

Plenary

Chris Dickman (University of Sydney): We have planned a two-part plenary. In the first part, we invite you to ask today's speakers questions on any of the topics that they covered. In the second part Rob Whelan, David Farrier and Martin Denny have kindly prepared some summary points and will lead discussion on the questions of uncertainty and also on how we can ensure that we achieve the objects of the threatened species legislation. So, are there any questions?

Mark Burgman (University of Melbourne): Chris, this is a question for you. You made two assertions in your talk that went largely unchallenged. I'd like to put them to you now. One was that your group, the Scientific Committee, was performing well. I'd like to know what was your measure of performance. You could be doing it all wrong and I would have no way of knowing. I didn't see any substantiation.

Secondly, you claimed that all but two of the assessments that you completed were unanimous. I'm deeply suspicious of any committee process that is routinely unanimous, let alone almost exclusively unanimous. I think there must be something wrong or you're submerging dissent under threat or something. I'd like to know what threat mechanism you're using, because I'd like to use it!

Thirdly, did you notice and do you regret having no Indigenous representative on the Scientific Committee?

Chris Dickman: With respect to your first question, the Committee has several functions so there are a number of ways of measuring success. One is that the community gets to know about the legislation and begins to take it on board. If you look at the numbers of nominations that were received by the Committee from 1996 until 2002, there was a steep increase. This indicates increasing public awareness of the legislation and the ability for anybody to contribute information about threatened species, populations or communities.

Another measure of success is that we were attracting increasing numbers of certain kinds of nominations, particularly for endangered ecological communities and key threatening processes, increasing our ability to conserve broadly. If we're serious about conserving taxa, communities and ecological processes across the board, that increase in awareness and increase in submissions has to be good.

From the Committee's perspective, I think we did well in dealing with the deluge of information that came in. We got it right in the sense that there has been only one formal court challenge to the Committee's operations, and that's been dismissed. There are probably other aspects, but I'll come to the second question.

Your second question was about the unanimity of the Committee's decisions. Yes, well, it was just harsh and vicious chairmanship! I think the Committee was able to do a lot of background research, and cover a lot of discussion in meetings. These were not ordinary meetings. They were once a month, sometimes more frequent, and lasted all day, from a 9 o'clock pre-meeting to often 6.00 or 7 o'clock at night. So we really had time to cover any issues.

Also, all Committee members had an opportunity to read the information to be discussed at the meeting several days in advance, thanks to Sue Chate, our Executive Officer, who marshalled all the information before sending it on. So everybody was up to speed with what was going to be covered in the meetings. I think, given the opportunity to consider and discuss the issues, it was actually not that difficult to come to a unanimous conclusion in virtually all cases. So unanimity was achieved through the opportunity to discuss broadly and by the readiness and the preparedness of the Committee members.

People had the opportunity to raise their hands and dissent; there was no need in fact for unanimity to be accomplished. Perhaps towards the end of the day everybody was getting tired!

Your third question was about Indigenous representation: I'm sure it would have been of great benefit to the Committee to have had an Indigenous representative. Unfortunately, that is not part of the TSC Act. The part of the Act that specifies the backgrounds and expertise of the Committee members doesn't provide for Indigenous representation. It doesn't disallow it, but it doesn't say there should be an Indigenous representative either. I think that perspective certainly would have been valuable.

Dan Lunney (Department of Environment and Conservation, NSW): That's left you a bit less than satisfied, hasn't it, Mark?

Mark Burgman: Look, no, there are probably lots of other questions, but my experience of expert judgments in committees is that you can achieve consensus by negotiation or you can have some sort of decision-making process like voting. You can also amalgamate opinion numerically, quantitatively, and arrive at a process of consensus in which you re-examine the data and then re-examine the degree of disagreement.

You could then produce a judgment, as courts do that have dissenting opinions, or you could present a summary of the information that says that this is the point at which this person changed their mind. It would make the evaluative process much more transparent. At present you simply provide a point estimate, a yes or no, and we don't know why, but you all 10 or 11 agree.

