected the concerns of the people that I represent here—and Peter knows them very well. The first criticism was with the CSIRO, John, and the fact that members of the CSIRO as part of the Wentworth Group appeared to be representing leading scientific opinion in this country and carrying the weight of the CSIRO in doing that. We had witnesses from the CSIRO at our last hearing and they said that was not the case, that the group was—I think he said senior citizens, Chair, but of course I would not necessarily endorse that, or eminent persons—not representing the views of the CSIRO specifically and there was, in fact, a diverse range of views within the CSIRO. Could you respond to that?

Dr Williams—My presence and that of other CSIRO people as part of the Wentworth Group is to contribute to the national debate that CSIRO participates in. It is not a CSIRO position. It is rare that CSIRO actually takes a position because it is not a policy institution. It is trying to

assemble the best knowledge we have. We were contributing—and I was contributing—to the national debate on the issue of water reform in this particular one, and the other issues. My role, and the role I have played, is to make sure that anything that has my name associated with it, and CSIRO, is robust science. I believe we have done that.

Ms LEY—So you would say that you are confident with the robust quality of the science behind the proposals that the group has made?

Dr Williams—Certainly from my area of competence, I believe that is so.

Ms LEY—Would you acknowledge that others in the scientific field would not agree?

Dr Williams—I would be very pleased to see where there are errors of science in the documents that we have produced in Wentworth. To the best of my knowledge, none of my scientific colleagues has challenged the scientific basis that is in the documents. They may challenge the balance in some issues—whether we made sufficient paragraphs to deal with the impacts of the reforms that we were suggesting or required to get the balance between community wellbeing in an irrigated community and, at the same time, the long-term wellbeing of the river system.

We made a very real effort in the water reform document to recognise where scientific knowledge was limiting and therefore an approach to return of water was one where we did not take a line saying, 'This is the magic number,' or, 'This is the magic regime.' We believed there was sufficient scientific evidence to suggest that we needed to return more water to the river. How much and in what regime was something we needed to get started with 100 gigalitres a year and work through that with a proper scientific process to make sure that the benefits and the costs were appropriately measured and evaluated.

Ms LEY—Would you say that your colleagues, and scientists generally, have confidence in the Murray Flows Assessment Tool?

Dr Williams—It is the best tool we have at the moment. I would be one of the first to say that I would like to have had more resources invested in the science because most of the MFAT—the Murray flow analysis tool—comes from my division's activities from delivery through the CRC, of which we are a major part. So I am very aware of where that product came from and its strengths and its weaknesses.

Ms LEY—Would you say that one of the weaknesses is that where there is a gap in the science it has a built-in assumption that you get a better outcome if you add more water?

Dr Williams—To answer your question directly, the tool that we used there required input from expert panels and the best scientific judgments we had that related the biological response to a flow regime. That was the primary task that we were trying to establish—given this flow regime, what would you expect to be the response of the biological system to the river? That part of the MFAT is decided by the input from an expert panel. That response that you get from MFAT is dependent on the quality of the expert panel's advice to that branch or segment of the river.

Ms LEY—Quite recently people were told that the tool was being peer reviewed. Is that the case, or not?

Dr Williams—I understand that peer review has taken place. My understanding is that it is still with the Murray-Darling Basin Commission who commissioned the review, and that was our client at the end of the day.

Ms LEY—Is it taking place now or has it already taken place?

Dr Williams—I understand the review has occurred but discussion of it remains with the Murray-Darling Basin Commission.

Ms LEY—Would the peer review have predated the announcement that 1,500 gigalitres is the necessary volume to be returned to the river?

Dr Williams—The peer review of the MFAT was more about whether its use for the purposes of the living Murray was appropriate and robust, and how good it was. That was the question that was asked of the review. It is like all scientific tools. One of the problems faced by science is that that tool existed primarily because of a long-term investment over the last 10 years of appropriation funding in CSIRO to build it. The actual client demand for it only took place when the COAG and Murray-Darling Basin Commission discussions took place. Trying to build all the science you need for the policy questions is a pretty demanding task. We should be saying to CSIRO, 'Thank goodness you thought ahead and built some of the product, so at least you could do better than guess.'

Ms LEY—Chair, I do have other questions but I think we should move on in case we have something in the House and people do not get time to ask their questions.

Mr WINDSOR—When we were in Melbourne, the CSIRO was talking about the various models that they had been able to develop.

Dr Williams—This was with respect to the river?

Mr WINDSOR—Yes—well, climate generally, but the river. One of the questions we asked them was, if they were able to model forward, had they ever modelled backwards to be able to tell us what the river was like before the dams and the vegetation changes. We have raised that a few times with them. In Melbourne—probably 12 months ago now—they said that they had not looked at that but suggested that they might look at that. We have not had a response in terms of what the model would look like if we looked back. This follows on from Sussan's question about the basis for the science. There is an assumption that the river needs more water—and I believe that personally, but I do not have a basis in history for that. Can the CSIRO provide the modelling to show us what the system looked like, with reduced run-off from vegetation, trees, et cetera, and no dams, no regulator?

Dr Williams—We have done some work, and I have a paper here which looks at that. We took the Murrumbidgee system and ran the models back into history where we have some data to justify their doing that. It is possible to do what you are asking. In the division of land and water we have done some work which shows it is very much dependent on the climate variability that

you have. The work that I am referring to is, if you take the pre-war rainfall sequence and impose on that the post-war water extraction patterns, you will then be able to look at what the river flow would have been pre-war if we were taking water out of it like we are now. That is the sort of exercise we can do. Equally, we can do the exercise that you have suggested with different vegetation patterns. Some of that work is done. Maybe not all of the questions you asked have been done, but I am sure it is within our capability to do them.

