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Official Committee Hansard

SENATE

ENVIRONMENT, COMMUNICATIONS, INFORMATION
TECHNOLOGY AND THE ARTS REFERENCES COMMITTEE

Reference: Extent and economic impact of salinity

TUESDAY, 28 FEBRUARY 2006

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SENATE

ENVIRONMENT, COMMUNICATIONS, INFORMATION TECHNOLOGY AND THE ARTS

REFERENCES COMMITTEE

Tuesday, 28 February 2006

Members: Senator Bartlett (*Chair*), Senator Troeth (*Deputy Chair*), Senators Conroy, Lundy, Ronaldson and Wortley

Substitute members: Senator Stephens for Senator Conroy

Participating members: Senators Abetz, Allison, Boswell, Bob Brown, George Campbell, Carr, Chapman, Colbeck, Conroy, Coonan, Crossin, Eggleston, Chris Evans, Faulkner, Ferguson, Ferris, Fielding, Forshaw, Humphries, Joyce, Ludwig, Mason, McGauran, Milne, Moore, Nettle, O'Brien, Payne, Robert Ray, Siewert, Stephens, Watson and Webber

Senators in attendance: Senators Adams, Bartlett, Ronaldson and Wortley

Terms of reference for the inquiry:

To inquire into and report on:

An assessment of the long-term success of federal programs that seek to reduce the extent of and economic impact of salinity in the Australian environment, including:

- (a) whether goals of national programs to address salinity have been attained, including those stated in the National Action Plan for Salinity and Water Quality, National Heritage Trust and National Landcare programs;
- (b) the role that regional catchment management authorities are required to play in management of salinity-affected areas, and the legislative and financial support available to assist them in achieving national goals; and
- (c) what action has been taken as a result of recommendations made by the House of Representatives' Science and Innovation Committee's inquiry 'Science overcoming salinity: Coordinating and extending the science to address the nation's salinity problem', and how those recommendations may be furthered to assist land-holders, regional managers and affected communities to address and reduce the problems presented by salinity.

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Committee met at 6.04 pm

CHAIR (Senator Bartlett)—I declare open this, the final public hearing of the Senate Environment, Communications, Information Technology and the Arts References Committee in relation to its inquiry into the extent and economic impact of salinity in the Australian environment. Amongst other matters, the committee has been asked to consider support available to regional catchment management authorities to achieve national goals. The full terms of reference for this inquiry and submissions are available on the committee's web site or from the secretariat.

I welcome everybody here today. For the benefit of all of our witnesses, I point out that the committee prefers all evidence to be given in public, but should you at any stage wish to give your evidence, part of your evidence or answers to specific questions in private, you may ask to do so and the committee will consider your request.

[6.05 pm]

BLUMENTHAL, Dr Martin Joseph, Manager, Agronomy, Soil and Environment, Grains Research and Development Corporation

FRASER, Mr Gregory Stuart, Executive Manager, Practices, Grains Research and Development Corporation

CHAIR—Welcome. Thank you for giving us your time today. It is appreciated. The committee has received your submission, which we have numbered as submission No. 5. Firstly, do you wish to make any amendments or alterations to that submission?

Mr Fraser—No, thank you.

CHAIR—I give you a formal reminder that evidence given to the committee is protected by parliamentary privilege. The giving of false or misleading evidence to the committee may constitute a contempt of the Senate. As I said before, if there are any comments you want to make in private, please ask and we will consider that. I now invite you to make any opening statement you wish to make before we move to questions.

Mr Fraser—The Grains Research and Development Corporation is represented here today by Dr Martin Blumenthal, who is the manager of our Agronomy, Soil and Environment program, and me as executive manager of the Practices group. GRDC's strategy is clearly enunciated in our document entitled 'The way forward'. To achieve our strategic objectives we aim to take the lead role in setting, coordinating and facilitating the national grains research and development agenda based on market needs to enable grain growers to compete on the world market and deliver Australian government priorities. We also aim to contribute to maintaining total factor productivity above three per cent growth per annum and contribute to environmentally sustainable agriculture, enhancing the viability and long-term prospects of industry stakeholders and underpinning ongoing community support for Australian agricultural industries. We also need to work closely with other RDCs to leverage knowledge and capacity on common industry issues.

In terms of sustainable natural resource management, the sound use and management of natural resources is fundamental to realising the long-term economic, social and environmental goals of Australia. Of particular interest is the opportunity to better link investments in R&D with the Australian government's major natural resource management investments in the National Action Plan for Salinity and Water Quality, the National Heritage Trust and National Landcare Program. A multidisciplinary approach is necessary that integrates the economic, social and environmental dimensions of natural resource decision-making by landholders. Related priority goals include overcoming soil loss, salinity and acidity; sustainable use of Australia's biodiversity; and transforming existing industries.

New GRDC initiatives are in relation to catchment water balance and nutrient management. These include projects that investigate whole-of-catchment approaches to integrated water and nutrient management and other projects that identify ways to improve nutrient availability and

uptake under new cropping systems such as no-till or legume rotational systems while reducing nutrient loss. Related projects aim to improve the management of raised bed and non-raised bed cropping systems in high rainfall zones to achieve improved water quality and productivity outcomes.

GRDC's investments in salinity are part of the corporation's broader mandate to plan and invest in research and development for the greatest benefit of the Australian grains industry and to have close links with the Australian government's major natural resource management investments. Since the government announced its national and rural research priorities, the GRDC has achieved significant advances in its understanding of the economic impact of salinity in Australia's cropping regions and the cost-effectiveness of salinity management options. This places the corporation in a strong position to develop and deliver the cost-effective solutions that will need to be an integral part of the salinity solution.

The inquiry seeks to assess the long-term success of federal programs that seek to reduce the extent and economic impact of salinity in the Australian environment. The GRDC is not in a position to assess whether the goals of national programs to assess salinity have been attained, nor is it in a good position to comment on the role that regional catchment management authorities are required to play in the management of salinity-affected areas. However, the GRDC and other research and development corporations are partnering with regional bodies to undertake research, validation and integration of salinity management technology. I will now ask Dr Blumenthal to give more detail on our specific investments.

Dr Blumenthal—In the course of this inquiry you would probably have heard a range of estimates of the area of land affected by salinity and the potential area of land to be affected by salinity by 2020 or 2050. Whatever the correct figures are, they are all large. A lot of that land is on grain growers' properties. So the grains industry certainly is significantly affected by salinity now and likely to be even more affected into the future.

I would certainly see salinity as the major environmental issue for the grains industry. Whilst there are bigger environmental issues nationally, salinity is the one that really does impact on the grains industry and economic sustainability much more than any other. So with that in mind we have invested and continue to invest in salinity management. We have invested \$15 million between 2002 through to 2007-08 in salinity projects. Initially it was measuring water use of crops and drainage beneath crops and then we moved on to working with partners in developing new cropping systems. A lot of those are based on lucerne but others look at alley farming, where trees fit into cropping systems, and a whole range of other possible options. The most successful of those is certainly lucerne and how it fits into cropping systems.

Importantly, we have done all that work with grower groups. We have had a strong network of grower groups through GRDC for some time. It is a strong feature of our investments that they are able to bring our investments to the cutting edge in terms of practicality and profitability. It has been through these groups that we have been able to work through and invest a significant part of that \$15 million. We have also looked at some novel breeding approaches such as breeding for salt-tolerant cereals. Also, we have new investments with the salinity CRC looking at developing perennial cereals. So that is, in a sense, quite novel and far-reaching. Instead of growing annual crops, some time in the future we might be able to grow a perennial crop that is

able to use water throughout the whole season and, importantly, use water quickly at the beginning of the season in autumn, which is when most of the recharge is occurring.

I mentioned already that we would do this work collaboratively. It is such a big issue we cannot do it on our own. So we were investors in the National Dryland Salinity Program. We are partners in the Salinity CRC. I am a member on the board. Greg sometimes wonders who I work for—whether it is the GRDC or the CRC—I am putting so much time into it. Also there are collaborative programs with the other RDCs through the Grain and Graze program, which is I think a shining light in terms of collaboration between industries. Dealing with salinity is certainly part of Grain and Graze, but not all of it. Increasingly, we are working directly with NAP and NHT management. For example, we have had meetings with NHT looking at the range of projects that they are investing in through our grower groups and likewise we are able to match up and get themes going in terms of R&D and communication. So there is far less duplication between our investments.

We highlighted in the submission some key areas which still need addressing in terms of salinity management into the future. Research and development is still critically important. We don't know all the answers. It is not just about communicating existing knowledge out to growers. R&D needs to continue to be done. I think one of the key things that need to be done is a national training network to empower our agriculture advisers to incorporate not just salinity management but natural resource management generally into the advice they give to growers. By and large, the advisers are strong on agronomy, and strong on the economics, the bottom line for farmers, but not always strong on NRM. They have relied on NLP type funded positions, who in that instance are not strong on the economic side of farming. My view is that the answer is to empower the growing agricultural consultant sector to provide much better integrated advice.

The other issues I have already mentioned—continuing to work together with other RDCs, grower groups and the regional catchment authorities. Another key issue is the sharing of information. We do have a national land and water resources audit but certainly all the data is not there. There is data in a whole range of places, with local, state and Australian government authorities. Certainly our database, our information, needs to be improved and needs to be accessible to the catchment groups and grower groups that need to implement the changes to have an impact on salinity levels.

That is really our submission in a nutshell. It echoes what we put forward to the lower house inquiry. Many of those issues still remain to be addressed. From a Grains point of view, it is about management of information—getting it to advisers and also having information available for the catchment groups to use and have readily available.

Senator ADAMS—I am a grain grower in my other life, down in the southern area of Western Australia. I am very interested in these partnerships. Partnerships are certainly the way to go at the moment. There is no point in anyone being out working as a solo area, because it is just not going to happen. You stated in your submission:

Partnerships between catchment bodies and regional industry grower groups are fundamental to achieve practical, profitable and effective on-ground change.

How do you get over the parochial side of all of this? Have you struck that as you have moved around?

Dr Blumenthal—There is no doubt that getting people together more and more is a way to overcome that. People need to meet with each other. For example, when we were setting up Grain and Graze projects we visited the Avon catchment in Western Australia. In a relatively small community people from different perspectives had not actually met each other before. There were certainly differences in people's views on the same issue. If we focus on the win-win situations and what is profitable for growers, and also what is beneficial for the environment, and get groups focusing on that when they do meet together—and, increasingly, they are meeting—then I think some of those barriers will be broken down. But it is not going to happen overnight.

Mr Fraser—I think the Grain and Graze program is a pretty good example of how a number of RDCs and other bodies can work together at a grower level, not only on a paddock basis but with a landscape or a catchment focus as well. I suppose there has been an encouragement of those people to get together at ground level.

There are other issues too. More recently we have been working more closely with NLP and NHT staff to fully understand where they are in the practical sense of things. What we can offer some other organisations is linkages to groups of growers. Growers are one of our major stakeholders, along with the Australian government, so we do have a driving motivation within the organisation to work closely with growers. Again, if we use that, and we can link in resources and information from other sources, we would be able to get that link better. I think that will work very well.

Senator ADAMS—The committee did go to the Avon catchment, so the rest of the committee are very much aware of what is going on. For me, going right back in the history of that, nobody spoke—they were just poles apart. It was so gratifying to actually go there and see them all meeting together and sorting out their differences—whether they were salt tolerant, lucerne growers, saltbush or the deep drainage people. That is a huge breakthrough. That is why I was wondering how you were managing with what you are doing to get them together. What about other areas, on the eastern seaboard?

Dr Blumenthal—We operate in all the states, of course. Victoria has the longest history of a catchment management approach, a regional approach. I think the barriers there are probably the least. Also, the environment suits that. I am generalising, but there are smaller farms and there is more pressure to address environmental issues, given the population distribution of Victoria. I would put Victoria at one end and Western Australia at the other in terms of those sorts of linkages and the other states' activity in between.

But it is amazing what a small dollar investment can do to encourage people to work together. That is one thing that GRDC does have, as do the NHT and NLP programs—opportunity to forge these linkages with a small investment to encourage collaboration. That can often be quite effective when people can see an outcome for which they can set aside their differences and work towards.

Mr Fraser—We have another reasonably new grain and graze group set up on the border rivers, based around Goondiwindi in northern New South Wales and southern Queensland. It is interesting to note that one of the first collaborations they made was with the local catchment management people in the Murray-Darling. It is also interesting to note that that has actually expanded. Outside of the actual grain and graze areas, there is now growing collaboration between catchment management and, for example, the New South Wales Department of Primary Industries. But even without a grain and graze focus, we are finding that the grower groups that we have established or are involved in around the nation are getting more and more involved in other funding sources. That could be NLP, NHT, catchment management and so on. That is very encouraging for us, because it gives us some coordination of what is happening at ground level, and it does reduce any risks we have in terms of fragmenting the results of the research and duplicating what we are doing.

Senator ADAMS—I notice you are talking about salt tolerant species. Is GM coming into this? Are you using any genetically modified trials or anything?

Dr Blumenthal—No, they are conventional breeding approaches—although there is a breeding company in Western Australia with GM wheat. However, I do not believe we are investing in that project.