As a committee, you are then difficult to cross-examine. You are a lot of fairly important people to disagree with, so you become very difficult to challenge. You may start to assume a mantle of authority that is unassailable, even unwittingly.

Chris Dickman: I guess it would have been possible, potentially anyway, to record a lot of the cut and thrust of our discussions. It would have been easy for many of the nominations that were open-and-shut cases; everybody had a predetermined decision on which way they'd go on these, and they all happened to be the same. But there was certainly a lot of debate and cut and thrust about many of the nominations.

I think the difficulty would have been in terms of recording it all. The minutes for each meeting, just the record of decisions and other things that were discussed and decided by the Committee, usually ran to between 12 and 15 pages. So, although it would perhaps have been desirable, full recording was probably unworkable in practice and could not have captured all of the points that were raised.

If we felt there would be some benefit in capturing the diversity of opinions that contributed to a decision on a particular determination, we tried to make sure that the points were covered and that referencing was extensive. In some cases, such as the determination on land clearing, we produced an extensive series of appendices that provided additional information, indicating the contributions of various Committee members. Generally though, it would have been very difficult to capture the entire range of debate and opinions about everything that was considered.

David Farrier (University of Wollongong): Chris, I'd like to follow up Mark Burgman's question. You dealt with one side of consensus. I'm interested in the decisions that you made not to list particular species. Did you always have consensus at that level or was there lots of disagreement at that point?

Chris Dickman: The species that were not listed, the decisions not to proceed, were again in almost all cases unanimous. But like the species or populations or communities that ended up being listed, these cases were often subject to a lot of debate. I think some of the nominations for koala populations, for example, tied the Committee up in knots in trying to determine whether the nominations could be sustained. Did they fit the criteria in the Act?

Some of the difficulties that we had with such nominations for endangered populations were difficulties in determining where a population started and stopped. The question of boundaries is a really difficult one, particularly for mobile animals. There are issues not only of mobility, but also of lack of survey, perhaps lack of access into areas where the species might occur, making it very difficult to determine whether a population could be defined. Even though we didn't proceed with quite a large number of nominations, we considered them in detail, and the decisions not to proceed were virtually unanimous.

Martin Denny (Ecological Consultants Association): Chris, one of the questions I'm asked constantly by frustrated land developers is: "Why can't you delist a species?" Have there been any examples of delisting? That is, where species have been taken completely off the threatened list - not moving through the levels, but completely removed? And how do you go about it?

Chris Dickman: I think the first example of delisting was of a plant species, *Pultenaea campbellii*. The procedure for taking a species off the lists altogether is exactly the same as for putting one on. A nomination can be made by any person. The Committee reviews the evidence, then decides whether to proceed to a preliminary determination or not. In the case of the *Pultenaea*, the Scientific Committee decided to seek additional information on how extensively the species was distributed, whether any new populations had been discovered, and the extent of any threats. We discovered that there had in fact been new surveys that revealed that the *Pultenaea* was more widespread than the Committee had thought when the species was first listed. As a consequence, the determinations, preliminary and then final, were made to delist the species altogether. So, yes, delistings do occur, but admittedly there have not been a large number of cases.

Paul Adam (University of NSW): On the issue of rejection of a nomination and how unanimous the agreement was, one of the important things is that most of the rejections are, in a sense, automatically triggered. The Scientific Committee or individual members of the Committee may decide at meetings that they can't make a decision unless certain information or data are provided, and then a request for this additional information goes back to the nominator.

Most of the rejections under Section 21 occur because the nominator is unable to provide the information that would enable a decision to be reached. Normally this is because the information is deficient; or it doesn't exist. There have been a small number of cases with publicly advertised

rejections, and in these cases all the information that would be appropriate to making a decision is available. In those cases the Committee has come to the conclusion that there is a very strong case not to make a listing. There have been a small number of those cases, but the majority of rejections are because some or all members of the Committee have felt they can't make a decision unless certain information is available, and the nominator hasn't been able to provide it.

Paul Burcher: My question is for Dan Lunney. Given your concern for the 74 per cent of species not listed, what's the status and future of the New South Wales Biodiversity Strategy?

