T R A N S C R I P T

LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into Ecosystem Decline in Victoria

Melbourne—Thursday, 17 June 2021

(via videoconference)

MEMBERS

Ms Sonja Terpstra—Chair
Mr Clifford Hayes—Deputy Chair
Dr Matthew Bach
Ms Melina Bath
Dr Catherine Cumming
Mr Stuart Grimley
Mr Andy Meddick
Mr Cesar Melhem
Dr Samantha Ratnam
Ms Nina Taylor

PARTICIPATING MEMBERS

Ms Georgie Crozier
Mr David Davis
Dr Tien Kieu
Mrs Beverley McArthur
Mr Tim Quilty

WITNESS

Mr Peter Hawker, Chair, Field and Game Australia *(via videoconference)*.

The CHAIR: I declare open the Legislative Council Environment and Planning Committee public hearing for the Inquiry into Ecosystem Decline in Victoria. Please ensure that mobile phones have been switched to silent and that background noise is minimised.

I would like to begin this hearing by respectfully acknowledging the traditional custodians of the various lands which each of us are gathered on today and pay my respects to their ancestors, elders and families. I particularly welcome any elders or community members who are here today to impart their knowledge of this issue to the committee or who are watching the broadcast of these proceedings. I would also like to welcome any members of the public who may be watching the live broadcast of these proceedings as well.

At this point I will take the opportunity to introduce committee members to you. My name is Sonja Terpstra; I am the Chair of the Environment and Planning Committee. Also joining us via Zoom we have Mr Clifford Hayes, Deputy Chair; Dr Catherine Cumming; Mr Stuart Grimley; Ms Melina Bath; Dr Matthew Bach; Dr Sam Ratnam; Mr Cesar Melhem; and also I think Mr Meddick was with us, but he might have just opted out for a second; and also with us is Mrs Bev McArthur.

With that, all evidence that is taken by the committee today is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during the hearing is protected by law. You are protected against any action for what you say during this hearing, but if you go elsewhere and repeat the same things those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded. You will be provided with a proof version of the transcript following the hearing, and transcripts will ultimately be made public and posted on the committee's website.

If I could please just get you for the Hansard record to state your name and the organisation you are appearing on behalf of.

Mr HAWKER: Peter Hawker, Chairman of Field and Game Australia.

The CHAIR: Great, thank you. And with that, I will hand over to you to make your opening remarks. If you could please keep your remarks to a maximum of 10 minutes, that will allow committee members plenty of time to ask you questions. There are quite a number of committee members here, as you can see. I will give you a bit of a warning just as we approach that 10-minute mark. Over to you. Thanks, Peter.

Mr HAWKER: Okay. Thank you very much, Sonja. I would just like to thank the committee for allowing Field and Game Australia to provide evidence to you on what we see as a critical issue, that the ecosystem is in decline. Ecosystem decline is obviously a concern to a large number of Victorians, as evidenced by the number of submissions into this inquiry. I wanted to first start by providing to committee members some background around Field and Game Australia. A primary objective of Field and Game Australia is to preserve, restore, develop and maintain waterfowl habitat in Australia. Waterfowl hunters are aware of the importance of the importance of our wetlands and the biodiversity associated with them. The idea of maintaining and preserving ecosystems for wise use, including sustainable hunting by humans to sustain communities, culture and recreation aligns closely with Field and Game's mission statements, values and goals.

Field and Game Australia has consistently been at the forefront of wetland conservation, often being the first to notice changes in waterfowl habitat and population, continually seeking the reasons for these changes. Wildlife scientists agree that the loss of habitat is the greatest threat to waterfowl and far greater than the recreational hunting. Several species, including the hardhead, blue-winged shoveler, blue-billed duck and musk duck, have been considerably affected throughout the alteration and loss of their habitat, reflecting the continuing need for Field and Game Australia's wetland restoration and conservation programs.

