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**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND
FORESTRY

Reference: Impact on agriculture of pest animals

MONDAY, 11 APRIL 2005

PERTH

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY

Monday, 11 April 2005

Members: Mr Schultz (*Chair*), Mr Adams (*Deputy Chair*), Mr Martin Ferguson, Mr Michael Ferguson, Mr Forrest, Mr Lindsay, Mr Gavan O'Connor, Mr Secker, Mr Tuckey and Mr Windsor

Members in attendance: Mr Adams, Mr Forrest, Mr Lindsay, Mr Gavan O'Connor, Mr Schultz, Mr Secker and Mr Tuckey

Terms of reference for the inquiry:

To inquire into and report on:

The impact on agriculture of pest animals particularly:

To identify nationally significant pest animal issues and consider how existing Australian and State government processes can be better linked for more coordinated management of these issues across State boundaries.

To consider the approaches to pest animal issues across all relevant jurisdictions, including

- (i) prevention of new pest animals becoming established;
- (ii) detection and reporting systems for new and established pest animals;
- (iii) eradication of infestations (particularly newly established species or 'sleeper' populations of species which are considered to be high risk) where feasible and appropriate; and
- (iv) reduction of the impact of established pest animal populations.

Consider the adequacy of State Government expenditure on pest animal control in the context of other conservation and natural resource management priorities, with particular reference to National Parks.

Consider the scope for industry groups and R & D Corporations to improve their response to landholder concerns about pest animals.

Consider ways to promote community understanding of and involvement in pest animals and their management.

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Committee met at 1.31 p.m.**PENNA, Ms Anna-Marie, Salinity and Rural Liaison Officer, Conservation Council of Western Australia (Inc.)****TALLENTIRE, Mr Chris, Director, Conservation Council of Western Australia (Inc.)**

CHAIR—I declare open this public hearing of the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry inquiry into the impact on agriculture of pest animals. The committee was recently in Tasmania, and we are scheduling more hearings and inspections in Canberra during the next session of sittings. I expect that we may also return to Western Australia in July to talk to people in the North-West. These hearings and informal visits are adding to the considerable amount of information we have received in written submissions, and the committee should therefore soon be in a position to begin preparing a report.

I welcome the representatives of the Conservation Council of Western Australia. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament and, consequently, they warrant the same respect as proceedings of the House itself. It is customary to remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Do you wish to make a brief statement in relation to your submission or would you care to make some introductory remarks?

Mr Tallentire—We will make a very brief introductory statement, and then we will be very happy to take questions from the members. If there is one message that I would really like to get across, it is that conservationists in Western Australia are fully supportive of the use of 1080 poison as a means to combating feral animals, especially in the South-West. We do not have the technical knowledge to speak for the use of 1080 poison in other parts of Australia and, indeed, there are some question marks about its suitability as a feral animal control agent in the north of the state as well. But, without question, in the South-West we are fully supportive of the use of 1080 poison. We see this as essential because of the threat that is posed to our natural biodiversity particularly by foxes and other feral animals such as cats.

As well, we feel that it is very important that we consider in this inquiry things like the control of goats, camels, donkeys and, in particular, a threat that is looming, a threat that has been brought about by a sector of the agricultural industry—the sugarcane industry—a threat to Western Australian biodiversity and Western Australian agriculture, and that is the cane toad. Should the cane toad get into Western Australia, it would definitely be a serious threat to the tourism values of the Kimberley. We are in close contact with many tourism operators in the Kimberley who are passionate about not letting the cane toad get past its present point, which is Victoria River in the Northern Territory. We are working with people in the Kununurra area, in particular, and across the Kimberley to work out a means of developing a trapping exercise that could stop the advance of the cane toad and, who knows, possibly show that we can reduce its numbers and halt its westward advance. Those are the main points. Anna-Marie, do you want to add anything at this stage?

Ms Penna—The Conservation Council is very supportive of regional and national models but particularly a regional approach to actual on-ground control of feral animals. Experience has

shown that it is quite useless having control on individual farms because you are just creating a vacuum for feral animals from other areas to fill. We are also very supportive of a national invasive species council and a national strategy developed for the management of invasive species. We believe the national strategy should not be a 'one size fits all'; it does need to be site-specific to make allowances for the use of 1080 in the South-West of WA, where our species have evolved with gastrolobiums et cetera, so they are much more adapted to the impact of 1080.

CHAIR—Thank you very much for those brief introductory remarks. I will open the questioning by reminding you of the comments you made in your submission summary—that is, the issue with regard to the term 'pest animals'. You say that the term 'pest animals' should be restricted to exotic or introduced species and should not include locally endemic native fauna such as kangaroos and emus. Why do you say that? In what context do you believe that?

Mr Tallentire—That is a position that the Conservation Council of Western Australia have come to, and it is based on a lot of experience. A good portion of our supporters live in regional areas and are pointing out to us—and this is based on personal experience as well—that, if a land-holding has a lot of kangaroos on it at different times, perhaps it is a resource that needs to be tapped into rather than something that needs to be considered as a pest, a nuisance. Speaking from personal experience, I have certainly seen that. I have been struggling to get my parents to consider that the kangaroos that come on to their farm are eating the grass that their cows would like to have but in fact we are losing a resource there. That is one example of why we should be looking upon native animals that have naturally evolved in this ecology as a resource rather than as a pest.

Ms Penna—I would like to add to that. I used to do conservation covenanting, and quite a number of the land-holders who I worked with had the impact of kangaroos but did not see them as a pest, and they stated that to me whilst I was doing that role.

CHAIR—We have had evidence to the contrary. We have had evidence that not only kangaroos but wallabies and possums have become a very serious problem, particularly in places like Tasmania, where certain farming practices allow the animals to have open access to a very good food source, which has resulted in an unusual explosion of numbers, and so much so that they have become basically very difficult to control. Before I move on to my next point, I would like to make an observation. I am disappointed to hear that the Conservation Council is influenced by the urban views of some of its members who would not have any idea at all about what is going on in the rural sector with regard to the targeting of non-exotic species.

Mr Tallentire—It is not a point that has come from our urban sector at all. It is our rural constituents who are saying, 'The kangaroos that we have, sometimes in very high numbers, are a resource that we should be looking at. We should be looking at them as a resource, not looking at them as a pest.'

CHAIR—Is that to harvest them?

Mr Tallentire—Yes.

CHAIR—That is fine; that is what I wanted you to say.

Mr TUCKEY—Mr Chair, can I just follow that through. For the record, considering our inquiry in Tasmania, does the Conservation Council have a view that the government authorities associated with this should have a—I guess ‘relaxed’ is a very good choice of words—approach? It appears that the problem with treating these animals as a resource is that our governments have got all these roadblocks in the way, even in terms of assessment. Does the Conservation Council have a view, which we might pass on to some of the ministers we hope to talk with, that there should be a rapid review of how governments deal with this matter so they can be used as a resource? 1080 has a different effect in Tasmania to that which it has in Western Australia, where the animals in the South-West are not affected by it—they are resistant I guess. But, if it were a good business, we would get control and, of course, the marketplace does not go to extermination. Once the economics of hunting these animals gets to a certain point, people will stop. I would be very encouraged to have something on the record that says you think that harvesting is the appropriate control measure. We do have a lot of trouble. From my time in the North-West, I am aware of CALM representatives flying through the daylight trying to count kangaroos. They are pretty hard to see. So there needs to be, in my view, a better relationship with the person on the land. I have said a lot, but I would love to see something on the record from you with respect to a more commonsense approach.

Mr Tallentire—We would certainly support government agencies staying involved in this. That might not be exactly what you want to hear us say.

Mr TUCKEY—I do not mind them being involved. The trouble is that they are not involved. They do nothing.

Mr Tallentire—At the moment, in Western Australia, to shoot kangaroos people are supposed to have a permit in many circumstances. Another example would be with the use of 1080 poison, which does need some level of regulation. I have noted—and I think this might have been suggested in another submission—that there is a high degree of red tape getting in the way of people on the land doing things in a positive fashion. I think this is perhaps a case where we do need some form of control. It should not be a total roadblock—an obstacle to people doing what they know is the right thing—but we do need some level of control. At the very least, it should make sure that neighbouring properties are aware of a baiting program and make sure that somebody is perhaps catching or harvesting a legitimate target species, not a species that could be threatened or endangered. There should be no confusion between those things. It is important that there is some level of government involvement in this.

Mr TUCKEY—I will put it in another way: where there is clear evidence of overpopulation, on a scale of one to 10 would you prefer that there be a more aggressive harvesting scheme or poison?

Mr Tallentire—It is going to depend on what species we are talking about. If we are talking about western grey kangaroos that are sometimes in huge numbers in farmland in the South-West of WA, I think harvesting is—

Mr TUCKEY—I think that is the point. We start with the premise that they are in—to use our terminology—pest proportions. But the current arrangements in WA are that you get tags and you can shoot so many commercially—that is fine—but, if there are still a lot left, you are allowed to shoot them and leave them lying on the ground. I cannot understand the logic of that.

Anyway, I think you have answered the question. I have taken a bit of time, but the most appropriate method of control for indigenous species is going to be an issue for us. It seems tragic to me, if they have to be controlled, that they are not put to some use—send them to the poor people, if you like.

CHAIR—Is the Conservation Council of Western Australia affiliated with Animals Australia?

Mr Tallentire—Not at all. I am aware of the comments that Animals Australia made to you at a recent inquiry hearing. I have no idea who those people are.

CHAIR—You do not subscribe to the fact that introduced exotic species should be allowed to become part of the landscape through natural evolution, even at the expense of endangered species?

Mr Tallentire—Not at all.

CHAIR—Good. Thank you.

Mr ADAMS—I am very pleased that you have cleared that up too. It is very good. I take it that you support the opportunity to sell skins and carcasses as long as numbers are recorded and we know what is happening. We know what numbers are being taken out of the wild, and I think you would support management plans along those lines. The other issue is that you have talked about a national pest alert network. How would you envisage that operating? From a national perspective, there is an opportunity to give more thought to how we go about this. We have been doing it a bit haphazardly, I think, through a whole variety of species. Your thoughts on that would be useful to us as well.

