

# ENVIRONMENT, NATURAL RESOURCES AND REGIONAL DEVELOPMENT COMMITTEE

## Inquiry into the management, governance and use of environmental water

Melbourne — 5 December 2017

### Members

Mr Josh Bull — Chair

Mr Simon Ramsay — Deputy Chair

Ms Bronwyn Halfpenny

Mr Luke O’Sullivan

Mr Tim Richardson

Mr Richard Riordan

Mr Daniel Young

### Witnesses

Dr Terry Hillman, AM, member, and

Dr Celine Steinfeld, policy analyst, Wentworth Group of Concerned Scientists (*via videoconference*).

**The DEPUTY CHAIR** — Welcome to the Environment, Natural Resources and Regional Development Committee public hearing. The committee is hearing evidence today in relation to the inquiry into the management, governance and use of environmental water. The evidence is being recorded. The hearings are being filmed and broadcast live on the parliamentary website. All evidence taken today is protected by parliamentary privilege. Therefore you are protected for what you say here today, but if you go outside and repeat the same things, those comments may not be protected by that privilege. We welcome you and thank you for your time this afternoon. Today's evidence is being recorded. You will be provided with proof versions of the transcript at the earliest opportunity. Transcripts will ultimately be made public and posted on the committee's website. We do invite you to make a short 5-minute opening statement, and then we will allow committee members to ask questions of you and of your submission that you provided us. Dr Hillman, if you wish, are you able to make an opening statement first? I think Dr Steinfeld has indicated that you were going to lead the opening statement, and then she may well provide some other statements.

**Dr HILLMAN** — I guess the current situation of our talking to you has developed from an interest that the Wentworth Group has taken in the basin plan operation on a broader scale. That springs from a desire to really brush up on our understanding of how the plan was progressing, and in order to do that we received a small amount of additional funding which enabled us to cover some areas in which we did not have expertise. We have worked in the last year or 18 months I think, from memory, on catching up to how that was going and, as part of that, observing what the progress has been in Victoria.

We have made a submission to you. I am afraid that in parts it is quite general about the Murray system as a whole, but obviously the Victorian part of the system, which provides much of the water, is also well and truly covered by the views that were put in that report. I refer you also to our website, which contains the copies of all of our submissions to various people, where confidentiality will allow. Celine, who is really the mainspring of this operation in the sense that she coordinates it and keeps it all going in the right direction, is here and she can probably answer many more of the technical issues than I can.

**Dr STEINFELD** — Yes, I would just like to give you a bit of background on the Wentworth Group for those members of the committee who are less familiar with us. We were started in 2002, and water was really one of the focuses of the group right back at the beginning, and the group has been interested in water ever since. We played a role in the development of the national water initiative in 2004 and then subsequently in putting it into the basin plan development. Water has always been a very strong interest of the members, but it is not the only interest, and the members come from a hugely diverse background. While they are all scientists, they have expertise in different aspects of natural resource management — from vegetation to climate change to marine soil — and a key interest of the members is looking at policy and using evidence to make better decisions for the long term. It is in that capacity that we are interested in this inquiry today.

**The DEPUTY CHAIR** — Thank you. If you are happy, we might open it up for the committee to ask questions in respect to your submission but also obviously in respect to our reference.

**Mr RICHARDSON** — Thank you, Dr Hillman and Dr Steinfeld, for persevering with us and getting through the technological challenges there. We have heard from a number of submitters about the tension between supporting irrigators and their economic outcomes and ensuring greater water flows in an ever-pressing challenge of climate change and less frequent rain but then more rain events that lead to greater instances of blackwater and those severe blackwater effects. My question relates to the submissions that we have had about the tension between irrigators, economic outcomes and supporting employment and the food bowl and then also the need for environmental water flows, particularly to mitigate against and how they mitigate against blackwater events and lessen the severity of instances of severe blackwater events. I am keen to get a sense of how we balance those challenges in an ever-pressing challenge of climate change and having less of those rainfalls, and how we manage some of those challenges.

**Dr HILLMAN** — There are a variety of answers, I guess. In many ways Victoria is already doing that with its connections program at Goulburn-Murray Water, which is attempting to introduce efficiencies in the use of water and share the gain from that between the environment and consumptive users. So in fact the consumptive users get part of the water added to their current diversions, and the rest of the water is passed on to the Victorian water holder, who then uses it for environmental purposes. So that is one of the ways in which there is a win-win situation.

On a larger and longer scale I suppose you can say that, yes, we have managed to maintain the river as a working ecosystem that sustains itself and keeps itself tidy. Then the water is not going to be any use to anybody, and we can see that in all sorts of ways, like the more frequent and larger algal blooms that are occurring in the system and have done for the last couple of decades. That sort of thing will lead in time to the need for water quality actions like carbon filters et cetera on water supplies, which can only be urban water supplies, along the system and the cost involved in making the water usable.