In 1958 a report was released by the Victorian government which stated that the Pacific black duck could become extent in as little as 10 years. This report was a surprise, but even more surprising was who rallied to the defence of conservation—it was hunters. Concerned hunters united to present a voice on field shooting and

game management, and the Victorian Field and Game Association was born. One of the first tasks set for the fledgling association was to lobby for the licensing system for Victoria's hunters. Hunting licences were introduced into Victoria in 1959 at the cost of £1.

The licensing system raised in its first year approximately $910 000 in today's money. This new revenue source allowed the government to conduct research into the cause of the Pacific black duck's declining numbers. Then, as now, the main causes of the loss of habitat were the use of evasive draining programs across Victoria and the removal of shallow lignum, cumbungi swamps that ducks called home. With this problem identified, the continuing revenue for the game licences was used to acquire wetland habitat across the state. With a view to restore, observe and maintain these habitats, over 75 000 hectares has been restored into natural wetlands through the state game reserve system, and over 70 of these reserves are Ramsar listed. The first state game reserves were purchased using licence fees collected from duck hunters who identified early on that the draining of wetlands was seriously impacting waterbird habitat and populations.

Jack Smith Lake State Game Reserve was the first state game reserve to be proclaimed, in 1958, and ever since these reserves have played a very important role in conservation and recreation for all Victorians. In addition to the game hunting opportunities during the open season, these reserves provide recreational opportunities for water sports, camping, birdwatching and fishing for all other Victorians. Field and Game members are very passionate about their wetland conservation and restoration and ensuring that wetland ecosystems are protected for generations to come. Field and Game has delivered substantial projects across Australia in the last 60 years. With the origins of Field and Game Australia intertwined with the preserving of wetland habitats, it seems only a natural progression to form a public fund, and that became a reality in 2002. It was stated that whilst wetlands on public land were being managed by bureaucrats and state game managers, we also saw a need to actually have more access to be able to perform more conservation and perform more maintenance, and that became very problematic. So in 2002 we established the Wetlands Environmental Taskforce Trust for that purpose of purchasing, restoring and maintaining wetland habitats.

With ownership of the habitats came the full access required to rehabilitate ecosystems and restore biodiversity. With the rehabilitation comes the transformation—none so dramatic as the changes brought about in the Heart Morass in Gippsland. Back in 2004 a parcel of 819 hectares of the Heart Morass was up for sale. The land was worn down, depleted, after a century of stock grazing, with salinity issues and salt water intrusion. But it could be made into a diverse and productive wetland again. The first land purchases were completed in 2006 and two more parcels adjoining the land were acquired by WET in 2010 and 2013.

The restoration and conservation started with the 2006 purchase and continues to this day. Field and Game Australia's members have and will continue to volunteer their time and expertise to rehabilitate this degraded farmland to the thriving wetland habitat it once was. In the years since that first parcel of land was purchased over 50 000 native trees have been planted, 20 tonnes of introduced or invasive carp have been removed and seeds have been collected from over 50 native plant species for revegetation, with thanks to hunters and the Heart Morass project partners, which were Field and Game Australia, Watermark, Bug Blitz, West Gippsland Catchment Management Authority and the Hugh Williamson Foundation. The Heart Morass is one of the largest projects undertaken by WET. Other projects include the Australian national hunting archive, where the role of hunting in Australia's history and culture is the central focus of the large library in the archive, and the latest project at Connewarre near Geelong, where Field and Game Australia members are devoting hundreds of hours to construct the wetland centre for the purpose of researching the wetland habitats, waterfowl nesting and breeding habitats as well as educating hunters and the wider community alike on the benefits of wetland habitats and hunter-led conservation efforts.

With all of this, since the inception Field and Game and since 1958 we have been participating in waterfowl and habitat surveys. A large part of sustainable hunting is the collection of accurate data—gathering estimates of bird population measures and species abundance and surveying wetlands—which helps identify those habitats in need of maintenance and environmental water or other conservation efforts. There are other surveys conducted by various organisations and scientists, and Field and Game Australia's waterfowl and habitats surveys help provide more of a complete picture. One of the most commonly referenced surveys is the eastern Australia waterbird survey, also known as Kingsford Water Bird Aerial Count. However, this survey is conducted by air and follows a specific survey path which overlooks several major wetland habitats. The limitations of the aerial survey also mean that waterfowl in bushland areas or wetlands with healthy tree cover cannot be observed. Sometimes the best way to count waterfowl is to go out and get your feet wet. In February