Ms Penna—In terms of the national reporting system I think that there is a whole area of community that is not being tapped into. We could effectively tap into it to get better reporting mechanisms by utilising the new NRM regional groups and looking at more of a regional process. I know that this has been promoted on the weeds side of things with reporting for new outbreaks et cetera. I think that, for animals, we could actually use similar systems to those that they are proposing for weeds. Really it is the same people out there, so they will be seeing the same landscape.

Mr ADAMS—How would you see that working?

Ms Penna—Probably one of the easiest ways to do this is to have an internet reporting system. I know that there are still issues in regional areas with internet access and those sorts of things, but they have to be sorted out at the same time as implementing the internet reporting systems. But also having more regional people involved—I know there used to be a really good network of APB officers in the regions—

Mr ADAMS—What is an APB officer?

Ms Penna—It is an Agricultural Protection Board officer. I know that, with funding cuts, that level of staffing has been substantially reduced and that has caused quite a lot of angst in the community. I think we could get more resourcing back into those areas and get more staff who

are dealing with those issues out into the community, to have a No. 1, one-stop shop reporting system—for want of a better description.

Mr Tallentire—I think there is a view that that would help to coordinate resources as well. We are worried, when things are done in a fairly ad hoc fashion, that you get duplications and you get people conducting research in different areas without it all being coordinated. The idea of a national pest animal control council is one that we have seen mentioned in other submissions and it is one that we subscribe to as well.

CHAIR—What sort of make-up would you see that as having? It would be a mixture of what?

Ms Penna—It would have to be a combination of the CSIRO and the Pest Animal Control CRC et cetera, but it really would need to have community involvement as well, so it would be government research officers as well as the community. I think the WA Weeds Committee is a very good model for having very good cross-sectional representation. I think a similar sort of model should be implemented for pest animals, certainly in WA. I cannot talk for the other states.

CHAIR—Would these councils be made up of a good mixture of, say, land-holders and community based rural people?

Ms Penna—That is exactly what the WA Weeds Committee is made up of. It has very broad representation at regional level; it has some urban representation as well. It has the Environmental Weeds Action Network, as a community based organisation, as well as land-holders.

CHAIR—Is it heavily weighted in one direction rather than another?

Ms Penna—No, it is very well balanced. It includes representation from the northern areas as well as down to the South-West and out to Esperance et cetera. It has a very good cross-sectional engagement.

Mr GAVAN O'CONNOR—Thank you very much for your submission; it is a very good one. I am from the eastern states and I want to get a bit of a fix on WA and the 1080 issue. In your submission you said:

... in the eastern states compared to Western Australia where significant numbers of native taxa appear to have a greater tolerance to the toxin than the eastern states species.

Why is that? Is there some research to back that proposition?

Mr Tallentire—There certainly is. In our Western Australia flora, which in the South-West is incredibly diverse—I think nearly 8,000 plant species occur in the South-West of the state—there is a group known as the gastrolobium species of plants which contain this 1080 toxin. From the plants, the toxin enters the food chain. Native animals such as the chuditch, a carnivorous dasyurid marsupial, have managed to absorb, during their evolution, enough of this poison to become quite tolerant of high levels of 1080. Chuditch have been reintroduced into areas through very good programs run by our Department of Conservation and Land

Management and a baiting program, such as the Western Shield program targeted at eliminating foxes, can work in perfect harmony with the restoration of the natural ecology in those forest areas.

Mr GAVAN O'CONNOR—You made statements about the consumption of poisoned feral animals, or direct consumption of the bait product, and the impact on native species. Do you know of any concrete research that has been done on that?

Mr Tallentire—I know there has been extensive research on the impacts on native species in Western Australia and that just confirms what I was saying previously. But I might have missed the direction of your question.

Mr GAVAN O'CONNOR—I was just interested in the research that backs up this statement about the impact of the consumption of these baits.

Mr Tallentire—We could submit the links to the research papers. There has been quite extensive research done on this.

Mr GAVAN O'CONNOR—That is fine. I am also interested in that intergenerational equity issue that you raised in your submission. Would you like to explain that a little bit further? When it comes to the argument about private cost and public good we need to philosophically tease out this particular issue because there is often resistance to public moneys being used to control a pest when the major impact might be on private land.

Ms Penna—That was one of the reasons we used the bumblebee as an example of the impact of intergenerational equity. One sector within the agricultural community is lobbying to introduce the bumblebee, but the ramifications of that for the greater community are absolutely huge in terms of the explosion of environmental weeds that would occur. That would be a cost borne by the wider community, not just the tomato growers or whatever. There are other systems that can be used for pollination of tomatoes, so I would hate to see the bumblebee introduced, with the huge cost that will have on the wider community. That is really where I was coming from with that point.

Mr GAVAN O'CONNOR—Has there been any concrete research done on the impacts of the bumblebee?

Ms Penna—There has been research done in New Zealand, I understand, and I can get some references to the committee at a later stage.

Mr GAVAN O'CONNOR—That would be helpful.

Ms Penna—The CSIRO or the CRC for pest animals—I cannot remember which one—also used the example of the ferret. Even though that is actually an ornamental pet, it is going to have a wider impact.

Mr ADAMS—We would be interested in any information you can get to us on that. The bumblebee is very active in Tasmania, I can assure you. It started five years ago.

Ms Penna—Yes, I do not envy you guys.

Mr SECKER—I also congratulate you on what is an almost refreshingly sensible approach from a conservation council in Australia, which we do not always see. I was surprised that you said there should be strict bans on further import of pasture grasses, ornamental plants and aquarium fish. I can understand your point in relation to aquarium fish; they get into the native waters. To a certain extent, I can understand your point in relation to ornamental plants; soursobs have come in as an ornamental plant and gone wild out in the pastures. But I wondered why you want a blanket ban on pasture grasses. I use the example of springfield lucerne that was brought in to cross with hunter river lucerne to give resistance to aphids. Haifa white clover, a high producing clover, came from Israel. I just wonder why you have a blanket ban on new pasture?

Mr Tallentire—I think there is a need for a bit of clarification on that one. It really means that we are very concerned about release where there is no satisfactory research on the environmental implications.

Ms Penna—I apologise about that. In Western Australia in particular we have quite a number of grassy weed species, such as veldt grass, which were introduced as agricultural fodder crops. Veldt grass is now a huge weed problem throughout bushlands in the South-West. It is also a huge fuel problem because it dies back in summer. So I guess we should be looking more at what we are importing. I would prefer to see greater research and exploitation of our native species before we look at what is happening overseas and introduce potential new weed species.

Mr SECKER—People still plant veldt grass in their pastures. It is pretty productive. Some people might say phalaris is a weed in some places because if it is not grazed it gets into a great big clump and can be a big fire hazard, but it is still a very productive pasture if it is managed properly.

Ms Penna—From a Western Australian perspective I can tell you that it was planted throughout Kings Park so that they could harvest it. So from that experience we have learnt quite a bit about potential weedy problems. We really should be looking more closely at the wider impacts, not just at the productivity impacts.

Mr ADAMS—Rice grass is another one.

Mr LINDSAY—I have a philosophical question. In your evidence you talked about species being endemic to the eastern states and you said that they should be considered pest animals if they extend beyond their normal distribution. What about indigenous animals whose populations have mushroomed because of conditions that have been introduced by humans? When humans come along the populations of some indigenous animals expand. Why don't you then call them pests?

Mr Tallentire—It is a difficult one and to deal with it effectively we need to look at that on a case-by-case basis. One example would be the pink and grey galahs and how they have expanded enormously beyond their original range. In some cases they could be said to be causing damage to agricultural production.

Mr TUCKEY—And other indigenous species; the corella is even worse.

Mr LINDSAY—Are you prepared to consider changing your view?

Mr Tallentire—We wanted to highlight that the rainbow lorikeet that has come into Western Australia is as alien as the cane toad.

Mr LINDSAY—You said that no indigenous animals should be considered as pest animals, but in Tasmania, because of how farming has occurred, the populations of wallabies and potoroos—or whatever it is—have blown out of all proportion. Would you be prepared to consider changing your view on that?

Mr Tallentire—We could consider that, but the important thing is to recognise that the population explosion of some of those species might be a sign, as I said earlier, of not having a correct view about what is a pest and what is a resource; but it may also be an indication of some sort of imbalance in the farming system we have established.

Mr LINDSAY—I agree.

Mr Tallentire—That might mean that we need to have a more productive agricultural system and better treatment of the ecology. We might need to look for modifications within the underpinning agricultural system.

CHAIR—Can I be the devil's advocate for a minute? You are obviously of the opinion that the native species that have been introduced—like the birds you were talking about in Western Australia—should not be regarded as pests. But would you see them—once again referring back to your comments—as a resource that we should harvest and perhaps use as a legitimate way of exporting that particular breed in substitution of the illegal or against the illegal exporting of animals or birds such as that?

Mr Tallentire—This is an issue that the conservation movement is grappling with at the moment. We have not come to a final position on it but we do have concerns about the animal welfare aspects of exporting—

CHAIR—Illegal exporting.

Mr Tallentire—Certainly illegal export is terrible, but so is the condition that the animals end up in when they are exported legally, unfortunately. We have no control over the cage size for a red-tailed black cockatoo once it ends up in, who knows, a Singapore flat or somewhere like that. So that is a concern to us, but it is an issue that we have to grapple with because there is certainly evidence that one of the best control mechanisms is to have that market system in place.

Having said all that, we are aware of the goat eradication program that once existed—and members of the panel may be able to add information on this—which attempted to eradicate goats from areas of the rangelands of Western Australian. It involved very expensive helicopters and shooting exercises. It was not successful, and we have switched to a system where we ask pastoral leaseholders to collect goats. There is an established market, and it is quite a lucrative line for people to expand on their standard enterprises of cattle or sheep grazing. Even though we have moved into the area of using market forces to control what was a pest animal, we have

gone into a phase of not removing the pest animal from the rangeland landscape at all because many pastoral leaseholders are quite happy to see a nice stock of goats out there still causing damage. We cannot rely on market forces to deliver when it comes to the eradication of these pests on every occasion, but market forces have a role to play.

Mr LINDSAY—In your evidence you talked about the cooperative approach between government departments here and the DAG's levy scheme for controlling wild dogs. You said that it should be extended and you listed a whole lot of things: foxes, feral cats, rabbits, birds et cetera. Would you include insects in that?

