

ENVIRONMENT, NATURAL RESOURCES AND REGIONAL DEVELOPMENT COMMITTEE

Reference

Mr O’SULLIVAN (Northern Victoria)—I move:

That, pursuant to section 33 of the Parliamentary Committees Act 2003, this house requires the Environment, Natural Resources and Regional Development Committee to inquire into, consider and report, no later than 27 November 2017, on the management, governance and use of environmental water in Victoria including, but not limited to—

- (1) the assessment of the role of environmental water management in preventing or causing ‘blackwater’ events;
- (2) how environmental water and environmental water managers interact with, and utilise, management tools such as carryover and whether the carryover of environmental water impacts on the availability of water for irrigators;
- (3) consideration of what barriers exist to the more efficient use of environmental water and how these may be addressed; and
- (4) assessment of fees and charges applied to environmental water and whether these differ from those imposed on other water users.

This is the motion we have in front of us today, and I am very pleased to be able to speak to it and be the lead speaker. Environmental water is very important in our ecology system right throughout the whole of Victoria but it is of particular relevance and importance in the north where it is a bit drier, including in the northern part of my electorate. Environmental water plays a very crucial role.

Over a number of years we have seen the use of water and the operation of our river and stream systems change from when, once upon a time many, many years ago—in fact probably early last century—some of the rivers were unfettered in terms of the management structures that were in place in relation to the way the water moved throughout our systems. Essentially back in those days the water was free to move in any way it wished, depending on how much water was actually available at the time and depending also on where the water wanted to run.

What we would see quite regularly was almost a bust and boom with our waterway systems up in the north. At times of heavy rainfall we would see floods—we would see flooding in the Murray River and the Goulburn River and a whole range of other rivers up in northern Victoria. At that time because there were no man-made barriers in place to stop that water just flowing downstream the water did flow downstream, and it flowed downstream at a pace and a rate consistent with the fall of the topography in terms. The water ran particularly into the Murray River, down into

South Australia, and it ended up running into the ocean through Lake Alexandrina. When there was less rainfall we would get to the point when drought would occur, and there would not be anywhere near as much water. If you look back on some of the history, there is evidence recorded, in articles and reports and books and so forth, that it was possible to actually walk from one side of the Murray River to the other. That was quite common—you could actually just walk across the Murray River. There was absolutely no water in it, because of those dry times, and no barriers that were in the way to hold the water back from just rushing straight out into the ocean in South Australia. That was the way it worked back in that time.

Since then our civilisation has become a little bit more sophisticated. A view developed that that water could probably be used for purposes other than just allowing it to flow naturally where it wanted to at any time. This is not something that is unique to northern Victoria or just Victoria; in fact it is something that is done pretty much right around the civilised world. People understand, and communities understand, how important water is for just about everything that we do. We drink it every day, we bathe in it, we shower in it—we use it throughout the household for a whole range of purposes. Right now we could not imagine a scenario where that was not the case. It is a luxury we have that we probably take for granted in terms of what we use water for. It is a crucial part of our whole lifestyle and the way we exist nowadays.

Around the world some communities use water better than others and some understand its value better than others. Quite often that depends on the amount of water that is freely available for whatever use it might have. Certainly if you look beyond just the towns or the cities, water can be used for a whole range of other purposes, particularly if you look at the concept of the value of water for growing food. We understand that all of the food that we eat relies in one shape or another on a water source to allow that food to actually grow. Whether it is plant matter, through grains and vegetables and fruits and so forth in the horticultural sector, or whether it is through the animals that we consume, which eat grasses and so forth to grow and drink water to survive, just about every aspect of our whole existence revolves around the importance of water.

I grew up in a very dry part of this continent, a little place up in the Mallee called Patchewollock. I remember in my early years of life that we did not have a direct water source available on our property other than the rainwater tank that used to collect water off the roof of our house. We were in a fairly dry climate, so

quite often we would have to be very careful with the tank water storages that we had, particularly during the droughts, because the tank would get quite low. The only other water that was available on our farm at that time was bore water that used to be drawn up from underneath the ground, which we would use as drinking water for the sheep and cattle on the property. But that water was very salty. It was not able to be used for drinking water in the house because of the salinity of that water. What it was certainly good for was being used for stock purposes.

Even with the water that we had available, it was too salty to actually grow any plants or fruit trees or a garden or vegie patch or anything like that. I remember when I was quite young that we had a very limited garden around the house because we just did not have the water available to sustain any sort of garden or vegie patch. A lot of people take for granted that they have that opportunity nowadays, but we did not have access to that on our place. That was something that you got used to, and the garden that we did have around the house was very much centred on plants and so forth that required very little water. There was quite a bit of cactus and there were the natural trees that were growing—gum trees that did not need regular water to keep them sustained. From a very young age I certainly had a very strong appreciation of the importance of water and how you can adapt to the water that you have available to you.

As I moved into my teenage years that changed, and we were able to build ourselves a dam some 15 kilometres from the farm, which was fed by the channel system. I remember the excitement of building the dam, with the anticipation that we would get some fresh water that we would be able to use for a whole range of purposes. The dam was built and the pipe was laid some 15 kilometres from near where the golf course was to the end of the channel system where the water flowed from the Grampians. We were able to get fresh water, beyond the tank water that used to be collected off the house, for the first time when I was about 13 or 14 years of age. That was very exciting, because for the first time we could actually have a garden—we could have a vegie patch and grow some fruit trees and things like that. The difference made by having that access to a reliable water source and what that really meant, in particular being able to grow tomatoes in the front yard, became very stark in my memory. I used to love getting out there, watering and feeding the tomatoes, and growing fruit that we could actually eat—those tomatoes—was a tremendous thing. I loved going out there, picking them and putting one of them in a sandwich. But I digress. I do understand the importance of water,

and I am very pleased to be able to talk about some aspects of that today. Just flowing on from that, it has made me realise the importance of the irrigation system that we have in Victoria, and I will go on to talk more about that in a little bit.

A lot of people who live in the capital cities do not often get out into the country to see for themselves where the food that they eat actually comes from. People in the city tend to go to supermarkets, and people who live in Melbourne are very fortunate to be able to go to their local supermarket and see the types of fruits, vegetables and other fresh food that is available to them. They are very lucky to have access to such an array of fresh, quality fruit, vegetables, meats, nuts and so forth—there are a whole range of things that I think people probably do tend to take for granted—but that food actually has to come from somewhere; it has to be grown. There are many farmers and irrigators across regional Victoria, but particularly in the north, for whom that is their job—growing food for people. They do it very effectively, but they need water, particularly the irrigators, and they need a lot of water to be able to grow the food that we take for granted when we walk into a supermarket. That is why the irrigation water is so very important. I will certainly come back and talk about that a little later on.

One of the areas that I do want to focus on this morning in relation to this motion is about the blackwater events that occur throughout our river systems in northern Victoria. They are not so much of a problem over in the west of the state and not so much of a problem down in Gippsland, but certainly over the last 10 years we have seen a lot more of these blackwater events in the north of the state—up in my electorate. I want to talk about some of that today. I have seen these blackwater events for myself. They are sort of a new phenomenon, if you like. I will read out the technical definition of what a blackwater event is, and then I will come back and explain it in a form that most of us will be able to understand. The Murray-Darling Freshwater Research Centre has given a definition of what blackwater is, and I will read that out. It is a little bit technical. It says:

Blackwater is characterised by a high concentration of dissolved organic carbon in the water column. Transfer of organic carbon from flood plains to the river channel is vital for the sustenance of riverine food webs. However, microbial respiration of this carbon consumes oxygen and if oxygen consumption exceeds re-aeration, dissolved oxygen concentrations may fall to levels insufficient to support aquatic biota. This is known as hypoxic blackwater.

That is an extremely technical way of explaining what it is. That is why I will take a little bit of time to explain what blackwater means for us normal people who would not understand what that means. Essentially it occurs when we have a flood event in our river systems,

when we have large volumes of water come down the river to the point where the amount of water coming down is greater than the capacity of the channel, river or stream to handle it. As a result of that the water then goes over the banks and starts to flood out onto the land on the side of the river. While that is fine and that does happen naturally from time to time, it can also happen in a man-made way. In these blackwater events the water goes over onto the banks and rests amongst the trees, grasses and so forth on the banks and on the land on each side of the river. Then what happens as the water starts to recede after a period of time is that water starts to flow back into the river. When it is over the land it picks up little twigs, sticks, leaves, grass matter and so forth—organic matter—and brings that back into the river, although it can actually happen while it is still sitting out on those flood banks. What then happens is that matter starts to disintegrate, and as it disintegrates in the water it then starts to take the oxygen out of the water. That water then becomes very stale and discoloured.

Mr Barber—Stale?

Mr O’SULLIVAN—Yes, very stale. The problem really starts to occur when the animals, particularly the fish, that rely on that water or live in that water and use that water to breathe do not have as much oxygen in that water. In some cases the oxygen almost entirely disappears from the water and those fish struggle to breathe. What can and does happen on varying scales is those fish then die.