and November each year Field and Game Australia volunteers visit wetlands, rivers, lakes and farm dams right across Victoria to assist with the waterfowl surveys. The data collected helps determine the trends in waterfowl numbers and the breeding patterns for the upcoming future duck seasons. The surveys conducted in November play a bigger role in negotiations surrounding the declaration of otherwise a legislated duck season for the following year, whilst the February data is added to a long-running survey that provides further insight into the general waterfowl abundance. Field and Game Australia is always looking for enthusiastic volunteers to take part in the waterfowl and habitat surveys, so if any of you are interested in taking part in this important activity, please contact the national office.

Some of the threats and concerns around urban encroachment and the trend towards developing wetland environments into housing estates have become a concern to us. One of the largest concerns is urbanisation, and we have actually noted that with the current trend of developers focusing land and buying parcels around surrounding wetlands for future development. Identifying the drivers for this, wetlands are seen by some as low value and of little use, so the economics surrounding that are appealing to developers. Let us face it, living nearby a beautiful wetland and its inhabitants is fairly appealing. Also this creates a natural attraction for investors. Wetlands are also seen as a quick fix to assist in the management of run-off wastewater that cannot be handled in high-rainfall events.

The CHAIR: Peter, I will just let you know have got about 2 minutes.

Mr HAWKER: Right. The Victorian Planning Authority needs to take a protective approach to the future of precinct planning to ensure that encroachment is considered and impacts to ecosystems analysis is undertaken to mitigate any potential impact on wetlands. That is of paramount importance. The development of the nearby Connewarre wetlands and the Hospital Swamp is a perfect example of our current concerns—environmental water holders and the need for water allocation specifically to benefit habitat. We continue to advocate for environmental bulk water to be actually provided into many wetlands that do not receive water anymore. The purpose of the environmental water is exactly that—for environment use—but we must use the water to improve wetland habitat. We need to add something about our respected First Nations people's culture to hunt and maintain the land, and that includes the ecology of wetlands. We are in the process of developing projects with several traditional owners to identify what we can do to support them in this way and continue to teach them new techniques and practices. In Australia and throughout the world hunters have contributed in so many ways to conservation and biodiversity, and I believe that we are part of the original hunter conservationists.

The CHAIR: Great. Thanks so much for that, Peter. All right, we will go to questions, and I might start off with Ms Bath.

Ms BATH: Thank you, Peter, and thank you for the work that you do in terms of habitat restoration. I have been out to Heart Morass, and it is a truly amazing transformation from a desolate sort of place to an abundance of waterfowl and all sorts of species and a beautiful place to be. It might be helpful, because we are not going to get out there, to provide some before and after pictures for us. You could probably take that on notice; that would be something that would be useful. I am familiar with Heart Morass, but could you provide a list of some of the other Victorian sites that you have—so a bit of an update of what other areas you respond to and look after? I am interested in the Indigenous traditional owners and the role they play. Do they play a role, and if so, what is that role and what are some of the projects that you run with them, collaboratively, together?

Mr HAWKER: Okay. Well, thank you very much, Melina. I will answer on your traditional owners and Indigenous people question and then go on to talk about other projects that Field and Game are involved with on public and private land throughout Victoria. You may get to the argument that traditional owners may not want duck hunting as there are too few ducks. The rebuttal here is that traditional owners share or use ducks as a food source and have done that for thousands of years. We are about to deliver a project with Mark Little and the Wurundjeri people with a nest box program. Mark was also a past board member of the Game Management Authority. Greg Little is also a Wurundjeri man and is a member of the Field and Game duck submission panel for 2021.

Field and Game has participated in and is part of the traditional owners game management strategy with the Victorian government. At the launch Rodney Carter from the Dja Dja Wurrung said:

> Hunting, as an experience, is very important to us, as a way to stay connected to Country, to put Traditional Ecological Knowledge into practice, and to honour our reliance on Culture and Country for our sustenance.