Dan Lunney: The NSW Strategy for Conserving Biodiversity [produced by the NSW National Parks and Wildlife Service in 1999] is a different way of approaching the issue of biodiversity conservation. The topic of threatened species is just one of the strands of thinking. The Strategy is currently under revision, and there is also the national strategy [1996], and local councils also have strategies as do different local community and catchment groups. All these matter, but it is the clout that threatened species legislation delivers that makes it so important across Australia. The selling of the importance of threatened species makes for a very powerful image.

From one way of looking at it, threatened species legislation and the actions that followed in the last decade or so are a response to the massive conservation problems identified through the 1970s and 1980s. In one sense we have legislation that deals with yesterday's problems, but we have yet to catch up with the rate at which we are understanding current problems and to legislate, or put in place other policies to force a broader approach on conservation issues.

Not that these other issues are neglected, but the question you have to ask is, is the current emphasis on threatened species the right emphasis to conserve biodiversity? The NSW Biodiversity Strategy is great from the point of view that it covers so many approaches, it does identify a wide range of options. It identifies actions by priority, but a lot of those priorities slide away when it comes to funding because they do not have legislation to force matters, such as going to court for lack of compliance.

No name recorded: I had a question in regards to private land, when a recovery plan or a listed threatened species is involved. To what extent are the writers of the recovery plan or the Scientific Committee responsible for a socio-economic study? Also, given that it is largely command legislation, but a lot of people believe that incentives are the best way to go, how much is that going to come through in actually writing the plans, and who assesses whether that socio-economic study is adequate or not?

Rob Humphreys (Department of Environment and Conservation, NSW): I'm one of the managers of the Threatened Species Unit in the Department of Environment and Conservation. The responsibility for socio-economic assessments falls on the Department. We recognise that we are not experts on social and economic matters and, depending on the impact of a preliminary assessment, we may or may not go to external expert consultants to do that work for us.

As an example, in the Cumberland Plain Woodland recovery plan, we've spent in the order of \$150,000 so far on independent external economic assessments. Those assessments will go out on exhibition with the plan. That will provide an opportunity for people who are affected to provide a comment on whether they agree or disagree with those economic impacts.

A lot of the recovery plans we write, such as for a species which is known only from a very few sites, or is wholly within the National Park estate, might have very limited social or economic impacts, so the amount of social and economic assessment that goes into the plan will vary, depending on the species and its locations.

There were amendments to the TSC Act which came into force at the beginning of this year that will set up a social and economic advisory committee in parallel to the Scientific Committee. This will have various terms of reference and all recovery plans will need to be sent to that committee for their advice.

In terms of impacts on private landowners, we can't write recovery plans or dictate actions which bind private landowners. We can only enter into voluntary-type actions on private land. As far as statutory authorities or government agencies are concerned, we can't put actions into recovery plans unless the ministers responsible for those agencies agree to those actions being included. So, to a degree, we're pretty hamstrung as to what sort of actions we can put into recovery plans.

Gillian Courtice (Curlew Biological Services): I live on the mid north coast. Up there, a lot of the application of threatened species legislation is with private landholders who are slowly developing the coastline with a sort of urban creep that may start off with 25-acre blocks, which go down to five acres and then one and so on.

Since the introduction of the latest Rural Fires Act, we find that the Act is really overstepping or overwhelming threatened species legislation in the applications to Council. I guess the socio-economic aspect of fire protection is overcoming the threatened species legislation to the point where all subdivisions, even if they are large rural holdings, have to be totally underscrubbed and therefore have all habitat removed, whether threatened species are present or not.

This will happen unless you can make a really strong case that the last animal on earth is living on that subdivided block. It seems that urban creep and habitat impact have accelerated enormously since the asset protection zones of the Rural Fires Act have been enforced. I just wondered if any of the speakers had a comment as to how that could be addressed.

Michael Murphy (Department of Environment and Conservation, NSW): On the north coast where I work, I think the new fire legislation is a good thing. What we were seeing in the past was that developments would get the okay, with only the immediate impact of the development being considered. Then they'd come along and say, "Well, now we have to put all these fire breaks in", even though they weren't considered as part of the original development. The way we look at it is that the fire buffers that would be needed if a development goes ahead are part of the footprint of the development. If it comes to DEC for concurrence, it is then considered as part of the overall impact of the development.