Ms Penna—I think so, situation dependent, but I know that insects are certainly an area that is really neglected in terms of research and approach.

Mr LINDSAY—So the answer is yes. You mentioned that you were concerned that no research had been conducted into the impacts on the wider native invertebrate fauna of aerial spraying measures for locusts. Do you have anything else to add on that?

Ms Penna—I do not have any empirical evidence. I have heard quite a lot of anecdotal concerns and information from other people that spray drift is an issue in WA per se. I have heard concerns from people when talking about spray drift from blue gum plantations et cetera about adequate buffers between conservation reserves, native vegetation areas and crops when spraying for locusts.

Mr LINDSAY—You have said in your evidence that, where individual land-holders try to control whatever their pest is, it is ineffective and wastes money if not all land-holders conduct concerted and targeted control. Does that introduce the possibility that perhaps governments should take over so that all lands are covered? Would you agree with that? Would that be better than relying on individual land-holders and finding that they are wasting their money by doing it on their property?

Ms Penna—It would really be dependent on the region or the area that you are working in. For example, in the NEWROC, or North East Wheatbelt Regional Organisation of Councils, area which takes in Koorda and Mount Marshall and a couple of other shires, they have a very effective regional model for approaching management. They have a feral animal week, which they use as an education and awareness-raising pivotal point. They get all their land-holders to do all their baiting at the same time. That is the sort of model that we see as a really effective model and we would like that model expanded. Who leads it I think is probably not so much of an issue.

Mr LINDSAY—I have a non-scientific question. It seems that every introduced species—introduced into one state from another or into Australia from overseas—always seems to go wrong. Would you empirically be prepared to say, 'No; I don't agree?'

Mr ADAMS—That is not true. That is far from it.

Ms Penna—There are some very good examples where it has worked very effectively, like the leaf hopper for controlling bridal creeper. Those sorts of biological controls are very good.

Mr LINDSAY—That answers the question I did not ask. I was intrigued by your comment that intrastate mail services need to have effective quarantine measures implemented. Why do you say that?

Ms Penna—A couple of years ago they used to run the dogs over the mail to pick up weeds and things like that. I understand that practice was stopped—I cannot remember the name of the act now, but it was to do with national communication and mail. WA is in a unique situation where we have the ability to stop a lot of this stuff coming in, and the removal of those sorts of practices really undermines our effective quarantine controls. It would be great to see that practice back.

Mr LINDSAY—Finally, are you prepared to pass a judgment on how well the Western Australian government departments handle this whole issue of pest animal control?

Mr Tallentire—The short answer is: they probably do as well as they can given their scarce resources. Sometimes we question their prioritisation, and the cane toad case is an interesting example. At the moment, the West Australian government is putting forward some \$600,000 towards stopping cane toads getting into Western Australia, but actually the money is going to be spent on a biodiversity monitoring exercise in the Kimberley region so we can see what biodiversity values exist in the Kimberley before the toad arrives. That sort of decision making is something that we are lobbying hard against. We feel that this is the time, especially in the coming dry season, where we can really try something to stop the advance of the cane toad. The big trapping exercise that I mentioned earlier, in the months of, say, October and November of this year could be the last opportunity for us to do that. We are working hard to convince the WA government to come good and to work with the community on that. In other areas, I think it is often a lack of resources.

Mr TUCKEY—Considering my special interest some time ago, I want to ask about the Conservation Council's view on native forests and their protection. There was a very sophisticated baiting program going on in state forests, as once we knew them, associated with the harvesting program. Are you able to enlighten this committee to any extent as to how all of the new forest reserves are being managed in this regard? I have a view that we treat national parks with benign neglect. We like them, but once we have declared them we ignore them, both in terms of fire and the indigenous species that were previously protected by baiting. What evidence is available to your organisation that the level of baiting that occurred when it was a production forest is still being maintained in these reserves?

Mr Tallentire—My understanding on this point is that the Western Shield program extends over—

Mr TUCKEY—I know Western Shield, but is it still being applied in all these reserves? Western Shield was Shea's thing, and he got private enterprise money and everything but that was when he was managing forests for profit.

Mr Tallentire—I understand that it is still continuing and that it is in the forest areas as well. We would need expertise from CALM to tell us how they are making decisions on where to bait and where not to bait and what their rationale is. I do not think it is influenced by the profitability of an area of forest—not to my knowledge, anyway.

Mr TUCKEY—I am interested to know whether they are still doing it. We have received a lot of evidence that national parks have become the breeding ground for all forms of feral and indigenous pest species. As minister, I was informed that there were, I think, 19 million feral pigs in the Cape York National Park. You can imagine what would happen if one of those were to get foot-and-mouth disease coming down from what are virtually adjacent islands.

We have increased this park estate. You have talked about goats. As you are probably aware, there was a big fuss about them turning the water off. In fact, that is all that achieved. They took the sheep off the properties, turned them back into a national park and the goats and the kangaroos and everything else were decimating the flora. While you had the windmills going, it was okay. The minute you stopped them, they all had to die of thirst. If you are putting in further information, you might tell us what your understanding is of those activities that, amongst other things, make the national parks the source of everybody else's wild dogs et cetera.

Mr Tallentire—We are lobbying hard for greater expenditure on the management of national parks. There is no doubt that it is displeasing from a tourism perspective, it is environmentally destructive and it is just bad practice for us to have situations where, for example, there are wild pigs around. I was in Kalbarri National Park recently and there were wild pigs around. That is just not good at all. There needs to be greater expenditure and better management; that is for sure.

The message that we need to get across as well is that feral animals that exist in national parks and nature reserves were not there originally. They have got there possibly because of poor practice in the surrounding area. We are all responsible, whether we are park managers, whether we are conservationists or whether we are adjacent agricultural land-holders. We all have a responsibility. I am concerned that there is an attitude at times that says: it is the park authority that should be the only body responsible for controlling the feral animals in the national park.

CHAIR—My experience over the years has been that political parties of all persuasions have been influenced by the pressures from what I refer to as the radical element of the conservation movement, to the extent that we are increasing national park areas more and more—in some instances they have increased them in a calendar year by about 30 per cent. Governments have been put under pressure to declare more and more wilderness areas, which basically just locks up all of the ferals and introduced weed species, to the extent that if we have a fire caused by lightning strike, as occurred in the Kosciuszko a couple of years ago, it might wipe out all our native flora and fauna. The point I am making—and you might agree with it—is: whilst it is always easy for us to say that government should be making more money available for national parks and wildlife service people—in your case, CALM—and related organisations, it is not helped by the fact that we keep increasing the size of the area that they are responsible for. The point there is: we have to find the money somewhere, so we go back to the taxpayer. It is a never-ending cycle. Would you agree that at some stage we are going to have to say: 'We are not going to expand the area anymore. We think we can handle all we need to handle to look after our biodiversity in these areas now,' without unnecessarily, for political or whatever reasons, expanding the areas that we currently manage?

Mr Tallentire—I am afraid I do not think I could agree with that. We need a national parks and reserve system which is based on developing a system of comprehensive, adequate and representative reserves—the CAR system.

CHAIR—I am not disputing that.

Mr Tallentire—It would be very unfortunate if we were to say, ‘We can’t add this piece of land to the conservation estate because of the extra management costs.’ If a piece of land has been identified as being worthy of inclusion in the conservation estate, that is the reason for including it, rather than saying, ‘We are worried about how we are going to control a possible feral animal outbreak in the national park.’

CHAIR—How do you answer the point that I just made that we are increasing them when we do not have enough resources to look after them and that a fire caused by lightning strike might destroy everything within a 500 kilometre radius of the very spot we added to increase the percentage of national park?

Mr Tallentire—I am not sure of the details of the example that you are thinking of there. All I can say is that, in WA, seven per cent of our landmass is in the conservation estate. That has hardly increased. There has been a slight increase with the new forests in the South-West that the Gallop government added over its first term of office. Essentially, the size of the conservation estate in WA is still pretty small. Management costs and concerns about the impact of lightning strikes and things are, I think, secondary issues, but important ones. It is true that when we add to the conservation estate we have to make sure we have the resources to correctly manage it.

Mr GAVAN O’CONNOR—On the final pages of your submission you talk about the need for regional plans and coordination and the need to bring in other agencies that are not under the umbrella now. You mentioned railways, easement authorities, telecommunications authorities and water corporation catchment areas. Are there any models where these sorts of bodies have been included and some good work has been done? I think you make a very valid point there, especially with regard to weeds.

Ms Penna—I am not aware of any other models that have encompassed all the agencies like that. The best way I can see that happening, off the top of my head, is including them in the working group or the steering committee or whatever you set up for invasive species management in the state. They need to have representation; otherwise, it is excluding aspects of the community. You are not going to get whole-of-government engagement without it.

Mr ADAMS—I take it that along the railways there has been a lot of stuff that has blown off trains over the last hundred years?

Ms Penna—Yes. I used to work in local government, so I dealt with Main Roads a lot, particularly on rabbit control issues—rabbits infesting Main Roads lands. I was aware through that work that Main Roads are constantly left out of the loop.

Mr TUCKEY—In the light of the comments you have just made that there is not enough money spent to make sure that the national parks we declare are not a pest in themselves, what would be the attitude of the Conservation Council of WA to a special tax that became a dedicated fund, so that the people who demand these parks start paying for them?

Mr Tallentire—We are generally supportive of various forms of environmental taxes or levies. We are aware of surveys I think conducted by the *West Australian* a few years ago that

showed that, indeed, there was support for a tax to help fight salinity. Members might be better aware of this than me, but if people feel that the likely use of a tax or levy is a worthy use they will be supportive of it.

CHAIR—You are absolutely right. Mr Tallentire and Ms Penna, I thank both of you very much for the very precise and very frank way in which you have answered questions. Can I also take the opportunity to reinforce the point that was made by some of my parliamentary colleagues: it is refreshing from our point of view to hear somebody coming from a conservation organisation looking at things with an open mind and with a very broad focus on the implications for the community as a whole, particularly the grazing community. I thank you for your submission and compliment you on it.

Mr Tallentire—Thank you for that, Chair. Can I just point out that on Friday the Minister for the Environment and Heritage, Senator Campbell, did announce significant cuts to the funding of various conservation councils in Australia.