Field and Game has also been working with the Gunditjmara people in developing a program to get traditional youth back to country. The late Eugene Lovett, a Mabo signatory, said:

> My people are excited by this opportunity to partner with Field & Game Australia. Hunting the land is something my people have done for generations and this initiative will help educate our youth and allow them to provide food for their families including duck, quail and kangaroos.

Another elder, Greg Lovett, said:

> We are proud to stand side by side with Field & Game Australia to continue the tradition of hunting and harvesting game from our land to feed our communities.

Beryl Booth, an Aboriginal Peoples Embassy ambassador, also put her support behind the initiative. Ms Booth said:

> The Aboriginal Peoples Embassy is pleased to support this project and hopes that this is the first of many to be delivered throughout Victoria and beyond.

This comes by no accident, as our Northern Territory Field and Game members have been very active participants working with our Aboriginal communities. Since 2014 Field and Game members have delivered up to 25 per cent of the magpie goose meat to the Royal Darwin Hospital renal unit to help Indigenous people with their diets. They are active participants with ongoing weed control programs at Harrison Dam and Lambells Lagoon. Our members are currently investigating ways to help young Indigenous people from the ages of 12 to 17 in firearm safety courses, learning how to hunt and how to have self-respect and provide food back to their communities whilst helping break the cycle of domestic violence, drug abuse and alcoholism. By bringing boys and girls back to country all of these positive aspects of what we do as hunters will continue, given that the Indigenous people were the first people here and they have hunted ever since they have been on this land.

The second component is around what projects Field and Game members do and how that actually interacts with the history of conservation as dedication. Is that right, Melina?

Ms BATH: Yes, sure. I would like to think it is important that we get an understanding of the conservation efforts that you do and even an estimation of the hours that some of your many members would put in. I think it paints just an understanding for the committee.

Mr HAWKER: Okay. I did a fair bit of work a few years ago looking at how many volunteer hours is actually done on behalf of FGAs. Volunteers dedicate between 1600 and 1900 hours. Now, if you actually put a dollar figure on that, that is a quite significant investment.

The second component to it is that Field and Game has been involved in longstanding and very difficult situations to save wetlands within Australia as well as in Victoria. I think part of those many efforts have predominantly been aimed at non-game species, especially the ibis up at Kerang, and we actually have seen increases in brolgas across the regions as well. But some of the wetlands that have benefited from Field and Game's hunter-led conservation efforts—and I will just include a few of these wetlands for the committee—would be Hird Swamp, which is a Ramsar-listed wetland and part of the Kerang wetlands; Johnson Swamp, a Ramsar-listed part of the Kerang wetlands; Dowd Morass, another Ramsar-listed part of the Gippsland Lakes; Reedy Lake at Nagambie; Kanyapella Basin near Echuca; Lake Borrie, a Ramsar-listed wetland in the Port Phillip region and along Port Phillip Bay at the western shoreline and the Bellarine Peninsula; Reedy Lake, Ramsar-listed and part of Port Phillip Bay and the western shore line of the Bellarine Peninsula; Macleod Morass near Bairnsdale; Hospital Swamp near Geelong; Tower Hill at Warrnambool; Lake Eppalock near Bendigo; the Loveday Wetland complex in South Australia; Gunbower Island and Gunbower forest, Ramsar listed, near Kerang; Gaynor Swamp near Rochester; Lake Buloke near Donald; Harrison Dam in the Northern Territory; Lake Wellington at Sale; Jack Smith Lake at Sale; the Heart Morass and Sale Common at Sale; Emu Plains Reserve at Balnarring; Pyramid Creek swamp; Murtnagurt lagoon near Geelong; Hawkstowe park at Epping; and Plenty Gorge Park at Epping.

I could continue to go on with many more wetlands that have actually had long-term benefit from Field and Game members and hunter-conservationists, and they continue to do work in these wetlands—from eradicating pest species to building nest boxes to actually supporting tracks, making sure there is an overall management program in place and working alongside government departments.