Stuart Little (Department of Infrastructure Planning and Natural Resources): I worked on some of that bushfire policy. The approach that we adopted was through the planning and development control provisions and the new planning for bushfire protection guideline. What we tried to achieve was that, first of all, the bushfire protection measures get kept on the side of the development and are therefore not palmed off onto the biodiversity side, or the bushland side. Secondly, that the set-backs be retained on the side of the development wherever possible, for existing developments that have already gone in and for existing properties where the bush is already close to that particular asset.

What gets triggered then is the bushfire hazard reduction assessment, which comes through the new bushfire code. What we are trying to provide, first of all, is a planning process through the bushfire risk management plan that identifies where your asset protection zones are. Then there's a streamlined process through the bushfire assessment code that actually makes explicit provisions for consideration of threatened species, and other biodiversity matters, which should get taken into account when developing the type of bushfire protection measures that are warranted and how far they should go into the bush. There are set distance thresholds provided in that code document.

Judy Lambert (North Head Sanctuary Foundation): There have been a few comments from various speakers, myself included, about what I'll call offsetting, for want of a better term. I'm wondering if anybody would like to comment on this. I believe it's a fairly widely held community view; certainly in my interactions it is. If an ecological community is already sufficiently at risk to be listed as endangered, then surely the remaining remnants that are being used for the so-called offset should already be getting management attention to enhance their degraded conservation value; should they really be allowed to be the subject of an offset trade-off?

Rob Humphreys: I'll volunteer to answer that question. Judy is right. There are a lot of landowners who have threatened species or threatened species' habitat on their land, but the legislation does not require the landowner to carry out any active management of their land. So if a landowner has a threatened species, they can just sit back with their arms crossed and watch it slowly degrade over time, and a lot of threatened species sites on both public and private land are decreasing in value through lack of active management. In some situations - and whether offset or compensatory habitat or ameliorative measures are the appropriate terms, I'm not so sure - if funds can be found to actively manage the remnant sites, then it enhances and increases the value of those remnants.

Tony Auld (Department of Environment and Conservation, NSW): Can I just add to what Rob is saying. People use the word "offset" for several different things, and it leads to confusion that is part of the problem. It is the case that, where you lose a remnant of bushland, the way you compensate is to actually create new bushland in an area that is severely degraded, with no current biodiversity values. That's a different thing to what I think Rob was talking about. If you have a political decision to develop, you try and use whatever resources you can get from losing a particular patch of remnant to protect another patch, or patches, of remnants.

So they are two slightly different things. In the case of the former, the problem is the timelag effect and our ability to reconstruct communities. We should not be calling these offsets - the new community we are trying to create does not have anything to do with the existing community, because it really is not that community and it may not be for centuries.

David Keith (Department of Environment and Conservation, NSW): I'm interested in the issue of uncertainty and building - or the dynamics of knowledge, I suppose, and how it reflects upon the whole process of regulating and conserving threatened species in particular, and biodiversity in general.

We've been doing things like impact assessment now for 25 years formally in New South Wales. I get the impression that we have not learned an awful lot in terms of how we go about mitigating impacts, or making decisions about whether impacts are acceptable or not in terms of community values. For example, when we place conditions of consent on a particular development, my question is: "How well have we done in the last 25 years in assessing the success of those conditions to mitigate the impact that they were proposed to mitigate?"

I guess it's not a new issue. Peter Fairweather commented on this subject, very effectively I thought, maybe 15 years ago, when there seemed to be a fairly woeful standard of environmental assessment with investigations that were purported to be scientific but had no replication and no controls and very little commitment in terms of resources to follow up observations in any sort of sensible scientific design. This is something that I think we have largely neglected today, but I think it is an important part of the whole threatened species issue, and it certainly needs as much scrutinising as the success of the various other stages in the process.

