# Transcript

# A conversation with the Commonwealth Environmental Water Holder (CEWH)

(Webinar)

# 19 October 2021, 12 pm

(Note: speakers frequently refer to the “CEWO” which is the Commonwealth Environmental Water Office)

Siwan Lovett:

Good afternoon, everyone. It's lovely to see all of these participants coming together through our conversation this afternoon. My name's Siwan Lovett and I'll be guiding our conversation today with the Commonwealth Environmental Water Holder. Before we begin, I'd like my friend, Jason, to come to the stage if you'd like and provide an Acknowledgement of Country. Thanks, Jason.

Jason:

Thank you. I'm just looking for my slide. But it's okay. We acknowledge Australia's traditional owners and respect... My slide's gone down. And respect the nations of the Murray Darling Basin, their elders, past, present, and emerging. I want to give you a traditional welcome from my Country. Hello, everyone. [Aboriginal language: **Yaama ganu**]. I acknowledge the Yuwwalaraay people, who are the traditional owners of the land on which we meet. And pay the respects to elders both past and present. [Aboriginal language: **Giir Yuwaalaraay nhalay maran nguwalayy winangaylanha Girirr wayamaa winangaylanha ngiyani  maran**]. Extend and further extend the respect of others here today. [Aboriginal language: **Ngindaayluu  yilaadha  winangaylanha  ngiyani**] now and always. Good luck today, thank you.

Siwan Lovett:

Thank you so much, Jason. I love hearing language. It's just so beautiful and melodic to hear. Joining me today for our conversation, Hilton Taylor, the Commonwealth Environmental Water holder. I've got Jane Humphries, who's at a locally engaged office based in Moree and Anthony Wilson, otherwise known with his hyphen there as Willow, who is a locally engaged officer based in Wodonga. This week is water week and the theme for water week is caring for water and country. It's with this spirit of caring that we're going to be answering and listening to your questions today. If you have a question, we'd like you to place it in the chat box and to find the chat, it's at the bottom of your screen as a little bubble. If you just click on the chat, then you can ask your questions. We'll all be moderating those questions and then they'll be coming through to me to ask any of our panelists.

Siwan Lovett:

I do want to set some ground rules for our conversation. We all come to our conversation today with different life experiences and backgrounds. We may not always agree, but my goal today is to run this session with mutual respect so that we listen to each other and listen to the answers which we'll be providing. Hilton, I want to start with a question that I do get asked quite often, which is why do we need water for the environment?

Hilton:

Thanks, Siwan. That's a large question right from the get go, so thanks for that. The other thing I'd like to do is thank Jason for the acknowledgment of country and the welcome to country today. That's an important part of what we do here in the Commonwealth Environmental Water Holder's office working on country with traditional owners, so I'd like to acknowledge that. Why do we need environmental water? What we really need to think about is how different rivers are now from their natural state. If we think right across the basin from down in Victoria or on the Golden River around through the Murray and Murrumbidgee right up through the Lachlan right up into the North, right to the border rivers the Macquarie in between. Every one of those major rivers has a big dam or more than one big dam on the headwaters. That fundamentally changes the patterns that those rivers run. In the springtime or even summertime depending on whether they're in the Southern or Northern parts of the basin, when those rivers ran naturally, a whole lot of that water is now being captured in those big dams and it's been let out over the year and used for really productive agriculture.

Hilton:

The Western plains and parts of the Murray Darling Basin out on the flatter country was incredibly fertile and productive. But we need to add water. But in doing that and changing that whole system into a really productive agricultural system, we've also got a little bit out of balance with the water in our rivers. Sometimes that water is being held back in those dams at a time when the native fish and vegetation was requiring and in other times of the year when the water starts making its way down the river. It gets partway down the river and then is extracted for productive use. As a consequence, these systems are not operating as they evolved. That's a really important thing. Evolution takes millennia and we've changed it in less than a century. These rivers are really being turned on their head in some cases in the way they run. Even the millennium drought, it got to a crisis point. We saw whole river systems going blue-green with algae, we saw salinity issues arising, we saw acid sulphate soils coming to the fore, we saw forest and water holes and billabongs just drying up and dying.

Hilton:

It was decided amongst state governments and the federal government that some water should be recovered and used to keep these river systems healthy so that there's healthy industry, communities, and environments right along these system. I think the "why" is pretty clear when you step back and think about it over time. It's a big responsibility, but it's a really important part of getting the balance between community, industry, and the environment.

Siwan Lovett:

All of us remember. That was devastating, pictures of our rivers looking very, very sad and fish very stressed. What I'm interested in though is given, as you say, you've got the whole basin. How on earth do you decide on which bits to water and how do you go about that planning?