Mr WINDSOR—The other issue is where COAG is at the moment—the arrangements between the states and the Commonwealth. In terms of the property right agenda—which was on the agenda back in 1995—and the trading facilities that have been put in place or talked about now, what difference do you see between what was agreed in 1995, when COAG came together to drive the competition policy arrangements, and the arrangement that was made a couple of months ago?

Dr Williams—I think it will depend a lot on how the actual entitlements and water trading models work out. At the moment that is in the hands of a working party. I will ask Peter to comment more on this. In the Wentworth Group's document we argued quite strongly for a commission of inquiry to set its mind to working out how we would get the best entitlement and water trading mechanisms in place, where you want to go for the very best system—as Peter said—that would set us up for the next century, rather than patch up what we have now.

Some of the work that Mike Young has done since 1995, which is embodied in a document that I am sure you are aware of called *Robust Separation,* makes points of principle that it is wise to separate the way that entitlement is traded from the way that entitlement is regulated. They are real developments to try to move towards a system where you recognise that you have a share in a secure resource—that it is secure in the sense that 'this is your share', but the dividend will depend on the actual climate of the particular circumstance and the land use. So you know the dividend from your share will vary from time to time, but the way you trade that share, the way that share is regulated and the way you use it need to be clearly separated.

All those things are distinct improvements on what we had in place earlier. Therefore, if we have the appropriate body to think through things—not go for the minimalist solution, but probably the most forward thinking and well thought through solution—it will make an enormous difference in getting the balance between resource security for people with irrigation or in the cities, and sufficient water to make sure our rivers remain living entities.

Prof. Cullen—I want to reinforce John's point because I fear that the current mechanism the COAG framework is developing is going to give us a minimalist solution. A working party of state officials is working on it and I think what they are going to do is make some minor changes to the existing situation, and say they have met the COAG requirements. I fear if they do that they just could miss the opportunity to give us something for the next century. I have heard state officials say, 'We are almost there. We don't have to do very much to tweak what we're doing now to make it consistent.' I do see there is real value for Australia if we have a nationally consistent system, especially across the state borders in the Murray-Darling Basin. I just wish we could be a bit more adventurous and have a go at doing that.

Mr WINDSOR—You mentioned one of the concerns that you had was bringing the community with you. Are you concerned at all that the two tenements of the 1995 arrangement

and the current one are basically the property right and the trading mechanism and we are putting the trading mechanism a long way in front of the property right and the entitlement holders may panic because of that?

Mr Cosier—Hopefully not. My reading of the COAG communiqué was that it should clarify that. Certainly our position is that we should move from annual licences, which has gross uncertainty, particularly in a period of change where entitlements are being taken back, super licences are being activated and all those sorts of issues. People who have invested money on the basis of historical use of annual water licences in some instances are being punished or penalised as a result of the current reform process. That is one of the key reasons we felt that going to a perpetual share of a variable resource was a fundamental reform that needed to happen. In my reading of it, the current COAG communiqué sets that principle up.

We believe that what Australia needs is a Torrens title for water so that water users, including irrigators and towns and cities and everybody else, know what share of the resource they have in perpetuity. Then further discussions about river health and river management and environmental flows and what is needed can be undertaken on the basis of a square ledger so that rural communities do not think, 'Well, if I agree to that it means I'm going to lose more water from my historic water use and that's going to cost me a fortune.' In that climate it is not surprising that there is massive concern about water reform. To re-emphasise what I said at the beginning, we felt as a group of concerned environmental scientists that until we clarify water entitlement use, it is going to be very difficult for communities to work together to restore river health in river systems that are degraded, or degrading.

Ms LEY—Annual water licences, Peter, work well with annual crops, surely.

Mr Cosier—If you build into the perpetual share system you would then have annual allocations within those shares. What it does give you is a guaranteed security that of the available water coming down a river in any particular year—depending on climate or whatever—you have a guaranteed perpetual share of that resource. If someone wants to take that away from you, you are compensated; you do not sell it free-will on the market, or someone comes in and offers you an incentive to do something else with the water you are using.

Ms LEY—So the difference between what you have just said and what happens now with annual water entitlements is just the perpetual nature?

Mr Cosier—No. The other difference is that at the moment in many systems, particularly in New South Wales, there is a reallocation happening within government. People are losing large proportions of what they historically had as users with annual licences. In some catchments—I do not know the figures but I could get them for you, or Peter might have some more information—some people are losing 50 per cent of their historic water licence.

Ms LEY—They lost that at the cap. They lost the historic water licence when the cap was introduced.

Mr Cosier—But it is going further with the draft water sharing plans in New South Wales that Minister Knowles has suspended. We think that is just unfair. It is not the way you behave when you are trying to reallocate a scarce resource in Australia.

Mr SECKER—I agree with you. I think you do need certainty for the irrigators. It will have to be on a share basis because obviously in a drought year the water is not there. But I believe, as a farmer, that you do need that certainty. I have an annual licence and there is an expectation you will get to keep it forever, but there is no guarantee. The banks are looking now for more of that type of guarantee. I just want some clarification of what Professor Cullen said. He talked about the minimalist approach and the more adventurous approach. They are two almost emotive words. Could you explain what you mean by the minimalist approach and a more adventurous approach?

Prof. Cullen—The minimalist approach is where we have officers from various state agencies making minor modifications to what is happening in their state, making them roughly consistent and suggesting that meets the COAG agenda. The more adventurous approach is, as we have recommended in our blueprint document, a commission of inquiry of a number of people to look at what is the best in each of the state systems and design a system to take the best from all of them. They are all being changed at the moment, in broadly the same direction, but they are all very proud of their particular spin on it. It would be great if we could choose the best of those and get a nationally consistent system. That is what I see as the more adventurous approach.