Anne Conway (Countrywide Ecological Service): I had a long history in the bureaucracy, dealing with EISs on both sides of the fence. I think that is a really key question and I think the fundamental failure of the environmental assessment system in New South Wales is that there is no monitoring on several levels. The first being whether in fact the conditions of consent are actually met.

There are many developments, that I am sure people in this room would know, where the approval was given, with conditions of consent, and you know damn well they have not even complied with them, let alone going back 5 or 10 years later and looking at what the environmental impact statement said, and whether the assertions that were made in the environmental impact statements were in fact correct and that there was no impact, or only little impact..

I've had a long interest in some of the really big infrastructure developments. It would be very interesting to go back and look to the early days and look at what was said in the EIS, what the conditions of consent were, what actually happened on the ground, what the EIS said, and what in fact happened. Were there other impacts that were quite significant that were in fact picked up in the EIS and what sort of things that should have been picked up. We could learn from that.

It could be fairly non-threatening to the government if you did it for the early ones. I think it's the sort of thing that the scientific community should be pushing, to actually spend some money and have done, because we will never learn if we don't go back and look at what happened. We will continue to blunder on into this century, making exactly the same mistakes as we made way back when.

Dan Lunney: Thanks, Anne. We shall now shift to the second part of the plenary, with three new convenors to bring a fresh dimension to this matter. They have assembled, as a stimulus for thought and further discussion, some comments and identified some themes that have become obvious during the sessions today. These are presented below, in the comments by Rob Whelan, David Farrier, and Martin Denny, and are followed by responses from forum participants.

Rob Whelan (University of Wollongong): One important point of relevance to the forum is that the first couple of objects within the NSW *Threatened Species Conservation Act 1995* actually don't say very much about threatened or endangered species. They talk about conservation of biodiversity and ecologically sustainable development. Given that these issues are contained in the objects of the Act, then we need to think more broadly about how to achieve them.

David Farrier (University of Wollongong): It seems to me that there are several questions related to listing. The fundamental issue is whether we should list anything at all (i.e. avoid using listing as a conservation process) or whether there are other processes which we can use, broad-brush processes such as land use planning. This would avoid what is often a tortuous process of working out whether or not a species should be listed.

Assuming that we decide that it is useful to list something, there is the issue of what we should list. There have been various points raised in relation to whether we should focus on listing many species or just a few. "Flagship species" have been mentioned. We have not had much discussion of the idea that nominating one species can save a lot of others.

There has been discussion of listing on a broader scale than species. Habitats were mentioned, although it is not clear exactly what 'habitat' would mean in this context. In Queensland, ecosystems are being listed; threatened ecosystems are identified, not under the threatened species legislation but under vegetation clearance legislation.

The next question is, if you do decide to list, whether the actions this triggers can ever be implemented vigorously enough to achieve adequate protection for the listed entity. Often the result of listing is some sort of approval process. It has been argued that we go through the motions, and end up with some sort of amelioration that appears to be sufficient to allow an approval to be granted. It has been suggested today that a lot of the amelioration does not really achieve its objective. I have always been concerned about amelioration: whether it is, in fact, just something that we put up with because we really can't bite the bullet of saying, "This development shouldn't take place". If it shouldn't take place, then perhaps we need to look for ways of softening the blow to the land user by producing some sort of conservation agreement, which will involve flow of funds.

Then the last question: What are the alternatives and do we trust them? I think we really do need to look beyond threatened species legislation. It does not work in a vacuum. There is lots of activity going on at the moment with vegetation clearance legislation in both New South Wales and in Queensland. In Queensland, they are listing threatened ecosystems and also pursuing a parallel process of listing species. Basically you have two regulatory systems – two command regulatory systems – operating alongside each other.

Then there is the question of whether or not we should really start looking at the land use planning system. People have mentioned the NSW *Environmental Planning and Assessment Act*. Our focus is very much on the concurrence process at the moment, but maybe we should step back a little and look at the planning process, the LEP making process, the REP-making process.

Martin Denny: One thing that I did not mention earlier, and it comes in here very importantly, is that in Western Australia (through the EPA) there are statements that the species should be assessed within the ecosystems. They talk about keystone species, and also ‘hotspots’ – areas with high species richness – neither of which brings in the idea of listing of threatened species.