Hilton:

That's a complex thing as well and I've actually asked if we can have a slide to have a look. Thanks. That's come up. One of the things that people need to be aware of is that the water that has been recovered for the commonwealth environmental water office is about 15% of the held water entitlements across the Murray Darling Basin. That comes from right up in Queensland, down through New South Wales, into Northern Victoria, and down into South Australia. There's a whole lot of water policy around how much water should have been recovered? How much... Which places, how it should be done. That part of the policy is hotly contested and debated amongst state governments, industry, commonwealth government, and that's a really important process. The water that has been recovered is then transferred to the commonwealth environmental water holder. It's our responsibility in the commonwealth environmental water office to manage the water that has been recovered rather than being involved in those policy decisions about how much and where and when.

Hilton:

What becomes really important to us as the holder is that there's a large portfolio of water, each worth a lot of money. It's about 120-ish different entitlement types across one million square kilometres of basin and in thousands of different individual licences. Actually planning and thinking about how we use that water is a major role, a major part of our work. The things that really draw at our use of water in any year are around the science. What's science telling us about when, where, and how water should be used in these systems? That goes back to the rivers are being changed in terms of their timing, how they run, and where they run. Communities, people know. They live on those rivers. They use the rivers for their business and recreation. First Nation people are very strongly connected to their rivers for cultural purposes. Just health and well being of having these rivers in the towns. Community information is an important part about how, where, and when we use our water. We've got the science, community, and then we've got the physical stuff about how much water's available, when did it rain last, is there a certain area in good condition or in really poor condition, can we physically get water to a site that needs it? Is it too hard on the flat plain or can we get permission or access to put the water there?

Hilton:

All of these things play into our planning. The other thing that's a really important part of our planning is that each year, we review and monitor every piece of water that we deliver. We get really good results. We know whether we've got the outcome that we're aiming for. We can see where the bird's breed or where the fish spawned and then we can go back the next year and see whether those baby eggs actually turned into baby fish. Getting that feedback loop about what's working and what's not, listening to communities and the science, and reading the landscape and the environment, that's a critical part of our whole planning system.

Siwan Lovett:

Relationships sound incredibly important in terms of actually then deciding where the water will be used. Relationships, obviously, within nature, between people and nature as well. What are some of the successful areas? What are you feeling nice and proud about in terms of has done over the last few years?

Hilton:

I think that's a really important issue or question to deal with. But the thing that we often get asked is, "You've got all this water. What have you done with it?" Really there are some big things that have had a major impact upon river systems in people's lives in the Northern Basin through the most horrendous drought of 1819. They rewrote record books there in terms of inflows and drought and low rainfall and stuff like that. What we saw in the Northern Basin was some of our connectivity flows were actually able to keep refugees alive in those river systems and fish in holes to hang on between the drought. Some of the vehicles in those communities, they were just in dire straits. In getting that bit of environmental water through that system made a huge difference to those communities and the town and the people in the town, not only in a physical sense. They had water. But in an emotional and well being sense as well. Water in the environment is a critical thing. We've managed to get water birds breeding down in the Murrumbidgee system and it's down at Gayini Nimmie Caira in years where bird numbers are declining, we're able to get a refuge. We had 18,000 pairs of ibis breeding down in that area. It's just fantastic.

Hilton:

We've managed to have 10 years of continuous flow, sometimes just a trickle of water keeping the river connected to the Coorong. If everyone remembers the millennium drought, how desperate that part of the river system got. It was just dying from the bottom up. Since there's been an environmental water, we've managed to keep that connection since the millennium drought. There's some really big, important things that are occurring through the use and delivery of this water.

Siwan Lovett:

I've actually read about fishermen Coorong just being gobsmacked, I guess, in a way, about how much it's recovered and how nature will actually recover when you provide that all important water. We've got a lot of water around at the moment. What are the plans for '21, '22? I know you guys have just released your annual watering plan. What are we looking at doing for the next year?

Hilton:

When we do our planning, one of the things I didn't mention before is that we actually plan for all scenarios because none of us have a crystal ball. That'd be fantastic if we did and we'd be able to work out, "Is it going to be wet or dry? How's it going to pan out?" This particular year, there are good reserves of water across a lot of the basin. But it's really important to really build on the work that we've done previously. We've got to keep that momentum moving forward. It's a bit like farming. Just because you have a good year one year, you don't sit back and spend all your cash and think, "I'll be all right." You actually make hay, you put it in a shed, you look after it, and you leak it out over other years. I think managing our water resources is like that as well. If we get a good year, getting the water that we've got in storage and using it to extend the flow events when they start getting cut off and caught in dams. Making sure those flow events extend long enough to get bird breeding through to their final phase.