For our organisation, that would mean a change from \$75,000 annual funding down to \$10,000. What that will mean is that some of the more positive outreach work we do is going to be harder for us to achieve, whereas we will always be doing the advocacy work. It is disappointing. I am not sure, perhaps there is still room for negotiation.

Mr ADAMS—Maybe, on that point, you could put a submission like this one to us saying that having the \$75,000 in funding gives you an opportunity to put the submission that you have made today.

Mr Tallentire—Absolutely. It is critical to our involvement, to our ability to engage with other stakeholders and to be well informed. The quality of our submissions will be dependent on the level of funding we receive.

CHAIR—The point is well put and is certainly taken, I can assure you.

Proceedings suspended from 2.20 p.m. to 2.33 p.m.

MERCY, Dr Ashley, Acting Executive Director, Animal Industries, Department of Agriculture, Western Australia

WOOLNOUGH, Dr Andrew, Research Officer, Vertebrate Pest Research Section, Department of Agriculture, Western Australia

McNAMARA, Mr Kieran, Executive Director, Department of Conservation and Land Management, Western Australia

WYRE, Mr Gordon, Acting Director of Nature Conservation, Department of Conservation and Land Management, Western Australia

ACTING CHAIR (Mr Adams)—I welcome the representatives of the Western Australian government. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament and, consequently, warrant the same respect as proceedings of the House itself. It is customary to remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of the parliament. I invite you to make a brief opening statement in relation to your submission and we will go from there. I apologise for our chairman's absence, he will be back in a moment.

Dr Mercy—I will lead off. You have our joint submission. To summarise our submission, we believe that we need national leadership and a coordinated approach to pest animal issues, and of course this needs to be fully funded. We need some sort of agreed protocol for dealing with incursions of new pests and for dealing with established pests. That is a key issue in our submission. One of the other issues is that we certainly need some coordinated research into the best practices for controlling animal pests. I am not sure whether it is totally coordinated now, but it certainly needs to be coordinated in terms of those best practice issues.

Another issue we need to look at is some sort of uniform legislation across Australia. This happens with a lot of things. There are differences in state legislation. I know it is difficult to do this, but wherever possible we should try to get some uniform legislation to deal with a pest that does not respect state boundaries. We need to have a clear priority to stop the establishment of exotic pests as a first priority, while we are dealing with a number of other pests and diseases. It is about stopping the establishment of exotic pests, rather than about the control of pests that are already established, although they of course do need to be controlled. But a clear priority is stopping exotic pests.

I have a couple of other points. The control of endemic animal pests in Australia ought to be the responsibility of the landowner. That is a premise that we are pushing here in Western Australia—that is, that the control of pests on their land is the responsibility of the landowner. I will leave my comments there and am happy to answer questions in due course.

Mr McNamara—All I will add is that, as the Department of Conservation and Land Management, we work closely with the Department of Agriculture within the state in dealing with animal pests and with plant pests as well. We cooperate with the department of agriculture at the national level through forums such as the Natural Resource Management Ministerial

Council, which is meeting later this week and which currently has work going on on the invasive species framework for the country. Our primary responsibility is twofold. We are responsible for biodiversity conservation throughout the state of Western Australia, and we are specifically responsible for the management of that part of Western Australia that is set aside as national parks, nature reserves, state forests and the like. In total, we directly manage about 10 per cent of the land area of WA, or about 23½ million hectares, as parks and reserves and state forests, and we have on-ground management responsibilities in relation to feral animals for unallocated crown land extending over 80 million hectares of the rest of the state.

ACTING CHAIR—So you basically believe that we should be going down the line of a more national approach to this? We have been trying to get rid of the rabbits since probably the year after they started here and we have not done all that well, although we have knocked them down from time to time. What about animal management programs and those sorts of issues? Do we need a new approach? You have been at it over here for a long time, and your predecessors have had programs, I guess, through your departments. Should we be looking at new ways or new research? Do we need to really put some effort into research?

Dr Mercy—I think there are probably a few things. I will ask Andrew to comment on the research side of things but, in terms of the approach, in the time that I have been in the Department of Agriculture—and I have probably been here for too long, 37 years—I have seen where we started. It was not my game, but I worked alongside these fellows. Once upon a time the Department of Agriculture people used to do everything on the farmers' properties. My father owned a farm, so I am well aware of that. We have moved from that situation to one where the landowners are taking more responsibility. That works in some cases. Of course some farmers and landowners do not want to do it; they want to go back the other way. But we feel that our resources are better spread across a wider number of people by giving advice on how to do things. Actually getting out there and spraying weeds or trapping rabbits is not a good use of taxpayers' money. I think it is working to some extent, and we do not have quite so many—

ACTING CHAIR—Do we need new videos to do that with? What do we need to give them? Are there new ways or do we just keep tackling the old ways?

Dr Mercy—We are certainly doing a lot more training. I think that is working. Perhaps in the beginning they might have just said, 'Go and do it,' although I do not think so, but we are spending more time on training farmers. By and large a lot of them are now accepting their responsibility. They are finding out how to do these things, and they do them. It is about getting them to accept the responsibility for their patch and to not let things get out and infect someone else's patch. That applies to weeds as well as pest animals.

Mr TUCKEY—On that particular subject: anecdotally—and I know this as the member for probably the biggest farming region in Western Australia, if not Australia—and from evidence that has been given to this committee on the issue, we know that generally farmers are quite comfortable with being required to look after the pest species on their properties but that they are all browned off with CALM and other such parks managers sending their pest species across the fence and, what is more, in some cases—and you might inform the committee as to the requirements here—tree clearing is such that if you want to build a pest-proof fence you cannot clear enough ground to stop the trees falling on the fence. You might want to answer about those situations. It is fine to ask farmers to keep the animals off their farmland. They are delighted to

do so, but they are frantic about the number that come in. I have raised this already today, but it is my view that we have got to the point that national parks and others are treated with benign neglect.

Mr McNamara—In terms of the clearing legislation that you referred to, the Western Australian Environmental Protection Act was amended last year to bring in new clearing controls. My department does not administer those. They are administered by the Department of Environment. They extend the clearing controls beyond what they used to be in the Soil and Land Conservation Act administered by the Department of Agriculture. It is certainly the case that a greater number of actions than used to be captured in the past are now captured by the requirement for permission to undertake clearing. I do not have personal mastery of all the details of those clearing regulations and permit procedures, but certainly they do provide for the construction of fences and other things with appropriate firebreak clearances and so on alongside them. There are various permissions and so on that one has to get that are different from what they used to be in the past. I am not really able to answer that part of the question beyond that. It is not my department that administers those controls.

As for pests, parks and so on, there is a whole range of things to be said. The fact of the matter is that I also hear farmers and pastoralists say what you have said: that they receive pest animals from parks and crown land. But it is certainly not one-way traffic. The pests, both native and introduced, that we have operate in both directions. I can certainly cite examples of control programs that we conduct, the effectiveness of which is—

Mr TUCKEY—That is an argument that says two wrongs make a right. We are asking you what you are doing under your management about pests on your property.

Mr McNamara—Firstly, I am explaining that it is not in one direction and that—

Mr TUCKEY—But I do not think that is relevant to my question.

Mr McNamara—It does go in both directions. What we are doing—

Mr TUCKEY—I did ask ‘what’ in the other question.

Mr McNamara—What we are doing is attempting to control feral animals on the parks that we manage to the best of our ability. We have a situation in this state where we are responsible for conservation across one-third of the Australian continent and we have one-tenth of the taxpayer base of this continent. So there are some challenges in what we do, and I would never sit in front of a committee like this and say that we are perfectly resourced for all the land management and other functions that we have to perform.

Having said that, we spend about \$3 million per annum directly on feral animal control on CALM managed lands. We give priority to those species that affect the values of those lands and we also give priority to the effects on our neighbours. We do the best we can with that. The government, in creating additional national parks in the South-West in the last year, has increased our budget to accommodate the costs of managing those parks, as did the previous government in the context of the acquisition of substantial areas of pastoral leasehold land in the Gascoyne-Murchison as part of the Gascoyne-Murchison strategy. I do not believe that we

operate on the basis of benign neglect. We have quite concerted programs done to the best of our ability with the resources we have got, though we have to balance that right across the state against all our other obligations, such as fire management and the like.

Mr TUCKEY—And you have got \$3 million for pest animal control?

Mr McNamara—In terms of direct expenditure on pest animal control, we spend about \$3 million per annum at present.

CHAIR—Do you believe that the individual departmental demarcation issues that arise not just in your state but in all states contribute to an inefficient approach to pest animal control overall?

Mr McNamara—Obviously different agencies have different roles and different perspectives. My agency has a responsibility for the conservation of biodiversity and for management of the lands that I outlined. The Department of Agriculture has different responsibilities. Obviously I, within my responsibilities, would give some emphasis to the impacts of pest animals on conservation values.

CHAIR—I understand that. The point I am making, and I am not trying to paint any of you guys into a corner, is that it would seem to be a very positive use of taxpayers' resources, either at state or federal level, for departments to be more integrated with each other on these issues, rather than having a cut-off point and a line delineation that prevents perhaps in many instances a more positive attitude and outcome with regard to feral animal or pest control.

Mr McNamara—Where I was heading was to say that, while we have our emphasis and Agriculture understandably have their emphasis, I think there is a good degree of integration. To use an analogy on the weed side, a thing like the state weed plan is fully integrated across agricultural and conservation requirements. The efforts we are involved in at the national level through the NRM Ministerial Council, such as the invasive species task force and the national weed strategy, seek to achieve exactly what you refer to, which is integration across agricultural, water resource, amenity and conservation interests whilst still not forgetting that each of those might have some particular emphasis.

Mr SECKER—Pardon me if I am a little bit cynical, but every time I see a submission from a state government I note there is always a request for increased Commonwealth funding. Aren't pest plants really the responsibility of state governments? Why is there a need to get increased funding from the Commonwealth government if it is their responsibility in the first place? I am playing devil's advocate here.