The other thing I’d like to bring up is why do we have a seven- or eight-part test? We should not have it at all. I’d like to put that up as a suggestion: if a development is to go ahead, it should go straight to a species impact statement. All of the significance of impact should be assessed at that level. We don’t need an eight-part test or seven-part test at all. It’s only duplicating what’s going to come next and it’s a waste of time and a waste of money.

Rob Whelan: We have drawn out a number of themes from several of the presentations today that dealt with uncertainty of various kinds. We have summarised some of them above. Several people have referred to the uncertainty of the science. One component of uncertainty is not knowing how an organism is going to respond to a particular development or a particular type of action, nor being able to predict how it will respond to a proposed mitigation action.

We have talked about ignorance of various sorts; not that invertebrates are ignorant (despite their simple nervous system), but that we’re ignorant *about* them. In many cases, we don’t even know if a particular listed organism actually exists in an area. If we know nothing about an organism, if we don’t even have that first hint that there might be an impact, it is unlikely that we could apply the precautionary principle.

A third type of uncertainty has to do with definitions. Paul Adam especially emphasised the importance of definitions, and several people returned to that theme during the day.

There is also the issue of change over time. Even if we agree on definitions, and if our science becomes more complete, the landscape out there is not stationary. It is not static. We also heard about how communities change over time. How can we deal with this sort of uncertainty or variability?

How should we be responding to these components of uncertainty? I suggest that there are two levels of response: internal and external. How we respond internally is how, as a community of scientists, managers and policy-makers, we could help guide the development of legislation so that it can deal with the uncertainties in predicting distribution and abundances of organisms and their ecological responses. These predictions, with their associated uncertainties, are needed in imposing development controls, amelioration actions, recovery planning, or threat abatement planning.

Really interesting questions were stimulated by Mark Burgman’s optimism about presenting our uncertainty to the political world and to the community, and educating them about so-called ‘facts’ and their uncertainty. This issue has been debated at the tea breaks and lunch. People sound very nervous about this subject because of the way in which politicians and special-interest groups will twist that admission of uncertainty. So we might do it with the best intentions, but how is it going to be used externally?

Stuart Little: The first key point looked at was biodiversity and ESD. What I think is becoming clear is that there is indeed a need for a threatened species framework, but that it is driving everything and it is not sitting properly within the context of a wider biodiversity framework. When Dan Lunney spoke about ‘the other 74 per cent’, it became clear that there is a need for a mechanism that considers ecological processes, and things in the landscape, such as wildlife corridors.

There is also the need to deal better with the source of the problem - the actual threat. The Threat abatement planning process does not appear to be well resourced and there are not many threat abatement plans. The other thing is the development control and planning processes. Again, responses seem reactive to particular development applications.

There has not been a lot of discussion about integrating biodiversity considerations into wider land use decisions, as David Farrier was suggesting, such as regional vegetation management plans, catchment blueprints, and local environmental plans. How do we actually encapsulate biodiversity outcomes at the early stages of planning processes before the area is zoned and individual developments come through?

The final thing is that the relationship between threatened species and conservation in the wider natural environment is driven by regulation. Potential solutions to such things as salinity and land degradation are driven by incentives. There seems to be an absence of regulation on that side and an absence of incentives on the threatened species side. I think we need to balance that up a bit.

Paul Adam: I was going to raise some of the same issues. I would love to think that the solution was going to be in planning. However, I look back at history and conclude that I was over-optimistic. The important question is, given that we have a planning system, how do we redesign it so that it will actually meet these ends?

The other issue I'd throw into the debate is this: As the number of listings increases, we have got to seriously revisit the whole question about what we want recovery planning to do, whether it really is appropriate, and whether the same timetable should be set for everything. We need to make much more strategic use of resources so we are not producing plans and losing sight of those things we urgently need to have a plan for, rather than having a mechanistic planning process.