I love fish. I love fishing, and I love everything to do with fish. I actually quite like just going down to a store, watching all the different fish and trying to identify which types they are; but I digress.

In terms of those fish, in my personal opinion the native fish that we have in our waterways in northern Victoria are some of the most exquisite in existence. We have got the iconic Murray cod, which is one of the world’s great fish. They are very, very difficult to catch.

Sometimes there are a few of them around, but quite often there are not many around. It is one of those fish that everyone likes to say they have been able to catch. Your concern levels rise when you see these blackwater events and understand the environmental damage they can do to the aquatic life. Not only do they impact the Murray cod but they also impact other native fish that are iconic in their own right but probably do not have the profile of the Murray cod. There is the silver perch, which is also impacted by these events. One of my other favourite fish is the golden perch, which is more widely known as the yellow belly. Being a fisherman, whenever I go fishing I strive to catch a Murray cod, but that is very difficult to do. In fact in my whole

fishing career—I have been going fishing since I was 10 years old—I have only ever been able to catch two Murray cod myself. The excitement levels when you catch a Murray cod are just amazing. I caught my first Murray cod when I was probably about 27 or 30 years of age. I was in a boat with my good friend Jason Scott, and we were able to catch a Murray cod. It was not a big Murray cod; it was only about 56 centimetres, which was legal at that point in time, and it weighed about 6 pounds, from memory. The excitement of being able to catch that Murray cod, which was my very first one, is something I will never forget as long as I live. I want other people to be able to go out and have that same thrill of catching a Murray cod for themselves. Some people have been very lucky to have caught many Murray cod. Other people have been fishing for years and years and have never been able to catch one. The Murray cod is an iconic fish. People right around Australia and beyond have heard of the Murray cod—they are iconic. It is a bit like the barramundi. The barramundi is very much an iconic fish, particularly in the northern part of Australia. We have seen in recent times some barramundi trials taking place down in Gippsland at the Hazelwood pondage. There has been much interest around that experiment. I think that is a good thing too. From a Victorian point of view, I think the Murray cod is the most iconic and sought after fish you can catch. So I am very keen that through this reference we potentially see what can be done to ensure that none of the iconic Murray cod are killed through events such as blackwater.

Blackwater events will happen. Natural floods will create blackwater events from time to time that will kill fish, but there is nothing we can do about that. What I would be interested to know is: are there other reasons, other aspects and other things that occur that cause blackwater events? I am hoping that through this reference we might be able to explore some of those scenarios to find out if there is anything going on in terms of the way our water system is managed that might help us to be able to protect more of these great fish.

The Minister for Agriculture, who is responsible for fish, would be very much in agreement with me about the importance of the Murray cod. I hope she supports this motion, because I certainly want to look after the Murray cod here in Victoria.

The second Murray cod that I caught was actually earlier this year. It was only a few months ago up on the Goulburn River at Nagambie. I went out fishing with a couple of other guys. I had a line out, and we were just about to shift to a new spot because we had not had a bite. Just as I was reeling in my rod a Murray cod took

the bait and I was able to land it. What was even more pleasing on that occasion was that my brother Paddy and my first cousin Danny just happened to turn up in a boat at the very same time I caught the Murray cod. As I pulled it out of the water, they were both there to witness me catching the Murray cod. I am sure that they would not have believed it if they had not seen it with their own eyes. I was very pleased that both of those gentlemen were able to see that Murray cod I caught. In terms of the blackwater events, I just want to make reference to some of the occurrences that we have had in Victoria and New South Wales over the past few years. Blackwater events did happen from time to time many years ago, but it was really only after a significant flood. What we have seen in recent times, and particularly in less than the last 10 years, are a number of blackwater events which have been detrimental to the freshwater fish that we so greatly appreciate in our waterways. One of the most significant of these events was back in 2010. It was experienced throughout the Broken Creek, the Goulburn River and the Murray River, and also downstream of the Goulburn River just south of Shepparton. That was the first one, which was back in December 2010. We had had a dry spell throughout the first decade of the 2000s, but in 2010 we saw a breaking of the drought and there was a flood along those rivers which created a blackwater event. In October 2011 we saw another flood, which also caused a blackwater event. So essentially we had two in under a year. It was a significant flood along the Murray River in particular that stretched for some 700 kilometres. Its magnitude saw water going above the banks of the Murray, flowing out onto neighbouring land and bringing debris made up of sticks, leaves and other organic matter back into the water, stagnating and de-oxygenating that water and making it very difficult for the fish to survive.

Anecdotal evidence at that time from the locals who lived around those areas reported that there were tens of thousands of Murray freshwater crayfish fleeing the blackwater. It would have been an amazing sight.

Probably not many people actually know about these Murray freshwater crays. Wintertime is really the only time that you can catch them. Not many people do it, although there are some people who go out and do it. They are like a normal crayfish but they are darker in colour and a bit smaller than your average crayfish. I have never actually caught one, but I have certainly seen them.

As a result of the blackwater event in 2011 the Murray freshwater crays were fleeing the Murray River—they were scurrying to get out of the Murray River, which had a blackwater event. There was no oxygen in the

water, so these crayfish, that almost never come out on land, decided that the best way to try to survive was to escape the water. The Murray crays live in water, breathe in water and eat in water. They never come up onto the banks for any reason. As a result of the blackwater event they decided that the situation was dire. There was so little oxygen in the water that they knew they would die if they stayed in the water, so they had to escape the blackwater and come up onto the banks. They had to escape the Murray River looking for fresh water. Unfortunately there was no other water that they could really escape to.

Once those Murray crays leave the river, it is illegal for anyone to pick them up and take them home and eat them or anything like that. So essentially what happened was that those tens of thousands of Murray crays came up onto the bank. A couple of things can happen to them. They do not find fresh water, so they either stay in the sun or they look for some shade. As they are looking for water, the sun and the heat when they are not in the water essentially will kill them. They also run out of oxygen because they breathe oxygen through the water and if they are not in water, they will live for only a short time before they die. There were tens of thousands of them, and that is tragic. No-one likes to see that happening to those iconic freshwater crayfish. The anecdotal evidence was that some of the crays were even trying to climb trees as they were escaping and looking for some way to be able to survive.

At that time the locals also reported that there were massive Murray cod that could not escape. They could not do what the crays did, because the crays could get out of the water and look for another option somewhere, which ended up being futile, but they were doing their best to try to survive. The poor old Murray cod cannot get out of the water and look for a better option. They have to try to survive in the water where there is no oxygen. What they will try to do is swim somewhere to find fresh water that they might be able to survive in. They look very quickly for a better option in terms of swimming but with this particular event, with the blackwater and the floods along 700 kilometres of the Murray River, there was no place for those Murray cod to go. After a period of time they ran out of oxygen in the water and the Murray cod died and floated to the top.

I have seen it for myself. It is not a pretty sight when you see the beautiful iconic Murray cod on top of the water. It seems to me—this is only my view—it is the larger Murray cod that struggle with blackwater more perhaps than the small ones. Maybe it is just that the big ones are more visible because they are so large.

A big Murray cod can grow up to 1, 1.1 or 1.2 metres in length, so they are a big fish.

Mr Barber—Tell us a few old fishy tales.

Mr O'SULLIVAN—I will take up the interjection by Mr Barber. The biggest one I have ever caught was a 56-centimetre Murray cod. The second one I caught was only 45 centimetres, so he got released for another day. So I have not got too many tales to tell about my Murray cod exploits, but I would certainly like to be able to in the future. I will be out there trying—if we can get them to survive.

Mr Barber interjected.

Mr O'SULLIVAN—Well, that is a big fish.

What is really disappointing when you are out in a boat or walking along those rivers anywhere is if you see those iconic big Murray cod floating upside down or lying on the banks rotting. It is a pretty tragic sight. That is something that where possible we should try to avoid. If we can do anything through this reference in terms of maybe coming up with a couple of different ideas or a couple of recommendations on how we think we might be able to assist in the management of water in terms of eliminating or minimising the impacts of blackwater, that is a cause that is well worthy of being taken up. I am certainly going to do that, and I am hoping that others will support us in doing that.

Another event took place in 2011–12. That again was through the Barmah forest. A significant amount of environmental water was released and it caused a blackwater event throughout the Barmah forest area. Again, that made it difficult for the fish to survive.

In November–December 2016 there was another blackwater event along the Murray River up towards Mildura, near Lake Victoria. There was a comment by a guy from Manangatang who actually made a few videos in relation to the blackwater events at that time and put them on YouTube. Rod Mackenzie from Manangatang is an avid fisherman, as all fishermen are. To be fishermen there have to be fish for them to catch, so they are very supportive of fish thriving in their natural environments. No-one wants to see anything occur in their natural environments which will take away those opportunities for those fish to exist.