Mr Fraser—We have two significant approaches. One is, as Martin said, a traditional breeding approach, looking at a range of native grasses that might have tolerance to salt and trying to breed that into the more civilised wheat varieties we grow. We also sponsor a GM project looking at taking genes into plants to actually offer salt and frost tolerance—the mechanism to give both is quite similar.

Senator RONALDSON—To get back to the softer issues with GM based development.

Mr Fraser—We support the technology in a broad sense and the fact that the market needs to decide whether those products go to market.

Senator RONALDSON—You should be in politics.

Senator WORTLEY—In your submission you state:

The GRDC is not convinced that a continuation of the National Dryland Salinity Program is the appropriate vehicle for coordination.

You go on to make other suggestions, including the NAP taking on a coordinating role and the development of a web based information retrieval system. Can you say more about these suggestions and also the limits of the National Dryland Salinity Program as the appropriate vehicle?

Dr Blumenthal—The National Dryland Salinity Program completed its activities two years ago. It was a very effective program, which we were a partner in. It did deliver a number of very effective products, but it was developed pre the national action plan, and it was really developed when salinity was a much smaller issue on the whole national scene. The national action plan has brought a whole lot of new investment into that area. I certainly see opportunities for the

NAP to take a stronger lead in coordination and information sharing. I would not see a real benefit in starting up a National Dryland Salinity Program again. Alternatively, the CRC for Plant-based Management of Dryland Salinity has picked up a lot of the communication and coordination roles of NDSP, although certainly not all the roles. It is focused on plant based solutions. So I think the NAP is in a good position to take an overarching view, integrate activity and provide information—certainly web based information.

Senator WORTLEY—Could you elaborate on the web based information? How you would see that operating?

Dr Blumenthal—For example, I would see people in the Avon catchment being able, through their staff, coordinator or management group, to sit on a computer and search for all information available through at least links through the one website. There is the ASRIS soils database, for example, but that is just soils information. Where do you go for the landscape information, the hydrology information and the vegetation overlays? I think that with the computer technology we have, the capacity is there to have overlays of all the information that is available. I think we are really just scratching the surface in terms of the capacity that is there that could help catchment groups make really sensible decisions about where land use change needs to take place.

Senator RONALDSON—Are you saying that will allay the need for a national coordination role?

Dr Blumenthal—I think I would see the NAP taking on the national coordination role, potentially.

Senator RONALDSON—I notice in your submission that under your recommendations or actions you have said:

A web-based information retrieval system that allows salinity workers and catchment authorities to assess information from all sources will help to allay the need for high-level national coordination.

Is that your recommendation?

Dr Blumenthal—Yes. It would assist in providing information that is accessible to all salinity players. It would certainly allay any need to further increase staffing in terms of provision of coordination. It could be done with—

Senator RONALDSON—If I am reading from a document that is not yours then I apologise. There is heading in it that reads, ‘Is a national dryland salinity program still needed?’ It says that it is a submission to the inquiry into the extent and economic impact of salinity in the Australian environment. There is another heading that reads, ‘Actions following the House of Representatives inquiry’. Is that your submission?

Dr Blumenthal—That’s it.

Senator RONALDSON—It says:

The recommendation of the inquiry to continue the National Dryland Salinity Program in some form has not been acted on. The GRDC is not convinced that a continuation of the National Dryland Salinity Program is the appropriate vehicle for coordination. The CRC for Plant Based Management of Dryland Salinity can fulfil this role to some extent. However, the CRC does not cover all aspects of salinity management. The National Action Plan for Salinity and Water Quality could take a more active national role in coordinating broader salinity management issues. A web-based information retrieval system that allows salinity workers and catchment authorities to assess information from all sources will help to allay the need for high-level national coordination.

I am not trying to be tricky or difficult. I am just interested as to—

Dr Blumenthal—Probably a better way of saying it would be: allay the need for continuation of the National Dryland Salinity Program. That would see the national action plan having a role in coordination. It is already there and can have a more active role in doing that. If you look at the role that NDSP has played in the past you see that it really has had a big focus on information. If, say, through the NAP, you were able to provide a web based information retrieval system, you would not require the sorts of vehicles that NDSP was using, which were newsletters, and other communications vehicles such as CDs and a whole range of various avenues for communication.

CHAIR—Commonwealth programs like the NAP tend to focus on a catchment management approach whereas bodies like yours seem to focus more on collaborative research on a national scale and demonstration projects. We had a bit of a look at that with the plant based dryland salinity people when we were over in the west. Are there limitations to the NAP focus on catchments, particularly in wheat belt areas? How do producer groups and catchment management authorities fit together in your view? How well do they complement each other? Are there ways we could make them work together better?

Dr Blumenthal—Certainly there are ways they could work together better—for example, in coordination of information and the development of projects together. There are some catchments where things are working extremely well. I would give the example of the Murrumbidgee catchment in New South Wales, where there seems to be a high level of communication and coordination between the catchment groups, state agencies and other funding sources. I think what is required is energy. In that example it is very much driven by producers in the Murrumbidgee who really see benefits in dealing with salinity and other NRM issues. They are very much driving the process. You could compare that to Western Australia where they are not used to the catchment management model. They have been very much advisory groups which are not used to leading or taking the initiatives. They are just learning how to do that. I think that, as growers gain confidence in really driving the agenda in terms of addressing salinity and other NRM issues for meeting their requirements, things will happen much more effectively.

CHAIR—What do you see as the advantages and limitations, I guess, of working with private agronomists and people with that sort of expertise beyond just individual landholders?

Mr Fraser—There are a couple of things. First of all, they work directly one-on-one with landholders. Secondly, there are a lot of them. There are probably over 400 nationally. Most of them are tertiary qualified. Most of them are in the business of advising farmers on their productivity and profitability. So I think that working with that pool of resource is actually quite

a logical channel to try to utilise in getting information through to farmers. It is not the only channel. Grower groups themselves are another channel along with other bodies out there that are actively involved with farmers.

Dr Blumenthal—That is certainly the advantage. The disadvantage is that often they are very much production agronomy trained rather than being trained in natural resource management. So those skills certainly need to be picked up. That was what was behind my emphasis on providing training for that sector. They have the links with the growers. They really need to be encouraged to integrate NRM outcomes with the advice they give.

CHAIR—You mentioned that there is still more scientific knowledge to get and we need to be continuing to focus on getting more and more of that. Where do you see that some of the gaps facing the grain industry are in delivering salinity solutions to your growers? Is it still just lack of knowledge or are there structural impediments? I guess one of the broader issues is that to some extent we need to accept that it is an issue that we are going to have to live with to some extent and obviously mitigate and address rather than eliminate.

Dr Blumenthal—Really, the range of options is quite limited. The profitable solutions are limited. I emphasised lucerne, but that cannot be grown everywhere. Certainly, where trees fit into systems, alley farming is a possible option but it does have a big impact on crop yields. Moving into blue gums or a whole range of other alternative options certainly manages the water table but it has big impacts on the rural communities and on the populations, social structure and networks of those communities. So there are biophysical, social and a whole range of other issues that we are dealing with in GRDC about using all of the paths to market to communicate messages. Greg has been doing a lot of work in that area. I do not know whether you want to talk about that. So it is communication as well as social and biophysical issues and a lack of options. I keep harking back to Western Australia. There seems to be a particular lack of options in Western Australia. If you look at the use of lucerne, it is widely used in eastern Australia where a little bit more summer rainfall encourages its persistence, but in the west it really is restricted to the higher rainfall belt.

CHAIR—One of the competing or balancing views that has come up through the inquiry is the issue of funding for research at a national level versus funding at a regional or a catchment level with the variations in geology and other local factors. But there is also the risk of having a whole lot of people doing roughly the same thing if you broker that down too much. We have had suggestions to the committee that some of the national action plan funding should be pooled for research of national significance. Do you have a view on that at all?

Dr Blumenthal—There are some advantages in pooling some money in terms of modelling approaches. Obviously you need integration of the data if you are providing that sort of web based information and there is resource based R&D that needs to be done. But I am still of the view that the bulk of NAP ought to be working in regions where land use change needs to take place provided that good advice and the framework for advice is there, and that needs to be done on the national level. So there is always going to be a balancing act there and, in our view, the balance is about right. They like to see regional delivery.

Mr Fraser—Our program is based on everything from a very national scale to things that are very regional. My understanding with these sorts of topics—and salt is one of them—is that we

have to have that balance of approaches as well. I do not think that we can look at salt as just a national issue and say that it is the same all over the place and we will just put a blanket solution out there. I do not think that that is going to work. It will not work for environment; it will not work for biodiversity; and it will not work for farm profitability.

Senator RONALDSON—Are we able to quantify the productivity and production losses in the grains area that are salinity based? Have we had those figures?

Dr Blumenthal—There is a large divergence in the figures but the current impact is two million or three million hectares nationally. In terms of profitability, it is difficult to calculate the amount of lost production but it is billions of dollars. But of course in managing salinity you do not necessarily lose all the productivity of that area. You can put more inputs to more profitable parts of the farm. There are very few farms that have been totally lost to salinity, although there are some, so those sorts of estimates are a little bit difficult. But it is a large-scale problem compared to, say, lost production due to subsoil constraints or sodic soils. It is far less, but there are the costs of amelioration. I think that looking at lost production figures can be a bit deceptive in terms of setting strategies. But it is certainly a significant issue.

CHAIR—Thank you very much for your time. If there is any extra information you suddenly think of that you think would be worth us having when you get home, please send it through. We are hoping to produce the report by the end of March.

Proceedings suspended from 6.39 pm to 6.49 pm

COOPER, Dr Maxine, Executive Director, Arts, Heritage and Environment, Chief Minister's Department, Australian Capital Territory

FOSTER, Mr John, Senior Policy Officer, Arts, Heritage and Environment, Chief Minister's Department, Australian Capital Territory

CHAIR—Welcome. Thank you for giving us your time today; it is much appreciated. The committee has received a submission from you which we have numbered 14. Are there any amendments or alterations you wish to make to that?

Dr Cooper—No, thank you.

CHAIR—I remind you that evidence given to the committee is protected by parliamentary privilege and that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. If for some reason you wish to give your evidence or part of your evidence in private, you may ask to do so and we will consider your request. I invite you to make an opening statement before we move to questions.

Dr Cooper—Thank you for inviting us. I will give you a bit of an overview of what we are in the ACT. We are located in the upper reaches of the Murrumbidgee catchment. We are a small jurisdiction, although we have the largest urban population in the Murray-Darling Basin. I think that is important in terms of reaching out to the broader community through education. For the purposes of the national natural resource management funding programs such as NHT, the Natural Heritage Trust, and the NAP, the National Action Plan for Salinity and Water Quality, the ACT is one region wholly within one jurisdiction.

We are in the process of finalising our bilateral agreement with the Australian government for the delivery of the NAP. This has taken a bit of time because originally we were not on the list of NAP regions as it was thought that our NAP components could be delivered in conjunction with surrounding New South Wales regions. However, we have found that that is not the most productive way to move ahead so we are negotiating as one region. We already have an agreement in place for the delivery of the NHT funding in the ACT. The ACT's equivalent of what you probably heard called today a regional catchment management authority is what we call our natural resource management territory body. This existing body has been used in the delivery of NHT and will be used for the NAP once an agreement has been signed with the Commonwealth.

Due to land tenure arrangements in the ACT, the majority of land is actually public land. I think that is a great difference from other jurisdictions. It is public land that is directly managed either by the ACT government or the Australian government itself. The ACT has an incredibly small rural sector, equating to approximately 16 per cent or 38,000 hectares of the ACT. It appears that salinity is not currently a significant threat to our productivity. However, we wish to ensure that our land uses and our land management practices do not make it a problem in the future, hence it is a priority for us to keep focused on. We understand that the ACT as a whole is less prone to salinity problems than areas lower in the catchment. This is, we believe, partly due

to our high levels of native vegetation cover and a lack of intense agricultural production. Over 54 per cent of the ACT is held in reserves of various forms.

While salinity is not seen as a significant issue at present, as I said before it is on our agenda so that we can undertake actions to prevent it or to minimise it becoming a problem. We fully recognise that salinity is a significant issue for many communities across Australia and even for some near the ACT, such as around the Yass River and areas surrounding Boorowa. The actual extent of salinity in the ACT is not known. From your inquiry's perspective, that is probably something that is going to come across nationally, but it is definitely the case in the ACT. Once we do have our NAP agreement signed, projects will focus on tackling the prevention of salinity in accordance with the national goals of the program.

In anticipation of our NAP agreement, we have prepared a project proposal for the NAP agreement that will undertake a basic salinity study. That will be implemented so that we do know what our current situation is, in terms of there being either a real problem potentially in some areas or a potential problem in others. The study will include salinity mapping and will provide a basis for managing both rural and urban land. However, in terms of surface water salinity we have already worked on some of this to a small degree with the assistance of the Murray-Darling Basin Commission. We are developing a hydrological and salinity model to comply with the Murray-Darling Basin Salinity Management Strategy. Under that, we are establishing some salinity baselines and a salt export target and monitoring future salt export to determine compliance with the target that we will be working on. So we are very modest in what we have been undertaking but we are also very conscious that for many areas salinity once was a problem and now is a significant problem, and that is where we are focusing. That is my presentation.