But that is only part of the story, because we are talking about public land. There is the private land aspect as well for wetland restoration. One of the key things we have got to look at here is that many of our wetlands actually are on private land. They are not managed by the public. I think a classic example of this is that many, many years ago Field and Game members and hunters in general talked to Tom Brinkworth. The Watervalley complex in the upper south-east of South Australia is over 40 000 hectares of wetlands that were restored—which were farmland prior to that. We also have significant projects with many other landholders throughout the Wimmera, the Western District, the south-east of South Australia, Tasmania and the Northern Territory. All these states and territories are where recreational hunting is permitted. Where it is not permitted in New South Wales and Queensland it is actually under pest mitigation, and a lot of those wetlands have been in decline, and we have actually seen the work that Professor Kingsford does that it actually concurs with that, because water priorities get taken to other areas—that is, cotton farms, big farming or if they are flowing down in environmental flows or water through the Menindee Lakes. So there is an overall management system that needs to be put in place, but those are just a few of the examples that Field and Game members have been active in.

The CHAIR: All right. We will have to move along, so Dr Bach, over to you.

Dr BACH: Many thanks, Chair, and thanks a lot, Peter, for being with us. I was also fascinated to hear about the many conservation activities that your members engage in. But in particular my ears pricked up when you started to talk about data and the collection of data, because that has been a really strong theme for us—that we can do more on and we can do better to collect data, particularly on threatened species, but our conversations have been more broad than that. I wonder, could you please expand upon the comments that you made in your presentation, sir, about the collection of data? I would be interested to know if there are other ways that your members collect data and share that with government agencies or other relevant agencies, or if there are other opportunities for your members to do that.

Mr HAWKER: Okay. Well, look, the first one, as I mentioned, is the waterfowl survey abundance, where we actually have members going out on private and public lands. We record that data and bring it into a central spot at the national office. But we also embarked on a head and wing research project, which we have been doing for many years, and Graham Hall—he has just come back from Africa—has been leading that. So ultimately the head and wing research is actually identifying the age of a bird, where it is actually taken, in what region and looking at many of the characteristics around that. We also partner with Deakin University on avian influenza, where we are trapping ducks and taking blood samples and monitoring what is actually happening within the duck population. So we have got a number of our members that have actually passed animal ethics handling courses, and they are now trapping ducks for that research with Marcel. We are also looking at another project where we are tracking ducks and watching where they actually move. So we are putting GPS monitors on birds and actually tracking them in real time: their feeding, when they fly, when they sit, when they roost and where they actually go. We have only just started doing that, and we are collecting that data as well. The Game Management Authority have been quite interested in those research projects, and we are actually talking with them at the moment.

Another key component to this is that Field and Game members—when we actually started—started the waterbird banding project. Now, ultimately a number of people that are still alive today were part of that project. To give you an idea about the significance of the nomadic qualities of ducks themselves, back in 1989 I basically shot a grey teal—it was banded in Busselton, in Western Australia—and ultimately we worked out it was 9 months old, from where it was. So we have actually got a lot of data within hunting archives as well on where the abundance of birds are. One of the things that we are starting to question is to say, 'Well, if we're looking at abundance, when you start surveying it all depends on where you survey and where you start and finish with these things'. We have been here for over 200 years and not one of the game species that is hunted is actually rare or endangered, and that is noted within the United Nations itself. So they are some of the projects that we are embarking on.

The nest box program—we have also been monitoring that data, so looking at how many clutches, how many eggs, what is the abundance of that. I would argue that we have probably been leading the way with nest boxes for decades, and one could argue that it could be the largest nest box program in the Southern Hemisphere. We are actually trialling new nest boxes now, or hen houses, which we can put cameras into and actually start to see what is going on there as well. So this is all done via volunteers—using their own time and their own resources.

Dr BACH: All right. Many thanks.

The CHAIR: Mr Hayes.

Mr HAYES: Thanks, Chair. Thanks, Peter. I just want to ask a question about—well, it is about data in a way. Many witnesses we have heard from before have talked about numbers of native birds in decline, including ducks. So I was just going to ask—and you may have data that shows the opposite or submits the opposite—if it was established that we do have our native birds in decline, including ducks, can it really be argued that we should continue killing wild ducks? That is my first question, Peter—if you could just briefly talk on that.