Rod Mackenzie, through the videos on YouTube that he was taking particularly up the Rufus River near Lake Victoria, showed examples of a blackwater event where the fish had actually left the Murray River and gone up the Rufus River, which is one of small rivers which allows the water from Lake Victoria to come back into the Murray River. The fish had left the Murray River and taken what is probably a 5-kilometre trip up the Rufus River trying to get to the source of that river to try to get some fresh water coming out of Lake

Victoria. Unfortunately on that occasion they could not find any, and around the Rufus River area there were a lot of Murray cod again found floating. I think on that occasion, they are saying, there were something like 200 dead and dying Murray cod in an 8-kilometre stretch around Lake Victoria, and that would be a very distressing occurrence.

At that time there was also a blackwater event that occurred on the Goulburn River just downstream from Shepparton. Just in January this year there were a number of dead fish—yellowbelly, cod and shrimp—lying on the banks of the river as a result of a blackwater event just near Shepparton, where fishermen were witness to those fish that were in a pretty bad way and dying or dead. So that was the latest occurrence that we have seen, although it seems like it was only an isolated area around Shepparton.

Since 2010 we have seen some five blackwater events. That is more than we have probably seen in the previous 20 years before that, so as part of the reference for this committee I think it would be good to have an understanding as to why those blackwater events occurred and what things can be done to potentially minimise any of those events in the future. There is no doubt that some of those blackwater events were caused by natural flooding. Yes, that is going to happen, but also it appears that some of them could have been as a result of environmental water being released, particularly the one in Barmah, where they are reporting that environmental water released prior to that had caused that event there.

I am not blaming environmental water for causing these, but I do wonder if there is something that could be done in terms of the management of our water management systems. When the environmental water was set up by Peter Walsh when he was the Minister for Water I do think that the occurrences of blackwater events probably were not taken into consideration with the significance that they may well have had. Now that we know there have been more blackwater events in the last seven years I would like to be in a position where we can, after the setting up of the environmental water holder in Victoria, see whether there is anything that can be done in terms of the better management of the way they operate their systems.

I would actually be interested to know what credence the environmental water holder actually gives to blackwater events potentially occurring as a result of any water that they have released for environmental purposes. I would be certainly interested to know whether there is any consideration of that. There might be a better way of doing it in terms of the timing of those waters being released and also the severity or the

significance in terms of what type of flood is created by those waters being released.

I would like to put on the record, particularly for Mr Barber here, that I totally support environmental flows. They are critical to the health of our river systems. They are critical to the health of our environment in Northern Victoria Region, which is very much a dry part of the world. So in terms of keeping our rivers healthy I totally support that, as it supports the relevant aquatic life and animal life that is sustained from the water. I totally support that.

I mentioned earlier in my contribution that there was not much water around when I was a kid on our farm, and I have got a real appreciation of the significance, when you live in some of the driest parts of this whole country up in the Mallee area, and the benefits that having some water in your local community can have. I think people tend to take that for granted, but when I was a kid there were no lakes anywhere close to us. The Murray River was the closest natural water source that you could go to to enjoy the water. To get from our farm out to the Murray River—and we would go up to Hattah whenever we could on a weekend during summer—was probably a 150-kilometre drive to our nearest significant waterway. So I have a particular appreciation of what the amenity of water in your local environment can do.

I am very pleased to see that, in the last little bit, the whole community has got a better appreciation of that. We are starting to see some lakes pop up all over the place, because it is very important if you live in a dry community that you can go somewhere and actually experience the water and overlook the water. The kids can play in the water, you can swim in it or you can do some boating in it or whatever recreational activities you would like. It is good for mental health if you live in dry areas to be able to be a part of those waterways that are healthy, clean and there for everyone's use.

I would imagine that just about everyone who sits in this chamber and beyond in the community and so forth—everyone on their holidays and whatever else—likes to go down to the beach or go to a lake for the long weekend or so forth. People up in the country who do not have much water around certainly appreciate that and want to have those opportunities as much as the people who do have those opportunities and probably take those opportunities for granted. Up in my part of the world in the Mallee you see what putting some water into the lake at Hopetoun has done. It has revitalised the town. It has created a whole range of economic activity for the town, and it has made the people who live in that town feel like they have got somewhere that they can go to enjoy the water and

recreational activities.

I am very pleased that the last coalition government, with Peter Walsh as water minister, put in place a scenario where there could be a lake created and opened up in the township of Ouyen. I have been keeping a very close eye on that along with local Nationals member Peter Crisp. We go there every few weeks to check the progress of that. They are hoping to have water go into the lake at Ouyen once it is completed later this year, and they are hoping to have it filled by Easter next year. So, Mr Barber, I would invite you to come up to the Ouyen lake when it is finished and have a look at what a tremendous impact that will have on the local community for those people who live up in the Mallee.

I just want to go back if I can for a moment to the importance of fishing in Victoria, and I am very pleased to say that the fishing community is supported by the current government but also by the opposition and hopefully by everyone in this chamber, because fishing is a great recreational hobby that many people like to do. It gives people the chance to get out onto the waterways, whether it be the ocean, the freshwater lakes and rivers in northern Victoria, down in Gippsland or in western Victoria. Fishing plays an incredibly important recreational function in our community, and as I said, it has been supported by both coalition and Labor governments, who have been very supportive of the fishing fraternity here in Victoria.

It is interesting to see that the government has got a target to achieve 1 million fishermen in Victoria. That would be a good thing, if they can get to that. I am not sure that they are anywhere near it at the moment. I think there are about 350 000 licences in Victoria, so we have still got a way to go to get to 1 million, but the government is spending a lot of money encouraging people to go fishing, and I support that. But what I am also very pleased to note is that there has been a significant investment by both sides of government—I am happy to acknowledge that—in terms of fish stocking, which creates more opportunities for people to go fishing and actually be able to catch a fish when they are fishing.

There is a hatchery up at Snobs Creek which does tremendous work in breeding fish that are released out into the waterways. In terms of the investment that is made, it is a significant amount of money, and a significant amount of fish is released out into our waterways every year, and that number is increasing. The number of little hatchlings that gets released is well into the millions, and hopefully they can form a part of the ecology of our waterways and grow up into big fish that people can catch.

In terms of those hatchlings that get released, one of the things that I think we need to do is ensure they have an environment they can thrive in. With all the time, effort and investment that has gone into breeding those fish and then releasing those fish, we would hate to see a scenario where there were significant amounts of fish released, whether that be Murray cod, whether that be golden perch or whatever it may be, and those fish then got caught up in a blackwater event and all died. That would be tragic, and it would undermine the whole premise in terms of being able to have fish in the environment for people to catch. So I would certainly hope that if you look at organisations like Fisheries Victoria, VRFish and those other groups out there who—

Mr Barber—Native Fish Australia. They do good work; do not forget them—Tim Curmi and the boys.

Mr O'SULLIVAN—Native Fish Australia—yes, absolutely. I would hope that all those organisations would be able to participate in this reference and be able to provide assistance, information and background on what they understand in terms of how fish are impacted beyond what we see in terms of their natural death. But those organisations might have a whole range of scenarios and information that they would be able to contribute to this reference through the hearings in terms of finding better ways to make sure that our native environment and the fish can survive.

Going back to environmental water for a moment if I can, I would like to make reference to one of the great environmental water exercises that has been undertaken by the Mallee Catchment Management Authority (CMA) up at Hattah Lakes, and it is one that is worth making mention of. It absolutely demonstrates to the nth degree the value of environmental water when it is managed properly and the benefits that can arise from environmental water. I want to use Hattah Lakes as the example that I will talk about today.

There is a project that was completed probably only three or four years ago—the Hattah Lakes project. Essentially the Hattah Lakes are up in the Mallee, just off the Murray River, about 60 kilometres south of Mildura in the Hattah-Kulkyne National Park. There is a fairly large area there which consists of about 12 different lakes that make up the Hattah Lakes—about 12 different lakes of varying sizes. It is a fairly dry environment up in that part of the world, and throughout history when there were not so many barriers in the river system in terms of weirs and locks and so forth water would regularly flow out into the Hattah Lakes, which would then set up their own natural ecology in terms of fish breeding up, birds breeding up and all the other animals being able to

breed up and take advantage of that in such a harsh, dry environment. Trees were also able to grow and thrive and survive as a result of those floods that would occur out in the Hattah Lakes.

But over time as water from the region was allocated for other purposes, such as recreational activities, irrigation and so forth, those water flows have changed, and there are not as many floods out in the Hattah Lakes as there once were. So the Mallee CMA—with the cooperation of the New South Wales, Victorian, South Australian, ACT and commonwealth governments, along with the Murray-Darling Basin Authority and Goulburn-Murray Water through the Living Murray program—were able to come up with some engineering works that would enable the Hattah Lakes to be flooded using environmental water. They are quite impressive, and I have actually been there and seen the project—but unfortunately I have not seen it when it has actually been in operation, which is something I will certainly endeavour to do this year. It is a series of pumps coming out of the Murray River—there are, I think, about eight of them. They are quite large electric pumps which pump significant amounts of water fed from the Murray River through a channel out into the Hattah Lakes project.