CHAIR—In your submission you mention that the ACT is preparing a proposal to conduct a basic salinity study which includes salinity mapping. When was the last time mapping was undertaken in the ACT? Is there a known threat of urban salinity?

Dr Cooper—We have never had a comprehensive mapping of salinity across the ACT.

CHAIR—Are there any issues potentially apparent with urban salinity?

Dr Cooper—None that have been brought to my attention. I am very familiar with, say, some of the country areas like Wagga, where it is quite in your face. We have not had that. But that does not mean, as I said before, that it is not going to be a problem tomorrow. That is why we do need the NAP funding and we need to do that mapping in a comprehensive way.

Senator WORTLEY—It appears as though the ACT is in an enviable position in that it can address the issue before major problems arise, unlike some of the other areas around Australia. In your view, what are the main barriers to effective salinity management? Is it research gaps, regulatory issues or funding? What would it take to overcome these barriers?

Dr Cooper—I think some of the barriers at a broader national level are firstly targeting specific areas or having a targeted approach and secondly, if you like, having a mechanism for bringing together some of the research that has already been done. I think generally, not just with salinity, part of our problem is that often there are pockets of work being undertaken in an

uncoordinated manner and often the wheel is being reinvented. If you actually had an appropriate link—and we can do that through technology—it would certainly be a way of sharing information. So I think it needs that dual approach.

Senator WORTLEY—A previous submission spoke about the role that a web site could play in this. Do you consider that that would be an effective means of coordinating some of the information?

Dr Cooper—Yes, I do. I also think that in our rural community now a lot of them do have access—although some may not—and they use that technology very well. We would endorse that. That way you are actually linking users, farmers, land managers of national parks, local governments and researchers.

Senator RONALDSON—I think you said before that you thought that your lack of salinity problems at the moment was to do with the levels of forestation. Is that right?

Dr Cooper—The level of native vegetation cover is significant.

Senator RONALDSON—Are you taking a stab at that or do have some scientific—

Dr Cooper—No, I am taking a stab at that from looking at the different regions and asking why. It may not be that at all.

Senator RONALDSON—Is that the sort of thing that you would be likely to get some scientific work done on in order to substantiate it? I am sure that you are probably right, but I am just interested as to whether, if you are looking at this in a proactive sense, that might be something you think you might need to do.

Dr Cooper—It is certainly about trying to distil that cause and effect. Is it a correlation or is it actual cause and effect? Some of the data that we are hoping to collect when we come on board with our NAP will certainly work towards that.

Senator ADAMS—Do you have any examples of urban salinity through the area?

Dr Cooper—No, at this point in time we do not have any examples like you find in other regions. But, again, other regions did not know they had that problem a decade or two back and now it is in their faces. So I hope that, through some of the work we will do under our NAP, we will be able to detect that ahead of when it becomes such an overt problem that you know you have significant costs.

CHAIR—It seems to me that, to some extent, you are still working through structural issues in the ACT to be able to access the funding properly. Is that a fair comment?

Dr Cooper—That is correct. We are very optimistic that that will be all solved very soon.

CHAIR—You are part of a broader catchment. Are you in the same catchment as Wagga?

Dr Cooper—The Murrumbidgee—we link through to them, yes.

Mr Foster—Yes, we are all part of the Murrumbidgee catchment.

Dr Cooper—We work in cooperation with the catchment authority for that area, and in fact we are working on a memorandum of understanding, because, of course, environmental issues do not respect any political jurisdiction. So we are certainly working on that. The other thing is, because of the size we are, the program that we have worked with New South Wales on is Healthy Soils, Healthy Landscapes, in which the New South Wales agriculture department took our rural lessees through a program whereby they could identify potential salt issues in their soils. So you do work cooperatively when you are the ‘hole in the doughnut’.

CHAIR—This is a broad sort of question: are there any things you see as main barriers to effective management of salinity—gaps in knowledge, regulatory barriers or funding issues?

Dr Cooper—Again this is a personal observation—there is not necessarily scientific proof—but I think that the key issue is detecting it early enough to know the cause and effect of what is going on. I think in some other jurisdictions you are now looking at severe problems, whereas here in the ACT we perceive we do not have any major problems and we perceive that at the moment what we are doing is the right thing. So the issue for us is to monitor what happens in other jurisdictions and then say, ‘If it is not happening here, why isn’t it happening here?’ and use that as a counterbalance to the areas where you say you think it is happening the other way. Senator Ronaldson made a point about the role of native vegetation in this when we have got such challenges with land clearing. As I think was said before, we are in a very healthy situation to not be where other jurisdictions are now. But maybe they were where we are two or three decades back. I think that, with national monitoring across the whole of the landscape, we should play one of the important roles in monitoring for the nation what is going on here.

Senator RONALDSON—This might have been raised before, but salinity is currently being dealt with by the NRM board within the Chief Minister’s Department—is that right?

Dr Cooper—Yes—the territory body. Actually it is not within the Chief Minister’s Department. The Chief Minister’s Department is the administration unit. It comprises community members and farmers, and it is like a catchment authority in other jurisdictions.

Senator RONALDSON—So would you consider it as a separate, independent regional body that will just continue if NAP funding comes through or if the bilateral agreement is signed? What is going to be the auspicing body?

Dr Cooper—This same body will be. One of the things we are very mindful of is our size, and our objective is to get things out in the field, rather than tying it up in administrative costs. So the model we have adopted is very much a reflection of our size and what we are about.

Senator RONALDSON—A sort of Landcare type model, with the on-the-ground aspects of—

Dr Cooper—That is where we push. We try and push it all down to that level. In the ACT, per head of population and per area we are very rich with academics and we also have very strong links with ANU and the University of Canberra. We also have here—which I think is a strength for us—the eWater CRC. So some of the issues that we work on are very much real, if you like,

laboratory issues but in the field. So we often have cross-projects with those people and we will certainly be bringing them in to work on the NAP arrangements with us.

Senator RONALDSON—Do you tend to have those academics on the board or do you bring them in as required?

Dr Cooper—We bring them in as required, because sometimes they cannot afford the time for that.

Senator RONALDSON—Thank you.

CHAIR—As there are no further questions, we thank you very much for your time.

Proceedings suspended from 7.05 pm to 7.20 pm

BINNING, Mr Carl Eric, Chief Executive Officer, Greening Australia**YVANOVICH, Mr Bruno Antonio, Business Development Manager, Greening Australia**

CHAIR—Welcome. Thank you very much for giving us your time this evening; it is much appreciated. We have received a submission from you, which we have numbered 16. Do you wish to make any amendments or alterations to that submission?

Mr Binning—No.

CHAIR—A formal reminder: evidence given to the committee is protected by parliamentary privilege and the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. If at any stage you do wish to give your evidence or part of your evidence in private you may ask to do so and we will consider your request; however, I am sure you want the whole world to know what you think, so I do not expect that is likely to happen. However, if it does, feel free to raise it. Would you like to make an opening statement?

Mr Binning—I will make a brief one. Most of what we want to say is covered in our submission, so I will summarise by highlighting three key issues. The first is that salinity management is a really good example of the tyranny of planning. It is very hard to link cause and effect in salinity management and, as a consequence, there is always the temptation to study the problem further because you are not quite 100 per cent confident in the actions you might take. However, in our experience, the most targeted actions are informed by experience as well as remote planning. So the big challenge we have in front of us is to ensure that when direct action is taken in one form or another amongst landowners and land managers—I mean that in the broader sense: including local councils, Indigenous people, private land owners and corporations—we can learn from those actions in a truly adaptive way. Otherwise, we can fall into the trap of studying the problem forever without taking any of the actions from which we will ultimately learn a good deal more.

My second comment is somewhat related and concerns regional bodies as coordinators of natural resource management. If you were to look back in history at the effectiveness of Australian government programs, you would find that under the decade of the Landcare Program and the first phase of the Natural Heritage Trust there was a great deal of community empowerment and significant on-ground action. Organisations like mine were significant beneficiaries of that process. The criticism of that process was that it was unclear that the actions that were taken were strategic—whether they would in fact make a difference. Our observations about that would be, firstly, that problems that have taken 100-plus years to manifest themselves will require many decades of concerted investment to repair. Secondly, it is very hard to work with people other than the willing, and that can often mean a strategic approach will look a little less strategic than it might otherwise. Thirdly, we will benefit through improved coordination of our activities.

We are facing the difficulties of the second phase of Australian government involvement, which is focused on the establishment of these regional bodies as planners and coordinators of action. I can talk a little more in response to questions. I would make a couple of critical

comments. Regional planning is absolutely fundamental to moving forward, but I think we have been caught in the trap of how on earth we solve the whole problem and what is the best and most elegant plan. When you only have \$20 million to \$30 million to invest in an enormous region over a long period of time, you might question how sophisticated that plan has to be before you can start directing your action.

I suppose our general rule would be that we should always be expending 80 per cent of our effort doing things and 20 per cent of our effort underpinning that with great science to guide our future investment. Action in the absence of science and good strategic planning is no good. Science and planning in the absence of action that informs us and keeps us practical is no good either.

A final comment that comes through in our submission is that salinity is but one issue that has our landscapes in crisis. Loss of biodiversity, water control and the loss of carbon banks are all critical issues in Australian landscapes. Salinity could be seen to be somewhat of a symptom of unsustainable land use. Our challenge is to find land uses that are more sustainable and commercially attractive. I do not think that a lot of the programs have fundamentally focused on that question and, as a consequence, they struggle.

CHAIR—When you said ‘focused on that question’, do you mean the question of financial viability? I think that was the term you used.

Mr Binning—There is an old saying which farmers will often give you, which is ‘You can’t be green if you’re in the red’. It is a truism. By way of example, I was at a mine site last Friday. I was looking at their revegetation efforts after mining activity, and they have done a truly outstanding job. They are investing \$50,000 a hectare getting there. The mine site is generating the wealth that can put \$50,000 a hectare back into the repair process. If you ask a dryland grazier in Australia whether they have several orders of magnitude less than that to spend on the repair of salinity, they cannot do it. So the critical issue is: where are the resources being generated that can secure reinvestment into that asset base, which is our land? A fundamental part of that is getting commercial land use which is (a) more sustainable but (b) more environmentally friendly.

CHAIR—Salinity being just one of a number of land management issues and land health issues, how integrated an approach do you think we have with natural resource management in Australia at the moment? Is it the case that we have all these bodies focusing on salinity and just doing things about salinity and ignoring some of the other related land management issues or is it becoming reasonably well integrated now?

Mr Binning—I think progress has been made, but the funding buckets still tend to put strong priority on one issue or another, and that can at times lead to perverse outcomes. For example, if we are just trying to address salinity, we may come to the conclusion that an engineering approach will work, whereas at some additional cost a softer landscape rehabilitation or restoration of perennial vegetation may achieve the same outcome and may deliver a range of other benefits that often are not taken into account.

Another good example of this outside the salinity arena is that markets for carbon sequestration are emerging, particularly in New South Wales. The name of the game there is to

put trees in the ground that suck carbon the fastest. You tend to put them in higher productivity sites and grow hybrids. This is not necessarily the outcome that our landscapes are seeking. I think it is very important that we understand that we are managing land use systems.

The other comment that I would add to that is a lot of this comes down to providing flexibility to land stewards—landowners—be they family farmers, corporations or Indigenous Australians, to identify solutions that work across their whole farm system. Those land stewards very rarely think in silos. If you involve land managers in that design and implementation process, they will tend to come up with solutions that optimise. So it is very critical that, as we move from the high scale of Australian government and we end up connecting with an individual landowner, we allow the voice of the landowner to come through that process.

CHAIR—On that issue of landowners and land managers and their ability to be economically viable—and we are even talking about the viability of regional communities—is there an issue that needs to be tackled? Should we be doing more and encouraging significant changes to how the land is used? Rather than continuing to do the same thing but just doing it a bit better, do we need to do more about the debate on climate change? There are areas that are just not viable for things like grazing, just to pick one example. Do we need to start looking at some of those tougher questions?

Mr Binning—There are three critical actions I would point to. The first is that government can certainly have a role in identifying land types that are well beyond sustainable in Australia. There are current land uses that are well beyond what can be ever be sustained.

CHAIR—Can you give us some examples?

Mr Binning—If you go to the wheat belt of WA, you can choose the point at which you decide it is just a hopeless joke. But as you move from west to east you walk down a transection where you can say, ‘Yes, this can make a fair bit of sense and cropping is definitely an economically and environmentally sustainable part of this landscape.’ At some point, when you get east far enough, everyone would agree that it is struggling to add up. So somewhere along that transection there is a clear case for some sort of government intervention to address the fact that we have allocated land to the wrong land use. However, I would put a footnote that governments have struggled with structural adjustment and you would need to have a clear sense of how that land is to be managed in the future. Otherwise you just replace one problem with another. Structural adjustment programs in Australian agriculture do not have a fantastic history.

Senator RONALDSON—You might also have varying views on marginality, I presume.