Hilton:

Getting water into those wetlands. There's Ramsar wetlands right across the Northern Basin, absolutely hammered during the drought. It takes more than one season for them to recover. So we're using our water in those systems up there Narran Lakes and Gwydir wetlands marshes. They're all Ramsar, they're internationally recognised wetlands. We're getting water into those places and really trying to give them some resilience because never to believe there will be droughts. We're getting water and fish out of Menindee Lake system down along the Anabranch system linking that up to the Murray. We'll see thousands, perhaps millions of golden perch make their way down along that system. Then once they're in the Murray, they can go back up the Darling mainstem or back up the Murray or down into South Australia or if they become kelp. Having these things link up like that is just fantastic. Building that resilience, building on what we've done in previous years is really where we're heading in the future.

Siwan Lovett:

Fantastic. For anyone who wants to see the watering plan, we can actually provide that link for you. Hilton, you provided a big picture. I'm really interested to know what it's like on the ground. I'm delighted to actually ask Jane now. What's it like for you in Moree Jane? What are some of the things that you're excited about doing in your role as a locally engaged officer?

Jane:

Thanks, Siwan, and it's wonderful to see everyone that's on here today, the broad cross section of people. I guess the overwhelming excitement is just how good things are compared to where we were a bit over 18 months ago, the contrast to what we're seeing here now is fantastic. We've had some of our catchments like the Gwydir. We've had floods earlier in the year. We've had rivers that have run now under their own steam just from rainfall run off for months on end. It's the most wonderful thing to be seeing things happening naturally. It's so important for our community, so we've got... Our dry land farm is looking at possibly one of the biggest harvested irrigation communities really interplanting. Our wetlands are just amazing. Part of this role is you get to work with a whole cross section of people and departments. I was lucky enough to be able to help out with some of the monitoring work recently out on the ground with local staff from New South Wales department. I haven't seen the Gwydir wetlands. That's where I grew up out in that country. To see it looking so good and frogs and the birds starting to build up, just to know that compared to when the millennium drought, you're thinking, "Will this country ever recover?" That power of what people working together can do. It's just amazing.

Siwan Lovett:

It’s a great photo you’ve chosen- tell me a bit about what's happening here.

Jane:

I chose this picture. This was back from... Hilton mentioned it, the Northern fish flow. It's one of those connectivity events that came out of the Border Rivers and Gwydir and connected along the Barwon-Darling. This one was especially important because it was in... It broke a really long cease-to-flows. It was about just keeping fish and native animals alive and hoping that mother nature eventually came along. This one's actually in the beautiful town called Collarenebri. It's part of this one. We've actually travelled along the water a bit. Sometimes we're a bit in front of it, sometimes a bit behind it. And so there’s three Northern Basin LEOs (Local Engagement Officers) now, so there's Jason, who did our wonderful welcome to country. Sal, who's in Goondiwindi, along with our other LEOs down south. We went in all the different towns like Boomi, Goondiwindi, Boggabilla, Toomelah and just sat down and had our bits and pieces, had some food, had some stuff to share, and talked to people. I love this photo because local community people came out and talked to us. We had the REO (Regional Engagement Officer) from the Murray Darling Basin Authority, Annabelle. We had David from New South Wales, energy, environment, and science. Jason Wilson from the commonwealth environmental office. The water was coming along the rivers and the community just told us how much it was needed to start off with and how relieved and pleased they were to see it there.

Jane:

For me, it's not a flash photo, but it just captures that people are just sitting down talking, sharing, and the people side of it's just so critical. It's what matters to people and how we can learn from each other. It's a snapshot of an event because it had everything. It had the planning, which really involved a whole range of different departments from Queensland, New South Wales all working together. Environmental water advisory groups, aboriginal communities, shire councils, everyone was in the picture saying, "What can we do? What's our options?" Then the monitoring side of it, we drew on the expertise of DPI Fisheries, MDBA (Murray Darling Basin Authority) and other consultants about tracking what was happening and seeing how things were travelling. It was just one of those events which was really important. It was about... We talked about connecting the river systems, so we're also connecting the community to what's going on, making sure people are involved.

Siwan Lovett:

Listing all those names, I thought you were going to start a famous song. [crosstalk 00:19:49] lovely names together. Just before we go to some more questions, which I can see are coming in big and fast, which is wonderful. Let's hear from you a little bit about your work in the region that you're in. I know we've got another beautiful photo here. What's happening here?

Willow:

Yeah Siwan. Thanks for having me along today. As what Jane said, I think she summed it up pretty well. Being LEOs (Local Engagement Officers) we're really lucky to be working where we do with our the communities. I'm lucky enough to work down in Albury, Wodonga. I cover both the New South Wales side and the Victorian side, so I reckon I've got the best of both worlds, this great part of the world down here. This particular picture here is one of our projects that we've been involved with. It's called Mullinmur billabongs, which is down in Wangaratta. It's almost right in the middle of town, actually. It's about a four hectare site in the middle of town. The really good part about this project is that it's been driven by the community. Jane mentioned a lot there before just how important that is, but it's the Wangaratta sustainability network who got hold of the site. It was a bit of a mess down there, weedy, carp infested lagoon down there. They thought, "How can we actually change this to make it worthwhile?" I suppose one of the advantages to give the LEO (Local Engagement Officer) model a bit of a plug here too is that in previous works, that would work with a lot of those people before. They knew the context and they knew I was now working for the CEWO.