Through the availability of the environmental water, at the appropriate times the environmental water holder in conjunction with the water authorities and the Mallee Catchment Management Authority turn on those pumps and pump significant amounts of water out into the Hattah Lakes, which absolutely does wonders for those lakes and all the ecologies. The environmental benefits that you get are through fish breeding naturally, through birds coming to the area and thriving and through all the kangaroos and other native animals living in that area—they absolutely thrive as a result of all this water going out into the Hattah Lakes.

It becomes a real tourist attraction as well. I am sure Mr Barber has been up to the Hattah Lakes to have a look at it, because that is the sort of thing that I know he is particularly interested in. People flock from all over the state to go and have a look at the Hattah Lakes when they are in flood, because the animals that you can see there when you go are very impressive, and the ongoing benefits to the local community and the local environment are tremendous. I would like to quote Sharyon Peart, who is the chair of the Mallee CMA, in terms of her view of it. She said:

The Hattah project is a good example of how environmental works and measures can offer a more accessible and effective way to deliver basin plan environmental outcomes in wetlands and flood plains along the Murray.

I totally agree with her, and everyone who has been there acknowledges the benefits that have occurred as a

result of those environmental waters being used and managed in a way that does not create any damage and does not create any problems—it creates a significant number of benefits. That is one example of where I think environmental water has done an amazing job. I would like to see more projects like that occur. I think in terms of the Murray-Darling Basin plan there are some more works and measures required to enable environmental water to be used more efficiently and more effectively to achieve the outcomes that are intended through the use of that water.

One of the things in relation to those works and measures for the water that is available through the Murray-Darling Basin Authority is that we need to ensure that those engineering works are done in a way that, when those waters are released, does not create man-made floods on farmland, which is a contributor to what potentially could be blackwater events in the future. So when those works and measures that need to be undertaken are being done to shift the volumes of water required down our waterways, it will be critically important to make sure that those works and measures are undertaken in a way that will be able to cope with that volume of water being released at those times. I am sure that there would be plenty of people who would come along to these hearings, if we get the chance to have them, and who would give us a view as to how they think some of those works and measures can be best put in place to achieve the outcomes that we all want to see from the Murray-Darling Basin plan.

The Murray-Darling Basin plan is one of those scenarios that I think was started under John Howard when he was the Prime Minister and has then been followed on by successive commonwealth governments. I think the current Prime Minister, Malcolm Turnbull, was the water minister at the time of the act going through the commonwealth Parliament, which put the Murray-Darling plan into play. That ensured that there would be a balance created between water being able to be used for the community, water being able to be used for irrigators to grow the food that we all eat and water being available for the environment to keep our waterways healthy and to keep our river systems clean so that they can be used by everyone involved, whether they be tourists, people who live along the rivers or the animals—the birds, the fish—who rely on those systems to be as healthy and to be as clean as we can possibly get them to ensure that we get the best possible outcomes.

Just while I am on the Murray River and the best possible outcomes in terms of clean water I want to make mention of the carp virus that is being created with a view to being able to be released out into our

waterways to kill the European carp. We know that European carp are a menace in our waterways. Essentially the European carp is like the rabbit: once released they have bred up very quickly and have taken over a lot of our waterways. The European carp is an absolute pest. They grow to a fairly large size. They eat native fish, shrimp and yabbies and so forth. The way they go about it is, when a European carp eats, they take in a mouthful of mud, swirl it around in their mouth to find if there is anything that they can eat and then they spit it back out again. As a result of that the European carp has made a lot of our waterways quite muddy and very coloured, and it does not look all that pretty at times.

I remember my father telling me that when he was a teenager up at the Murray River he would be able to stand up to his chest in water and be able to see his toes because the water was that clean. By contrast now in the Murray River you could probably only see a few centimetres before the colour of the Murray water in terms of the brown from the mud stirred up by the European carp takes over. So the river is not as healthy as it once was, and I think that is largely due to the number of European carp in the river system. As we have done with rabbits over the years, we have introduced viruses that impact only on the particular species we are trying to eradicate or control. We had myxomatosis released back in the 1970s, Mr Ramsay? Myxomatosis was released back in the 1970s?

Mr Ramsay interjected.

Mr O'SULLIVAN—Yes. At some time around there myxomatosis was released to have an impact on the rabbits. It worked for a long period of time, but over time they got resistant to it, and then the calicivirus was released, I think, in the 1990s. It did not impact on any other species, only on rabbits to control the number of rabbits in the environment.

In terms of the carp virus that has been developed, I think it has been proven that it does not impact any species other than carp. I would like to see that virus released into our waterways to kill off the European carp. That would allow our waterways to be in much better condition and would allow our native fish to thrive without being encroached on by European carp, which I would think would be of benefit to the whole community.

I would certainly like to see the Victorian government and the minister for fisheries release the virus. I think people are a bit nervous about releasing it. Obviously there will certainly be impacts. There are suggestions that we could kill up to 70 per cent to 80 per cent of all European carp. If that was to occur, I think that would be a tremendous win for the environment. That is not

directly relevant to this reference, but I would certainly encourage the minister for fisheries to release the carp virus as soon as possible so we can get on with cleaning up our waterways. That is not relevant directly to this reference, so I will come back to the reference that we have in hand.

I would like to see that we might be able to look at better ways of being able to manage our river systems and better ways of being able to manage any environmental water that was released into our waterways, including the Murray River, the Goulburn River and other rivers. We might be able to create more value or have a better value for water that is released if we can try and eliminate or minimise these blackwater events. There is nothing more stressful if you are walking down the river or going for your morning stroll along the Murray River and you see all these dead Murray cod—big Murray cod, up to a metre long, floating upside down in the water. That is a terrible sight and we do not want to see that, but we do not want to see the Murray crays get to a situation where the water is so deoxygenated that they have to try and escape the water and go up onto the banks in search of some fresh water or another alternative to be able to exist. We know that once a Murray cray leaves the water its chances of surviving are almost nil, because the water over the bank is quite often deoxygenated and is part of the blackwater event as well. They cannot find any reprieve, so they end up dying as well.

Really this motion is designed for us to be able to have a reference where we can call the experts in who can provide us with information. There may be a better way in which we can manage our water system here in Victoria. The Victorian Environmental Water Holder has only been in existence for about four years, so there might be better ways that we can ascertain how we can manage our water systems in terms of the use of environmental water. I think everybody agrees that environmental water plays a critical role in the health of our river systems and our local communities in northern Victoria. We are certainly not trying to do anything in terms of attacking the role that environmental water plays—that is absolutely critical. What we are looking to do is find out if there are some ideas that we can hear about. We could talk to the experts, let them come and talk to the committee to see if there is a way of being able to come up with some recommendations whereby we can get a much better outcome in terms of minimising blackwater events. They will occur—we know that; they are a natural part of our existence—but we do not want them to occur when they do not need to occur. If we can find a few areas that will help minimise blackwater events, that would be a terrific

result.

With those few words I would like to commend the motion to the house.

Ms SYMES (Northern Victoria)—It is a pleasure to follow Mr O’Sullivan in relation to the motion today. I would not describe your contribution as a few words, Mr O’Sullivan, but you did cover a lot of really interesting topics. You have a strong history in fishing, which I cannot match—I have been fishing only a few times—but I do support the policy of fishing, and particularly our Target One Million. I think Mr O’Sullivan referred to 350 000 licences as falling short of the 1 million target, but I know how excited my dad was when he turned 60, and the only thing that made him excited about turning 60 was that he did not require a fishing licence over 60. I reckon there would be quite a few over-60s that would be pushing us up to that 1 million target.

This is a good opportunity to get these issues discussed in the Parliament. Of course environmental water management is a significant and important management issue relevant to all Victorians. It was great to hear Mr O’Sullivan’s approval of the great work of the experts in this space and his unwavering support of environmental flows.

I have got to say that I do not think that the contribution of Mr O’Sullivan really matched the intent of the review. I thought that everything he said was worthy of discussion, and I do not think there is much that I disagreed with; I just do not necessarily agree that all of that equals the need for a parliamentary review when much of the work is being done by very competent experts in this field.

We would maintain that the proposed inquiry comes after this government has already undertaken substantial community and stakeholder engagement to develop the policy and actions in *Water for Victoria*. We have committed to significant investment and further progress in this regard. *Water for Victoria* outlines major investment and policy reforms to further build on our comprehensive framework for environmental water management. Actions that the government have already committed to include a review of the Victorian Environmental Water Holder (VEWH) to build on their prior performance and ensure that they have the right tools and processes to most efficiently and effectively deliver environmental outcomes, particularly in light of the changing climate; a review of environmental water charges to inform the next round of water pricing submissions to the Essential Services Commission to ensure transparent and equitable charging arrangements; and a major investment in environmental works and measures for

priority watering sites to better use existing environmental water.