Mr Binning—Yes. My second comment goes to that point. If government can devise a market signal that allows landowners clear choice about when and how they move, your strategy can be a lot more successful. A somewhat related example is that the emergence of water markets in the last 10 years in Australia has seen a massive substitution out of irrigated dairy and those sorts of things towards viticulture, cotton production and other higher valued uses. The environmental signals in that transition have not been quite as strong as I would have liked, but what it did was enable landowners to choose when to move out of industry and, by giving them a property right in water, it enabled them to be compensated but with government remote from the process. That meant that they got to choose when to adjust and the market told them how much the adjustment

was worth. That has been quite a clever way for government to facilitate some quite difficult transitions in rural Australia.

My third point on this is that the government spends a little more time on than is desirable setting up processes to plan for other people's livelihoods without directly approaching them. I would be strongly in favour of more direct incentives for change—

Senator RONALDSON—Can you expand on that before you get to the solution?

Mr Binning—The regional process is a good example of this. The regions are very large. We are sitting in the Murrumbidgee region here today; it extends out beyond Griffith. Socially, it is an enormous catchment—not to mention its complexity environmentally. We have people planning for that landscape and how it should be with relatively little reference to the people who are going to be impacted by that decision. That can lead to naive or unrealistic plans, in my experience. In a colourful moment at one stage when I was discussing this with Minister Kemp he asked me how I felt the regional process was going and I said, 'At times it feels a little Stalinist in the sense that we have the grand five-year plan but we have no clear mechanism through which to implement that plan.' I suppose what I see as a solution to that issue is providing much more direct signals to land managers by saying, 'If you take this action this is the incentive that we will give you,' rather than leaving it to others to think about what they would like, with little reference to the land manager.

Senator RONALDSON—Just to build on the chair's question: you said earlier, as I recall, that regional planning was fundamental.

Mr Binning—Yes.

Senator RONALDSON—Given your example of this area, how do you make that regional plan work? Is it bottom-up or top-down with consultation? How do you make that fundamental regional plan work and who does it?

Mr Binning—I think you need a combination of the two—and I am not copping out of the question. I think you need to genuinely engage with local communities. You need to ensure that the representatives of those local communities have access to the science and information required to make decisions. The key difficulty those regional bodies face is that the problems are very large and manifest and the time frames in which to address them are very long. If you try and envisage the whole solution in one step you tend to become incredibly disempowered through the process. It is much more important to ask: 'We have this much resource to invest. We have these regulatory tools at our disposal. Realistically, which of these can we implement in the next three years and what would define success in three years time?' It is giving that regional planning process a much more pragmatic emphasis and then ensuring that there is a clear signal to land managers: 'This is the outcome we are seeking and this is how you can participate.'

Senator RONALDSON—In this area, for example, which are they? Are they the cocktail, the bottom-down or the top-up?

Mr Binning—In terms of salinity management, you could divide most salt prone landscapes in Australia today into three classes.

Senator RONALDSON—I mean the regional planning in the local area, which you said was having real problems.

Mr Binning—I did not say this region particularly. I was using this region as an example of how large those regions are and how socially complex they are. The critical comment I would make is that if you did a survey of land managers in most regions of Australia they would be unaware of what the regional process is doing. They would have a fair degree of uncertainty and fear around that process. I think that is relatively easily fixed by clearly communicating to land managers and saying: ‘This is what the process is. This is the outcome sought and this how you can participate and benefit from that process.’

Senator RONALDSON—I do not want to harp on about it but you have indicated this is a very large and diverse area, an area that would be prone to difficulties because there is potentially no community of interest—if you go out to Griffith it is a very big area. Is the regional planning working in this area?

Mr Binning—I think an example of where regional planning is probably working in an equally complex catchment—

Senator RONALDSON—No, is it working here? You have given us this example.

Mr Binning—In the Murrumbidgee?

Senator RONALDSON—Yes. Is it working here or not?

Mr Binning—It is early days. Some of their plans are reasonable but I do not think they have the pathway, with land managers, to implement them. They now have some clear priorities. But if you surveyed landowners within this region I do not think you would find they would have a clear sense of how they can participate and what changes they can make on their land.

Senator RONALDSON—If the assumption is that it is not working as well as it should, which model are they using which therefore should probably be avoided in large catchments like this? Are they from the top up or bottom down? What are they actually doing? Obviously you know this catchment area well. I am trying to work this out. If it is not working, what is being done here that means that it is not working properly—which other areas can possibly benefit from? I do not expect you to go out and bag people. I am trying to get a general indication. You have identified this area, so I want to pursue that a bit.

Mr Binning—After a decade of bottom-up through Landcare et cetera, we agree that that process was not strategic enough and not well enough targeted. We have now spent three or four years trying to find a strategy and to target our action but, broadly speaking, we forgot that there were landowners that needed to implement the change. The next challenge is to re-engage that land holder community and empower it to take action again. That is the critical step. The criticism that I would make is that for too long time has been spent on planning in the absence of empowering action on the ground. Be that as it may, the key priority now is to take the outcomes of the planning they have been through in the last three to four years and make sure that the actions are flowing through to the land managers that ultimately need to make the change required of them.

Senator RONALDSON—On that basis, is your preferred model a top-down one with appropriate consultation? From a strategic planning point of view is your preferred model a top-down one with consultation as opposed to a bottom-up one?

Mr Binning—You will find that I prevaricate, but it is not deliberately so. We need to absolutely be informed top-down of priorities but we need to fully engage the community on how those priorities might be attained, so it is genuinely a balance between top-down and bottom-up. From where we sit, the ideal process would see governments articulate clear priorities and inform communities with good science but then be guided by how those communities think they can realistically implement them. I would say, in deference to the regional planning process, that we have actually made a pretty good first step at embarking upon that process. There is a lot to learn. We have yet to find the right balance. We tend either to go too far into bottom-up—and we lose the strategy—or to go too far into science and planning and we lose our compelling call to action. If you really look in very simple terms at the last two to three decades, under Landcare and NHT1—those major programs—we had too much emphasis on bottom-up without the guiding hand of science and top-down planning. Under NHT2 we have had a little bit too much science and planning, which has disempowered the bottom-up, and we are struggling to re-engage.

Senator RONALDSON—Is it possible to have an across-the-board planning process or change, whether it be policy, legislative or otherwise? Is it possible to do that across the board and have a multiregional approach or is it going to require horses for courses? Can you identify a balance whereby you can pull out a map of Australia and say that this process is going to work for everyone or are you reduced to a horses for courses, region by region approach? We have talked about policy and you have identified the first round—there was too much bottom-up—and the second round—too much top-down. So from Greening Australia's point of view, there must be a position which you think is far more ideal than those two. There has got to be a third preferred position using experience as a guide. Is that preferred position one that is implementable across Australia or are the regions so totally different that it would have to be horses for courses? Please do not say it is going to be a cocktail.

Mr Binning—I think you need some programs that everyone can access and I think you need to resource the regions that are performing.

Senator RONALDSON—But from a planning policy point of view?

Mr Binning—Those regions have to be able to define the plans for their regions and we need to continue to invest in those.

Senator RONALDSON—So you do not think you can have a multi-region blueprint? I do not mean to put words in your mouth, and if that is not what you meant say so. But I take you to mean that it is impossible to have a multi-region blueprint to address the top-down, bottom-up issue.

Mr Binning—Yes, I think I would agree with that. The simplest guideline that I could come up with is that somewhere between 70 and 80 per cent of our resources at any given time should go to direct action of one form or another and the remaining 20 to 30 per cent should be spent on administration and strategic planning. It is about learning through action and monitoring action,

balanced with good strategic planning. When you do not have good strategic planning, you find that your actions do not meet your outcome. When you do not have action guiding your strategy, you tend to lose sight of what is achievable and hence your plans become unrealistic and aspirational.

Senator RONALDSON—My preference would be to have a blueprint. Do not get me wrong—I do not get much joy from the fact that it is probably not possible to blueprint this issue, but I just think it is an example of the magnitude of the task.

Mr Binning—Yes, absolutely.

CHAIR—You commented earlier about the tyranny of planning and the need to get on with on-the-ground actions, which is part of what we have just been tossing around. We have heard some concerns through the course of this inquiry about a rush to put all the money in on the ground so that people feel like something is happening. The natural concern that people on the ground have is that there is all this money around but it is just going people off in research labs somewhere and none of it is helping them, and that that has led to poorly targeted actions at the least. What sorts of things are you doing to evaluate your efforts? Do you have any evidence that the plantings, for example, have been reducing ground water levels or of how they provide value for money?

Mr Binning—We certainly do some monitoring of our work and I can provide some examples to the committee. If we demand that everything is successful, we are not going to learn a great deal. Part of taking action is learning from those experiences. Where we have done monitoring, that learning has generally led to fairly positive outcomes. I can give you some examples. We have a range of sites where we have done long-term salinity modelling following reasonably large-scale plantings and we have good cause for optimism because the ground water levels are falling. We have probably run that process with reasonable discipline across about a dozen sites in Australia. Also, we have done quite a lot of research around biodiversity conservation with the Australian ornithological society and CSIRO to look at how much use is made of revegetation by declining woodland birds. Again, we are getting feedback that gives us cause for optimism. Often what we learned from that monitoring is that the scale of our activity is not large enough and that it is going to require concerted and disciplined implementation over 15 to 30 years to achieve the success that we are looking for.

This is a little outside the area of salinity, but we had a program on the Murrumbidgee River that over 2½ years engaged 270 land managers and put the basic rehabilitation across about 250 kilometres of river corridor, of river habitat. That process was highly successful, but there are many thousands of kilometres—and I cannot remember the exact number—of creeks and waterways in the Murrumbidgee system, and so our program managers have worked out that if they had achieved the same in the following 20 years they would be near to completing the task. So one of the difficulties is to have the fortitude to see small-scale success and stick with it.

The third comment I would make is that environmental programs from the Australian government's perspective, because of the uncertainty of outcome, place a relatively high administrative burden on inputs—what staff you are using, where the fence is, where it is going to be, what you think the outcome is going to be—before you are funded to implement a project. Then there is very little resource for monitoring and evaluation. I would certainly encourage the

committee to think about how that process might be turned around so that the approvals process for projects is a lot simpler and the monitoring is a lot more rigorous—and that is where we put our administrative resources.

There are three levels of monitoring we could consider. The first is: have you done what you said you would do? Even that level of monitoring is fairly poor currently. Then there is: is what you said you do contributing to our plans? The third is: are our plans meeting our strategic objectives? There is very little resource going into that backend of these programs. I think a component of the reason for that is that we are asking a few too many questions up front and not enough questions at the back of the process.

CHAIR—Are there any final comments you want to make?

Mr Binning—The final comment from me is: inevitably discussions in this sort of forum focus on the criticisms and the shortcomings of these processes. What I have tried to do today is to point out a couple of the key areas where I think some improvements could be made. On the whole, I think these programs are trying to address problems that are very deep in Australia—they are very complex, both socially and environmentally—and, above all, we need to persist and have strong continuity in the programs to ensure that we get the long-term outcomes that we are seeking.

CHAIR—Thank you for your time today. If you think of anything else that you wish you had said and did not or other information that you think might be useful for us, please feel free to send it to the secretariat. We hope to bring down our report within a month, so we will be writing the report soon. If there is anything extra you want to throw before us, please do.

Mr Binning—I would be delighted to follow up in any way I can.

[7.54 pm]

WATTS, Mr Michael Corey, Acting Manager, Land and Water Program, Australian Conservation Foundation

CHAIR—Welcome. Thank you for giving us your time this evening. It is much appreciated. I am sure you have a busy schedule. The committee has received the submission from the ACF, which we have numbered submission 19. Do you wish to make any amendments or alterations to the submission?

Mr Watt—Not at this time.

CHAIR—I will just give you the formal reminders: evidence given to the committee is protected by parliamentary privilege and the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. If for some reason you do want to give some evidence in private, you may ask to do so and we will consider your request. I now invite you to make an opening statement, if you wish, before we move to questions.

Mr Watts—I will begin by saying a little bit about the Australian Conservation Foundation's interest in this matter and then make some general comments about the salinity problem—some of the things that we see as having gone well or which have been developing well over the last five years, since the national action plan on salinity was launched, and some of the remaining challenges and deeper problems that we see. Firstly, ACF has had a long involvement in landscape management, both private and public land conservation management, trying to find solutions that are socially acceptable but that also advance us towards sustainability. That is to say that they protect our biodiversity assets and ecosystem health and they try to enhance and restore that.

We have long recognised that salinity is a major threat to biodiversity in this country. It also has a major impact on social and economic goods. To that end, we have teamed up over the years with the likes of the National Farmers Federation, first in launching the Landcare movement onto the national stage. We retain a very strong investment in the Landcare movement. We are represented on the Australian Landcare Council. Then in 2000 we worked with the NFF and Land & Water Australia in looking at the level of and strategy for investment in landscape repair and, most recently, in helping to launch the National Water Initiative. We have also worked with major corporations like Southcorp and others to try to look for solutions to salinity and biodiversity loss as well as other threats facing our private lands and our whole landscapes. That is our role. In addition, we have been participants in the Cooperative Research Centre for Plant-based Management of Dryland Salinity since its inception. We retain a very strong interest in the research and development angle.