Mr HAWKER: Thank you very much for that. I think the first thing that you have to establish with anything is to say, 'Well, are the bird numbers actually declining in numbers?', and when do you start getting that data? Now, we do not have data from when we had the first settlements in Australia, but what we do know is that none of the game birds are critically endangered or extinct. The second component to it is the decline in overall waterbird populations is directly related to the loss of habitat, as I mentioned in the talk.

When we actually look at the biology of game, they are a group of generally mammals and birds that have been pursued by humans since the start of time, and the ecology of game species is geared to very, very high rates of mortality. And this is shown in a number of our game species. So two examples would be that if you take a pair of stubble quail in the right seasonal conditions, they will most likely in an average year rear two broods. But if you take two grey teal, they may produce between two and three clutches in the right environmental conditions. In good years this is much higher. So our argument is that if you follow the rainfall, you follow the abundance of waterfowl within the years when we have large areas of wetlands. And Australia is very much a wet and a dry continent. We do have dry periods, and we do have very wet periods. All of our native birds have actually adapted to that over the centuries and thousands and thousands of years. So the sustainability of the harvest, it can be argued, could be much higher than what it is today, because ultimately the biggest killer of birds is nature itself, and really it is about actually preserving the wetlands.

So it is all about, 'Well, where are the major wetlands?' Well, sadly, they are where the urban areas are. If you take Melbourne, that was one of the largest deltas, with the Yarra flooding out and Carrum Lakes and around the whole bay. Well, that is all boxed. You know, it is all in housing. So you actually have more of a threat from the urban and human population building on creeks and the major wetlands than we have actually seen. And that is where our argument is to say, 'Well, you've got to actually put policy around this', and then policy actually means sustainability. Sustainability is getting more water back into the natural run-off areas and wetlands, because a lot of farming activities have diverted water into other areas or getting it off their property. One of the key things that I see is that in order to have an ecologically friendly state, you have to have a diversity of landscapes. If you are going and cropping with wheat or barley or lupin or canola, you have got that land use for one use only. It is that crop that actually returns per hectare, or if you actually have a grazing paddock, it is actually the sheep production per DSE, or for cattle. But if you said, 'Well, how do we actually create value throughout the entire system and through the entire farming system?', there is a path for that. You can have sustainable wetlands on farms whilst hunters conserve those, and you can actually put payment systems in place. This is exactly what is happening around the world at the moment. Because if you actually take it to one land use and you say, 'Well, I'm going to get a yield or a return off that', we are arguing to say, 'Well, you can get multiple returns off other areas with people that are interested in doing these activities'.

So one of the key things is: if you enable a diverse use of land on public and private land, you will sustain and protect all the parts of the ecosystem. Especially with wetlands, it takes a long time to preserve and get a working wetland being productive properly. I have personal examples, where I have got on a D6 Dozer, 30 years ago, moving dirt, and we went out with a theodolite; we looked at where water used to move. And then you would say, 'Well, we actually want to put drains in here', you put in dams and then you actually capture the water. Then you actually have wet and drying systems, and within all of that, you can fence off areas that were productive for livestock, were productive for cropping, but now are beautiful wetlands and basically get another use out of that land. The one thing that I have noticed and observed over the 30 years that I have doing this is that the productivity of livestock has actually gone up, because your wetland is not just benefiting ducks, it benefits all wildlife. It is benefits everything from the insects through to the frogs through to the growth of the vegetation and through to trees, which also benefits a number of mammals and birds, which in turn promotes breeding within the livestock itself.

This was the problem that Field and Game faced in 1958. We came out of World War II. The government basically said, 'Let's go for soldier settlement blocks'—soldier settlement blocks were 640 acres—and they went to the most productive land. The most productive land is where water is, because over thousands of years that is where the most productive soils are. And that was what was leading to the decline of that black duck at that time.