It is important to note that the VEWH has a trading strategy to ensure that there are no market distortions as a result of any trade actions they may undertake. The VEWH currently uses environmental water to mitigate blackwater events where this is possible, and the work programs include construction of fishways that enable fish to move and escape from blackwater events and perhaps end up on the line of Mr O'Sullivan.

Going through the items in the motion that the house is being asked to refer to the committee for consideration, it starts with the assessment of the role of environmental water management in preventing or causing blackwater events. Over the past 10 years environmental watering has reduced the build-up of organic matter in many areas, lessening the impact of blackwater events. When I first got elected this was not a policy area I was overly familiar with, but I was told that a simple way to explain it to people who are not familiar with water policy is that it is similar to the way planned burns can lessen the impact of bushfires. Just as land managers carry out frequent cool burns to avoid one big hot, damaging bushfire, environmental water managers try to reduce excessive leaf litter build-up on the flood plains with regular flooding. Aside from boosting vegetation and providing connectivity across a flood plain, this flooding aims to reduce the negative impact of blackwater events.

There is not enough environmental water available to dilute blackwater events in large systems like the Murray. However, environmental water can help in smaller, isolated waterways and is currently used to provide refuges for fish and other animals to escape from blackwater, if it occurs—for example, environmental water is currently being used to try to limit the chance of hypoxic blackwater occurring in parts of the Loddon River. The Goulburn Broken Catchment Management Authority worked with Goulburn-Murray Water to coordinate environmental water deliveries to help improve water quality in Broken Creek. Environmental water deliveries continue until the end of the irrigation season to maintain water quality and provide habitat and shelter for native fish such as the Murray cod—and we have heard a little bit about Murray cod today.

I will use this opportunity to give a bit of a shout-out to the Goulburn Broken Catchment Management Authority. Mr O'Sullivan obviously has a good relationship with the Mallee Catchment Management Authority; we heard him reporting on the good work they do. I have had a fair bit to do with the Goulburn Broken mob, and I am in awe of their dedication to the

environment and their ongoing efforts to engage with the community and work on really important community projects. I would just like to say that they do a great job and it is great working with them in northern Victoria.

There is daily monitoring and adaptive water management being done collaboratively and it is helping to limit the impacts of blackwater events. I understand that past and current investment in works such as the removal of fish barriers has also increased the ability of fish to escape during blackwater events. The Goulburn Broken Catchment Management Authority, to which I have just given a pump-up of its tyres, has also recently undertaken a review and documented its findings following the blackwater events of January this year.

Mr O'Sullivan's motion also seeks an inquiry into how environmental water and environmental water managers interact with and utilise management tools such as carryover and whether the carryover of environmental water impacts on the availability of water for irrigators. Water management is now much more targeted, efficient and effective, with new tools that reduce the need to recover more water for the environment. More cost-effective environmental benefits can be achieved through small-scale changes to river management, with reduced economic and regional impacts when compared with large-scale water recovery programs.

Water allocation trade is one of the tools the VEWH uses to effectively manage environmental water. Water trading allows the VEWH to move water to the system where it is most needed and to smooth out some of the variability in water availability systems across many years. The VEWH ensures its trading activities are carried out in a manner that is consistent with trading rules under the Victorian Water Act 1989 and the basin plan water trading rules under the federal Water Act 2007 for the Victorian part of the Murray-Darling Basin.

Decisions to trade environmental water are made by the VEWH as part of the VEWH's standard portfolio management practice. While the primary focus of VEWH operations is the delivery of environmental water to maximise environmental outcomes, carryover and trade are also important tools that can help the VEWH manage seasonal water availability and maximise benefits to the environment. The VEWH regularly assesses its environmental demand and supply position throughout the year, considering factors such as environmental condition and demand, current and forecast climate conditions and water availability, carryover capacity and of course the relevant market

conditions. Carryover is an important tool that is used to help ensure environmental water can be delivered at a time when it is of the optimum benefit to the environment—for example, environmental water demand is often highest in winter and spring and carryover can help ensure demands can be met where there is a risk that low seasonal determinations may have been made at the beginning of the season.

At the end of each year the VEWH may undertake administrative transfers between VEWH accounts to maximise carryover opportunity. Such transfers may occur within particular systems or trading zones or across systems or trading zones, subject to some of the trade limits that are in place. Trade is the mechanism used to shepherd environmental water flows down the Murray and across the border from Victoria to South Australia, so the flows are not regulated for supply to consumptive users in either state. This re-use policy is known as ‘return flows’. It is available for environmental water delivered from the VEWH Goulburn, Murray and Campaspe entitlements in northern Victoria. It increases the efficiency of environmental water use and helps reduce the volume of water needed to be recovered for the environment from consumptive water users. It is important to note that the VEWH reports annually on the management and use of environmental water in Victoria, including on all of the carryover practices and trade, through its annual reports and reflections.

Mr O’Sullivan’s motion also asks for consideration of what barriers exist to more efficient use of environmental water and how these may be addressed. The VEWH has the same rights as other water users and there are no policy constraints other than those that apply to all water holders. Making the most efficient and effective use of environmental water is important because it will reduce the need to recover more water for the environment now and into the future, and obviously that is important for maintaining our fish supplies, our environmental conditions and some of those recreational pursuits that Mr O’Sullivan spoke at length about which are important to communities, particularly country communities in some of the driest parts of Victoria, particularly in our shared region of northern Victoria.

Water for Victoria commits to continued investment in environmental works and measures for priority watering sites to better use environmental water.

Victoria already has a significant and ongoing program of environmental works and measures and is currently developing a policy to clarify asset ownership and maintenance arrangements. The *Water for Victoria* document also outlines the commitment to exploring

how we can use stormwater, recycled water and the water grid to achieve better environmental water outcomes. *Water for Victoria* goes on to further commit to an integrated catchment management approach that maximises the broader benefits of environmental water delivery.

Where environmental water is used to promote fish movement and migration, in-stream barriers, such as road crossings, weirs and things like that, can increase the volume of environmental water required. This can be needed to 'drown out' effectively those barriers. This is being addressed by funding catchment management authorities to provide for fish passage at priority sites, meaning less environmental water is actually needed to aid those fish movements through these barriers.

The motion also seeks to look at the assessment of fees and charges that are applied to environmental water and whether they differ from those imposed on other water users. Coming back to the *Water for Victoria* policy, it commits that water corporations will work with the Department of Environment, Land, Water and Planning (DELWP) and environmental water holders to ensure clear, transparent and equitable charging arrangements. DELWP has recently commenced a review of environmental water charges to implement this action, so putting this part of the reference into an inquiry, we would maintain, would purely duplicate the work that very competent experts have commenced.

Water for Victoria outlines the following principles that will apply to charging arrangements for environmental water: prices for services to environmental water holders will reflect costs, prices to reflect the level of services received, prices to provide signals for the efficient and sustainable use of water infrastructure, and prices will not deter environmental watering. The government requires environmental water holders to pay applicable charges for the costs incurred by storage and system operators to store and deliver environmental water. While charges have been applied to all environmental water entitlements since July 2014, there are varying approaches to charging across different water corporations.

There may be different levels of service provided for environmental water, most often in water delivery systems. We certainly need to consider the revenue requirements of water corporations to maintain future infrastructure needs. A fair and reasonable contribution to system costs should be made by all users in line with the level of service that they receive. A collaborative planning process that involves all relevant parties will allow environmental water holders to engage in the process of cost allocation and provide transparency and

accountability.

The Essential Services Commission is responsible for approving the price proposals of water corporations consistent with policies that are set by government. This is in line with the pricing processes for other water users. For example, in the Wimmera region, GWMWater has established charges for water storage and delivery. Taking into account the broader public benefit of the recreational water entitlement and the high cost of water delivery, GWMWater went through a process to seek water customer agreement to contribute to a subsidised rate for charges applicable to water used for recreation. Approval was received from the Essential Services Commission.

In conclusion, we would say that this is a worthy debate to have. It is great to have these conversations about environmental water. Everybody in this house sounds as though they are a big supporter of environmental flows, but given the good work of the experts and given the reviews that are already going on, not to mention the resource pressures on the parliamentary committees, we would say that it is a worthy debate but not a worthy reference for a parliamentary committee.

Business interrupted pursuant to sessional orders.

ENVIRONMENT, NATURAL RESOURCES AND REGIONAL DEVELOPMENT COMMITTEE

Reference

Debate resumed from earlier this day; motion of Mr O'SULLIVAN (Northern Victoria):

That, pursuant to section 33 of the Parliamentary Committees Act 2003, this house requires the Environment, Natural Resources and Regional Development Committee to inquire into, consider and report, no later than 27 November 2017, on the management, governance and use of environmental water in Victoria including, but not limited to—

- (1) the assessment of the role of environmental water management in preventing or causing 'blackwater' events;
- (2) how environmental water and environmental water managers interact with, and utilise, management tools such as carryover and whether the carryover of environmental water impacts on the availability of water for irrigators;
- (3) consideration of what barriers exist to the more efficient use of environmental water and how these may be addressed; and
- (4) assessment of fees and charges applied to environmental water and whether these differ from those imposed on other water users.