Mr McNamara—I accept my colleague's comment that certainly there is a primary responsibility that rests with land managers. In that sense, my department is a land manager just like the farmers and pastoralists and other land managers whom we have referred to. The Commonwealth has a range of responsibilities and functions, starting with the barrier of quarantine, which is a Commonwealth responsibility in respect of what gets into this country and what does not. We have a number of breaches of that happening from time to time. We have examples like red imported fire ants, which if jumped on quickly, urgently and cooperatively perhaps can be handled. We are hopeful that will be the case. Those issues are of national

significance and warrant a national interest and national role. The Commonwealth has, through a range of mechanisms such as the Environment Protection and Biodiversity Conservation Act, legislative responsibilities for threatened species, threatened ecological communities, RAMSAR wetlands and a whole range of things where the matters for which the Commonwealth has a range of responsibilities are affected by such things.

Mr SECKER—So you are not seeing this as a cost-shifting thing; you are just saying we should spend a bit more on our responsibilities and not fund your responsibilities.

Mr McNamara—I am certainly not asking that you fund our responsibilities. I am saying that a combination of effort is required and the Commonwealth should contribute to that. Through other areas like CSIRO and cooperative research centres the Commonwealth is very well placed to contribute to some of the research and development that we need. We are doing work on cane toads at the moment. That is an animal that is obviously already in the country and well established, but it is coming towards Western Australia. We do need to expend some of the effort of the CRC for invasive animals, through the CSIRO, on some of the things that are already here that are major problems. We need to be watchful at the barrier and make sure that the R&D backs up what we need to do.

Mr SECKER—That brings me to my next question. A previous submission suggested that, with the cane toad problems and the possible invasion into Western Australia, the Western Australian government is measuring biodiversity for a before and after comparison rather than spending money on stopping them getting here. Would you like to comment on that?

Mr McNamara—I will invite my colleague Gordon Wyre to comment on that because he is directly involved in that project, but we would love to stop cane toads getting to Western Australia. If it were that easy, someone else would have stopped them getting where they already are. We are looking at a range of parts of our program, which include the vigilance, the surveillance and the ability to trap and control cane toads in high-value areas. However, the major impact that cane toads do have and will have is on our native fauna values. What we believe we need to do as part of a package of measures—not the only measure by any means—is to understand exactly what biodiversity values we have in the face of the impending cane toad arrival and take measures to make sure that we do not lose those things.

Mr Wyre—One of the major problems that you have when you are looking at cane toads is that very little was done during their migration through Queensland to determine what their impact on biodiversity and the landscape was in its entirety. So we have four main elements to our program. The first element is to do what we can to stop them coming in as hitchhikers. They are the advance guard that are more likely than anything to come in first, so we have beefed up the border security, public awareness and everything on that. The second element is to see if we can possibly stop them coming across the country—and we have programs going into that. We actually have people in the Northern Territory this week trapping cane toads and looking at the effectiveness of traps. We have heard some phenomenal claims about the success of traps that stop them. This program is really unprecedented. No trapping effort has ever been decided upon and proven to stop them. Certainly if we can stop them we will redirect resources into that, but we cannot let an opportunity go by to actually find out what we have in an area before the cane toads get there, to see what impact they really do have if nothing else works. So we have all those things. The fourth element of our strategy is to make sure that it is properly coordinated.

We have a community input into the decision-making process, and we have cooperation. The state, the Commonwealth and the Northern Territory are all involved, and that is working well. We have a budget of \$600,000. We think the Commonwealth is going to chip in another \$600,000 for this year, and we are hoping to identify what resources are needed to take us from here on the success or failure of what we are doing at the moment.

Mr SECKER—So it is not true to say that you are spending most of your money on looking at the biodiversity. You are actually doing a fair bit on control, trapping et cetera.

Mr Wyre—Our main effort at the moment is finding out exactly where they are and where they are moving the most. Once we have determined what is going where, we will direct resources. As I said, we are trialling resources now in terms of controlling them. We also have resources directed at finding out what is in the Western Australian environment that they might impact upon. As I said, if we have any hopes of success, if it looks like a trapping program or fences or something like that would actually stop them from getting here, then we can redirect that budget at very short notice.

CHAIR—So are we talking about holding the line against the cane toads in Western Australia?

Mr Wyre—No. We are talking about holding it in the Northern Territory if we possibly can.

CHAIR—Given that the cane toad is very difficult animal to control in terms of the facilities and products that we have available for controlling other pest species, are we doing enough in terms of research and are we doing research quickly enough to get on top of the problem in time or do we need to put more resources—whether it be money or something else; I do not know—into research to address the issue?

Mr Wyre—A cane toad is a classic example of an almost perfect invasive species. It breeds phenomenally, it can travel anywhere, it can aestivate when conditions get dry and it kills everything that tries to eat it. You would be hard-pressed to design something that was better as an invasive species. Having said that, a lot of research has been done. I was involved in the early days in the eighties when the Commonwealth was funding research through CSIRO and James Cook University to look at stemming the tide of cane toads. You can never have enough research until you actually find whatever the key factor is that is going to be the weakness in cane toads, but unfortunately to date none of the research has found that key factor. We could have been lucky and got it right up front, but we have not been lucky and we have gone down a few blind alleys. The only other thing I would say is that we should have started researching back in the 1930s rather than the 1980s. We have missed about a 50-year window, and we could have found something by now.

Mr GAVAN O'CONNOR—Can they only survive in tropical and subtropical areas?

Mr Wyre—They can adapt to most environments. They seem to be spreading to areas where no-one thought they could survive. We even have some researchers now telling us that they can possibly change sex. So it is a very difficult species to deal with. A single pair of cane toads can put out half a million cane toads in a couple of years if all their young survive, which thankfully they mostly do not.

Mr TUCKEY—We have been looking at going to the Kimberley on some other matters. What inspection opportunities would we have regarding your current program in that region? Could we talk to some of your people on the ground while we are there?

Mr Wyre—Certainly our on-ground operations at the moment are in the Northern Territory. We are based along the Victoria River, which is the current front line of where we know cane toads to be. There could be some cane toads further west, but we have investigated where we have had reports and they have not been found to be there. We would be very delighted take representatives of the group to see the trapping operation and what is going on. We are establishing our broader scale biodiversity surveys and we also have our communication program ticking over, involving communications programs with the local schools and the Aboriginal communities—but that will be rolled out over the dry season.

Mr McNamara—In terms of the Kimberley, Kununurra is an obvious place to talk to people about community awareness, interest, community concern and the surveillance and border arrangements that have been put in place. The action is currently on the front that is reaching Darwin. That is where the animals are close to. I know they are at Fogg Dam, which is on the edge of Darwin. The community of Darwin is getting pretty excited about it, and that is why people are experimenting with innovative designs of traps, fencing and so on and claiming various successes, which we would love to examine closely—and we will be this week in fact when the Natural Resource Management Ministerial Council meets in Darwin.

CHAIR—There is also a problem in northern New South Wales now. They are moving south.

Mr GAVAN O'CONNOR—Is your suggestion of a national pest animal strategy a view common to both your departments, and how extensive is this view in other agencies?

Dr Mercy—From my perspective it is a common view. In terms of the other departments, I am not sure, but there is the Vertebrate Pest Committee, which is a national body. I am quite sure that they would have the same view that a nationally coordinated approach is far better than individual states going it alone. My personal background is in another sphere—animal health—and we try to do everything in a national sense. That is the key to it. It is absolutely hopeless trying to do it individually, particularly with pests, diseases or whatever that travel across state borders; it is ineffective. I would be most surprised if the other jurisdictions did not have the same view, but I personally have not spoken to them.

Mr TUCKEY—Could it be incorporated with the national weed strategy? When you are talking about seeds and so on, it tends to cross borders, doesn't it?

Mr Wyre—I can probably answer that one. I am the state rep on the NRM council's invasive species task group. As part of our terms of reference, we are looking at a national invasive species strategy which would go across the weed strategy and we are hoping to get a national pest animal strategy. So we would be bringing together the elements that we have learned from the weed strategy into the pest animal strategy and have a framework over the top of them. At the committee level, that involves one representative from each state. In most cases, they are agriculture department representatives. Sometimes they are environment or conservation representatives. That is the way we are going—to really set up a national strategy for pest animals as well as weeds. While the weed problem has not been solved, we think that it has

definitely gone ahead since we have had the weeds of national significance list and the national approach.

Mr ADAMS—Do you see that as a pretty good way to go?

Mr Wyre—It is a good first step. Once you have people talking the same language on the same issues, then the next thing is the same investment. I am sure you have heard elsewhere that if you have seven different people trying to do something and they are not perfectly communicating with each other they tend to find the same mistakes.

CHAIR—This might be an appropriate and opportune time for Dr Woolnough to talk about the Vertebrate Pest Research Section of the Department of Agriculture and, more importantly, where we are at with the current research. I note that the research that you are particularly involved in relates to animal pest survey in agricultural and pastoral areas, feral pig baits and control strategies and the effectiveness of wild dog baits. Could you give us, as an example, a brief overview of where you are at with your research? It will then give us some indication of what is happening.

Mr GAVAN O'CONNOR—Can I preface those comments by saying that I am interested in the structures, within government, that will drive an effective response given that state boundaries basically mean very little these days. In that context, you might illuminate us as to what your committee does and how you see the structures evolving.

Dr Woolnough—To demonstrate, in our section we have three research themes at the moment. We have feral pigs, which is pretty much a national focus at the moment. That involves doing things at a national level to help reduce the damage by feral pigs. We have a focus on wild dogs, which is influenced by the pastoral community. There is high community outrage with wild dogs, so that drives government funding. Then we have another pest: the European starling, which is exactly the same as the cane toad in that it impacts on agriculture, biodiversity and has major social impacts. It is widespread in the south-east of Australia. It does not have the profile of cane toads or wild dogs but, in terms of economic cost to agriculture, it is probably just as bad. In the US, a paper that was written estimates that \$800 million per year is spent just on agricultural damage alone from the European starling. The Department of Agriculture and the Agriculture Protection Board have been actively involved in starling control since they were first detected in 1971. This is one of the few examples of long-term control anywhere in the world and it has been quite successful and it is ongoing. So one of the research focuses is to look at European starlings.

Mr GAVAN O'CONNOR—Could you explain what the physical impact of the starlings is? Wild dogs and pigs I am aware of, but I do not know about the impact of starlings. Could you also explain the elements of your control?