**Mr RICHARDSON** — Does Celine want to add anything to that or has that covered it off?

**Dr STEINFELD** — I would like to mention the water reform in 2004 and the national water initiative, where there was a huge opportunity to improve the productivity of regional and agricultural landscapes while adapting to the future with less water, and we have been very keen on finding that opportunity — those win-wins that Terry discussed — in implementing water reforms in the past 15 years. It was clear in the millennium drought that too little water in the river is a huge detriment to both the environment and irrigation communities, so it is in everybody's best interests that we manage water sustainably fairly for the long term.

We have recently done some investigation into the predictions of climate change in the future, and in Victoria there is some considerable variation by 2030 that rainfall in the northern parts of Victoria could decline by 11 per cent or increase by 5 per cent and by 2050 it could decrease by 17 per cent or increase by 8 per cent. So there is a lot of variability but certainly a likelihood of a decrease, and those changes could multiply threefold in terms of runoff. We have got a huge consideration there for climate change, but these current reforms provide an opportunity to help communities deal with those pressures while at the same time ensuring that the most important, vital assets are protected, including the ability to maintain water quality and underpin agricultural and environmental uses of water.

**Mr RIORDAN** — My question is about the infrastructure required going forward in terms of managing the water that we have to get the best outcomes for agriculture, communities and the environment. Do you think there is other infrastructure that should be developed in the area to improve the efficient and effective use of environmental water?

**Dr HILLMAN** — Can I have a shot at that? Mr Riordan, I think probably we are at the point in the development of infrastructure where we really should be testing and learning to understand what we have got. I do not think we have spent enough time on that, in particular where there are issues of risks involved and how we manage those risks. No doubt we will manage them, but we need to know how.

For instance — and this ties back to blackwater and water quality — a number of these structures are designed to imitate small floods on the flood plain when there is not in fact a flood in the system, in other words just creating one and therefore saving the need to release a lot of water to produce that effect, which obviously is a sensible thing to try. One of the risks involved is the risk of creating blackwater incidents, particularly if this flooding happens in the summertime when the water is warm. Then it will pick up a lot of nutrients, and you will have blackwater fairly quickly. As we are operating this in a low river rather than a high river, as it would be if that was a release of water, we are releasing blackwater into a very low flow, and that creates considerable risks with the fish and large crustaceans in particular. That is just an example of a risk that we have not explored.

I think it would be very useful to be able to sit back for a couple of years, look at the data that we have got and make sure that we can manage the risks that are entailed in those sorts of interventions. I am not saying for a moment that they are not useful and they will not be necessary in the future, but we just need to better understand the mechanisms that they depend on.

**Mr O'SULLIVAN** — My question is off the covering letter that was sent into us by Peter Cosier, and it talks about relaxing the constraints to allow higher peak flows. Can you explain how that would work in a realistic sense, because that is not an easy thing to do.

**Dr HILLMAN** — It is not an easy thing to do. I have been on the community reference committee that overlooked the Yarrowonga study on that for a number of years now, which has involved VFF, state departments and the odd oddball. The reason it is necessary to explore this is — let us take, for instance, the Barmah forest. Overall it is one of the great resources of Victoria of course, and the overall job is to try to

reduce the number of floods into it during the summer and autumn and increase the number in winter and spring when they do some worthwhile [inaudible] environmental outcomes.

It is very difficult to do that because, with the constraint of 25 000 megalitres per day going down the Hume to the Yarrowonga stretch, and with the further constraint of water going out of Mulwala out past Yarrowonga, it is not possible to get the water down to the system that would flood a significant part of the Barmah forest. In other words, with those constraints in place we are reduced to not being able to produce any realistic overbank flows in the spring and summer. In winter and spring I can do it. Unless it is on the top of a very large natural flood or unless we have already got what would amount to a significant flood, we cannot get the water out of the system onto the flood plain. What needs to be done if we are going to go down that path is to arrange for some mechanism by which we can pass high flows up over those areas, even though we know that they would represent a threat to some component of the people who live there.

**The DEPUTY CHAIR** — Thank you. Dr Steinfeld, do you want to make any comments?

**Dr STEINFELD** — I would just like to talk about the solutions that have been used in the past to address constraints. The obvious one in terms of building roads and bridges is also looking into options around covenants and easements to compensate landholders for any changes in land value as a result of managed environmental flows harming properties. There have been successful examples of constraints being removed, and it is important that they are given the benefit that Terry has raised.

**Ms HALFPENNY** — Just a quick question before I get to my question about what you have just said. When you said there were examples of where there has been compensation to landowners, where has that been and what form did it take?

**Dr STEINFELD** — I cannot give you any examples right now. I know that they have been negotiated, but I would be happy to provide those to you on notice if that would be helpful.

**Ms HALFPENNY** — Yes, thanks. The question I had was around the submission that you put in. This is in terms of our terms of reference around the barriers that exist, management tools and how to utilise water. What you are saying on page 4 is that the state governments have put forward 37 projects that on paper have the potential to achieve environmental outcomes using less water, but I understand that none of the extra water has been recovered to date. Is it because these programs are not possible or they have not followed through on them? Why have they not been successful?