Mr SECKER—This is you looking for a Commonwealth role here and trying to get the states working together.

Prof. Cullen—The Commonwealth in a coordinating role, yes.

Dr Williams—There are two reasons for that: one is the security issue, which is fundamentally important, and the second is trading across states. Both are important to the Commonwealth, I would thought, particularly the trade across states. We have often been misunderstood, I suspect, but that is why we say about the balance between the security for water resource users and the security for water for the river that you have to screw one down before you can do the other and they both need to be done. That is why I think the issue of a reform that takes us further forward and creates a Torrens title security, so that financial institutions treat it in the same way as land, would make a lot of difference. That has to be screwed down so that we can go forward.

Mr Cosier—I make the point, particularly in response to Sussan's question, that it was bureaucrats who overallocated water; it was not irrigators. If we need water back to restore river health, it is incumbent on all Australians to contribute to that restoration, not just the irrigators who, through no fault of their own, were taking water out of the river system. That is the fundamental deal breaker in the current water reform process. It is why the 1994 reforms did not happen and it is hopefully how the new reforms can happen. If we deal with that matter of fairness and equity, we can then get on with the restoration of river health. The vast majority of rural people want to see the river systems improved and restored. It is a question of how you go about it. We believe you cannot go about it until you fix up property title.

Mr ADAMS—We should have told the fishermen that when we made them buy back their own catches and their own quotas. There is a bit of inequity there in the thinking. I want to go to the water accounts—that is, to understand that there is enough water; that we understand how much water there is in each catchment. How close are we to that? How accepted is that in the state jurisdictions and the Commonwealth system?

Prof. Cullen—My understanding is that each of the states is starting to assert that they are either doing it or they are close to doing it. I think they accept the notion that there should be a register of all allocations of productive water and environmental water. They are now agreeing that environmental water needs to be targeted the same way. Most of them do not have it to a stage where it is publicly accessible on the Web. We believe there is no reason why that material should not be publicly available. That lets everyone see what happens in those valleys when governments change the rules. Any devaluation of those licences can then be more apparent than they are when the licences are kept secret.

Mr ADAMS—It is not very transparent at the moment, is it? We do not really know what is in each catchment. There is only so much water that falls, or that is there, but we do not really know that, do we?

Prof. Cullen—It is known but it is not publicly known and it should be. There is no reason why it should not be publicly available to people. It lets them understand the water resources and their value much better.

Mr Cosier—And it is why the current system failed. If you were an irrigator in 1973 and you got a water entitlement, you did not know the other water entitlements that were issued in that catchment. You made investment decisions based on what you were given. Twenty years later you find out that water entitlements are now 250 per cent of the actual rain that falls out of the sky and—hello!—you have got to cut back entitlements. There was no transparency for those people when they made their investment decisions. You cannot get a Torrens title for water working until you know what water you have. It is pretty basic stuff.

Mr ADAMS—But it is envisaged that allocations will be made depending on the climate during the year and how much water falls..

Prof. Cullen—The other wicked part is that if someone starts planting forests up in the top of the catchment, everyone's allocation goes down. It would be nice if that was on the table so people could see it happening and they could argue about it.

Mr ADAMS—We need a bit more science on that, Peter.

Prof. Cullen—The science is coming along.

Mr Cosier—Science and commonsense.

Dr Williams—Getting back to your question where you were asking have we got enough knowledge to actually build a sensible and transparency of comprehensive water accounts, we can make some good steps forward to get a fair way down that path. There will obviously be some uncertainties that we will need to do more work on to get it clean. One thing is to get the accounts that have the surface water and the groundwater properly connected. If you try to do that in the Murrumbidgee there is still some uncertainty on how the surface water and the groundwater systems are connected or are not connected when you come down to the fine detail. Groundwater systems do not follow the same catchment boundaries, therefore you have to do your sums very carefully. There is some work there. One of the paragraphs that I pored over for hours and hours to get right is on page 8. The whole changing land use issue that you raise is a

very important one because it can go a number of ways. They are all issues that, if you can get to the matter of principle, we need to do more work on, but at least you are moving in the right direction.

Mr ADAMS—Maybe you could run through the river classification system. Are we going to have pure catchments here and degraded ones there? How are we going to do that? There would be some financial issues around that as well, I would imagine.

Prof. Cullen—That proposal did not get particularly picked up in the COAG discussions, although I think it is still being examined by some of the bureaucracies. The idea was we have few undeveloped rivers in Australia that have not been damaged to some extent, therefore it is important that we should protect those few we have left in that condition. That was the idea of the heritage river. Many of even those rivers do have people taking water out of them for stock and domestic purposes. I think of the Ovens in Victoria. It is in fairly good biological condition because it does not have any dams on it but it is supporting rural communities. There is no reason why it cannot continue to do that.

What I would like to do, with a river like that, is to declare it as a heritage river; do not allow further development of the water resource but allow continued use for stock and domestic purposes that is being used at the moment; and use some money to do some reconnaissance planning to see whether there are threatening features in that valley that we could countenance. There could be aquatic weeds, there could be river bank restorations or whatever, but we could get some resources in to manage that river valley.

There are other rivers where only a small amount is being extracted. I suggested several classes from a heritage river down to a working river. There is nothing magic about the percentages I invented. If we are going to lock up the small number of pristine rivers that are left, we should also try to identify the rivers where there are further development opportunities. There are difficulties in doing that, especially with our northern rivers, in terms of our lack of knowledge at the moment, but that was the basic idea.