Since then we actually have seen black duck numbers at normal, reasonable, high levels. Other game species, like chestnut teal, have benefited from it. I have also seen benefits for the shoveler, and I have also seen in regions where the freckled duck, which has always been claimed to be rare and endangered, is coming back in bigger and bigger numbers all the time. This is all further fact that there are a number of hunters that actually value the actual wetlands and have actually been able to diversify their landscapes to doing this on private land. So I would say that the actual shooting or the mechanism of harvesting from the land is insignificant to the overall population that breeds when the actual seasonal conditions are right. Proper game management recognises that, which means that in some years when you have higher abundance you have higher game harvesting than in other years. At the moment we are actually experiencing another large breeding event, and ultimately that has been happening for the last 12 months. It will continue to happen, and if we have seasonal conditions and floods continue, not just in Victoria but across the whole Murray-Darling Basin, the breeding will increase exponentially and you get to a point where you actually see thousands and thousands of birds.

Probably the prime candidate for the adoption of breeding is the pink-eared duck. You can go into the middle of Australia and all of a sudden they turn up when the water is just starting to flow. Then all of a sudden you get hundreds and hundreds, and then you get thousands and thousands. And it has actually been recorded by the CSIRO that when the water goes back you see large die-offs of that particular species. So within Australia our native wildlife—there is a bigger argument to be consuming that because it is a better meat than that of the farming of European animals, but by the same token these are the animals that have adapted to the landscape, and the landscape has been changing ever since the ice age and will continue to change after you and I go. So you say, 'Well, that's the argument, and then for that this is one of the solutions'. And I would argue that we have got more dams, more wetlands, than we ever had, and ultimately some of this data does get skewed. So I would actually argue that you need to put a hypothesis and say, 'Well, how high can you sustainably harvest these birds and at what level is it detrimental to the population?', and then draw a conclusion back the other way.

Mr HAYES: Thanks, Peter—a very comprehensive answer. I do appreciate the work that you do on wetlands, and I am very aware of the pressures put on our wetlands by population increases and development along where water is available, so thanks for your answer on that. I do have another question, but I might leave it till we go around—if we get around. Thanks.

The CHAIR: Yes, we are going to have to move along. Dr Ratnam, a question?

Dr RATNAM: Thanks very much for your presentation. Throughout you have talked about anecdotal observation of numbers—for example, of native waterbirds. You have talked a lot about the ecological restoration work that you claim that your members do, but primarily you facilitate hunting, and we know that Victoria's environment is in dire trouble. The state of the environment report paints a very troubling picture of what is happening, including in our wetlands, rivers and bird species. So is there any work that you do—do you commission any independent research work to look at the ecological impact of shooting native birds, for example? You have talked about anecdotal data, but I am interested to know whether you invest in independent research about or analysis of that impact that many of your members have on our environment and if you can talk to us about any of those findings if that research has been conducted.

Mr HAWKER: Look, to put it as a straight answer: the first part is that we have not actually invested any money at the moment into what you are actually asking. But the critical point to this is that there have been a number of surveys and the game bags get surveyed every year. We also had a number of leading scientists that did a lot of this work back in the early 2000s, and they came to the conclusion that hunting had no detrimental effect on any waterbird species.

Dr RATNAM: Sorry to interrupt, Mr Hawker. I was just wondering—you mentioned surveys. Who conducts those surveys?

Mr HAWKER: Kingsford was one of the leading ones that actually conducted that survey, and ultimately all of that work is with the Victorian government and part of the Arthur Rylah Institute.

Dr RATNAM: And the other research you mentioned was from the early 2000s, so it sounds like it is a little bit dated if it is two decades old.

Mr HAWKER: Well, we also have a number of researchers in New South Wales that actually monitor the pest species of duck harvesting on crops that actually get devastated by ducks, and they come up with much higher numbers than what we do here in Victoria. We also have pest mitigation programs in Queensland, and the DPI has been doing a lot of work there as well. Ultimately they have all come to the same conclusion along the eastern seaboard that the way that game birds breed and the way that they can basically attack rice essentially and other crops they warrant permits to be able to be destroyed.