Mr ADAMS—And when did we start making it illegal to—

Dr Woolnough—In terms of agricultural damage, they impact on high-value crops, particularly in horticulture. They impact on grapes and apples—you name it, they will eat it. They impact on the sheep industry: they contaminate fleeces. They impact on the feedlot industry. They will come in and eat feedlot. There are problems in South Australia at piggeries

and places like that. They have the potential to spread exotic and endemic diseases because they feed with the animals. They also have a major impact on structures—they will go and nest in silos and things like that. You will find, in South Australia for example, the bulk-handling stores and silos will spend lots of money bird-proofing their facilities.

In terms of agriculture impact, lots of single industries are impacted on very little but the combined impact is great. I think that sometimes the impact of pests on agriculture is industry driven. If one industry is affected greatly, then we will get a reaction, but if lots of industries are influenced less we do not get too much of a reaction. In terms of control, we employ people to physically stop them at the border. We have three people who are employed full time at Eucla, which is on the border of South Australia and Western Australia. They actively stop the westward expansion of birds into Western Australia.

CHAIR—How do they do that? Is it by feedback from the community about sightings?

Dr Woolnough—Feedback from the community probably happens further west in Western Australia. We have two rogue populations near Esperance in the south-east of the state. At Eucla they have a trapping program. They go out and actively trap birds. Since 1976 about 56,000 birds have been stopped at Eucla. It is a major problem for Western Australia. It is an alternative viewpoint from some of the stuff that perhaps you have heard so far.

Dr Mercy—I would like to add to what Andrew has said before he goes on with other things. I think it also affects tourism because they do apparently make an enormous mess of things. I would like to emphasise the point again that it is really hard to coordinate a response and get people's interest because it might only affect each one a minor amount. We are quite concerned about starlings. It is not a federal issue, but from my own point of view we need to put some more resources into that. If they keep coming across, those industries that are only affected a little bit will be affected quite a lot in a few of years, and it will be too late.

Mr McNamara—I would like to add one remark to that. It illustrates the mix of pest animal policy and control in this country. If something is already in the country and is, in fact, common and widespread throughout the entire south-east of the country most governments just say, 'Put up with it.' Western Australia takes a different position on a number of these things because the Nullarbor has been the greatest protector we have had. We want to make the choice to keep some of these things out and expend those sorts of resources. This country is not 'one size fits all' in terms of policy setting and program setting for pest animal control.

Mr GAVAN O'CONNOR—I think that is a very good point you have made. How does your committee operate?

Dr Woolnough—We are a research section. We are a group of research scientists. We interact by helping to provide policy advice to the Vertebrate Pest Committee as well as to the committees that Gordon mentioned. We provide both research and policy. We are involved with the Pest Animal Control CRC and the Australasian Invasive Animal CRC. We also get funding from the National Feral Animal Control Program through the NHT funding. The NHT funding and the Pest Animal Control CRC have been a major source of external funds for this type of research. While the state government manages to pay our salary, we do struggle to get research dollars. At present, our budget would probably just cover salaries. We really spend a lot of our

time seeking research funds. That includes going outside of those agencies and going to the Australian Research Council as well. But we do find that research funds are limited.

Mr GAVAN O'CONNOR—As to the national approach to knowledge sharing that you mentioned on page 5, is there any formal mechanism for that to occur now or is it mainly done around issues et cetera?

Dr Woolnough—There are the pest animal CRC and the new Australasian invasive animal CRC. BRS have started feral.org, which is one approach that they have taken to get a lot of the grey literature together and out into the public domain. That is one way that that is happening at the moment at the national level.

CHAIR—We would be interested in any suggestions that you might have to improve that, because, obviously, this might well feature in some of the recommendations that we make. On page 6 in the second paragraph of your submission—I am absolutely staggered by this—you say:

There is a need to ensure the independence of how importation risks are assessed for animals entering into Australia. However, the current system allows the applicant to assess the risks themselves ...

In what context does that occur? I find this hard to comprehend.

Dr Woolnough—This is a little out of my field, but I believe the department of environment does this. We would be encouraging a stronger set of risk assessments.

CHAIR—This is the department of environment at the state level?

Dr Woolnough—At the Commonwealth level.

Mr FORREST—It comes through some quirk in the EPBC Act, doesn't it?

Dr Mercy—I can only comment on something that comes past my desk. Occasionally, when they want to introduce a species into this state, they at least write to us and ask if we have a problem with that. But I take the point that—certainly in the field that I am more familiar with—Biosecurity Australia would be giving it the once-over fairly rapidly.

Dr Woolnough—Our research section is currently involved in testing the BRS risk assessment model for a lot of species. That process is one aspect which we are really proactive in. I think there are about 600 species that are being put through the risk assessment process at the moment, but that takes time and money.

CHAIR—The crux of your concern and the point that has been raised by Mr O'Connor has centred on the first couple of sentences of that particular paragraph. It states:

A national approach to the management of pest animals needs to be supported by clear legislation that, where appropriate, is consistent between jurisdictions (Commonwealth, State or local government).

I think that says it all.

Mr GAVAN O'CONNOR—I think it is an important point that you made about perhaps standardising the legislative response to these things, and it is something we might pick up in our recommendations as well.

Mr LINDSAY—In the foreword of your submission you talked about the three agencies in Western Australia committed to mitigating the impact of pest animals. The WA Farmers Federation do not think that there is a satisfactory working together of the three departments. Have you got a comment on that?

Dr Mercy—Are you referring to CALM, the department of agriculture and the APB?

Mr LINDSAY—Yes, the coordination between the three departments.

Mr TUCKEY—What about the environment department? Is that part of their submission?

Dr Mercy—No, they are not part of this submission. In terms of my understanding of it, the coordination is very good. Obviously, between the Agriculture Protection Board and the Department of Agriculture we work as one, more or less.

Mr LINDSAY—Are you happy with the cooperation you are getting interdepartmentally?

Dr Mercy—I am very happy with it. If there is ever an issue we talk and sort things out. I am not aware of any major conflicts.

Mr LINDSAY—We will take that as the same reply from you, Kieran—is that right?

Mr McNamara—I believe the cooperation and interaction are very good. We have, as I said earlier, some different emphases on functions, which is only to be expected given that we have different statutory roles. But things like the cane toad and bait factory programs are totally integrated.

Mr LINDSAY—The DAWA says it would be pleased to supply us with a second submission on request in relation to the impact of invertebrate pests on agriculture. Can that be done?

Dr Mercy—We can do that.

Mr LINDSAY—Thank you. Your submission says:

The successful management of pest animals is fundamental to achieving these strategic outcomes.

Do you think that you are coping?

Mr McNamara—Personally, I regard weeds, pest animals and dieback caused by *Phytophthora cinnamomi* as probably the three most significant factors affecting conservation values across this state. In many ways, weeds and dieback are more intractable than pest animals but the pest animals still pose significant challenges. We are capable of having effective control programs for the larger animals—pigs, goats, camels and that range of things. We have a very successful fox program covering 3.5 million hectares in the South-West. We are doing some

good research on feral cats, which are not of terribly much interest to agriculture, but they are to us as wildlife conservators.

Mr LINDSAY—So you are saying that you are coping?

Mr McNamara—No. I am saying that there are technologies to deal with a number of those animals but not, for example, cane toads. Resources are always limiting, compared to what you would like to achieve—that is an undeniable fact. We are winning to some extent with foxes in the South-West. We are winning on localised scales here and there around the state. But, broadly—

CHAIR—Has the cooperation between your department and the land-holders and between the land-holders created that positive outcome?

Mr McNamara—Sometimes that is a factor and sometimes we might be operating on a scale on crown land, such as in the Western Shield program. We have a largely contiguous forest block in the South-West where we are using technologies that you cannot apply broadly on private land anyway. So, while there are some partnerships that are very useful, that is predominantly a crown land program. But certainly some of the goat and dog control programs are very much integrated across landscapes.

Mr TUCKEY—For the benefit of other members that are not from Western Australia would you expand on how Western Shield works.

Mr McNamara—Western Shield is a 1080 baiting program that we have adopted. Fifteen or more years ago in Western Australia there was continuing decline and extinction of a range of our native mammals that used to be widespread across this nation. They were retracting to the South-West corner of Western Australia and only surviving there. And we were still losing them. There has been evidence that fox control was capable of turning around that trend towards extinction. Some research on rock wallabies in the wheat belt by CALM scientists quantified and verified that during the 1980s and early 1990s. The department began reasonably large-scale operational fox control as a consequence of that. That turned into a program, launched in about 1995, which sees us routinely bait about 3.5 million hectares four times per annum—sometimes more often in smaller areas and on the margins next to agricultural lands. That is at a cost of about two-and-a-bit million dollars per annum. We will shortly publish a major independent review of that program, which shows that it is one of the visionary large-scale programs of its kind in the world. It has certainly turned around the trend towards extinction of a number of our native mammals. There are still challenges in that program to be addressed, but it has been a major success on a national scale.

Mr TUCKEY—Does it still attract any private sector funding?

Mr McNamara—It does. We made an announcement in the last week of the reintroduction of tamar wallabies into the Nambung National Park north of Perth, which is a program that was jointly sponsored by Tiwest, the mineral sands mining company. Yes, there continues to be a number of sponsorships by that and some other companies.

Mr Wyre—We also get significant funding from Alcoa.

Mr LINDSAY—Gentlemen can we get back on track. In the resources that you have listed, and there is a whole range of them, is a client resource information system. Is that being used by landowners? Are you disappointed in how that is used?

Dr Mercy—This is one that the Department of Agriculture has put together. It is not so much being used by farmers but by government agencies and others to keep in touch with landowners. It is quite an innovative system, and it is working. However, I should say that trying to keep it up to date as people sell parcels of land is a tall order, but it is working and we have given it to other states, and I think some of the states are using it.

Mr LINDSAY—Can you give me some advice in relation to Indigenous Australians? What do you think their attitudes are to both native and introduced pest animals? Do you have any advice for the committee on that?

Mr Wyre—I can speak a bit on that. You have to be careful in generalising here, because Indigenous Australians can be as varied as non-Indigenous Australians in their views. We certainly have some cooperative programs, such as baiting for foxes in some rock wallaby habitats on some of the traditional lands, some of the lands that have been claimed. We have some cooperative programs going on out in the desert country as well. There are some issues related to our wanting to get camel control in some areas and the local Indigenous land-holders not feeling that camels are an appropriate animal to destroy. So you have to be sensitive to the local beliefs and the local reading of the impact of animals on the landscape. Without generalising too far, you can say that the idea of an indigenous or non-indigenous animal is not something that is of great concern to a lot of traditional owners of country. It is whether the animal is useful.