Willow:

They relied on us. They called and made us help out with the site and try and work out how we can actually improve the ecological values there. Over the last two or three years, I've actually grown the actual lagoon, removed all the carp from the side, and down a lot of the weed work around that area. It's been done by the networks and also a lot of the school groups, the Landcare groups around the area and that too that have actually been involved in it. I suppose that's where they called on us with the environmental water, actually say, "Can we actually use some of the CEWO water that's in the other system to get it back into the billabong there once they introduce catfish?" Again, I played a part in that by actually connecting the sustainability network with the Barham area because we worked on a program over there where they got to decommission the lagoon over there that had no catfish in it. I hooked up Kelvin, the fellow there in the picture with the angling club over in Deniliquin. I actually got a permit to remove some of the catfish and bring them back... Translocate back to the Mullinmur wetland.

Willow:

Then we put our CEWO water into that lagoon system there and we reintroduced the catfish into the site and they've been going gangbusters in there. They're really thriving and they have educational days down there with the schools in the local area. We do a lot of research down in that area. You can see the nesting boxes there in the background. Year to year, Cath McInerny, who's the other lady there in the picture. She works for the Northeast Catchment Management Authority. She's the environmental project officer for them. We worked together with the VEWH (Victorian Environmental Water Holder) in Victoria and every year, when we listened to the community about how low the lagoon is getting and we give that a bit of a top-up when needed in that area. It's a fantastic project and it ticks all those boxes of working together and being able to rely on that local knowledge, I suppose, to be able to work with the community. It's fantastic.

Siwan Lovett:

Great, thank you. Thank you so much, Willow. I can see some questions, so we'll go to answering some questions now. But thank you for that introduction so that people know who our panelists are. Our first question is from William. Hilton, I think I'll throw this one to you. If climate change is going to result in a drier climate, what are the implications going to be for environmental water management? Is climate change actually being factored into your planning scenarios?

Hilton:

Thanks for the question. I'm just having a technical issue here. I've got a black screen. I can see, I can hear perfectly and just see names and no faces, no videos, no pictures. I'm not sure you can do anything about that, whether it's me. But with regard to the...

Siwan Lovett:

It's fine, Hilton.

Hilton:

That's a bit disconcerting.

Siwan Lovett:

It is quite disconcerting, but you're looking good.

Hilton:

Okay. With regard to climate change, it's a major issue for everybody, for all the industries and environmental water management is no different in that sense. In the short term, we absolutely deal with climate change in every one of our annual plans. As I indicated at the beginning, we plan for a range of scenarios every year from dry through to very wet or very dry through to very wet. Depending on how the year pans out, we use our water and we're adaptive and responsive along that way. On a slightly longer term basis, climate change is also able to be taken account of in our work and planning in that the allocation systems reflect water availability, therefore, rainfall and climate, short term span as well. In the longer term, this is where the policy issues become much more significant for everybody involved. It doesn't matter whether you're in industry, town water supplies, or you're delivering environmental water. What will it look like into the future? The policy issues around how the available water is divided up between the climate and other important critical uses will be an issue for community and politicians to work out into the future.

Hilton:

From our perspective, however, we've got some major decisions to make in terms of do we think about protecting individual refugia where we can get water to and ensure that we maintain a reading core of environmental assets, whether they're vegetation assets or bird assets or aquatic life, frogs, things like that. Whether we work on the basis of really protecting those vital sites so that come good times again, the environment can respond and expand out of those sites or do we try to make our water go a little bit right across the sites and just keep the whole system ticking over? Some of these things, we're working with scientists and starting to think about, "What will the future look like under climate change?" For all sectors, it's a real concern for us also.

Siwan Lovett:

I guess it's preparing for what may or may not happen. There is that uncertainty there, but certainly by using scenarios, you can actually have a bit of a sense of what may or may not be able to be done.

Hilton:

That's right.

Siwan Lovett:

I have a question here from Claire. Constraints in the Southern Basin limiting the delivery and effectiveness of the water already for the environment that's already been recovered for the environment. Hilton, should I go to you for that one as well?