Mr SIDEBOTTOM—Thanks for your contribution. Some of you have already alluded to this but I am interested in you expanding a little bit more. I would like the overall view of your group's reaction to the COAG initiatives of 29 August in terms of their revised framework, the national water initiative. To what extent do you think these initiatives meet your blueprint initiatives? Are there impediments in implementing the COAG initiative?

Prof. Cullen—Overall we were delighted that the framework picked up a lot of the points we thought were critical and has started the journey on them. We still have concerns that there is still a long way to go to get the sort of outcomes we need for Australia. We are a little disappointed that the idea we proposed of an environmental trust to purchase the water has not been resolved as yet. At the moment there are all sorts of people suggesting how the $500 million should be spent on a whole variety of things.

The reason we put it up the way we did was that we do not think these departmental committees are going to be able to get the best bang for that buck. There will be a lot of money spent on flying people around to negotiate, whereas we think we could get into the market and either buy water or invest in infrastructure to save water. The idea we were pushing was that we

should get the best bang for the buck by maximising the amount of water we get back for the environment. I fear that a large proportion of the money will go on tarting up infrastructure works and having negotiations and we will not necessarily get the outcomes that I believe we have enough knowledge now to get.

Mr Cosier—Concluding on that: $500 million is a lot of money and Australians are watching this process. It is taxpayers' money that is being put up. If we do not get $500 million worth of water in rivers for the $500 million investment, Australians are hardly likely to come back and say, 'You can have some more.' What we think is absolutely crucial is that the process by which that is done is (a) transparent but (b) done by experts. So the proposal for an environmental water trust is a group acting as a board which would have experts in trading, experts in ecosystem health and environmental flows and other such people. They can make informed decisions. Should they operate alone? No, they should not. They should be answerable to somebody. We suggest the one for the Murray River should be answerable to the Murray-Darling Basin Ministerial Council. They should be accountable to an elected body. They should be given the job of maximising that taxpayers' investment.

The second issue we are concerned about is the process by which the new title system will be designed. With due respect to public servants, we are not convinced that an intergovernmental committee of public servants is going to produce the world-class Torrens title model for water in Australia. Our preference was for a commission of inquiry or something of that nature which comprised, for example, a High Court judge, someone with expertise in trading systems, markets—how markets are traded and how they work—and also someone with expertise in freshwater ecology. We think if such a group was formed, took advice and produced a blueprint for a new title system and put that in the public domain for debate, at least you would then have something on the table for debate to occur. Whereas we think the current process will simply have a lot of people with ideas but never specifying something. The concern is that we will end up with a camel and not a world-class system which we think Australia is capable of producing.

Dr Williams—We were absolutely delighted with the progress that was done at COAG. It is timely and a wonderful outcome. But there are two areas that are important, that we raised in our report and that I am not sure are in the process. One is to learn how to engage with community. That is something we felt was absolutely critical because we recognise the decisions on the water sharing sits with community, but the whole process of genuine engagement—not token—where the actual planning and also the execution of resourcing sits with them. That seemed to me to be pretty important. Also—and you can say this is self-interest but as I am retiring it will not be for me—I do believe the hydrological knowledge we need to underpin the progressive reforms initiated, particularly around the issue of robust and transparent accounts for catchments, will demand some science and knowledge that I believe we do not currently have.

Mr SCHULTZ—Your comment about users of water acting on advice they received from the bureaucracy are very relevant, but you have failed to make the point that much of what has occurred has been politically motivated at times in the usual political process of getting votes in certain areas. It is not only the impact of drawing water out of the system but the way in which water is put into the system from some of the dams. The classic example—and I represented this area for a number of years as a state parliamentarian—are the two dams around Tumut: Blowering and Burrinjuck. These dams—particularly Blowering Dam— have been used to control water to the Tumut River and have created massive ecological problems in terms of the

changing structural face of the river itself and what that has done to native fish species and aquatic life. My point is that that is also a problem and I am surprised that you have not mentioned it in your blueprint.

There is a question I want to ask in relation to scientific evidence. On page 7 of your blueprint you say:

> There is an emerging view in the scientific community that if we remove more than two thirds of the natural flow we will cause obvious and significant damage to river health. Flow regimes of less than half-natural will mean that it is highly unlikely that a river will be capable of remaining healthy in the long-term.

Can you please explain to the committee the science behind calculating environmental flows? When you talk about environmental flows, do you mean environmental flows that have occurred naturally, keeping in mind the Murray as an example, over the years, before we started drawing enormous amounts of water out and it stopped flowing?

Prof. Cullen—Those rules of thumb that I articulated are very crude and are just a simplification of how to assess environmental flows. There is no doubt that some of our rivers dried up, but if they dried up now we would not have the carp infestations and some of the other things we have in them. The native fish can cope with that; the introduced cannot. However, it is socially very difficult to dry up our rivers when they are being used as major irrigation channels, so we have not had that on the radar.

I have not been involved with the development of the MFAT tool being used in the Murray at the moment, but the idea of it is to try to identify the particular ecological assets that are important in the river and then to work out what sort of flow they need at particular times of the year. This came from some work I did on the Lower Balonne, looking at the Cubby Station issue, where we identified four particular environmental assets and we had a go at identifying, as best we could, what sort of flow each one of them needed. The critical one turned out to be the Narran Lakes, which is a Ramsar wetland. We came up with a wetting regime that was, we thought, the best guess we could give it as necessary to let the lake survive in its current condition.