Mr BARBER (Northern Metropolitan)—

Mr O'Sullivan, the mover of this motion, came in here earlier today and he sounded like the world's biggest greenie. He professed his concern for all aquatic

creatures great and small. At one stage I thought he was going to burst into tears over the fate of the fishies and the birdies and the dragonflies, but anybody who has followed this issue knows that the National Party are far and away the most hostile group of individuals when it comes to the protection of the environment, and particularly of the Murray River. Members should not be fooled when they see this motion.

This is all about the National Party continuing their radical opposition to the provision of water for environmental flows. It is Mr O'Sullivan and his party colleagues who stand up and applaud when irrigators set fire to copies of the Murray-Darling Basin plan in the streets as if burning such effigies and dancing around them was going to make it rain. That is why he is here today urging all of you to take the microscopic **amount of environmental water that is available here in** Victoria and put it under the microscope. I cannot believe he does not understand the real reasons for these environmental problems that we have been having with the Murray River, but if he truly does not understand it, he could quickly have found out with a few phone calls.

Let me make it very clear what it is that has been going on up in the Murray River. I hope at the end of it we will be satisfied that we do not need to have an inquiry when the phenomenon at play is already so clear. When water sits on the land surface for some time, it picks up and starts to degrade any organic material that has been lying on that land surface. As the material breaks down, tannins and other chemicals contained within the organic material start to discolour the water and you get something that is called blackwater. However, it is not blackwater per se that causes some of the environmental problems that Mr O'Sullivan alludes to; it is actually water that does not contain oxygen. If that water is quite heavy with rotting vegetation and if the water is at a high temperature, then oxygen is removed from the water. When that anoxic water moves down into river systems where fish and other creatures are in place, it can cause the death of those fish if it is not sufficiently diluted with the water that it meets in the river. The dilution is in fact quite a key issue. I have a couple of figures here that might explain this. The carrying capacity of the Murray channel is around 10 gegalitres a day.

Ms Shing interjected.

Mr BARBER—I can do a David Bellamy. Will that help? In order to get an environmental flow event—that is, to flood the forests along the fringes of the river—typically about 15 gegalitres of water is put into that Murray channel, at which point the water goes over the embankments and starts flooding the forests on

either side. In October last year, however, just prior to the anoxic event that Mr O'Sullivan referred to, we had a natural flood—that is, a flood that was caused by weather, not by any environmental watering efforts—of 180 gegalitres at Yarrawonga. In other words, this was more than 10 times the size of the amount of flow that would typically be delivered as part of an environmental watering effort.

Of course what happened then is that water flowed out not just over public land or forests but actually over private land. During environmental watering events, environmental managers are prohibited from flooding private land. However, in this event, 10 times the size of any environmental watering effort, private land was flooded, so vast amounts of organic material was no doubt picked up from private land, where it must have been lying for some great time.

While we talk about a flood as a natural event, certainly in terms of size it was quite large, but in terms of frequency these so-called 'natural' floods are very infrequent these days. That means large amounts of organic material is there to be picked up, not just from public land but particularly from private land. So a month or so later down the Murray there was an anoxic event that Mr O'Sullivan was referring to. In fact this was the biggest flood since 1993 in the Upper Murray area. That is how long it had been since we had seen a natural flood of a similar size.

Ask anybody involved in water management, flood mitigation, biology, environmental watering—you could have spoken to any of the catchment management authorities up there—and they would have all told you quite simply what it was that was going on. There is no need for some enormous parliamentary inquiry, where National Party members want to just keep whipping along this attack on the small amount of water that has been made available for environmental purposes. Make no mistake, The Nationals are the most radical party in the Victorian Parliament. They are radical in the sense that their policies are so far removed from that of the ordinary, average Victorian, and they will oppose any measures that we put forward for the environment on land or on water. I was going to call them Neanderthals but of course that would be a very false analogy. The Neanderthals were living very much in tune with their environment over many, many thousands of years, the result of which was that they were able to grow their population and expand their geographic range. When we look at the population known as the National Party we see the exact opposite. They are shrinking endlessly. In fact if it was possible to put the leader of the federal National Party, Mr Barnaby Joyce, into a time machine

and send him back to that epoch, I believe he would in fact be bullied by the Neanderthals: I think they would be slapping the guy around trying to get some sense into him.

And just as it was that homo sapiens came along and actually out-competed the Neanderthals—homo sapiens had greater cognitive ability, leading to better technology; certainly more adaptability—so it is that the Greens party has come along and is going to replace the National Party as the dominant species in country Victoria. It is stunts like this that just embed the inevitable extinction of the National Party. The bigger drongo you carry on as, the faster you will rise within the National Party because you are appealing to a particular constituency and you are bringing into it a **studied ignorance of very basic facts, like what the environmental watering regime in Victoria consists of and where these effects come from.**

I have read the newspaper articles that are appearing in Mr O'Sullivan's electorate. I read his local papers in the same way as I read all the ones in my electorate and there is a bit of a story getting whipped up there at the moment that it was environmental water—with brackets around the greenies—that caused the blackwater event, which we know accurately we should refer to as an anoxic event, because the two things are not exactly the same. If we want to avoid such events and if we want to ensure that our rivers remain healthy—because, as Mr O'Sullivan rightly said, it is essential that they are healthy for the amenity of communities that enjoy those rivers for recreation; that they are healthy for the species that live in them in their own right, or for people like Mr O'Sullivan and I who like to fish and want to hook them out; that they provide drinking water for humans; that they provide water for stock; and that the channels and the river banks are usable and not constantly suffering from all sorts of environmental problems, including algal bloom—it is necessary to bring the rivers back to a more natural regime.

Mr O'Sullivan constantly talked about the iconic species such as Murray cod, but his party's plan for the Murray River will actually lead to the extinction of the iconic Murray River ecosystem itself. Ecosystem decline, species extinction, is the direct result of the policies implemented by the National Party at the state and federal levels. At the moment there is no breakthrough made available, and I am talking about at both state and federal levels whenever the coalition has been in government. For example, there is the earlier instance of setting fire to copies of the Murray-Darling Basin plan because it provided additional environmental water, even though scientists are telling

us that the sorts of volumes of water that have been contemplated by any of the plans put forward by any government are all woefully inadequate and will in fact over time guarantee the extinction of the Murray River ecosystem and all the species that go along with it. So their policy is a policy for extinction. And nobody is fooled. I certainly hope members in this house are not going to be lulled by Mr O'Sullivan's warm words when he talked about all creatures great and small, because right there at dot point (1) is:

the assessment of the role of environmental water management in preventing or causing 'blackwater' events.

As I have said, the amount of environmental water that is provided for these events is so minuscule. What is causing these events are the sorts of policies that have been put in place and retained by both the Liberal-Nationals coalition and to a fair extent I would also say the Labor Party, and at the moment they remain absolutely implacable in relation to any meaningful change that would provide the sort of water we need to bring this back to a healthy system.

Mr O'Sullivan—Ban all irrigation.

Mr BARBER—There you go, you see? I asked for more water for environment, and he yells out, 'Ban all irrigation'. That is what he said. The cat is out of the bag. 'It's my water; you can't have it. Nick off'—that is basically the politics of the National Party.

Mr O'Sullivan—That is not quite what I said.

Mr BARBER—It is not quite what he said. But it is what you say when you are up there talking to your irrigator friends. It is a different story you have been saying down here in the Legislative Council today; that is the point I am making. And no-one is fooled.

We need to bring back a more natural flooding regime.

The amount of water that is provided now is minimal, but I share the exact same observations that

Mr O'Sullivan made earlier: when you get a bit of water—a small amount of environmental water—get it down that channel, off the river and into the Hattah Lakes and leave that water there for a good season, nature just comes to life. It is like an oasis down there. Creatures appear that you cannot imagine where they have come from. I have sat on those lakes at Hattah after the environmental watering events and seen hawks hunting dragonflies over the source of the water, and that has been simply just a dry dustbowl under the existing highly unnatural regime that has been put in place over many, many years.

I am not saying it is an easy thing to fix; I am not saying there is some simple solution. Mr O'Sullivan reverted to type when he brought in his simplistic 'Shut down all irrigation' mantra, guaranteed to get the troops all fired up, but it is hardly a response to the clear science that Mr O'Sullivan and his party seem to want

to shy away from. Mr O'Sullivan would do better to go and talk to the experts and the water managers and understand a little bit more about how water management is occurring rather than coming into the Parliament and expecting that it will send a reference to a parliamentary committee to do his homework for him. That is not a good use of the Parliament's time. It would not be a particularly good use of the Parliament's time to add to all the many, many inquiries about the crisis in the Murray-Darling system, because there have **been hundreds of those, backed by thousands of** scientific studies, and that is not what we need right now. For that reason, the Greens will be opposing this motion.