Hilton:

Yeah, I'm happy to have a crack at that. Thanks, Claire. That's a major issue for us. As I outlined at the beginning, we have around about 15% of the held entitlements across different basins. Some of those basins are quite strict flow constraints. What people mean by constraints is it's how high a river can flow before it starts to have third party impacts. Whether that's through development on flood plains or where people's pumps are and things like that. Having the flow limited or the regulated flow limited to low levels prevents or impedes our capacity to get water into certain parts of the flood plain into some of the flood runners out into the billabongs out into inundating some of those forests that naturally would have been inundated every Spring without the dams on the headwaters capturing a lot of or taking the peaks off a lot of those flows. Constraints do have a big impact upon the effectiveness of our water and it's something there's a lot of work going on with the state governments, both in Victoria and New South Wales, looking at ways to work with communities to work out, "Where can we put water safely or what sorts of changes need to be made to infrastructure or easements to allow water to be more effective in its environmental outcome without having impacts upon the community?" Rely on those rivers also.

Siwan Lovett:

I guess it's those are testing to see what works and what doesn't. Does that happen quite a bit as well as you're going through these discussions?

Hilton:

I think there's got to be a lot of data and conversations had with communities around what works and doesn't work, what the impacts are and what they're perceived to be. It's had a bit of a stop/start history, the alleviation of constraints, and there's been different mental bubbles of what constraint, relaxation might look like. I think some people have this concept that constraints are relaxed, river managers are just going to flood everybody. That's absolutely not the case. Commonwealth environmental water office and, I think, river operators in general really pride themselves on minimising and avoiding third party impacts wherever possible. If there were constraints relaxed to a certain level, I can assure you that as the commonwealth environmental water holder, I'd be very circumspect about how we release water and how we worked up towards those constraints and seeing what the actual outcomes were rather than the model or theoretical outcomes.

Siwan Lovett:

Yeah, great. Jane, you mentioned earlier about monitoring. I've got a question from Andrew here, who's just asking how do we monitor environmental released to ensure they reach the intended areas? Have you got a comment about that?

Jane:

Absolutely. Prior to working with the CEWO, I was involved with what was then New South Wales, that side of it. It's a whole range of monitoring from the really basic watching gauges and checking flows to going through... Being out in the ground, seeing where water's getting to, having a look. Of course, we've got people that live along our rivers and in our wetlands, so they're always a source of wonderful knowledge. It's really basic monitoring from just, you know. Where's the water, how much of it, how's it going, how's it looking? Then it's a whole lot of other monitoring that happens, both to commonwealth programs and state programs. They cover anything from water quality through to water bugs, critters, birds, frogs, and of course, plants. I really love my plants. There's different sites. Obviously, we don't have the ability to monitor absolutely everything all the time. But there's a range of monitoring programs that are really looking to, "Is the water getting to where we want it?" Just as importantly, "What are the outcomes?" We're trying to support the birds and frogs. What's the response to how they're going?

Jane:

It's building that up event by event and then year by year and then longer term. Looking at that big pattern of what's happening.

Siwan Lovett:

Andrew, if you're particularly interested, there is actually a flow monitoring evaluation and research program funded by the CEWO that's looking at new ways of monitoring, as well as building on existing ones. We can also put that in the chat. You can go and have a look at those areas because there's some really interesting work being done there.

Jane:

There's a lot of other organisations doing work too. Obviously, there's fisheries based in Queensland, New South Wales, Victoria. They're also doing work, so there's lot of complementary things happening as well.

Siwan Lovett:

Yeah. The water industry in Australia is actually pretty small. We tend to know each other, so we do collaborate.

Jane:

Yeah.

Siwan Lovett:

Anthony (Willow), I wanted to ask you a question now and this one's come from Tim. Tim's asking, "How does the CEWO incorporate some of the nonflow complementary measures to maximise environmental outcomes from recovered water?" Is that something you can respond to?

Anthony:

Sorry?

Siwan Lovett:

It's the nonflow complementary measures, measures that will actually make the water do more. I guess we're talking some of the infrastructure as well there. How do the two incorporate the nonflow complementary measures so that the environmental outcomes are even better?

Anthony (Willow):

I suppose just on that question now, without flicking it to Hilton. He's probably a better one to probably explain that one, just from that higher level [crosstalk 00:33:02]. Can I put him on the spot?

Siwan Lovett:

Yeah, sure. Hilton, I am going to put you on the spot.

Hilton:

That's fine. Thanks. The nonflow complementary measures are a really important part of our considerations. I’ve seen in a range of sites across the basin, fantastic fish screens, for example, where people are installing them at big irrigation off-takes. What this does is helps preserve and enhance the benefits we're getting from our flow measures. For example, if we put a flow down, get a fantastic outcome, we’re breeding a whole lot of baby fish. But then all those baby fish just get sucked up. It pumps them out on paddocks somewhere. That's defeating the purpose. A nonflow complementary measure that can really complement our flow of things would be having fish streams on those off-takes so that when the water goes out, the fish stay in the river where they belong, things like that. Fish ladders, getting water into wetlands that otherwise get water. Actually using pumps and things like that. There's a range of complementary measures that really enhance what we can achieve.