Dr RATNAM: I guess the issue, though, is the native birds being killed throughout that process. You talk about game birds, but we also know that native birds get shot, and that is what we are particularly worried about in terms of the species that are endangered or facing extinction.

Mr HAWKER: Well, I would argue that hunters over the last 30 years are much better marksmen ever since the actual stoppage of semi-automatic shotguns. Essentially where we actually are today is the majority of hunters basically are practising their skills throughout the year, and they do that through our simulated clay target ranges. Secondly, hunters that are keen to go out and hunt food for their table actually know of all the downsides, and they have seen that in the media for over 40 years. I think that there is no argument there to be had about non-game species being shot in any large numbers.

The CHAIR: All right. Thanks, Peter. Mr Grimley.

Mr GRIMLEY: Thank you, Chair. Thanks, Peter, for your presentation. I have no questions for the time being. Thanks, Chair.

The CHAIR: Peter, I might just take an opportunity to ask a question at this juncture then. You were talking about that you collect data, or you have referred quite extensively to data that Field and Game and your members do and counts and things like that. But are you able to elaborate, I guess, on—you talked about bag limits but are your members primarily shooting native waterbirds for sport? And are you able to say, 'Yes, this percentage of our people are shooting it for sport' or, 'This percentage are shooting them for food'? Are you able to elaborate on that?

Mr HAWKER: I think the first part is that all our members and duck hunters are shooting for food.

The CHAIR: So 100 per cent are shooting for food.

Mr HAWKER: Absolutely, because, firstly, we have a respect campaign to respect the game animal. The second component to it is you should be taking an animal out of the environment unless you actually are going to use it and consume it. There is no sport in actually going out and shooting a duck. It is actually a recreation and a cultural activity to basically put food on the table.

The CHAIR: Have you actually got any data that supports that assertion, or is that anecdotal just from your organisation's perspective?

Mr HAWKER: I can survey all the members, and they would actually say exactly what I have just said, because there is a lot of game sharing as well throughout the communities. Ultimately with that I have not come across anyone that actually is just out there shooting for the thrill of it. They are out there to pursue their hunting skills and ultimately have an alternative lifestyle which provides food for their family and puts food on the table. And we—

The CHAIR: But to date, as you said, you have not surveyed your members. You said that is your view that you could survey them, but at the moment you do not have data around that.

Mr HAWKER: We do not survey that because it is an assumed assumption that you are going out there to actually harvest birds, like you are with fish, to actually bring them home and eat them.

The CHAIR: Okay. No, it was just a question. Thank you.

Mr HAWKER: It is a fantastic question.

The CHAIR: As Dr Ratnam was saying, primarily a major focus of this inquiry is to inquire into ecosystem decline and looking at native animals. You talked a lot about what your members do in terms of conservation, but what is your view about the fact that ducks are not an introduced species, so they are not necessarily a pest species—they are a native animal? Do you have a view about that in terms of your organisation's members shooting native animals, and is that of concern that it could be impacting ecosystems as well, or is that not an issue?

Mr HAWKER: It is really not an issue. And I think Australians actually have to wake up to the fact that our environment actually warrants probably more harvesting of native species for meat—so that is kangaroo, emu, wild duck, that are all native—because they all have reproductive traits that are warranted to this environment. Some of the more detrimental aspects are European farming when we first started, and that has had probably more of a detriment on that, but farmers today understand that. You know, in South Australia kangaroo meat can be purchased through the supermarkets. So we see that as an absolute non-issue. And many countries around the world have native duck species that are harvested year in, year out. More of a concern is actually the habitat, and ultimately that is part of the ecological system and we have got to preserve that.

The CHAIR: You spoke about that. Yes. All right. Look, I am sorry; we are out of time. We have been running late this morning, so I apologise for keeping you waiting as well. But I am trying to get us all back on track, and I apologise to those members who did not get a chance to ask questions. But what I will say is that if other members have questions for you, we will arrange for the Secretariat to get them to you in terms of questions on notice, and then you will be able to respond to them when time allows. I would like to thank you very much for your contribution today, Peter.

Mr HAWKER: Okay. Thank you.

Witness withdrew.