Mr RAMSAY (Western Victoria)—Again I seem to be placed in the speakers list after Mr Barber. I am always having to respond to his contributions, where he spends some time telling us how much he hates farmers, how much he hates food producers, how much he hates irrigators, how much he hates the National Party and how he hates generally anything or anyone that is not in sympathy with his ideology. So again I have got to clean up after Mr Barber's contribution to say that I am speaking in support of this motion brought to the house by Mr O'Sullivan in relation to requiring the Environment, Natural Resources and Regional Development Committee—a committee I admit I sit on—to inquire into, consider and report, no later than 27 November 2017, on the management, governance and use of environmental water in Victoria including, but not limited to the assessment of the role of environmental water management in preventing or causing 'blackwater' events; how environmental water and environmental water managers interact with and utilise management tools; consideration of what barriers exist to the more efficient use of environmental water and how these may be addressed; and assessment of fees and charges applied to environmental water and whether these differ from those imposed on other water users.

It is fair and reasonable, I would have thought, to look at what has been happening with the use of environmental water and the impact that blackwater has had on our water systems since the Victorian Environmental Water Holder was introduced by the coalition in 2011, given it has been six years now since that independent body was formed and has had responsibility for some of the work that is being foreshadowed in this reference. A joint parliamentary committee should take the opportunity to look at the work that the environmental water holder has been doing on behalf of Victorians but also look at the impact of blackwater.

As has been suggested, I suspect many people would not know what blackwater is, so they will be certainly after this inquiry much more informed in relation to the impact that has on our fishing stock—and that has been much discussed in contributions by Mr O’Sullivan. Certainly some of the flooding that has been happening and the returning of floodwater, which has high elevated levels of dissolved organic carbons, does impact on our fish life and the sustainability of fish life in our waterways. So it is an important reference to look at some of the impact that blackwater has, and I say this with some knowledge given that at the time I was president of the Victorian Farmers Federation a Liberal Prime Minister, John Howard, provided \$10 billion to provide a Murray-Darling Basin management plan to create an authority. He gave a significant amount of money to the states to improve their infrastructure and he provided a commonwealth environmental holder that looked after the shared water between the irrigators, the environment and some of the urban uses that require a long-term strategy in the basin. It was good to see a Liberal Prime Minister make a significant investment in saving the Murray-Darling Basin at the time and put the dollars at work to help achieve that outcome.

In the meantime, as Mr Barber will remember, in 2007 the Water Act—in fact, it was the commonwealth Water Act—was amended. If I remember correctly, I think it was the current Prime Minister who was the federal Minister for the Environment and Water Resources at the time. I remember that the minister and I had many a long night of exchanges on how the responsibilities of the states would work with the commonwealth in relation to providing long-term sustainability in water use in the Murray-Darling Basin. I am pleased to say that at the time the Victorian Farmers Federation had a significant input on not only providing practical and sensible advice to the federal minister about sustainability in the basin but also on how responsibility could be shared between the irrigators, the food producers of this state, and the \$8 billion or \$9 billion that the northern irrigators provide in food product or in agriculture product and how we share and sustain water set aside for the environment.

In the negotiations between the states and the commonwealth an appropriate balance was trying to be achieved in relation to an agreed position on the responsibilities, certainly within the states and their role in managing water but also that of the commonwealth—which was pared back, if my memory serves me, to it having responsibilities contained in and around the basin that did not

compromise our state irrigators at the time. We introduced an amended Victorian Water Act 1989 that also tried to find the right balance between the environment and environmental water and the long-term sustainability of the Murray-Darling Basin. Of course that was always compromised by the lack of inflows as a result of the long periods of drought we had through that period.

If I remember rightly, from back in 2005 I think the period of drought and very low inflows into the basin at **that time almost extended right through until 2010**, when we were trying to develop a plan for the basin and also provide a shared water resource between the environment and the irrigators.

At the same time in Victoria we tried to provide, with the commonwealth, significant infrastructure—about \$2 billion of shared investment—to upgrade some of our channels and automatic metering systems in the northern part of Victoria that could make our irrigators more efficient users of water and also provide a more efficient use of environmental water to provide the sorts of environmental outcomes that were sought to be achieved by the federal Liberal government at the time and also the state government.

As I said, it was actually a coalition government and the Minister for Water in the previous Parliament, Peter Walsh, who initiated the Victorian Environmental Water Holder. As I said, it has been some six years now since that independent body started working, and it is appropriate that we now look at some of the achievements of that body and also at what has been achieved in preserving the environmental water under the plan and at the impact on our irrigators that work within the water resource of the Murray-Darling Basin and the constraints that they are under in relation to the water put aside for environmental use and the impact of the environmental water that has been used to flood and build up water storages for, as has been indicated, recreational use and further environmental use.

Of course at the other end we have South Australia, which will never be satisfied with any sort of agreement made within the basin about surcharge or discharge in relation to water flows flowing out from New South Wales and Victoria to South Australia and also the environmental water that has been used or put aside for environmental purposes.

Without prolonging this debate, I think it is appropriate that the Environment, Natural Resources and Regional Development Committee has the opportunity to look at and consider the management, governance and use of environmental water in Victoria and also look at particularly the impact that blackwater has on our current fish supplies and the environs around where

flooding occurs and at the return of the floodwater. As I said, in the most part it has been contaminated by high levels of organic carbons, which in fact have a significant impact on fish life.

I concur with Mr Barber in one respect though—that this committee has been saddled with a number of inquiries. It now has quite a large inquiry into the sustainability of local government. My hope is that we can do justice to all inquiries prior to the finish of this term of Parliament and that the committee has the opportunity to be able to inquire in depth and provide reports to the Parliament on the inquiries that have been referenced to it.

Ms BATH (Eastern Victoria)—I rise this afternoon to speak on and support the motion put forward by my colleague Mr O’Sullivan. I will just make a brief contribution this afternoon. The motion relates to sending to the Environment, Natural Resources and Regional Development Committee an inquiry looking into environmental flows and the effects of environmental flows in terms of blackwater.

I note that Mr Barber is like the man with the curl in front of his forehead—when he is good he is very, very good, and when he is bad he is horrid, and sometimes today I found that it was the latter rather than the former. It is all very interesting until you are in government, is it not?

In talking about environmental flows and specifically the poisoning effect of blackwater and what it can do in terms of wildlife and native fish and crustaceans, it can have quite a devastating effect. Other members have commented on how when there is a massive flood event—so a natural flood or an environmental flow—water can tip over the edges of a river and go into the plains and then sit there for many, many months and sometimes years. That water can become debris logged and brackish, as we will call it. It then flows back into the river and starts to do its damage. I guess the major damage that it causes is that, as it decays in the centre of the river, oxygen becomes depleted as the organic matter starts to decompose. The effect that has on native fish and crustaceans, as I said, can be quite widespread and damaging. In fact there are a number of cases of where this has occurred.

I will go to a couple of cases. In the Murray-Darling Basin, around the time of the 2010–11 floods, in the southern part of the basin there were large amounts of organic matter that accumulated in the flood plains, came back into the river and along a 700-to-800-kilometre stretch of water killed Murray cod, crayfish and yabbies. As recently as December 2016, also in the very north-western part of the state, 200 Murray cod were found dead and dying in an

8-kilometre stretch of water in and around Lake Victoria. The fish were searching for this oxygen so they moved onto the shores of Lake Victoria and perished, sadly.

In an article published in December 2016 the *Weekly Times* reported varying comments on this issue. One **comment came from local Manangatang resident**

MrMackenzie. According to the *Weekly Times*:

Angry at the losses, he wants to challenge the Murray Darling Basin Authority on how the management of environmental water may have caused events of this scale.

‘We know from spending our lives on the river that what is happening isn’t right’, he said.

‘You have natural blackwater events—no-one is disputing that—but generally they are small and localised’.

MrMackenzie’s argument is in fact that environmental water stored in forests for long periods of time before coming back into the river has very dark consequences.

MrMackenzie is quoted in the article as having also said:

The only link to this is environmental flooding into the bush—did this flood pick up a payload of toxic environmental water that had been held in the Yamba forest since last summer and drag it down the river?

If it’s true what the locals say, and that water has been sitting in 40 degrees in the bush for six months, how much oxygen would it have left in it?

MrMackenzie raises important issues about the quantity and location of the release. Finally, he said that he has concerns that:

We’ll end up with no fish left in the river.

Others, however, have different opinions, and I would like to put that on the record. They say that blackwater has no link to the management of environmental water but rather that debris has been washed into the river from surrounding land which had not flooded for years—the floodwaters naturally brought it back in. A gentleman by the name of Carl Binning, from the Murray-Darling Basin Authority, made this counter case. He said:

‘One thing that’s clear is that environmental watering and works programs on the Murray did not give rise to the backwater we’re now seeing’.