Our aim with regard to salinity but landscape management more generally is to look for ways of living on and making a living from this land without taking us backwards environmentally and in fact taking us forward in a way that sees people looking after the land for all of its values—environmental, social, cultural and economic as well. The salinity threat, as far as we can see, still remains as significant as it always was. There has been some comment in the media

recently suggesting that the problem has been exaggerated. I do not think anyone has deliberately exaggerated the problem, least of all people in my field. We would quite dearly love for it to be less than it is, for it to impact less on the landscape, but as far as I can see there has been no new scientific evidence to suggest that the problem is less significant than it has been projected to be. That is not to say that estimates for salinity damage across the landscape will not be revised over time—of course they will as new data comes to hand and as we learn more and more by putting in place actions to try to remedy the problem.

I think the question about the extent of area that is liable to be damaged by salinity misses the point. We are talking about assets in the landscape. We are talking about biodiversity assets, agricultural assets and townships' water supplies and so on. If we adopt that assets based approach then I think we move further towards a solution. Salinity is a tough nut to crack. There is no silver bullet, if I could deliberately mix some metaphors there. There is no one solution to this problem. It will require an integrated approach. It will to some extent be horses for courses. That said, the major driver of secondary salinisation in the Australian landscape is the clearing of native vegetation. So the first port of call is to prevent the problem before it arises, to end broadscale ad hoc clearing of native vegetation and then to begin to strategically revegetate parts of the landscape and adopt other approaches where they best fit the problem and the people who are going to implement the solution.

One important thing to remember is that we do not want to create more problems by trying to solve this one. For instance, we cannot simply pump out saline water from one wetland and dump it in another one without being very thoughtful about how we do that and what is at stake. We will need a mix of policies to drive an integrated response. We have at our disposal a range of tools, some of which have yet to be tried properly. They include regulatory instruments. Of course, those need to be implemented properly—that is to say, enforced and communicated properly—and to be well resourced. We also have market based and economic instruments, some of which are under development. One of the things for which I can give credit to the people in the departments of agriculture and environment federally and at the state level is the attention they have given, through the market based instruments program, to developing those market based instruments. There is some promising work there.

We also have voluntarism. We must not forget the tenacity and incredible social capital of the Landcare movement. That being said, the problem is well beyond voluntarism. I think we have started to make that shift away from dependence on volunteers. At the beginning of the decade of Landcare a lot of people, ACF included, had an idealistic view of what volunteers could achieve. Having been a volunteer myself with very social movements, I know how easily people burn out and how you can be incredibly underresourced, yet you are expected to go above and beyond. Lastly, in characterising the problem, it is not a stand-alone issue. As Carl Binning before me said, this is a problem that is tightly meshed with other problems such as biodiversity loss, water quality, soil health and so on.

In terms of where we think things have gone reasonably well or definitely shown improvement over last five years, firstly there is the national action plan itself. Although it is by no means of the scale and intensity, I suppose, that we would want, nevertheless it is a major step forward in giving salinity a national focus and getting cooperation between the states and the Commonwealth and getting cooperation between the departments at a federal level. The fact that there is now a joint natural resource management team within the Australian government

linking together the departments of environment and agriculture is a very promising and very welcome change.

The development of a regional NRM delivery approach, or catchment management or landscape management whatever you want to call it, certainly is in principle a model that we welcome. We think it is an essential component, albeit an underdeveloped one at this point. We also welcome the focus on developing capacity at the regional level. Unfortunately, I feel that that has come somewhat at the expense of that social capital in the Landcare movement. We lost a lot of those people. Also, the development and upgrading of our scientific and information systems as a result of those salinity investments has been quite important. The work of the National Land and Water Resources Audit amongst others has been instrumental in driving forward policy and also in tracking how we are doing.

As to the challenges that remain, firstly there is the matter of long-term commitment. It was very promising to see that a seven-year program, which turned into an eight-year program—the national action plan—was put under way and was agreed to eventually by all states, although there were some real teething problems to begin with. But we are still going to need a longer-term commitment again. This is not a problem that will go away in a hurry. It demands a long-term commitment. I think that minimum 10-year programs are needed.

We are going to need a significant upgrade in the pool of finances and the amount of money, basically, that is available. Money is not the be-all and end-all to solving environmental or indeed any other problems. Just throwing money at things has never got us anywhere. In fact, it causes more problems than it is worth. But good strategic deployment of funds is important. The fact that, by our estimates, 0.1 per cent of the federal budget is spent on both the NHT and NAP suggests that it is not the national priority issue that it is made out to be by some. Compared to other areas of key national interest, salinity and other environmental problems still rate second or third. It just simply does not match the scale of the problem itself and it is not equipping people properly to do the job as it needs to be done.

We are going to need to put in place policy drivers that drive land use change. Simply tinkering around the edges is not going to be enough in most cases. Certainly some land management changes—that is to say, changes to cropping or pasture development—and changes to how you manage soil and so on will do reasonably well in some areas. There is no doubt about that. But, in many areas, given that salinity is a deep systemic landscape problem, it requires a landscape-scale approach. It also requires significant land use change. We still have not come to grips with that in terms of policy drivers.

We have not leveraged private investment and there are ways and means of doing that. We believe that private investment for both public good and commercial outcomes has been done reasonably successfully in other areas of policy such as health care, infrastructure development, aged care and so on. We think that some of the same tools that were used in those areas could be brought to bear on this issue. In 2001 we and several private organisations as well as the CSIRO commissioned Allen Consulting to develop a policy package that would leverage large-scale private investment. We did that, and that has made some changes. It has informed the policy process. But, significantly, it still has not borne the kind of fruit we were after.

We need to clearly link this kind of land management issue to other significant issues, such as climate change. A piece of work that we and the Joint Venture Agroforestry Program commissioned from consultants a few years ago looked at how you would develop new industries on the land, especially low-rainfall forestry specifically for bioenergy, that would also deal with problems like salinity and greenhouse pollution. In this case URS Australia looked at the oil mallee industry which is developing in Western Australia. I believe senators are knowledgeable of that. We think that has great potential, but we think it is being let down by lack of high-level government intervention. Unless we can develop up a market for the other values, the other dividends, such as carbon sequestration, salinity mitigation and so on, I do not think we will really see it take off in the way that it should. Our consultants suggested to us that if, for instance, the mandatory renewable energy target were a good 10 per cent rather than the nominal two per cent, it could really drive investment in bioenergy with real environmental outcomes as well as economic and social outcomes.

There is still lack of local government engagement at the regional level. Again, we think there are some significant policy drivers that could be put in place at the national level to attend to that. We feel that the lack of national targets on salinity as well as a whole range of different environmental and institutional issues means that people lack the guidance that they need at the regional and local level to drive change.

With regional delivery itself, as I said before, we think it is a good step forward, but by itself it is not going to be enough; we do need those national interventions where they are warranted. We also need to recognise that there is a great deal of variety in the quality of regional delivery across Australia. Some groups are at a very low level of development, while others are quite advanced. But even with those that are quite advanced there is still lack of a strategic approach in regional delivery in many areas. People are still looking around for decision-making tools that they can use to assist them in doing that strategic approach properly and in tools that they can use to engage land holders and other organisations to make the kind of changes that are necessary.

Finally, we need to really upgrade our monitoring systems. We need to be able to track change at all levels. We need in place good ecological and other monitoring systems to do that so that we can adapt our management if needs be and see how our money is being used and whether it is being used effectively.

CHAIR—Thank you for that. In some of the views you have put forward here today and recommendations with the *Getting on track* paper that I think you prepared—you have got your name on it—

Mr Watts—I had something to do with it. All the typos are mine!

CHAIR—You still spell ‘programme’ that funny way.

Mr Watts—I like spelling ‘programme’ that way, thanks, Senator.

CHAIR—My understanding of the work you do is that it does involve a lot of work with land holders, farmers and other people pretty comprehensively. Rather than the approach of environment group lobbying to stop people doing things or force them to do things, you are

working in with them. What sort of level of involvement did land holders have in developing these sorts of recommendations? I know it is an ACF paper and not a farmers' paper, but I want to get a sense of how much engagement you have.

Mr Watts—The methodology in that paper was essentially me contacting I think about 40 different individuals who were involved in natural resource management in one way or another. Some of them were in national institutions, some of them in regional and some of them at local level. They are basically people I knew through my networks and that other people referred to me. I did not just choose people who I thought would agree with me; I basically went far and wide to try and find ideas, answers and perspectives. Not everything in that paper reflects those views that were given to me, but I did use those to inform the paper— and that included land holders, yes.

Senator RONALDSON—What is wrong with spelling of 'programme' like that?

CHAIR—It is that funny 'old-fashioned way'.

Mr Watts—I am with you, Senator Ronaldson.

Senator RONALDSON—I think it is lack of Americanisation of the spelling. I am a big supporter of 'programme' being spelt like that.

Mr Watts—Just call me a patriot.

Senator RONALDSON—It is probably about the only thing you and I have agreed on tonight, Mr Watts. But I have to say I am with you on the spelling of 'programme'.

Mr Watts—Thank you, Senator Ronaldson. I will take that on board.

CHAIR—Speaking of programs, the recommendation you have talked about of merging the NAP and the NHT into a single megaprogram, if you like, for a more strategic covering of all the issues that we have touched on with the previous witness, rather than a bit for salinity, a bit for land clearing and a bit for this. Have you had any responses to how feasible that would be? How important do you think that is for trying to get a more cohesive approach to land management in general?

Mr Watts—I do not think we would die in a ditch if NAP2 and NHT3 remained separate. They are two sides of the one coin. They are administered, at least at the national level, by the same people or, at least, people who are in communication with each other. That is the really core thing. That said, I think you would have administrative savings, which could be better spent on on-ground change, capacity building and so on, from a merged program. The key for us is that the good bits are not thrown out in any merger, that the whole effort is augmented rather than to weaken some elements of it.

CHAIR—You talked about the need for more money. Obviously that is with the caveats you said. I have to say that one of the things that surprised me a bit in some of the evidence we got during this inquiry was some people saying that there is round about enough money at the moment, that we just have to spend it better. I would not say that was universal, but there were

some that said that. It is sufficiently rare for people to say: ‘No, thanks. We’ve got enough money,’ that I noticed it.

Mr Watts—Can I address as to why that might be? I do not want to second-guess those people necessarily but it is certainly the case at the regional level that some of the regions feel that with more money would come responsibility beyond their means. Everyone is at a different stage of development. I think one of the points that we have made in that paper is the need to identify what stage people are at in organisational development and how much responsibility they can reasonably be expected to be enabled with. So, as I said, simply throwing more money is not enough. You need a very strategic approach. That said, the scale of the problem really demands a scaling up of resources over time. We have seen that. We have seen, from NHT1 to NHT2, NAP and the National Landcare Program, a raising of funds, and now the Commonwealth is drawing on core funds rather than the sale of public assets so it is a more sustainable approach to funding. We have certainly seen a significantly longer time frame, but we do need this raising of funds over time.

Senator RONALDSON—You would probably need to see the submissions and hear the reference before you were able to attributive motives to those people, though.

Mr Watts—Certainly that is right. That is why I was a bit cautious and said that I did not want to second-guess people. But I have heard similar things from people. I have also spent five years listening to people as they have gone through the regional delivery approach. I have spoken with people in my role on the Landcare Council and generally in my travels. I have heard the view that they can only do so much if they have more money, that far too much is expected of them. But people are entitled to their view. If they feel they have enough money, that is up to them. I happen to disagree. I disagree at the national level, if you like. I am not saying that all regions should suddenly be given more money; I am saying that, as a nation, we are not investing enough.

Certainly we are not investing enough in leveraging private investment. There are ways that we could be doing that a lot more strongly. We could be significantly augmenting our action to defeat this problem and also mobilising the creativity, energy and enterprise of the private sector. We could bring the big end of town in Peel Street or Collins Street, and their resources, to bear and link them with farmers, land holders and the Greening Australia’s of the world on the ground to find profitable, commercially viable and environmentally beneficial new ways of using the land. Some of those are available already. There is a lack of options but, with the interest of the private sector, you would start to see a lot more investment in R&D for commercial outcomes.

Senator RONALDSON—Where is Peel Street?

CHAIR—I think he meant Pitt Street.

Mr Watts—Did I say Peel Street? I beg your pardon.

Senator RONALDSON—Peel Street North and South. In Ballarat there are not too many at the top end of town.

Mr Watts—Peel Street was a street in my home town.

CHAIR—I have final question on that money issue. I am not trying to nail you down to a figure but I recall that some years back the ACF and the National Farmers Federation—and here is another example of your cooperative approach—

Mr Watts—We do not always agree, but we do look for common ground.

CHAIR—as a constructive mainstream environment organisation—did release a package. Off the top of my head, I think it was suggested that it was \$60 billion or so. It was a very large amount of money. Obviously, what has been made available as it is is a lot less than that. Without trying to nail down a figure, are we looking at that sort of quantum to really tackle it or is it a bit of an overstatement—we just need something more substantial than we have now?

Mr Watts—As I recall—it was before my time that that particular document was produced by NFF, ACF and Land & Water Australia—that document was the best estimate at the time. I think the important thing is the magnitude of the figure that was suggested rather than the exact figure, the fact that it was calling for a strategic approach to using that money and the fact that it was talking about leveraging private sector investment.