**Dr STEINFELD** — To give you a background on the kinds of criteria we assess projects against, a lot of the criteria were related to the basin plan objective. I guess we reviewed these projects in the context of implementation of the basin plan, so key criteria were around whether these projects were consistent with those objectives in the basin plan for the environment. There were some other criteria around risk. For example, are there risks introduced by infrastructure projects or other proposals that were not mitigated to acceptable levels? We were provided with the business cases for some of the projects from the Victorian government, which enabled us to do an assessment which we were appreciative of. Some risks have been mitigated, such as blackwater and salinity events, while others have not to acceptable levels.

There were other issues around the entitlement of a water saving created by these particular projects, including rules-based changes, where there was uncertainty over the enduring nature of the water saving given there were no entitlements created. On the basis of our assessment, we determined for 22 Victorian projects that were submitted that for four we required further information and for 18 we said that they should not be accepted for actual adjustment in their current form. We made a set of recommendations to the Murray-Darling Basin Authority, which included seeking further information from the state about how those issues could be resolved.

**Ms HALFPENNY** — Are the assessments of the projects public information or not?

**Dr STEINFELD** — Yes. The submission that we made to the Murray-Darling Basin Authority includes the report of the assessments of the 37 projects, and that is available on our website.

**Mr YOUNG** — Thank you for talking to us today. I just wanted to ask about some stuff out of your submission, and it relates to another line of questioning that we had just previously with the Murray-Darling Basin Authority to do with trust and the social licence people are granted for environmental watering. In your

submission you talk about building trust and having greater transparency, which is obviously very important if we are going to find a social licence that goes across many different factors and covers environmental aspects as well as farmers, tourism and other recreational users. Have you got any commentary on the social licence that exists and how it could be improved for environmental watering?

**Dr HILLMAN** — I am not a social scientist and I do not think Celine would claim to be one either, so I guess I am just going to repeat what I have heard other people say. I think the original airing of the precursor to the basin plan would indicate that there was not a lot of social capital behind all that, hence the behaviour in Griffith at the time. Certainly in the past there has been a sort of leaning towards keeping things in house, I imagine, not only by the authority but in general and even in some of the state departments, because a lot of the information is commercial and involves other people's buying and selling of water and so forth.

I see a big willingness in the people in charge now to recognise and take seriously the need for transparency, which has been lacking until recently, and I hope that will bear fruit. But at the moment I suspect that there is a big lag in that. A good example is — if we have the time, it will just take a minute — we had a study done on the socio-economic ramifications of the plan, which are attached as an appendix to our report, which is on the internet. Basically that matches up with the assessments of various communities in the basin, including Griffith, which showed that Griffith, New South Wales, had received the most per capita input from government money et cetera and had benefited most from government support.

Another study, which was carried out by the ANU at about the same time, looked at community satisfaction with the plan and found that Griffith again came out on top, but this time as the community least satisfied with the plan, which is a kind of contradiction except that it seems to be saying that despite things going very well in Griffith, financially and socially, there is a perception that the plan is a bad thing and needs to be opposed. I imagine that is best remedied by complete transparency in our operations.

**Mr YOUNG** — Dr Steinfeld, do you have any comments on that?

**Dr STEINFELD** — No, I have nothing further to add.

**The DEPUTY CHAIR** — I would have loved to have been able to ask you a whole lot of questions about parts of your submission in relation to government buybacks and impacts, but unfortunately time is against us. We have commitments.

**Dr HILLMAN** — Is it appropriate for us to volunteer to answer questions in writing or whatever if you want to do it that way?

**The DEPUTY CHAIR** — Yes. Given the time constraints, if you do not mind, I might just pose a couple of questions in writing and send them to you both if you would not mind just giving me a response. If there are any other committee members who wanted to canvass questions that we have not had time to ask today, perhaps we can do that as well. Because you have been with the Murray-Darling Basin plan and also the national water initiative going way back, as I have, obviously I am keen to hear how you think that has worked generally up to this point. You have noted that the Prime Minister, who was then the Minister for Water and had carriage of some of that plan, has committed the commonwealth to seeing that plan out, but there has been a whole lot of different variances along the way. We will pose some questions to you, which we will link to our inquiry, and if you would not mind just responding to them —

**Dr HILLMAN** — No, I think that would be fine, don't you, Celine?

**Dr STEINFELD** — That would be no problem at all.

**The DEPUTY CHAIR** — Thank you very much. Thank you both for your time this afternoon. I do appreciate it has been difficult for you, given some of the hiccups along the way. We do appreciate the fact that you have made a submission through your group and that you have made your time available this afternoon.

**Dr HILLMAN** — Thank you.

**Dr STEINFELD** — Thank you, members of the committee.

**Committee adjourned.**