I think these differing opinions emphasise that there needs to be an investigation into this blackwater and its effect on environment flows. It needs to be looked at in terms of questions such as ‘Can this be done in a better way?’, ‘What are the governance issues around it?’ and ‘What can make it a better structural system?’.

Finally, we know that fishing in the Murray is a massively important and interesting sport. We have some serious anglers right across our river systems. Back in 2009 there were almost 800 000 Victorians participating in recreational fishing. The recreational fishing grants program report in 2010 told us that almost 2 million hours of fishing time was spent by

anglers in the fishery, and the total Murray cod catch was estimated within the study to be over 113 000 fish, of which just over 8000 were harvested. We want to see fish and crustaceans remaining in our river systems. We also know that anglers get rid of carp, and they can often remove quite large quantities of carp—up to 74 tonnes from a river stream of 1500 kilometres. There is economic benefit to towns along the rivers where there is fishing and angling. I fully support Mr O’Sullivan’s motion. Send this to a committee, let it be reviewed in its entirety and let us have some facts so that governments can make positive, long-term progress around managing blackwater.

Mr YOUNG (Northern Victoria)—On behalf of the Shooters, Fishers and Farmers Party, I would like to throw our support behind this motion and impress upon everyone the importance of this issue, particularly to the region that I represent, Northern Victoria Region. It is also the region that Mr O’Sullivan happens to represent, so it is quite good that this motion has coincided with the work that we are all trying to do.

Our support for this motion did not get off to the best of starts. There was a little bit of a cheap shot a while ago when the Leader of The Nationals felt he needed to point out to everyone else that we should be supporting this motion before actually coming to speak with us about the motion himself and before anyone let us know what it was about. It was a fair assumption that we needed prompting to be on board, but it is safe to say that the Shooters, Fishers and Farmers Party does have a very big interest in this area. We are absolutely looking forward to looking into it more.

Environmental water has pretty significant importance for us in many respects. We do represent a lot of people who have recreational interests that involve places that use water. That includes wetlands, rivers and lakes—all kinds of areas and all kinds of activities. As well as that there is the ecological health and wellbeing of our natural spaces, in which we also have a vested interest because they are the places where we partake in activities. It is interesting to know that we have many wetlands in this state that are fed by environmental water. We do live in quite a dry climate and the wetlands do not always get the water they need for the perfect ecological outcomes, so given the technology that we have and the management that we can provide, we build infrastructure and we put water into these places to allow them to thrive, and we want that to happen. It is great when it all comes together because you can turn a place from a dry, desolate wasteland into a beautiful, thriving environment which is awesome to **be out in. It is really, really encouraging when we get** those events and are able to get out and experience

them.

Most of the experience that I have had with environmental flows has been to do with wetlands, and my interest in this arises out of my pursuit of duck hunting. Many of those wetlands in which we do environmental watering are our Ramsar-listed wetlands. They come under an international convention that recognises their importance, both their ecological impact and their recreational aspects. The Ramsar convention throws a lot of weight behind the fact that these places should be used for recreational pursuits, which really falls into the theme of our party, which is that there is no point having these beautiful, thriving places if no-one is out there seeing them.

It is important to note that out of 200 state game reserves——

Mr Barber—Really? There is no point unless you can go there and kill things?

Mr YOUNG—That is right. Out of the 200 state game reserves we have, 132 of them, it has been uncovered in a recent report by the government, are only used by duck hunters. That is an interesting thing. It goes to show how important we are in terms of visitation to these areas and how important these areas are to quite a big recreational activity in this state. This state really is home to some of the greatest duck hunting in the world. Those areas rarely get visited by people involved in any other pursuit, and it is really important to encourage that and promote more of it. As far as environmental watering goes, we have quite a stringent process in place already, and that process covers many levels of management right down to on-the-ground environmental advisory groups through local catchment management authorities (CMAs), which feed up to the Victorian Environmental Water Holder. It is great to see many people come together throughout that process, but there are obviously problems when you have so many people involved in these processes. We have seen cases where an agenda has gotten in the way of the achievements we are aiming for in environmental watering processes, where people have tried to manipulate systems and people have offered advice that is not right in order to push their own agenda. That has resulted in some serious issues where environmental watering plans that had been developed by a CMA and approved by the Victorian Environmental Water Holder have been changed without due process. We have seen that as recently as in the last 18 months or so.

The minister actually recognised that point. We raised it as quite a serious issue in one particular case in northern Victoria, and the minister, upon looking into it, had no choice but to admit that there had been a

failure in the process. This was quite a serious thing, because it impacted on a recreational activity that, as I mentioned, is the only recreational activity that happens in 132 out of 200 state game reserves. That example was a bit of an eye-opener for me about how the system works and does not work. They are some of the reasons we are interested in having this inquiry and seeing what can change to improve those systems.

A lot of barriers to environmental watering already exist, and part of this inquiry could be to look at that and see how we can make it easier. It is not just bureaucratic but also physical barriers. Environmental water is delivered through physical means so we need the infrastructure there to support it, and in many places in regional Victoria that infrastructure is not there. It could be very easily done and have huge, huge impacts. Woolshed Swamp, near Boort, is the example that springs to mind. In many years it is dry. It does not have a regular wet phase and it is also a closed catchment, so it does not receive enough water on its own and it does need infrastructure to start delivering environmental water, to get those outcomes. It really is such a beautiful place when it fills up. I have witnessed it myself, and we have had some fantastic times there in our hunting pursuits. It is an example of somewhere where a little bit of work can go a long way, and environmental water is the key to that.

In summing up, the inquiry is a little bit broader than just environmental water, because it starts to address all of those issues around water. It is one of the most convoluted areas of government that I have encountered. I certainly would not want to be in charge of it at the moment, because it just seems like a nightmare. There are so many levels of government and so many people trying to influence it, and it is really difficult. This inquiry is going to shed a bit of light on that.

When we talk about water, we talk about people's livelihoods and we talk about the environment. This affects farmers and people in regional towns that do not have that consistent town water supply and have to really look after the water supply they have got, so it is very much an inquiry that would reach those people. For the benefit of those people, the Shooters and Fishers party will be supporting the motion.

Mr O'SULLIVAN (Northern Victoria)—I would like to quickly wrap up the debate on this motion. I thank everyone for the contributions that they have **made in relation to it. I just want to quickly pick up** some the points that Mr Barber made. It seems to me that Mr Barber was just driven by the Greens ideology in terms of his contribution on this motion rather than

the type of commonsense approach that I like to bring to my deliberations in this place. I made it clear right from the start that I would look for practical outcomes in this place rather than blindly following ideology. Mr Barber's contribution clearly shows why the Greens are only an inner-city party. They do not understand what happens out in country Victoria, and from Mr Barber's contribution today, I do not think they ever will.

In terms of what Mr Barber said in relation to the Murray-Darling Basin plan and the way it was when it was first established, that would have absolutely decimated regional communities, so there is no way that that could have ever come to fruition. Essentially what we are trying to do through this motion is see if we can get the experts to come in and give us some evidence in relation to this matter and see if we can come up with some recommendations that would allow the water industry to be even more effective in terms of dealing with issues such as blackwater. I am not sure what the Greens fear about that, because by doing that we might be able to drive better environmental outcomes for the fish and so forth that live in the rivers, particularly up in the north. We might be able to find a way of adding better value to what we have already got. So I am quite surprised that Mr Barber has come at it from the direction he has. It again shows how the Greens are such an inner-city-driven party.

What we are trying to do is come up with some ideas that we might be able to implement that could assist with the ecology of the Murray River, of other rivers in Northern Victoria and of rivers in other parts of the state where this may be relevant—ideas for trying to minimise the blackwater events that do occur from time to time. As a result of that we might be able to come up with some recommendations to protect the iconic Murray cod up in that part of the world, plus all the other animals that rely on the ecology that relies on the Murray River.

In terms of that, I would like to close the debate. I commend the motion to the house.

House divided on motion:

Ayes, 19

Atkinson, Mr O'Donohue, Mr
Bath, Ms (*Teller*) Ondarchie, Mr
Bourman, Mr O'Sullivan, Mr
Carling-Jenkins, Dr Peulich, Mrs
Crozier, Ms Purcell, Mr (*Teller*)
Dalla-Riva, Mr Ramsay, Mr
Davis, Mr Rich-Phillips, Mr
Finn, Mr Wooldridge, Ms
Fitzherbert, Ms Young, Mr
Morris, Mr

Noes, 19

Barber, Mr Mulino, Mr (*Teller*)

Dalidakis, Mr Patten, Ms

Dunn, Ms Pennicuik, Ms

Eideh, Mr Pulford, Ms

Elasmar, Mr Shing, Ms

Hartland, Ms Somyurek, Mr

Jennings, Mr Springle, Ms (*Teller*)

Leane, Mr Symes, Ms

Melhem, Mr Tierney, Ms

Mikakos, Ms

Pairs

Lovell, Ms ALP vacancy

Motion negatived.