Hilton:

I just noticed in the chat also, there's been a few followup questions around the constraints. I'm quite happy to go over the issue at some stage when [crosstalk 00:34:30].

Siwan Lovett:

Yeah, sure. Why don't you continue on there and then we'll come back? James got a comment about First Nations that I'd really like to get to. But build on the constraints because that's what we were talking about.

Hilton:

Yeah. There's two that go almost hand in glove, one from Bob and another one from Claire. They're about recovering how much more water is the water you've got really that effective. There's a few things that all come together there. Clearly, the constraints were relaxed and water could get on to a greater part of the flood plain. We would get a better outcome. There's no doubt about that and I think that answers Bob's question pretty categorically and we're very keen to see constraints relaxed so that we can enhance the environmental outcomes on a bigger footprint. That's what relaxing constraints achieves. The other thing that it does is gives us varied ability in terms of our timing of when we can get water, not only to those immediate sites, but then to other sites adjacent to and out further onto the flat plain. But the point that Claire made about is there any point in recovering more water if you're already constrained? Claire, if you think back to my point again, we hold about 15% of the held entitlements. It's a fraction of the water that used to go down those rivers. There is far more environmental assets all the way down along our river systems than we have water to service.

Hilton:

Even with those constraints, there are still assets that we got to further downstream or off on certain tributaries and things like that where we can use every drop and more of the water that we've got. I think that's a really important thing. Once upon a time, those sites got 100% of the water. Now we've got 15% of that water that we can manipulate and manage around the place.

Siwan Lovett:

Talking with flows and where we allocate those flows, how much of a role do First Nations actually have involved in identifying the values and priorities of e-flows? I know this is an area that is really important to me, that we actually want to see genuine change and involvement of First Nations. Hilton, maybe you could comment on that one.

Hilton:

Yeah. This is an area where, I think, we're certainly improving. If you look at our annual plan for this year, in front of it, there's what we call the Mildura statement and it's actually come out of a workshop that was run where First Nations people were deeply involved in guiding us around what the environmental priorities are for them. Last year, we ran workshops in both the North and South of the Basin to gather information from First Nations people across a range of tributaries and sharing this information that what we can and can't do with environmental water and what's important from an environmental aspect for First Nations people. Building and incorporating that into our planning is becoming an increasingly important part. It's really important that I make the distinction here between really taking account of First Nation's environmental priorities versus cultural water that would be available to First Nation's people to do with what they want and for them to have sole discretion over. They may want to trade that water, grow a commercial crop, use it for a cultural outcome, use it for an environmental outcome.

Hilton:

The commonwealth environmental water holder, under the legislation, it was very tightly bound in terms of the things we can do with the water we have. We need to have regard for First Nation's input into our water use. That's a really important thing, that it's really got this focus on the environmental aspect of it by legislation. That's not something we can choose to ignore. But the cultural order is a separate issue and I'm sure there's lots of people who have very strong views about that. It's not an area that we can really stray into here.

Jane:

Can I add to that at a really local level?

Siwan Lovett:

Yes, please do.

Jane:

Just in the areas where we work, we've certainly been told by the local community. I live and work on Kamilaroi country and their advice has been to us that we need to work within a nation. We're building up to a project that builds on that foundation of the environmental water guidance project that happened in the previous year, both through NBAN (Northern Basin Aboriginal Nations) and MLDRIN (Murray Lower Darling Rivers Indigenous Nations). But actually working with the nations to get that environmental water guidance and to learn and incorporate those. The other aspects in some of the catchments is environmental water advisory groups and they have aboriginal community reps on those. Both learning from those reps and also finding ways to support those members in working with the local community, so it's that knowledge sharing and building. Hilton's spot on, it's something we've got to keep working on and improving on.

Siwan Lovett:

When it comes to working with private land holders, can you tell me a bit about how that's working in Edward Wakool?

Anthony (Willow):

Sure. I think we've come a long way, actually. Right through the whole of the basin, really working with land holders, but the Edward Wakool area in particular has been really positive over the last few years. It fits back into the constraints issue we're talking about before. We work really closely with the land holders in the Wakool association, individual land holders, and other groups through that area to say, "What flow do we want to see at the right time of year to try and get our fish spawning and that sort of stuff?" Even over the last couple of years, we've seen when we go to these groups, they say, "Let's try something different." We might have a constraint here of 600. Let's try this year with everyone involved and everyone to agree to maybe 800 at this particular time. We get out there and monitor these sites. We get out on the ground, we're always on the phone if we're not out the paddock. We're always out, aside from COVID. We’ll say "That's fine. We can go a bit higher and do that side." We're pushing but we're doing it with the community and the land holders all the time. I think that's a real step forward and I think Hilton said it and Jane said it too. I think people are starting to get a lot more confident that we're not about just blasting water down these systems.