Mr LINDSAY—You have strongly put forward the need for a national body or vertebrate pest committee. What is your advice in relation to other states? Do you think they have the same view as you do?

Mr McNamara—I am sorry, did you say you were referring to the pest committee?

Mr LINDSAY—The vertebrate pest committee—you have said that there is a need for a national body. Do you think the Commonwealth government would get the support of the states?

Mr McNamara—In my view, to get integration across agricultural and environmental interests, to get integration across the range of existing pests and the emerging ones and to get prioritising frameworks for research and development and for control programs, you do need national arrangements that the vertebrate pest committee is a current model for. We have already referred to the National Invasive Species Taskforce under our own ministerial council, and whether some overarching structure across weeds, pest animals and marine pests, which have a whole area program as well, comes out of that to achieve the highest level of national coordination remains to be seen. Control and policy setting and standardised legislation about what can move in and around the country, R&D frameworks and those sorts of things simply will not work unless there is a networked environment together across the country.

Mr LINDSAY—Talking to your colleagues in other states, do you think there would be support across the states?

Mr McNamara—What I have just said is a consistent view at the top level, if you like, in the agencies.

Mr LINDSAY—You have said that there needs to be greater community and non-government organisation involvement in the detection and reporting of pest animals. You have said that the role of government needs to change. Do you want to expand on that?

Dr Mercy—In terms of people reporting it is the same as a lot of the things we do now. Governments cannot be responsible for trying to solve the whole problem. If we can get landowners to report things, that will take a bit of the heat off and, as I have said, if it is on their property, to do something about it. I have no problem with that. Our role has changed and I think it is working. We are getting more advice.

Mr LINDSAY—You said that pest control options need to be humane, effective, safe, affordable and practical, and then you put in this sting: ‘they have to remain available’. What did you mean by that?

Dr Mercy—Specifically, it could be related to things like 1080. There is some talk about that being withdrawn. Some people think it should be withdrawn. My understanding is that, if that were to be withdrawn, it would make a very difficult problem for the control of some of the pests that we have.

Mr McNamara—Leaving aside dog control, if we lost 1080 use we would have another wave of native fauna extinctions in this country. There is no doubt about that.

CHAIR—That seems to be the consensus right around the country. Dr Mercy, submissions received by the committee indicate the importance of funding to employ doggers to help control the wild dog population. Is adequate funding available from the Western Australian government for this purpose? I ask that question because it is not endemic to Western Australia. It has cropped up not only in Western Australia but in other states as well. Doggers seem to be a species that we require to control dogs but nobody seems to be enthused about ongoing funding to keep them active and to train up more doggers.

Dr Mercy—This is an ongoing problem. I have just come back from the Kimberley and there was a bit of discussion about it there too. It seems to me that the government does provide some resources but I think there is more of an acceptance now, particularly in Western Australia, where we have the DPACF, which is funded fifty-fifty by landowners and the government. That enables doggers to be employed. Whether it is enough I am not too sure. If you speak to some pastoralists they would say yes, but there would be lots who would disagree and say that we need more. I have no solution to that, except to try to do the best we can. We do train doggers who can be employed by community groups. That is where we are putting our emphasis: community groups raise money to employ them.

Mr ADAMS—Is there a TAFE program? Is there training? Do they get a certificate?

Dr Mercy—I think we have been doing the training, haven’t we, Andrew?

Dr Woolnough—Yes, we have a person employed to train them.

CHAIR—A former dogger?

Dr Woolnough—No, he is not.

CHAIR—The reason I made that comment is that doggers become as cunning as the dogs, and they are the only people who when they are out trapping can read what the dogs are going to do. The dogs become very smart.

Mr TUCKEY—I have two questions. Firstly, and I link this to the other point, Dr Mercy, can you give us some advice through the secretariat—so it does not have to be done now—about some of these people whom you have just been talking to in the Kimberley on the dog problem?

Dr Mercy—Yes.

Mr TUCKEY—For instance, in parts of New South Wales and Victoria that is all they wanted to talk to us about. We would like to take some more evidence while we are up there, and we would very much like to have some of your staff or other people such as pastoralists who participate in that scheme to give us some evidence. Could you give us some names that we can call on?

Dr Mercy—I certainly could, and you will get both sides of the spectrum. If you go to Kalgoorlie—

Mr TUCKEY—We are going out that way tomorrow.

Dr Mercy—you will get an earful of what should be done, what has not been done and so forth. On the other side of the fence we had one pastoralist from the lower Meekatharra area who said that pastoralists should do more to help themselves.

Mr TUCKEY—At this stage I do not want to get into the debate. I just want to know if you can give us some leads so that we can widen the advice we receive on that.

Dr Mercy—So do you want to speak to them when you go there?

Mr TUCKEY—Yes. Do not give us the names now; you can advise our secretariat. We are planning a trip up there in July and we need to have a wider opportunity to discuss this and to talk to people on the ground.

Secondly, and lastly, a lot of complaints relating to indigenous species of pest animals in Western Australia relate to the tags system and the assessment system. With regard to the tags issue, recently my phone rang hot because there was a decision taken—and I am not even sure if it was taken federally or locally—as to some reduction in the number of grey kangaroos that could be shot so that they could be turned into a resource. We have had the Conservation Council in here today saying they are not a pest; they are a resource. It is a big issue in Tasmania: do you poison them or do you use them as a resource? The criticism has been that, with the assessment process, you go out and look for the kangaroos in the daylight et cetera. How do you see them: as pest or resource? What additional measures do you see, from export and other aspects, that could be taken so that they are a resource where management is required?

Mr McNamara—I will get Gordon to elaborate, but I cut my teeth as a Commonwealth public servant trying to get the red and grey kangaroos off the US threatened species list over 25 years ago. Under our formal policy and management program, we regard them as a resource and something to be conserved and something that causes damage to primary production at the same time. We have a commercial kangaroo industry. One of the best moves that was made was to allow human consumption. It added opportunity for that industry to get better value for the products. The size and scale of Western Australia makes it costly to run the standard kangaroo management programs. We have a more relaxed system in a number of ways in terms of inspection and tagging than a number of other states. Commonwealth governments over a number of years have tried to ask us to have stricter controls, which we have said are not really warranted given the status of the species.

The recent event with grey kangaroos was that there was a real upsurge in demand for kangaroo product, partly off the back of a decline in the eastern states, and good prices, and there was extensive shooting, particularly on the Nullarbor. We were heading towards the quota set by the federal minister being exceeded very early in the year, which would have meant total shutdown rather than divvying up the available tags where they were most needed. So we took action to prevent the quota being exceeded because the reality, from my perspective, is that if we do not manage to the system we have put in place as a nation, which includes the federally set quotas, then we lose credibility internationally in those marketplaces, and the pressures from Europe and the US to close us down will come back on board. That is why we took the action we did. At the same time, we did the work with the federal department and minister to gain a significant increase in quota for the current calendar year, which will obviate the problem.

Mr Wyre—I manage the kangaroo industry as part of my duties. We did follow that path. We detected early in the year that we were going to exceed the quota. We took management action then to curtail the level of harvesting in the Nullarbor and Goldfields areas while we did some further accounts to establish what the population really was and if the population had grown or not, and we put a submission in to the Commonwealth to increase the quota. Through the course of the year—towards the end of the year—we established that the population had grown. It was significantly more than we had previously determined. The Commonwealth recognised that and gave us an additional quota. That happened towards the end of the year. But, more importantly, we did get about a 50 per cent increase in the quota for this year.

Mr TUCKEY—I have highlighted the problem that I would like you to address, and it may reside with our public servants. The criticism I get all the time is that the population is not properly assessed. For instance, people go out in a four-wheel drive in the daytime counting kangaroos. You have obviously been able to prove that there were plenty of kangaroos, and we were saying that there were not, to gain some international credibility. Is there any advice you can give this committee as to how the assessment process and the quota system might operate in a better fashion?

Mr Wyre—I think the quota system works okay. Last year while all this was going on, I was appearing before the federal AAT, with a claim that kangaroos were becoming endangered and that the very thought of harvesting was cruel. The approval of any kangaroo harvesting for export was under question. So we had this going on at exactly the same time. That is an issue that I think we are always going to be confronted with. I think the counts are reasonable. What last year showed us was that we were not responsive enough to when situations change. The

kangaroo industry is not normally very dynamic, but it was dynamic last year, and we have learnt now that we have to be more responsive and have a closer eye on what is going on to actually avoid these sorts of problems.

Mr ADAMS—We have the issue of the selling of carcasses or kangaroo products and skins. Do you have any problems out of here? Does the kangaroo industry have any problems in exporting any of those products?

Mr Wyre—No. We have a very different system to the rest of Australia, as Kieran mentioned. We have what are called open seasons for kangaroos. So if you are an agricultural land-holder or a pastoralist you do not need any permit or authority from the state government to shoot kangaroos. You can shoot as many red or grey kangaroos as you believe is necessary to protect your livelihood. That is something that we have fought strenuously—

Mr ADAMS—There are no tags.

Mr Wyre—There are no tags, but they cannot enter the trade. If you want them to enter the trade, you have to purchase the tags. We have kept the cost of the tags as low as possible. They are still only 20c in this state, whereas they are around \$1 in some of the other states. While we have got a couple of million kangaroos in this state, they are pretty widespread and the cost of getting them to market is very high, so the kangaroo industry in this state is fairly marginal.

CHAIR—On the point that Mr Adams has just made, can I ask: are you in this state happy for kangaroo skins to be exported?

Mr Wyre—Yes, absolutely.

CHAIR—Just for your information: I come from a meat-processing background, so I understand the problems associated with viscera. There is no way for the kangaroo industry to be able to process viscera, because of the way in which the animals are killed out in the field. The point I am making is that you would have to have an inspector inspecting because of the risk of the parasitic—

Mr ADAMS—Kangaroo pate is not made.

CHAIR—That is what I am getting to.

Mr Wyre—That is right. They are field conditions. To dress the kangaroos for the human consumption market, you have to keep some of the organs—the heart, the liver and so on—in with the carcass, and it is only the viscera really that are dropped into the field. You even have to bring the head back now. So there is far less wastage than there was under the old skin-only shooting.