The irrigators have now worked with that figure and have come up with pumping regimes that I have agreed with the Queensland government give it a pretty good shot of protecting that wetland. Once we articulated the environmental assets and said what they needed, they were able to change the way they take water from the medium sized floods—which are the ones that are critical to the wetland—to ensure that the wetland gets its wetting every 3½ to four years, which we thought was fundamental to its survival. That was a case where, once we articulated the environmental assets and had a go at doing it, the irrigators were able to look at their extraction approaches and come up with a way which minimised the environmental damage and minimised the impact on irrigators. They are currently trying to do the same thing with iconic sites on the Murray, which will be a tougher job, but that is the way they are looking at it.

Mr SCHULTZ—Is it possible to generalise about the health of a river, given the length of some river systems? The Murray is a classic example with a length of 2½ thousand kilometres.

Prof. Cullen—It is very hard to generalise from our northern summer rainfall rivers and our southern winter rainfall rivers. People find it very hard to talk about environmental flows unless you can give them some broad indications. I put lots of caveats around those rules of thumb and all I can do is reinforce them. They are just to give people some idea of when a river might be overstressed. They are the sorts of rules of thumb that people are using in making a whole lot of assessments. The Victorian government have just listed a lot of southern flowing rivers which they have now decided are stressed and they have capped them, too. They are looking at what they need to do to perhaps restore them.

Mr SECKER—I am a farmer, but if I was a farmer on the Murray-Darling system and I saw this first dot point in the advert in the *Financial Review* which says, 'the environmental needs of Australia's rivers have a guaranteed first priority call...' the first thing I would think is that I will miss out because of the environment. I wonder whether you think that is a wise dot point and whether you would like to comment on that?

Ms LEY—Because agriculture is not mentioned anywhere in this advert, or rural Australia.

Mr SECKER—That is right, and this is the concern. It seems to be too much on one side—about the environment. That is fair enough—we need to look at the environment—but as representatives of the people, we also need to recognise wealth creation, what it does for communities and so on. It does seem a bit lopsided, especially with that first dot point. That is going to rile a few people automatically.

Prof. Cullen—That comment came about because in a lot of the water allocations that have been happening over the last decade—for example, the Victorian bulk water entitlements—the security of existing irrigators was guaranteed and any residual was left for the environment. In no way did it provide enough for the environment, nor did it meet the COAG agreements of 1994. As we thought about it, I came to the view—and I argued—that the environment was not another optional extra, another competing pressure. Unless you had some environmental security, you did not have a river at all. That particular phrase comes from the fairly well-regarded South African water legislation which gives two predominant uses: the environment and the domestic supply for all citizens. It seemed to me that it was necessary to say that, unless you have a reasonably healthy environment, you cannot hang agriculture or town water supply off those rivers. That is why I saw it as underpinning, not just an optional extra.

Ms LEY—But no mention of agriculture?

Prof. Cullen—I have talked about a whole range of uses—town water supply, city water supply; even Adelaide is dependent on the Murray, too. There is a whole range of extractive uses.

Ms LEY—But it is hard to read an understanding or an appreciation or a recognition of the—as Patrick says—wealth-creating outcomes of agriculture into any of these dot points at all.

Prof. Cullen—There are articulate advocates for wealth creating from agriculture. What we are trying to do is balance that picture a little bit.

Mr SECKER—Perhaps we would have liked a more balanced approach.

Mr Cosier—The 13 points there were what we thought, if implemented, would go a long way to fixing the problem.

Ms LEY—It would cost a lot more than $500 million.

Mr Cosier—And it may cost a lot more than $500 million, because we actually do not know how much it will cost.

Ms LEY—Basically it is the government compensating, so that the environment rules supreme.

Mr Cosier—Yes.

Ms LEY—In one sense, I accept what you say, that of course you cannot have anything without a healthy river, but to put these measures in place is almost an open chequebook. It really is. Governments do not have an open chequebook.

Mr Cosier—We do not believe it is an open chequebook. First of all, the 13 dot points are there to try and provide a template from which you build a new water management system. They are not meant to be biased one way or the other, pro environment, pro irrigator or whatever. Through the rest of the document we articulated what we felt was the balance between environmental use, river health and the viability of regional communities. We have made a few statements towards that today as well. We believe if the 13 dot points are implemented they can do it.

Will $500 million fix the problem? Almost certainly not. Will you need to spend trillions of dollars fixing the problem? Probably not. We do not know the answer to the dollar question yet, which is why we proposed starting. You allocate half a billion dollars and you find over the next five years 100 gigalitres per annum, you set up environmental water trusts with experts in local communities on those trusts and you start managing the system differently. As you start managing, you start learning by practice and practical experiments and then you will eventually get to the point where you start to improve river health.

Ms LEY—What happens to agricultural production over that period? Would you see it staying where it is now or increasing? The key to economic prosperity is increasing productivity.

Prof. Cullen—Increasing. I have just come back from Mildura, where I saw some of the most brilliant irrigation, with automatic sensors under the soil, huge broad acres fully automated, using about 20 per cent of the traditional irrigation. I have also seen communities that have not chosen to invest and charge themselves the appropriate use for water, have not invested in any infrastructure, with their hands held out for the government to upgrade their infrastructure. The private diverters are doing some brilliant irrigation up there, using much less water.

Ms LEY—As you know, this annoys the hell out of the people I represent. Everyone says, 'Just grow high-value crops. That is all you have to do. Just do what they are doing at Mildura. Just put in orchards or vineyards or grapes.' It is not the answer. It is not the answer in terms of market, in terms of the delivery of the river system and what it can deliver at certain times of the

year. In other words, it cannot deliver everything in December and January. We have to have a diversity of crops.

Prof. Cullen—We will have a diversity. That is the reason for the reasonably slow going at 100 gigs a year. But, equally, maybe in New South Wales we need a high security water licence which lets people invest a little bit more in some of these other crops. Maybe it is not just the soils and the climate; maybe it is just the structure of the water licences which might be inhibiting investment. Environment, social and economic are the three points in the balance that I think everyone is starting to accept now. Maybe that point is a bit pointed! I agree with Sussan about the change to farming.