Anthony (Willow):

We're all right. Don't worry about anyone else. That's not what we're about at all. It's about communication and making sure we're all on the same page. There's also other projects that we've got out there at the moment where land holders actually are really grabbing hold and almost having ownership of the project. They're saying to us, "Can we try this on this particular creek system here?" We run with it. We work with MIL and others to deliver water in some of these sites and again, similar to the Mullinmur

project, getting native fish back in some of these areas and it's great to see the land holders. They knock on the farm at night and might say, "Look, I'm heading down the creek with a beer. I'm just going to have a look at it and I'll report back to you on what I'm seeing." It's great to see these people who are becoming involved in really having ownership of it. Around that Wakool, we're really seeing steps in the right direction, I think, moving forward. It's just fantastic.

Siwan Lovett:

I've been involved a bit in the small bodied fish and we are talking tiny little fish. I do remember one land holder we were working with saying, "You're not going to get much of a feed out of that." But pretty soon, they do start to say I’ve got some pygmy perch in my dam. What have you got in yours?" Hilton, I've got a question for you here about the rules and notification structures for moving environmental water around. How does it impact the market and what can be done to ensure the movement of water doesn't adversely affect that market?

Hilton:

One of the things that's really important to understand about the water that is held by the commonwealth environmental water, I keep saying this because there's a whole lot of other environmental water out there. As Claire mentioned, there's state held water, there's planned water. Certain proportion of certain flows go through the system and they were all in place before the commonwealth environmental water holder came into being. There's quite a bit of other water that services the environment that services the function of rivers. But at the time of the millennium drought, it was decided that the rivers were still going backwards so more water had to be recovered for the environment and the commonwealth environmental water holder is the cascading of that additional water. That's the 15%. I just wanted to clear that up, but that 15% of water that was recovered for the commonwealth environmental water office or holder has been recovered in a form that retains exactly the same entitlement nature as other irrigated entitlements. We have maybe in New South Wales general security, high security, supplementary access licence. In Victoria, we might have high security and low security. Down in South Australia, they call them classics. Why? Class x,y and z there’s a whole 1, 2, 3, 4 up to 9 I think.

Hilton:

But we have those same sorts of class of licence. The rules around how we trade that water are the same, so we can't shift water across the Barmah choke differently from others in a trade sense or a market sense. The other thing about our trading is that we're very transparent. We signal our trade intentions on a courtly basis in advance. We go to the market in a transparent, open way. People know when we're trading water. It's a public tender process for us selling water. I think our impact upon water markets is very minimal. The other thing that really needs to be recognised here is there's very strict conditions around when water can be traded by the commonwealth environmental water holder. We can only trade water when there's certain met about having met all the environmental needs for this year and next year and there's a situation where we might forego water in a carryover sense. So the impacts we have on the market are minimal, and we go to great lengths to ensure that's the case.

Siwan Lovett:

Okay. Another planning question here, this time from Zara. Just wondering how the CEWH engage with communities when you're planning and seeking regional scale outcomes? In New South Wales, the EWAGs (Environmental Water Advisory Groups) based. How do the two go about working with them and being aware of this other work that's going on?

Hilton:

That's a really good question. In the Southern connected basin, I think the systems are really starting to mature and become quite integrated. That's helped because there's a thing called Southern Connected Basin Environmental Water Committee. It's got this horrible nickname that's SCEBWC. SCEBWC is an incredibly effective community because it represents people from South Australia right through to the headwaters of the Murray and the Murrumbidgee. We are really now starting to see coordinated flows out of tributaries time so they join up at certain times to generate pulses in the river to get particular fish outcomes or flow levels to hit certain wetlands and things like this. That coordination is occurring quite well in the Southern connected basin. In the Northern basin, as Zara points out, it's true, there's a series of EWAGs where people have got quite a within valley view of what needs to be done. But with the recent changes to water rules in New South Wales as a protection of water, the act of management of water out of one catchment into the next tributary downstream. This concept of connectivity and system scale planning is becoming a lot more important. I think there's the equivalent, the little brother of the SCEBWC is now started in the Northern basis called Northern Connected Basin Environmental Water Committee (NCEBWC).

Hilton:

There's a range of people that are on that. It's a new committee. It's really finding its way. But this coordination of flows from across the Queensland border and out of the various New South Wales tributaries and how they might join up will be managed in a holistic way will be a focus of the work for that committee.

Siwan Lovett:

I think we need this ever evolving dictionary of acronyms because [crosstalk 00:47:48]. They're all out there. EWAGs are environmental water advisory groups, I think. Is that right? Someone can pick me up on that. I keep calling that the EWAGs. I talk to my family and they're going to have no idea what language you're using.

Hilton:

Yeah, so I apologise for that. It's a whole language in its own... I've described it when people use all the acronyms as being on the edge of mobile phone reception. When you hear a bit that you understand and then it drops out for awhile and then... That's all the acronyms in amongst it, so I apologise for that.