Mr GAVAN O'CONNOR—I am interested in the technologies that are now being employed in this area, firstly for the identification of the problem—the new technologies as they are applied—and, secondly, the responses to the problem and new baiting techniques, traps and chemical responses or other behavioural responses. Would anybody like to venture an update on the use of these new technologies? It seems to me, in an era where we are fighting for resources

for a problem that, unfortunately, is not recognised by the larger community, that the way to get a more efficient and effective response might lie in these technologies. I will put another overlay on this: what is driving these new technologies in either of those areas?

Mr Wyre—One of the things that we have been working on in this state for the last ten years or so is getting a cheaper, more readily deployed bait. So we have gone from the standard kangaroo bait, which is a hard-meat bait that has been dried and injected with 1080, and we now have a soft-meat bait, which is a mincemeat bait made out of kangaroo meat with a skin. We have a process that is being registered and has been accepted. That reduces our bait cost from something like 90c each to something like 40c or 50c each. So the driver there is to get twice as many baits out in the field for the same investment of public money.

Mr GAVAN O'CONNOR—Where do you get your research for that?

Mr Wyre—That research was done primarily within the Department of Conservation and Land Management, but we also had a lot of assistance from Agriculture. Agriculture have been looking at the same sort of bait technology in terms of wild dogs—they are looking at salami bait. There was a question about this earlier in the day. The Department of Agriculture and the APB jointly run the bait factory in Western Australia. CALM, Agriculture and the APB are now cooperating to completely revise the technology of that bait factory. We are hoping to get some resources out of the state government in the coming budget to revamp that and to produce our soft-meat baits on a much grander scale for far less money so that we are basically getting better value for money.

Mr GAVAN O'CONNOR—I go back to the question of the estimation of numbers in certain populations. Are there new technologies being used there? How is that coordinated?

Dr Woolnough—I will go back a step with the baits. One of the things that we are doing with feral pigs is trying to develop a bait that the farmers can use quite readily. I know there is a Commonwealth push to get one that is also available at your Landmark shop as well. In terms of bait development, the cheaper, more readily available technologies is where research is being pushed. At the high end of things, we are also looking at molecular biology, DNA and wildlife forensics in pest management to see where animals are coming from and where they are going to. We are doing that with the University of New South Wales and the South Australian Animal and Plant Control Commission through an ARC linkage grant for starlings.

Back on your other question about populations, we have also recently done a survey of the whole of Western Australia using this client resource information system that was talked about before. We captured knowledge of people to get an idea of the distribution and abundance of pest animals. It was something quite simple. We captured the corporate knowledge of the Department of Agriculture and the Department of Conservation and Land Management staff, because those people know about where the pest animals are and how many there are.

Mr GAVAN O'CONNOR—Does that extend to landowners as well?

Dr Woolnough—It does through the staff interaction, because the staff know the areas. We have talked to many staff and captured their information about a relatively small area that they know very well. Through that, we have captured information on over 40,000 parcels of land in

Western Australia. That is basically every property greater than 10 hectares. The information is fairly crude. It is high, medium or low. The information does not say, 'There are 500 animals on this parcel.' There are a few trade-offs. It is quite cheap to do this way but it can be effective in terms of management outputs.

Mr GAVAN O'CONNOR—What about the satellite technology, sampling and those sorts of things? Are they all too expensive? Can they be incorporated in some other tasks? Is it a resource issue?

Dr Woolnough—There was recently a project through the Australian Biosecurity CRC to look at some of the remote sensing technology and probably some modelling as well to predict where pest animals and, in that example, diseases in wildlife populations would be. That is also being looked into.

Mr Wyre—The other area is DNA profiling. There is a lot of DNA work going on into the feral pig population in the South-West. I think it surprised many to find that the data that is coming forward now shows that there is not very much mixing at all between feral pig populations. This is fantastic because it means, if we can go in there and wipe out a small local pig population, there is not much movement of pigs back into that area, so we are looking at building this into a trial program. Instead of everyone controlling pigs around their boundary, we would draw a line on a map of a pig population, try and wipe it out and see what happens.

Mr McNamara—I would like to make a remark about the comments made about our bait research. We were facing a situation whereby we were trying to bait 3½ million hectares per annum and the baits were costing us nearly a dollar, so we were driven to produce a more efficient bait. We have also been driven to try to find a bait that works with cats—we are working with the Turnbull Institute of Victoria—because we are worried about what cats do to the wildlife as well. That is an area that we have explored because there was practical technology improvement that was needed to drive down costs and get better bang for our dollar.

We also have an important role to play in terms of our capacity in the field ecology of animals. People with laboratories can design things, but then you want to work out how these move through populations or what effects they might have. I think we have the particular capacity through our field and ecological expertise and so on to do that. I am speaking for my agency and certainly not for Agriculture. I am not an expert on where the high-end technology, the molecular biologists and the genetic manipulators are going to take us in the future, but I am looking more to universities, CRCs and the CSIRO to fill that part of the national research need.

Dr Mercy—I have not got much more to add except that you are on the right track. If you talk to these people in the pastoral areas about new technologies, and it might even be old technologies, you find that they are looking to introduce a pathogen to kill these dogs, such as parvovirus or something like that. The people out there are quite desperate to do things. As you would well know, the pastoralists believe that the dogs are responsible for pushing them out of the sheep industry. Any new technology that can control them needs to be looked at.

Mr TUCKEY—They are now attacking calves in parts of Australia.

Dr Mercy—The pastoralists are getting some big numbers in some places.

Mr GAVAN O'CONNOR—Chair, my comments on this are against the backdrop of your comment on the lack of knowledge and the need to share information and, of course, to better coordinate the research effort into these problems.

Dr Mercy—To add to that, as the gentlemen on my right have said, it is even extending into other disciplines like my animal health field, where everybody is cooperating. I think the CRCs have certainly sparked that up a bit. There is national cooperation. There has always been cooperation with universities, but this has lifted cooperation to a new level. If we are ever going to find something, this is the way it will happen.

CHAIR—I do not know who will answer this question, but it has been put to us as a committee that the green philosophy of many agency field staff means that there is an inadequate commitment to reducing pest animal numbers. Would you like to comment on that? It is not common to this state, I might add.

Mr McNamara—I would put it differently; I would say that the green philosophy of agency staff would make them hate feral animals even more because what they are out to save are the natural values of the landscape. That is using the term 'green' in a conservation sense. Perhaps in an animal welfare or animal rights sense it is different, but I do not think your problem in terms of support for feral animal or pest animal control—certainly in terms of introduced animals—comes from agency people, from my perspective.

Dr Mercy—I certainly do not think that comes up from our agency. I have heard the same remark, but I have never seen any evidence of it in our department. In fact, the staff are committed to what they are meant to be doing.

Mr TUCKEY—We have already had very positive evidence from the Conservation Council on retaining 1080 here in Western Australia. Because of the high academic level here, I think it would not be a bad idea if we put on record why 1080 does not represent the same risk to indigenous species as it might in other states.

Mr McNamara—The active ingredient in 1080 is sodium monofluoro-acetate, which exists in a family of plants known as the poison plants of the genus *Gastrolobium*, which is fairly widespread in the South-West. The early settlers did and farmers still do talk of poison country with gastrolobium on it. Because of that, there is a natural tolerance in the fauna of the South-West, at least from about Shark Bay to the Esperance area, to 1080. Without having the figures at my fingertips, that tolerance shows that baits can be used quite readily for foxes and not be of harm to native carnivores and so on.

CHAIR—What do you think of the criticism that baiting and the use of chemicals such as 1080 are being used irresponsibly and putting other species at risk, particularly native fauna species? Do you think there is any substance in it or is it just an emotive thing?

Mr McNamara—I would hate to answer for the whole of Australia—

CHAIR—I am only speaking from the point of view of Western Australia.

Mr McNamara—I was involved in discussions with Tasmanians when they had foxes, or reports of foxes, and they were more cautious in their approach than we are because we have that natural tolerance in our fauna. So I do not have concerns about the use of 1080 other than that we as an agency need to be careful with our protocols and so on because we become unpopular when we kill people's dogs. But as long as we follow our set procedures I have no concerns. It is an absolutely essential part of our armoury and I favour its continued use.

CHAIR—So your overall view would be that the use of 1080, as an example, would be complementary to what they are doing in Tasmania and other states and is complementary to the other methods such as fencing and/or shooting?

Mr McNamara—I do not know enough about what they are doing to comment.

CHAIR—But as a control method?

Mr McNamara—All I can say is that it is an essential part of what we do and it will continue to be so.

Mr TUCKEY—There is statistical evidence of the increase in indigenous species after a baiting program.

Mr McNamara—Certainly.

Mr TUCKEY—It is very significant especially in our forests and other areas.

Mr Wyre—The woylie is the only mammal anywhere in the world to come off a threatened species list by management action, and it came off because of our 1080 baiting. The other very important thing that a lot of people do not understand about 1080 is that it does not persist in the environment. It is water soluble so that as soon as the baits get wet through rain the 1080 goes. If you throw a bait into a dam or a wetland, the 1080 goes.

Dr Mercy—Before we give a licence for individual landowners to use 1080 the Department of Agriculture does a risk assessment of its use in that situation. I think that can also assist in identifying risk problems. They do not hand it around willy-nilly. A risk assessment is done so that there are some controls.

Mr Wyre—We use aerial baiting. We have a computer program and it is all computerised on the plane. We get a printout of where every bait is dropped and it takes into account the speed of the plane through the GPS system, the prevailing winds and so on. We can provide a map so that if any members of your team—when you come back to the state next time—want to see that, we will be quite happy to show you. We showed the people who were reviewing the 1080 use before. It is a very sophisticated system. It is not just someone looking out of a plane and throwing baits out the window.

CHAIR—I thank you most sincerely for allowing us to go over the time frame that we agreed with you before. We do appreciate it. We also appreciate the detail that you have put in your submission. It is very thought-provoking stuff and it is the sort of information that we need as a

committee. You have clarified a number of things for us today that we had concerns about. Thank you for your time.

Resolved (on motion by **Mr Adams**):

That this committee authorises publication, including publication on the parliamentary database, of the transcript of the evidence given before it at public hearing this day.

Committee adjourned at 3.53 p.m.