Mr SECKER—I have a very quick question on flood mitigation. Have you looked at that as part of the whole set-up? In our short time we have had floods and droughts in the same area.

Prof. Cullen—No, we have not looked at flood mitigation in particular. It is another competing use.

CHAIR—There is a division and we have to go whether we want to or not. If you would like to wait, there will be three or four members who will come back. I know you cannot, Professor, but thank you very much for the time you have given us today.

Prof. Cullen—A pleasure.

Proceedings suspended from 6.01 p.m. to 6.12 p.m.

CHAIR—We are resuming our evidence now. Thank you, Doctor, for being patient with us.

Mr WINDSOR—There was talk earlier of 'bang for the buck' in terms of the investment and we want water to be put back into the system, et cetera. A couple of weeks ago we had here the Snowy Mountains hydro people from New South Wales. They were saying they were prepared to invest quite substantial amounts of money—I think about $6 million—in cloud seeding to produce snow that would, when it melted, create up to 100 or 150 gigalitres of extra run-off. Does the Wentworth Group have a view on using that sort of technology in terms of creating water?

Dr Williams—No. I think the expertise was there and we did not write on that issue. It would be assumed though, as a matter of principle, that, whatever the technology or land use change, you need to be able to get a sense of what it does to the amount of water you have in issuing the share and the dividends. I do not have skills in cloud seeding. It is a controversial issue and you have to have the right meteorological conditions. But I am sure if the hydro body believe they can do that, then they have done their homework.

Mr WINDSOR—Would the group support private sector investment into a project like that, if there was a return to the system?

Dr Williams—This is what I think has not come out. By getting some serious resource security that is enduring and defined and tradeable and regulated sensibly, it will enhance private investment in this whole water industry. We can then move from being very much driven by a

public investment structure to an industry where there is a mix of investment in the water industry, because there is a sense of security and knowledge of the way it works and some way forward where business can really operate. I would have thought you want that mix.

Ms LEY—How can the Wentworth Group claim to be independent scientific advisers, if they are supported by an environmental lobby group such as WWF?

Mr Cosier—Can I answer that?

Ms LEY—Sure. You might like to cover the aims and objectives of WWF in your answer.

Mr Cosier—The mission of WWF is to conserve biodiversity and the viability of communities. There are better words than that, but that is what comes to mind. We like to think of ourselves as a balanced organisation. Our case is that underpinning environmental health is fundamental to the viability of human society. That is at the macro scale. That scale applies right down to local communities. You will see in our document a lot of what we talk about is regional ownership and management of issues. What we are critical of, in this document, is that the current process which has evolved over the last 10 or 15 years in particular has not done that. It has been managed by command and control from state government bureaucracies. What we are left with is great uncertainty in rural communities about the future of water resources and water supplies. It is a mess that we are having to deal with. We are also left with many river systems which clearly do not have sufficient water in them to provide the river health that is needed to make those communities viable. We, in WWF, believe that we are on your side.

Ms LEY—It sounds like a statement from George Orwell, if you will excuse me: 'We are on your side. We know what is best.'

Mr Cosier—The future for rural Australia is innovation. The future for rural Australia is healthy river systems and healthy landscapes.

Ms LEY—What part does agriculture play in that? What part does irrigated agriculture play in that?

Mr Cosier—Agriculture and irrigated agriculture are fundamental to that process. We are not saying, 'Turn the Murray back to what it was.' The River Murray is a working river. What it needs to be is a healthy working river. It is not healthy. It is not healthy for two reasons: one is that key environmental assets, such as Ramsar sites and other wetlands of national significance, are not receiving the amount and quality of water they need to maintain river health; secondly, we are suffering the scourge of salinity, which is not the fault of irrigator communities; it is the fault of land clearing further up in catchments. What we are trying to put down here is a set of solutions which satisfies both tests: environmental tests and viability for rural communities tests.

What role do WWF and the Wentworth Group have? WWF simply facilitated the forming of the Wentworth Group. The documents the Wentworth Group have put out are Wentworth Group documents. They are not WWF policy; neither are they CSIRO policy nor anybody else's policy. They are the views of the members of the Wentworth Group alone.

Ms LEY—And the cost of distributing them, plus the cost of advertising?

Mr Cosier—The cost of the whole process has been paid for by one single donor, who happens to be our president, Mr Robert Purvis, who is a Sydney businessman who also owns three rural properties in New South Wales. He has funded the whole process—the cost of printing and the cost of advertisements, et cetera.

Mr WINDSOR—One of the mixed messages that land-holders are getting—which the drought has alleviated a little bit—is that on the one hand they are being told one of the key objectives is to have healthy rivers; on the other hand they are being told that they have the scourge of salinity, caused by a range of other features such as land use patterns and clearing and lack of deep-rooted plants, et cetera. They are being encouraged on certain levels to go for deep-rooted plants, trees and natural pumps to overcome the salinity problem. That is going to have an effect on the quantum of water in the system. It might have been John or Peter who alluded to this earlier, that if we go into agroforestry in a big way it is going to have a significant impact on the water account that Dick Adams spoke of. How are you reconciling that, when we have not modelled backwards to see what we should look like, in a sense?

Dr Williams—That is an issue that is right on the front foot of where our best science is. It is true that what we want to do to mitigate drylands salinity is to reduce the amount of water moving past the root zone of our system. Putting in trees and other deep-rooted perennials obviously contributes to that. The question is: where in the landscape will they reduce the yield of water to our rivers? Not everywhere will they. So the emphasis is on learning how to put back the vegetation, like you say—and I am all for doing what you are suggesting, running the models with what used to be the vegetation, have a look at the flow regimes backwards and forwards—but the balance between whether the water is evaporated when you have trees in place or whether the water actually is shed as overland flow when you have trees in place is the issue.