We are not the only ones suggesting that, in order to get the sorts of environmental, social and economic returns that we need for dealing with this problems—and by the way, this is also an opportunity with salinity to do better—we do need to invest strongly. The working group of the Prime Minister's Science, Engineering and Innovation Council presented a paper called *Setting biodiversity priorities* in 2001 or 2002. The lead author was Hugh Possingham, a leading ecologist from the University of Queensland, and he was helped out by economists and others. They said that, for this much investment, you would get this much more in terms of returns. They said that for a whole range of things from restoring river flows to expanding the national reserve system and dealing with salinity. From a significant investment comes an even more significant return. If you look at the investments made through the cooperative research centre for salinity, which is joint public-private as well as having some involvement from the community, I think you will find those research and development investments will in coming years yield significant returns to the community and to business.

Senator RONALDSON—We agree on two things—and probably on a lot more. We agree that there is a problem, and we agree on the spelling of 'programme'.

Mr Watts—That is a good start, Senator.

Senator RONALDSON—It is a very good start; I could not agree more. I want to take up the chairman's comments from before. Have you costed your 45 recommendations? I had a quick flick through and came up with \$2½ billion or \$3 billion. That was not taking into account other things. Have you costed them?

Mr Watts—No, I have not costed them.

Senator RONALDSON—Hopefully in the report of this committee—and under the stewardship of our chairman I am sure that is going to be right—we will be putting forward some practical solutions to a national issue. What are the top three of your 45 recommendations?

Mr Watts—Let me think for a minute.

Senator RONALDSON—I am happy for you to refer to the recommendations.

Mr Watts—Let me canvass three or four that I can recall. I think one is developing a policy package that leverages large-scale private investment in commercial environmental ventures and starting that up. I think another is to ensure that we are getting the best mix of regional delivery and national policy intervention and that regions themselves are properly equipped to do the job that is being asked of them. Another is to develop incentives packages for land-holders to deliver ecosystem services outcomes, including salinity management. I think the third is that long-term commitment that I talked about. Sorry, did I say three or four?

Senator RONALDSON—It was probably a bit more than three, but that is your list of priorities.

Mr Watts—Those are certainly priorities. I would not hang up my hat and say that they are all there is to it. This is a very complex problem and I do not think it is going to be solved overnight. As I said in that paper, we do not believe that the recommendations that we put forward are the be all and end all, but they are our contribution to the debate and we certainly feel that they would push things forward.

Senator RONALDSON—Do you accept that the 45 recommendations are a wish list?

Mr Watts—Not entirely. I do not think that any of those recommendations have been plucked out of thin air. If you take, for example, the leveraging private investment idea—

Senator RONALDSON—I was not suggesting you plucked them out of thin air.

Mr Watts—Forgive me; I took umbrage unnecessarily.

Senator RONALDSON—I suspect you are far too experienced in this area to be plucking these things out of the air. But it is a wish list.

Mr Watts—Some of those recommendations in one form or another, since I put that report together nearly two years ago, have started to be implemented. We have seen the departments of agriculture and environment and heritage by order of the National Resource Management Ministerial Council undertake a review of regional delivery, which was one of the recommendations that we put forward. We have seen some innovation in the engagement of the land care and Indigenous communities, which was one of the recommendations we put forward. Whether or not they did these things because we recommended them, I do not know. What I am suggesting is that none of the recommendations we put forward is impractical. It may be that the country lacks political will or resources in some respects or that our policy offices at the national level do not have enough time to give these things more thought, but none of them is impractical.

Senator RONALDSON—If this committee was to take up one recommendation, what would be your No. 1 recommendation for the committee?

Mr Watts—I think the best thing the committee could do is adopt the recommendation of a policy package that leverages private investment in commercial environmental ventures.

Senator RONALDSON—Is that the COAG one, recommendation 42?

Mr Watts—The recommendation is based on several papers, including a paper called *Repairing the country: leveraging private investment*, which was produced by the Allen Consulting Group for ACF, CSIRO, Berri, Macquarie Bank and a bunch of others.

Senator RONALDSON—Is that recommendation 42, ‘That COAG establishes a national—

Mr Watts—I believe so. I do not have the paper in front of me.

Senator RONALDSON—It says, ‘That COAG establishes a national policy package to leverage large-scale—

Mr Watts—That is right, yes. That is certainly one of the top ones. That does not have to be limited to landscape repair. That could be for other things too.

Senator ADAMS—You are probably aware that I am from rural Western Australia. You came and saw us in Perth, didn’t you?

Mr Watts—Yes. I grew up in Busselton. My dad grew up in the wheat belt.

Senator ADAMS—That is what I thought. This is a practical thing—how are we going to attract those sorts of businesses to invest their money in something like this? Big businesses are always looking for returns.

Mr Watts—That is right.

Senator ADAMS—Can you go a little bit further and more in-depth into ideas as to how we could do that?

Mr Watts—Certainly. Before I do that, I will give you examples of where people are investing in preventative options for salinity management, such as the oil mallee company in Western Australia and the support it has received from the energy company in Western Australia—I forget its name.

Senator ADAMS—Western Powers. But it has four titles now, so I am not quite sure where the mallee comes into it.

Mr Watts—I do not remember what they are called this week. That is an example of where private enterprise is linking with government to invest in those sorts of the things. Hancock Natural Resource Group Ltd is, I believe, a Canadian based company, that has interests in superannuation and forestry. A few years ago they were saying loud and clear to anyone who would listen that they would invest in forestry with environmental benefits if the right policy drivers were in place and they could get the reception that they were after. They were finding it very difficult to find that reception and work with regional groups, who were saying, ‘Oh no,

gosh, your multi-hundred million dollar investment proposal is too large for us to handle.’ Governments did not know how to handle it very well either.

I believe the carbon sequestration company CO2 Group Ltd in New South Wales has invested in a mallee-cropping venture, not for bioenergy but for carbon sequestration. So there are certainly companies out there looking for investments. There are also superannuation firms. I know that VicSuper, for instance, was looking around to expand or diversify its portfolio, and this is one of the areas that it was looking at. There are a whole range of different companies.

How might you do that? There are a range of policy drivers and institutional set-ups that you would use. Firstly, you would look at other areas of public policy and how these sorts of things have been achieved there, and then you might use similar sorts of tools. So, for instance, the Allen Consulting Group—I am not an economist, by the way, so I cannot speak to this in any great detail—looked at the business innovation area and at the use of pooled development funds in that area to attract capital, because at that time the government was very supportive of business innovation and so they were looking for ways to attract private capital to new business ventures. What they found through that process was that, sure, a lot of those new ventures did not make it—that is the world of business—but a lot did, and those that did survive the process delivered returns for the whole nation as well as for the private operators.

Other things that could be used include taxation offsets for the investors. So, where an investor is looking to diversify their portfolio or looking to invest in accordance with their social responsibility requirements or policy for their company, the added incentive would be taxation offsets on the investment. So you would have tax preferred investment vehicles that would drive investment into areas where it is needed.

You do need to properly connect the land, the problem and the people with the ideas with the people with the money, and they do not always talk to each other. People in the investment world do not necessarily understand what is going on out there. We do have people—the middlemen, if you like—who are used to translating between those two levels of the investment chain, and they include Greening Australia, who, by the way, have developed what I think they are calling ‘Green Bank’, which works on a very similar principle to what I have just described. And of course there are a whole raft of investment consultants in the agricultural arena. So those sorts of tools could be used.

You would also need to make sure that whatever project was put forward for possible tax preferred investment got the tick-off environmentally and commercially. You do not want to invest in something that is not going to fly on either of those counts. But you might also have seed funding for new commercial ventures, and again that is something we do already. It is a matter of bringing these together, adding some new innovative tools and giving it some oomph.

Senator ADAMS—On land clearing: down in the area where you have come from, there are quite a lot of problems with land being repossessed by the government for the wetlands and remnant vegetation. Each state has a different policy on this, of course. You were talking about a national focus. How are we going to get all the states together on that issue?

Mr Watts—We kind of almost had at it at one point when the Commonwealth and Queensland were talking to each other about sharing investment in the structural adjustment

package to bring broad-scale clearing under control in Queensland—and then the Commonwealth pulled out, which I think was a great shame. As it happened, the state of Queensland bore the whole cost. To us, in this particular instance it is not whether the federal government assumes responsibility for land management or whether the states do; it is a matter of the two working together to get it right.

You need a whole suite of packages to deal with native vegetation management, which I think is the issue you are heading towards. You need regulatory measures that are flexible enough to give land-holders some certainty so that they can get on with the job of managing their land but solid enough so that they give the public and other land-holders—downstream resource users and others—a good deal of certainty that the natural assets on that land are going to be protected. That needs to be delivered well, it needs to be communicated to the land-holders, it needs to be resourced properly and it needs to be enforced properly so that people clearly know where their legal duty of care lies.

On top of that you need investments to help people to proactively manage natural assets on their property so it does not become overrun with weeds, it does not become trampled by whatever, so that the understorey can be revegetated or what have you. Also, to restore both areas of native vegetation to deal with biodiversity issues on farm as well as to deal with other problems like salinity and for carbon credits and so on. So you need a whole suite of different tools to deal with that. Stewardship incentives through management agreements are one way. We are experimenting with that, variously around the country, through programs like Victoria's BushTender, which is a competitive arrangement where landowners go through a blind auction to bid for government funds to do environmental work on their property.

You need that leveraging private investment approach that I talked about. You also need to seriously consider land purchases and water purchases, which is something that we have been pushing very hard and this committee might like to know about. In the water arena, there is the need for government to enter the market and purchase water in order to ensure environmental security and the security of downstream users. That use of market instruments and purchases of water is written into the National Water Agreement which has the support of the NFF, ACF and the Australian Bankers Association. Unfortunately, the government has been very reluctant to use that tool. I have even surprisingly heard them call it a blunt instrument. That is the first time I have heard a market based instrument called a blunt instrument. So you need all these suite of tools to help landholders to know where their duty of care is and to help them meet that duty of care but then to go above and beyond. We think that should be shared fairly between the private and private sectors.

Senator ADAMS—Without compensation it is very difficult for a lot of landholders. Of course, that is what is happening in Western Australia at the moment.

Mr Watts—We believe that where people are genuinely affected by the introduction of new laws, their businesses are severely affected, then they certainly need some sort of adjustment or financial assistance to help them through that transition. We do not call it compensation because we do not believe that a right has been lost but we do believe that government has a moral responsibility, on behalf of the public, to make sure that people are looked after and to make sure that communities do not have to suffer the burden.

Senator ADAMS—We had another submission on local government and legislative powers with the catchment organisations. It was not so much in Western Australia but definitely we found that when we moved around on the eastern seaboard area. Local governments were saying that they do not want NRMs to have any sort of power.

Mr Watts—I would certainly not trust a lot of regional bodies with that kind of power but I think, where there is a certain level of development, they should have powers of referral so that where local government is developing land use plans, zoning plans and so on that these are referred to the catchment authority which is suitably qualified. They have obviously reached a level where they are capable of working with local government. They have the right information at their disposal to make good sound judgments and, quite frankly, if that local government is going wildly off course then they need to be reined in. There is no point in spending millions of dollars of taxpayers' money in developing catchment plans with the best science, the best will in the world and the best consultation if somebody is just going to run off the rails and do something else which is going to cause damage. That said, you would obviously prefer a cooperative approach to begin with and you need this kind of push-pull. One of the things we have put to the Commonwealth is the idea of dedicating a pool of funds that would specifically be for local governments to develop biodiversity action plans in line with catchment plans to bring the two into line. So where a local government lacked capacity in biodiversity, they could draw on these funds as long as they achieved certain targets of conservation itself, management changes, capacity building, institutional changes and so on. One of those targets or one of the requirements for sign off would be a line up with catchment plans.

Senator ADAMS—Thank you.

Senator RONALDSON—I should indicate that I was actually a member of the ACF for some 10 or 12 years, I think, until you became overtly politically partisan.

CHAIR—Now they are back as a middle-of-the-road, mainstream, non-partisan organisation.

Senator RONALDSON—Do you think I should rejoin?

CHAIR—I do.

Senator RONALDSON—Perhaps I could chat to Mr Watts about it later.

Mr Watts—I will rise in defence of that somewhat. The ACF has no allegiance to any political party.

Senator RONALDSON—Regarding your submission, I think this is an interesting overarching document, though I disagree with some of it. I think it is very difficult for the committee to go too far outside with an overarching recommendation, so what could we pull out of this? I cannot see anything there that I could really call salinity specific. Am I missing the point in the document, or is there something there that we could call salinity specific?

Mr Watts—I will give you a bit of background. That document was submitted in lieu of a specific submission to this inquiry simply because we lacked the resources at the time to produce such a submission. I spent a lot of time on that submission, and we felt that that was sufficient

for the committee's needs. I am happy to work with the committee to identify salinity specific recommendations or parts of that to that submission, but I suggest that it is important—

Senator RONALDSON—Were you not given a copy of the terms of reference?

Mr Watts—I was given a copy of the terms of reference. I apologise that we did not produce something specific. We are overwhelmed by work, and it is difficult to always produce something specific.