Siwan Lovett:

Picking up on the discussion about the system, looking at the basin as a system, we've got a question from Jane here about how important is Lake Victoria to the CEWH?

Hilton:

Lake Victoria plays a critical role from a river operator's perspective. The importance of that is it gives a buffering in terms of being able to deliver water to the bottom end of the system at peak irrigation demand times in the summer without having to shovel a whole lot of water down through the upper parts of the Murray and the golden systems to get water down there. Particularly in years when there's not a lot of water in the Menindee-Darling system, Lake Victoria is a very important buffer. River operators can get water down there, load it up, and then help meet downstream demand. From our perspective, Lake Victoria is something we're starting to look a bit more as a potential area for golden perch. But at the moment, the way the infrastructure's set up there, it doesn't really allow good egress and access of golden perch in and out of the system. It's an area that could benefit from some nonflow complementary measures to have some really upgraded fish ladders, fish access built into that system and it could help. The other thing about Lake Victoria that's really important is the way it's managed is quite culturally sensitive as well. The sand dunes are adjacent to Lake Victoria, a very culturally significant burial grounds and all sorts of things in there.

Hilton:

It's managed within quite tight rules for and by river operators. It's an important part of the system and possibly more important at this stage to the operational side of the equation than environmental side.

Siwan Lovett:

Mm-hmm (affirmative). I'm conscious there's about seven or eight minutes left. Leo has asked a question, not a locally engaged office, but a real person called Leo, about what happens with all the monitoring data and whether there's an open data policy and to make it available for other people to use? What's your thinking on that? It's a great question.

Hilton:

Yeah, it is a great question. Yes, there is a lot of data. Yes, it is available and it's long term data now as well, Leo. It's a great resource that's being collected under what is known as the long term intervention monitoring program initially. Also, under the environmental water knowledge and research program. It's also now morphed into a new program called our monitoring evaluation and research program. If you look on the commonwealth environmental water office website, access to the reports and information data that's been gathered over 10 years now is freely available. There's a lot of information there and you can post follow-up questions on there.

Siwan Lovett:

Okay. Well we are coming to an end now. I'd like to let people know that we are running another session at seven o'clock this evening for anyone that's interested. I just have a quick question there from Jacky and from Leo, both asking, "How big do you think the current Murray flow, Murray flood will get?" Anyone like to make a prediction on that one?

Hilton:

Yeah, I'll have a crack. I'll go outside and get my crystal ball and polish it up and have a look and see how much rain there's going to be. No, I'm being facetious. I'm sorry. But it's really a very difficult thing for us and river operators to know what seasons will bring in terms of floods and things like that. At the moment, the Murray Darling Basin authorities posting certainly weekly and I think it's, from time to time, more frequent updates on the situation in the Murray. I know that they're very carefully managing releases to balance inflows so that as we come in towards summer, there's as much water available in the dam as possible for irrigation and other purposes. But at the same time, they're trying to keep a small buffer in the dam of air space so that if there's an unexpected heavy rainfall event, they can absorb some of that inflow and eek it out so that it mitigates a little bit of the flood damage. But you've got to remember that Hume Dam is primarily a water storage and it's operated firstly and foremost for the security and safety of the dam itself.

Hilton:

Then secondly, for maximising the resource that's available for irrigation. It's an irrigation dam, it's not a flood mitigation dam. Then where possible, river operators also use a bit of that air space in there to mitigate downstream variability in the dam or in the river flows. It's really difficult to say what flows are likely to come.

Siwan Lovett:

Mm-hmm (affirmative). You can see on the screen the main web address to go to get access to those reports as well as to the flow over program that I mentioned earlier, which is marketing and evaluation research science of the commonwealth environmental water office. If you could go to the next slide, Pat, we'll also just take a look at who's local in your area. If you're interested in the work of the CEWO and you want to talk to someone like their Local Engagement Officers, please do get in touch with these lovely people. They've all got beautiful, smiling faces there for you to connect with. They love the regions they live in and that's one of the most important aspects, I think, to being a locally engaged officer. It's some way that you live and you call home and you care about. We'd like to thank you once again for coming along today. There is another opportunity tonight at seven o'clock if you'd like to come back for more. We never know what the questions are, so it might be the same but it will probably be different. We'd love to see you there. Jane, thank you very much for coming. Anthony as well. Of course, Hilton, for hosting and enabling us to get the event underway today. Thank you very much, everybody. We'll see you again some time soon.

Hilton:

Thanks, everyone, and I apologise for my blank stare. It's been hard looking at a black screen and listening to people.

Siwan Lovett:

You haven't looked that blank at all.

Hilton:

Thanks, everybody.

Jane:

Thank you.

Anthony (Willow):

Thanks a lot.