In some parts of the landscape it goes primarily through evaporation and the recharge term goes down, but therefore the run-off term goes down; in other parts of the landscape and other rainfall sequences you can get shedding in woodlands. There are some areas where I do not think we know, when we put some forms of agroforestry together in some rainfall patterns—certainly below 600 millimetres—that the yield loss to our rivers can be quite small. In the high rainfall areas, if we look at the tree patterns of plantation forestry structures, a large-scale plantation forest can reduce the yield of water to a river and that is well established. It is a matter of getting that balance sensibly understood. That is why simple rules of thumb are often hard to get right.

The point you raise is the very one I have a bunch of people struggling with in trying to work out that balance. We want trees and deep-rooted vegetation to get the water balance more like it used to be but obviously, if we do that and decrease the water flow to the river systems from what it used to be, we have not made the progress we want. I believe we can work that out but it would be quite important—the point you make—that we need to get it right. Some of the science is in place for getting it right, but some of it is not.

Ms LEY—Could Dr Williams answer my question in terms of the independent scientific advice?

Dr Williams—Yes, thank you very much. The issue is for CSIRO scientists to contribute the best knowledge they have to a range of platforms. This Wentworth Group is one such platform. At the same time as I have contributed to that, I have also contributed to this—which I will

tender as evidence of the fact that we are committed or I personally am strongly committed. Both Peter Cullen and I are agricultural graduates and we recognise there are a number of platforms where we can put our facts, as we understand them, on the table to enhance the quality and depth of national and public debate. I have written and worked for the Academy of Science platforms. I have written for the NFF platforms. Obviously we work regularly with meat and livestock associations and grains organisations. There is a whole range of platforms where CSIRO scientists, and me, if the question is directed to me, contribute. We engage as much as possible to make sure taxpayers' money is used properly and ensure the knowledge we have is put into the public domain from different platforms that are genuinely part of the democracy.

Ms LEY—But at what point do your personal views or the philosophies of individual scientists cross over the advice they are providing? We are putting the facts on the table for others to make a determination. In a way this is the people who are part of the Wentworth Group putting their heart and soul into this as the answer. That is not quite the same thing as you have just described.

Dr Williams—It is, in the main, in the sense that I would challenge people to show me where there is scientific error in these documents. I have not been challenged on that so far. The question, you say, is when does a person, a publicly funded scientist, move from saying, 'This is how it works,' to saying, 'If you want a healthy river you have to put more water in it'? I know that line is there. We say, if you are doing a bit of agricultural work, 'If you really want to increase your productivity, I suggest you do this and this and this.' Where does it stop? The point I would argue is that we need to be conscious of that. There are times when scientists have to make a statement: 'Look, this is our best knowledge.' It is important in the public interest that we advocate a move in a certain direction.

Often when you should do that and when you should not do that is a judgment of one's integrity and the nature of where you are coming from; check yourself all the time. People believe that science is totally objective. We try to be as objective as we can but you know yourself, from your own personal circumstances and economic background, when you structure a hypothesis in science it will be influenced by the particular circumstances you come from. When you accept or reject a dataset that accepts or rejects that hypothesis, it will be influenced by your social background. There is a whole literature available to show that that is so in science. Science is able to help us in this ball game, but in the end it becomes a matter of personal integrity and judgment in those matters. I have tried to get it as balanced as I can, because I do care about agriculture, I do care about healthy rivers and I want to contribute to science on the table that leads us to both.

CHAIR—Peter, I want to clarify something. Sussan asked you to define what WWF stood for. You said that you believed that environmental issues with water should be put back into rural communities for them to take responsibility, or to be a leader.

Mr Cosier—Yes.

CHAIR—In this inquiry we have been travelling to different areas, especially down the Murray. Most of the environmental groups looking after that were under the auspices of the state government and there appeared to be a major concern amongst the users of water from the Murray that one side was being listened to and not the other. On page 7 of your blueprint you

appear to be advocating that environmental flows always have prior right over all other uses. If we get to that scenario and environmental groups—whether they are under the auspices of state governments or whatever way they are set up—are given all the water supply and then allocate it back to the farmers or to the irrigators, that would probably cause another major concern.

One particular fellow who auspices out from the state government to look after the flooding of certain trees on the Murray River says that he wanted to hold a licence, even though he would not be using it all year because you only need to flood the river red gum at certain times; that he would then sell the water back to the irrigator. Isn't that defeating the purpose? You are cost shifting. I am worried that this $500 million would get into the hands of auspices of state governments who would misuse that money, rather than the state governments who were allocated the money to look after that previously. It would be like we see all the time with federal money: it is reallocated into something else rather than fixing up or curing the problem.

Mr Cosier—Blatant bureaucracies.

CHAIR—A major concern amongst regional groups in rural towns was the fact there was no consultation with them and no leadership coming from the rural communities.

Mr Cosier—I will go back to the mission of WWF, which is the conservation of biodiversity. In Australia the only way you will achieve that objective—which we believe is clearly in the public interest—is if you work with local communities. We have a land mass of 7.5 million square kilometres. It is managed by private individuals. If private individuals do not look after the biodiversity, it will not get looked after. No amount of government regulation, laws, rules, penalties, fines, will ever achieve the objective of what is quite clearly in the national interest.