Senator RONALDSON—I certainly do not knock you for that.

Senator WORTLEY—Senator Ronaldson, perhaps additional resources is what is being said.

Mr Watts—The vast majority of the ACF's funds come from its members and supporters. A very small amount comes from the Commonwealth—and I think that is going downwards as we speak.

CHAIR—As I understand your arguments, one point that is being put forward is that we as a committee are focusing on salinity but you cannot really separate that from land management—this is broader land management stuff.

Mr Watts—Absolutely. We are talking about whole-of-landscape management—and Australia is moving towards that. We have made significant inroads, and that is in no small part due to the Australian government and bipartisan support responding to community calls for that kind of approach, but we need to invest in it properly. We need to make sure that people at the regional level have the tools to do the job, and part of that job means engaging land-holders and giving those land-holders the tools to do the job.

CHAIR—Thank you for that. If you have any further thoughts on things you should tell us about, feel free to put them through to the secretariat.

[8.38 pm]

ALDRED, Mr Tom, Executive Manager, Natural Resource Management, Department of Agriculture, Fisheries and Forestry

CALVERT, Mr David, Acting General Manager, Australian Government Natural Resource Management Team, Department of Agriculture, Fisheries and Forestry

STAUFFACHER, Dr Mirko, Science Communications Adviser, Department of Agriculture, Fisheries and Forestry

FORBES, Mr Malcolm, First Assistant Secretary, Australian Government Natural Resource Management Program Division, Department of the Environment and Heritage

CHAIR—I formally remind you that evidence given to the committee is protected by parliamentary privilege. The giving of false or misleading evidence to the committee may constitute a contempt of the Senate. I remind you that the Senate has resolved that departmental officers shall not be asked to give opinions on matters of policy and shall be given reasonable opportunity to refer questions asked to superior officers or to a minister. Thank you for giving us your time this evening. We have the departments' joint submission, which we have numbered 24. Do you wish to make any amendments or alterations to that submission?

Mr Forbes—No. As you know, we previously appeared before the committee, and we were asked to reappear at the end of the hearings in case we could provide further assistance.

CHAIR—Do you wish to make an opening statement?

Mr Forbes—No.

CHAIR—We will get on with questions then. To an extent we will be putting back to you issues that have arisen in the course of our various hearings and the submissions. I would be interested in your view of the adequacy of the priority given to urban salinity. I know it is identified as one of the salinity issues, but we have got a flavour from some witnesses that there is still an overemphasis on agricultural land use issues when it comes to salinity and not enough recognition of urban salinity in the way programs are structured at the moment. What is your response to that perception?

Mr Aldred—I would say at the outset that, largely, the two portfolios represented here do have a particular focus on rural and agricultural lands, and in some senses that was the genesis of the National Action Plan for Salinity and Water Quality. There are certainly significant issues in relation to built environments and major infrastructure, but they are not the primary emphasis of the programs that these portfolios deal with.

Mr Forbes—Senator, if I could just add a little bit. I think a question was asked a little earlier about the linkages between local government and regional plans. Local governments, clearly, are very interested in some of the infrastructure questions, and I think local governments can

actually learn a great deal from the regional construct and planning which has gone into the regional investment strategies and the underpinning work which has gone into creating those regional plans. So I think there is a linkage between the two, the planning process at the regional level and how it intersects with local government planning and how that will affect infrastructure, but infrastructure funding is not an issue that we have addressed.

CHAIR—When we had the opening hearing for this inquiry, your departments painted a slightly more optimistic picture of the extent and risk of salinity compared to the 2001 National Land and Water Resources Audit. But you would probably be aware of the Australian Farm Institute report released recently that argued that those 2001 figures are grossly overestimated—so much so that there should be an apology to farmers, for grossly overstating the potential threat with its earlier predictions—and objected to those figures still being used on government and other websites. Firstly, are you aware of those criticisms and do you have any response to them? Secondly, what is your updated assessment of the current salinity risk? I realise there is a difference between risk and current prevalence.

Mr Aldred—Yes, we are aware of the articles and the criticisms. I would make a couple of points. The original estimates were based on the best available science and information at the time. A particular point is that the mapping and the information that was available indicated salinity hazard, if you like; it was not a prediction of what would occur. I think that point is often lost in the criticisms of some of that original work. So it was an assessment of underlying salt stores and so on—a potential hazard. What has certainly been happening over the last several years is that the science that underpins those sorts of assessments has continued to be worked on. We are working through updating a range of information and figures to produce contemporary assessments of hazard and risk.

CHAIR—Does that mean there needs to be a review of some of the salinity management projects that are already well under way? Using an example that we have had given to this inquiry, I am sure you are well aware of some of the division in South Australia about the deep drainage proposals. If the science is showing that the picture is a bit different to what we thought a few years ago, does that mean we should be looking at re-examining some of the projects that are already under way?

Mr Aldred—No, I would not say that, Senator. I think the particular AFI article was really focused on the broad assessment of salinity hazard across the country. The particular drainage proposals or project proposals to undertake activities at regional or more local levels are based on better and more relevant information at that particular scale. So it is a little difficult, I guess, to try and draw the direct link between what is essentially a broad evaluation at a national level versus taking a particular action in a local area.

Senator WORTLEY—Concerns were raised throughout the inquiry regarding the uncertainty of funding post 2008—about the continuity of funding and the impact that that has on various projects. What is being done to address the issue of post-2008 funding? When are decisions on future funding likely to be made?

Mr Forbes—It is not for us to predict when the government will make those decisions. But, clearly, the government is acutely aware of the cessation of the NAP and the Natural Heritage Trust in June 2008. There is an active program already looking at evaluating what the current

circumstances are in terms of the implementation of the trust and the NAP up to this particular point in time. Those evaluations have been carried out in a public way, involving a lot of consultations. Those evaluations have recently been completed. Some are still to be completed.

There has been the Keogh review looking at the regional model and its successes and strengths and weaknesses. There has been activity through the Natural Resource Management Council, so cooperatively between the states and the Australian government, looking at the future arrangements. And there have been activities by advisory committees through the Natural Heritage Trust Advisory Committee and the Australian Landcare Council. I think the community has intersected with lots of those particular activities. All those—and, no doubt, your inquiry—will feed into government's considerations into the future beyond 2008.

Senator WORTLEY—So at this stage there is no time frame for decisions on post-2008 funding?

Mr Forbes—Government is acutely aware that funding runs out in June 2008 and it will make a decision on when it will actually make announcements on the future.

Senator WORTLEY—Throughout the inquiry that has been an ongoing concern with regard to planning—to making future plans, staffing and all the related issues.

Mr Forbes—We are acutely aware that the investment strategy is essentially on a three-year rolling program, and when you start looking at three years out we understand when that finishes.

Senator WORTLEY—Can you tell us when the Keogh review will be made publicly available?

Mr Forbes—Ministers are yet to receive the complete report on the Keogh review. It will be up to the ministers to decide when and if they will release the report.

Senator WORTLEY—When is the complete review expected to be handed to the minister?

Mr Forbes—We expect it will be some time within the next month.

Senator RONALDSON—Were you here when Greening Australia were having a discussion about bottom up or top down?

Mr Forbes—I was here for part of that; I came in halfway through.

Senator RONALDSON—We had a discussion on the Murrumbidgee area and what has worked and what has not worked. We discussed what the appropriate planning model is, whether it is top down with consultation or bottom up. Do you have any views? Are we closer to getting the sort of planning model that you could implement nationally? Is it horses for courses, region for region, and, within the policies and programs, is there room for that sort of movement within regions? Do you think we will ever be capable of having a national planning regime that will be a blueprint across the whole of Australia?

Mr Forbes—I think there is a blueprint in the sense that across the nation—and this is outside of just NAP regions—there are 56 NHT and NAP regions and we have nearly 56 accredited plans, which creates, if you like, a national blueprint, even though each of those regional plans are different. They take into account the requirements of those particular regions. In that sense it is horses for courses, because each region has its own particular problems. It also takes account of the need for strategic top-down arrangements, which I think you were discussing with Greening Australia.

In some respects, that was one reason why the Australian government moved towards a regionalisation in terms of its delivery for NAP and the Natural Heritage Trust. It was to try and find that linkage between the top-down strategic policy framework with the bottom-up requirements of the community so that there was ownership from the top down and also ownership from the bottom up. And that is not an easy balance. The test of that would be different in each of the regions in terms of the outcomes which have occurred so far.

The institutional arrangements have been quite different. I think you would appreciate that institutional frameworks in Victoria have been in place for quite a long time, therefore there is the capacity to deliver on these issues but at the same time the ownership of the community in terms of its intersection with the catchment management authorities has a maturity which perhaps is not there in other states. When some of these catchment management authorities have a stick as well as a carrot, that also creates issues about alienation between the bottom up and the top down.

So there are a variety of different models which are being used around Australia with a variety of different outcomes. Notwithstanding that, I think the regional arrangements we have seen are working reasonably well. We are seeing some of the longer term outcomes now starting to come to bear, having created some of those institutional frameworks, and getting some of those investments out on to the ground and a lot more activity rather than planning.

Senator RONALDSON—So I am clear about it, some of the strategic planning processes vary within those regions. Is that correct?

Mr Forbes—Yes, that is the case.

Senator RONALDSON—I am not suggesting it is a bad thing. I just want to see whether the one-size-fits-all solution is simply not capable of being delivered in those various regions, and whether, of necessity, those strategic planning processes will have to vary depending on the particular dynamics.

Mr Aldred—The very nature of the model dictates that the regional communities will determine the nature of their strategic planning arrangements. We have accepted and supported that throughout the process. With the maturing of the regional groups across the country, it is becoming quite clear that the regional groups are now lifting their heads above the parapet and starting to look at what the regions next door and across jurisdictional borders are doing. So there is an increasing interest in learning from each other. I think we will see a coming together of the best parts of regional plans, strategic planning models and investment strategies. I do not think we will ever have an absolute blueprint across the country, because the particular emphases in different parts of the country drive the strategic planning direction.

Senator RONALDSON—Is there room for the cross-flow of information processes to be improved?

Mr Aldred—Absolutely. There is a range of different things the Australian government is doing, including through the joint steering committees that we run with the jurisdictions, to facilitate that cross-fertilisation. As I indicated a little earlier, the demand for and interest in doing that is now becoming quite obvious—

Senator RONALDSON—So there is an arguable case for the strengthening of those processes?

Mr Aldred—A number of regional groups are seeking assistance or making suggestions on how we can translate what we have learnt. As an example, there was a monitoring and evaluation workshop or miniconference held in Tasmania last year, which representatives from virtually all the regional bodies attended to discuss the way they were undertaking monitoring and evaluation activities and doing those sorts of reporting tasks. A community forum is held each year in the margins of the Natural Resource Management Ministerial Council meetings, where the chairs of regional groups come together, talk about particular issues and make a presentation to the assembled ministers a couple of days later. We support a couple of working groups—for example, the large populations working group—so that those regions that have a significant urban or periurban population can get together and share information and approaches. They are just a few examples of the sorts of things that the Australian and state and territory governments are trying to do to facilitate the joint cooperative work.

Senator RONALDSON—I think that Greening Australia is right in that the fundamental aspect of this is strategic planning. What I have been grappling with is whether you try to impose a bureaucratic footprint, if you like, or a set of processes or whether you enable the regions to develop these on a regional level and hope that as the processes and experiences mature and they are able to have a cross-flow of information that you will get to the same end whilst still allowing for those regional differences. I suppose that is a comment rather than a question and you can respond if you want to.

Mr Forbes—You would appreciate that under the current arrangements for both NAP and NHT these are delivered through bilateral agreements with the states. Embedded in those are certain requirements in relation to what the Australian government will expect of the regional planning process in terms of matters for targets and the like. They also provide a bit of a blueprint but recognise, as we were seen before, that each region will be different. They do provide some broad policy frameworks in which we would expect regional plans and strategies to be developed so that they will be accredited and funds can flow. So there is already an arrangement in place which provides that strategic base for the Australian government's investment. That could be looked at further in terms of how that could be done. There needs to be a balance between the top-down and the bottom-up and, as you were discussing with Greening Australia before, it is a matter of what that balance is and striking the right one, which can be quite difficult.

Senator RONALDSON—Is it to have a set of nationally accepted guidelines within which the opportunity for regions to be able to move—

Mr Forbes—That is embedded within those bilaterals. But of course embedded in all of that too is the need for matching funds and the need to ensure that you have got those matching funds in your agreements with the states too. It is cash on cash, so these sorts of things mean that you have got to have those sorts of arrangements with the states because otherwise you will end up in some of those arrangements with matching dollars where it may match or it may not. If it is cash on cash, you know exactly where each party is sitting.

Senator ADAMS—I am from Western Australia so I thought I would throw this one in just to see how we get on. The committee has heard claims from the Conservation Council of Western Australia that the WA state government continues to allow, or turns a blind eye to, clearing of native vegetation in agricultural regions—and I do not go along with that myself, being a farmer. From a slightly different perspective, when we were in New South Wales we had a regional body expressing concerns about urban development of rural land at risk of salinity and a lack of local government regulatory will in curtailing the development. What is your response to that particularly against the backdrop of the national objectives and targets for biodiversity conservation 2001-05? I would also like your response to the following statement from the national action plan:

... any Commonwealth investment in catchment/region plans will be contingent upon **land clearing being prohibited in areas where it would lead to unacceptable land or water degradation ...**

I guess I could go on with this and ask: what more could be done at a national level to encourage responsible decision making and enforcement of regulations at a state and local level?