The method of operation that we strongly advocate is working with local communities to achieve that outcome. It is not very different to the Landcare philosophy, where you work with those people. Not only have we been quite aggressive in the *Blueprint for a national water plan* but in the original document we released last year we have been highly critical of government bureaucracy trying to take control of the process and using command and control solutions which demonstrably have failed for over a decade.

In a report that we did for Premier Carr on land clearing and landscape conservation we advocated a radically different model which was the establishment of financially independent catchment management authorities which were given the powers and staffing to implement regional solutions for regional problems. We are strong advocates of that pathway.

Ms LEY—They would not be bureaucracies.

Mr Cosier—Yes, they will be public servants. Can I draw a clear distinction between a public servant whose job is to serve the public—public good—and a bureaucrat whose job is not necessarily to serve the public good. Yes, you would have public servants working for the catchment management authorities but the decisions made by the authorities would be made by boards, and those boards would comprise local people. We do not believe that there is any other solution in Australia than to have local people take control of the environmental issues that they are faced with. The role of the Australian community and the public is to provide the taxpayers funded resources to help them achieve that outcome.

CHAIR—How do you perceive this consultation period or process starting? There is no trust out there. Do you need a national summit where you will bring key people in to talk?

Mr Cosier—My personal view is we are sick of talkfests. I will give some examples with the Macquarie River. Both the irrigators and conservationists have been working out there for many years trying to come up with an environmental plan for the restoration of the Macquarie Marshes. They also are a Ramsar site—that is, a wetland of international significance. That process has been stalled because the plans that they put up and produced went into the bureaucracy in Sydney and died. Surely it is far more sensible for those people, who are working together in partnership to restore the health of those wetlands, in a way that maintains and, if possible, improves the value of agricultural production in that process, to be given the resources to get on with the job. That is the path that we at WWF and within all of the documents that we have produced as part of the Wentworth Group are strongly advocating.

Ms LEY—What is going to drive that catchment management board and the people in that area to produce an outcome that is conservation of biodiversity?

Mr Cosier—First of all they need to be given some decent science. At the moment we get a lot of written reports, but they are very general. There are very few reports that I have seen—and they would probably fill this room—that could actually be used for tangible practical application of things at the local level. What is one of the functions of the catchment board? When you do not know the answer, you go and invest in some research, to the point where you think you can make a sensible decision and then move on. You implement that decision; you try it. If it does not work, you try something else; if it does work, you build on it.

Again, it goes back to the principles of why we advocated for $500 million, rather than simply setting a target. You could set up locally owned water catchment trusts, give them a bit of money to get a bit more in environmental flows, and learn by doing. I think it was Alby Schultz who made the point that it is not simply the amount of water going down the river that will determine the river health; it is also how that water is managed. Environmental water trusts would be the people to do that.

If you go up and down the River Murray, there are dozens and dozens of local communities wanting to get some access to environmental water so that they can get on with the job of repair. They have done the plans; they are just sitting and waiting. They are not getting access to the resources or water to do it.

Mr WINDSOR—You have made some important points there. One of the problems we have is that there is a lack of trust within the community generally. They do not trust the consultative process. They have been there before. They get wiped out by the bureaucrats every time. They are very cynical, even though they might agree with some of the objectives. The Murray-Darling is such a large animal to wrestle with and we are not going to fix it all in one hit. What is your view on looking at a relatively closed system and defining the principles that you say will work and that COAG are starting to address? That would be a groundwater system, not an above-ground system: all the same problems of overallocation and environmental problems; what does the property right entail; is there compensation when there is no other mechanism to trade between zones, or something like that.

The classic case that has been studied—and John would be familiar with it—is the Namoi groundwater system. There is no doubt that it has been overallocated. People are disputing the sites by a matter of one or two per cent. There has to be some resolution to the issue. The state has held off with the water plans. The market will not solve it by trading between zones. Do you see picking a small area and applying the principles, getting the state and the Commonwealth to agree on the principles, as being a way of opening up a larger area and gaining some trust in the system?

Mr Cosier—The principles that I was articulating are at that scale. We are not talking about setting up a community process for the Murray-Darling Basin. We are suggesting environmental water trusts for the Macquarie, for the Lachlan, for the Murrumbidgee—for all the river systems—and, within that, that group might decide there are some tributaries to that system which could be managed independently as well. That is essentially the Landcare model: do what works best.

Mr WINDSOR—How do you allocate the dollars into a process like that when some are overallocated, others are not, and they all have problems?

Mr Cosier—This is where our 13 points are designed to be a holistic solution, rather than 'pull one bit out and you fix the problem'. One of the difficulties with what you have just suggested is that the system is currently overallocated. Until you bring the system into balance, you cannot move forward with environmental improvement.

We believe that in many instances the current way the governments are balancing that system is grossly unfair to irrigators. Some people are being penalised through no fault of their own because government has introduced policy that has caused an overallocation of the system. We are saying, 'Deal with that issue first and square the ledger.' Then, through working with local communities, build up that process. I agree with you, they do not trust government to do any better this year than they did three years ago. But there is no other solution, other than to set up a new process which they believe is owned and hopefully over time they will begin to trust that process because it is working.

Mr WINDSOR—I do not want to put words into your mouth but would you see as a priority that the money being made available, the $500 million, should go to balancing the overallocated areas first?

Mr Cosier—No. I think there is plenty of money in the system at the moment, both through the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality, going into bureaucracies at the moment, which could be better spent providing structural adjustment assistance to farmers.

CHAIR—Thank you very much. I appreciate the extra time you have given us this evening. Again, thank you for your cooperation. The inquiry is winding up and early next year we should have a report with recommendations and we will make sure that we get a copy off to you. Thank you very much, we appreciate your input.

Resolved (on motion by **Ms Ley**):

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

Committee adjourned at 6.38 p.m.