Mr Forbes—It is very difficult for us to comment specifically in regard to regulations which apply at the state level, recognising that in the implementation of regulations that that is a state responsibility not an Australian government responsibility. But no doubt the states in putting in some of those regulations together would have embedded in them their notions of duty of care and the whole issue of condition in relation to native vegetation.

Where we have come from is not actually a top-down regulatory approach to these issues. The Australia government has come at it from the approach of using carrots and using an array of different tools, if you like, within our toolbox to encourage different sorts of behaviours and to assist in trying to have better practices in the landscape which will be more sustainable in the longer term. You have heard of some of those in relation to market based instruments and the development of EMSs, environment management systems, and the like. We are very interested in increasing the array of tools that we have in the toolbox to assist in getting sustainable land management practices.

CHAIR—Have you undertaken any analysis of the salinity investment framework?

Mr Aldred—I am not entirely sure I follow the question. I do not know whether you are talking about a particular salinity investment framework or—

CHAIR—SIF 3.

Mr Aldred—Okay. That particular framework comes out of the CRC for plant based solutions to salinity. We recently had some discussions with Professor David Pannell, who is one of the

developers of that, and he gave us an update on SIF—SIF 2 and SIF 3. We have agreed that we will have some further discussions with him and we have asked him to keep us apprised of a couple of pilots that are under way in Western Australia and in North Central, within Victoria. Those are two of the regional groups that are piloting or trialling that particular investment framework in those regions. It is a framework concept that I think people agree is still under development; it is not an absolute answer. But I think Professor Pannell was heartened by the thought processes and the analytical discussions that the use of the model actually started happening in some of the community groups. So it is a little way off being a black box, where we put in the numbers and get the answer, but the actual process has a lot of promise.

CHAIR—In the context of some of the issues to do with strategic planning, I am wondering whether these sorts of frameworks, rather than a prescriptive straitjacket on everybody, may be a constructive way to go. I guess what you are saying is that it is still a work in progress in terms of how it operates and how it could be applied.

Mr Aldred—It is, but, again, it is one tool in the array of different tools or approaches that our regional bodies and communities can have a look at and use.

CHAIR—Do you have any plans at this stage to develop similar planning and decision frameworks or is it still a bit early in the assessing process?

Mr Aldred—We would tend to provide some supporting funding or assistance and encourage those sorts of things rather than do an enormous amount of work, say, in-house. We would certainly retain an interest in the development of that sort of framework or other planning approaches that different groups are using as well.

CHAIR—We had a fair bit of emphasis from the ACF representative on leveraging private sector investment more broadly in land management as well as in just salinity. Do you have any comments or response to that key recommendation that was emphasised there? Is anything being done at a national level to encourage and support private sector investment to help with some of these issues?

Senator RONALDSON—Chair, I think, with great respect, the first part of that question is a government policy matter that the gentlemen cannot answer. But certainly the second part is quite reasonable.

Mr Aldred—What I can say is that the federal and state and territory governments have been supporting a range of market based instrument pilots. A market based instrument program is being funded to an amount of \$10 million. There was a first iteration of the program of \$5 million, and in 2005 it was agreed to do a second stage of the program. A number of those sorts of things and the development of a range of work on ecosystem services or different leveraging mechanisms are under way. In some centres, it is early days. They hold great promise, but we are yet to get all the results in from those sorts of activities. Certainly, the interest of a range of stakeholders in those sorts of mechanisms has not been lost and governments are certainly having a look at them.

Senator WORTLEY—I preface my question by acknowledging that we have already gone somewhat down this path with an earlier question from Senator Bartlett, but I would like to go a

bit further down it, if we could. In South Australia a number of land-holders have raised concerns about the Upper South East Dryland Salinity and Flood Management Program. Specifically, people are concerned about the decision to progress with the deep drains network. It seems science experts are also divided on the issue. One submission argued that the decision to complete the drainage network was not adequately based on latest scientific research. Given that significant NAP funds have been invested in this state-administered program, what assurances does the national government have that the decision to continue was based on sound science, and what level of consideration was given to other salinity management solutions?

Mr Calvert—The Australian government is actually represented on the program board that has oversight and an advisory function to the South Australian Minister for the Environment and Conservation in relation to that program. To that extent, our two portfolios—environment and agriculture, fisheries and forestry—are actually exposed to much of the science or the actual evidence underpinning a range of those recommendations that were made to the minister on each drainage proposal. Obviously, the ambit of the work the board undertakes is broader than simply recommendations to the minister on specific drains. It also has oversight of the adaptive management system that underpins that program as well. Through that, we are aware that there is a range of scientific advice that underpins not just the development work of that program but also the monitoring and evaluation of the various facets of that program.

Senator WORTLEY—Were other salinity management solutions looked at with regard to that particular area or was it one that was put forward and then proceeded with?

Mr Calvert—There certainly are. There is a fairly well-funded program that is looking at revegetation or perennial vegetation in the region. Much of the salinity problem in that region, as you are probably aware, was exacerbated by a sudden and fairly dramatic loss of deep-rooted vegetation as well as longer term land clearing—the lucerne destruction in the seventies. There are various aspects of that program that are looking at a range of productive agricultural options as well as preserving the remnant vegetation in that region. So it is in itself a multifaceted program. It is not simply about drainage; it is also about looking at environmental solutions and flood management as part of both the overlying productive agricultural approach and the environmental restoration or preservation.

Senator WORTLEY—You would no doubt be aware then of the concern in that particular region that has been raised by various individuals and organisations. Has that been adequately addressed? Has the consultation process been adequately applied?

Mr Calvert—I believe it has, and—

Senator RONALDSON—Chair, I am not entirely sure how this is relevant to the terms of reference of this inquiry, I have to say. It may be interesting to hear about some of the processes, but I am not convinced that it is relevant to the terms of the inquiry. I congratulate my colleague on this line, but I do not think it is actually adding anything to the potential of this inquiry.

Senator WORTLEY—Senator, it relates specifically to a submission that was put forward in South Australia, and I believe that it does fit the terms of reference of the inquiry. I cannot imagine that Mr Calvert would have a problem with answering that question.

CHAIR—I have to say I was temporarily distracted, so I did not hear the line of questioning but I will follow it from here on in and see how we go. Obviously, Mr Calvert, you can choose to answer or not, as you wish to.

Mr Calvert—From my contact with that program, I believe—and I cannot comment on the individual submission without having seen it, obviously—that overall it has an extensive communications component. Where a recommendation is sought from the board, the actual extent of landholder consultation is always a critical underpinning of any advice going to the board. The board itself also has stakeholder representation on it, so there is an opportunity for consultations in the region itself with individual landholders and, on a broader scale, through public meetings and the like. Various media are used for disseminating information as well. And then, prior to recommendations being made to the minister, there is further stakeholder input at that point, as well as the technical and scientific advice that is provided.

Senator WORTLEY—On that basis, would consultation have involved the consideration of other options that were put forward?

Mr Calvert—It is always couched in terms of the various approaches to salinity management in that region, yes.

Senator WORTLEY—Thank you.

CHAIR—A couple more questions. We are just trying to mop up all the bits and pieces of outstanding issues to make sure we can get our recommendations as clear-cut as possible. The government recently responded to the House of Representatives Standing Committee on Science and Innovation's report entitled *Science overcoming salinity: coordinating and extending the science to address the nation's salinity problem*. The response to recommendation 3 noted that the NRM Ministerial Council had recently established an executive steering committee on Australian salinity information as part of trying to coordinate salinity information, which is certainly one of the issues that keep popping up. Could you give us a bit more detail on that committee, such as its membership, its powers, its capacity?

Mr Aldred—I will just refer to a couple of notes.

CHAIR—You can answer on notice if need be.

Dr Stauffacher—I might be able to provide an answer because I am actually a member of the committee. The members of that committee are state representatives that are active in the salinity area. The committee also has Australian government representatives including the Bureau of Rural Sciences, the Department of Agriculture, Fisheries and Forestry, the National Land and Water Resources Audit, the Murray-Darling Basin Commission, Geoscience Australia and CSIRO Land and Water. One of the projects that this committee—this goes back to one of the questions earlier about re-evaluation post the 2000 audit of the salinity situation—is currently working on is to develop salinity indicators and the use of salinity data uniformly across all states to come up with a re-evaluation of the extent of salinity. That is a project that is currently going on, and one of the main purposes of this coordinating committee is to make sure that the project is going ahead. The project is actually supervised by the National Land and Water Resources Audit. Also, what this coordinating committee is going to do in the future is look at

salinity research and see what needs to be done and what is the best way to implement this research.

CHAIR—Will that committee have the capacity to fulfil the sort of coordinating role that was suggested in the recommendation in that report?

Dr Stauffacher—You are probably referring to post the National Dryland Salinity Program. The National Dryland Salinity Program was active for 10 years in two different phases and it was funded by Land & Water Australia. I would say that at this stage this committee is probably not the successor of the National Dryland Salinity Program. The National Dryland Salinity Program had potentially more funding and more power in that regard, but this committee is heading that way. This is basically the first step towards succession from the National Dryland Salinity Program.

CHAIR—The fate of the National Dryland Salinity Program is something that has come up now and then throughout the inquiry, as you probably know. In the government response to the House of Representatives committee report's recommendation that we were just discussing, the government basically stated that Land & Water Australia and the other program partners had decided not to continue the program. The evidence to this inquiry from Land & Water Australia indicated it was more to do with a lack of funds rather than it being a time to do something else now approach. They argued the need for the program products to be promoted to regional bodies, land holders and other stakeholders. So that need for a national coordinating body has continued to emerge as a major issue during this inquiry. There are always continual expressions of support for Land & Water Australia fulfilling this role. I do not want to go into government decisions. I just want to clarify what the process was as to who made the decision and why things ended up that way.

Mr Aldred—Land & Water Australia is one of the research and development corporations within the DAFF portfolio. The investment decisions of that agency are made by an independent board. It is my understanding that, having gone through two five-year cycles of funding for the Dryland Salinity Program, the organisation determined that it should invest its available resources in some new areas—you can take, for example, new programs under Land & Water Australia such as tropical rivers or environmental water allocations—so in a genuine sense there is an investment decision by the various agencies.

An additional year was funded. That led to, if you like, what is called a harvest year, where a significant amount of funding was put into collating all of the outcomes of the first two cycles of the program and producing a range of communications and synthesis products that are available and are still distributed by Land & Water Australia. So there are always legacy issues, I guess, with research programs such as this. I think the dryland salinity program is probably a pretty good example of where the synthesis products and the continual provision of that information is actually working, hence possibly the reason why people are well aware of the material and would like to continue to see it developed or at least for it to be made available.

CHAIR—Finally, one other issue that came up reasonably regularly through the inquiry was the decline in extension services. While that is primarily the responsibility of the states and territories, perhaps because of that concern there was a feeling that perhaps there could be more national leadership or contribution in that area. Is that an area that has been identified as a

concern at your level? Is there anything being done or that could be done to address issues like consistency across training institutions and potential career pathways of extension staff and those sorts of things?

Mr Aldred—I think it is quite reasonable to say that there has been a decline in traditional extension services by state and territory governments, which, as you pointed out, have prime responsibility for those. At the same time, I believe an increasing share of the burden, if you like, has been shouldered by the Australian government through programs such as the National Heritage Trust, the National Action Plan for Salinity and Water Quality and the National Landcare Program and so on. A very significant number of natural resource management coordinators or facilitators are funded either directly through those programs or are picked up as part of projects funded under the regional planning arrangements.

In an agricultural production sense, I guess the decline has tended to be balanced out more by an increase in commercial providers for agricultural production. That has tended not to be the case in natural resource management. It is certainly an issue of interest to us in terms of the ways in which we might be able to facilitate greater uptake of natural resource management teaching or extension as part of commercial services. In some senses, there is some evidence that perhaps the community and the farming sector are less inclined to use pure natural resource management type training activities, but they would welcome it when it is part of whole-farm planning type arrangements. So I think there is a little that we can do in looking at, for example, whether we can tap into the commercial providers who are actually actively marketing and being sought by farmers and so on, and whether we can actually provide a lot of our materials to them so that it is a natural part of their activities to put a little bit of NRM in their advice.

CHAIR—There are no further questions, but do you have any final words of wisdom you want to leave us with before we go off to finalise our report?

Mr Forbes—No.

Mr Aldred—No more wisdom here, Senator!

CHAIR—Thank you again for your attendance this evening and for your help throughout the course of this inquiry. It is much appreciated. Hopefully our report will contribute to making your work more effective as well. That concludes this evening's proceedings. I thank all the witnesses for their presentations. Thank you also to Hansard, broadcasting and, of course, the secretariat. I declare the public hearings of this inquiry closed. Hopefully we will have a report presented to the Senate four weeks from today.

Committee adjourned at 9.31 pm