Jack Baker (Department of Environment & Conservation, NSW): I don't think listing is a way to achieve conservation of biodiversity, but if you don't list things, we won't know what biodiversity we are trying to conserve. It comes first.

Judy Lambert (North Head Sanctuary Foundation): I agree that listing per se probably does not achieve the conservation of biodiversity, but listing, as a recognition of threat of extinction, is a far more saleable tool to both the community and decision-makers than is the conservation of biodiversity. Unless we include it as an essential step in the process, we are probably going to go backwards. One of the approaches may be to focus more on habitats and communities and less on individual species, except where they are really on the brink of falling off the planet.

Rob Whelan: Several speakers mentioned other things that happen as a result of listing. Listing triggers a range of activities, but also the listing of species raises community awareness, such as in Simon Nally's example. It also leads to an increase in knowledge. We know a lot more about many populations because of the excitement and interest that followed the listing. As mentioned in the fish example, alteration to management practices occurred as a result of information gained after listing, but not as an official part of the process. There are benefits of listing that we have yet to quantify.

Helen Mills (Department of the Environment and Heritage): Listing of threatened species and ecological communities is very important for all those reasons of recognition, but we need to stop trying to fund programs solely on the basis of a species being threatened, we need to prioritise. An awful lot of the nominations that come in are triggered by the fact that recovery plans are not being funded. They want to get it listed, so they can get it funded. Many taxa already have recovery plans, but the recovery *actions* are not being funded. Listing may not necessarily help them unless we stop prioritising endangered species for funding above other species and ecological communities.

Alison Colyer (Threatened Species Network): The main thing is to try to engage the community in threatened species recovery work through awareness-raising, through on-ground projects, and so on. We tend to find we use the flagship approach, and that's largely because it is reactive to what the communities that come to us want to do, and partly because it is a great way to engage the community and get them interested.

We tend to use species because this helps people understand broader biodiversity issues and the broader landscape management issues. That is where listed species are vital. Biodiversity is a concept that the general community generally cannot get their heads around, especially ecological communities. It is difficult for the wider human community to understand the complex interactions involved. Listing is therefore vital as a contact point, because we know that the vast majority of threatened species management has to be done on private land with community members.

Martin Denny: The seven-part test (of likelihood of significant impact) gives a chance for negotiation before the development goes ahead. One of the problems with the seven-part test and associated negotiation is that none of the things that the proponents say are locked in concrete. They can say anything they want to and they can go to a seven-part test and it could be assessed in a certain way. If a proposal goes straight to a Species Impact Statement, proposed actions have to be signed off by the proponent.

Rob Whelan: It seems to me that there is a fundamental problem here. The example that I used was of *Darwinia biflora*. If the determining authority, the Council in that case, had been negotiating with the developer about amelioration to remove the impact, the question is: “Have the putative ameliorative actions really removed the impact (even if they are put in place as planned)?” There is no external scrutiny of the degree to which they have achieved protection. We are trusting that the process of assessing likely effectiveness of proposed amelioration actually worked at the Council level. If the proposal does go to the next level – SIS – there is at least an opportunity for people to see whether something is flawed in the argument.

Lyn Dawson (RZS member): We’ve been talking about scientific certainty. We’ve been talking about the difficulties of understanding taxonomy of the life cycles of organisms. There’s a lot of money going into funding threatened species conservation or threatened species protection. I’m just wondering, “Is there any money going to go into the scientific basis for this?” If so, where is the money going to come from? It is very tedious science, it is slow science, it is boring science, it is not fashionable science. Would anybody like to comment on that?

Liz Denny (RZS member): Sitting here today I’ve realised that we have done it back to front. In fact, everything should be listed, and the game should be to get it off the list. Yes, it’s a wonderful idea! If you listed absolutely everything, and then you say: “Okay, you want to do something? Show the Scientific Committee that they can take this off in this region or this locality.” Then everyone would get money for research because developers would want as much research as possible so that they can say, “There’s bloody millions of them here.” What a good idea!

Kate McIlroy: I want to go back to the discussion that, instead of listing species, we should be listing ecological communities. I can’t believe I’m actually going to say this, because I’m not particularly convinced that listing ecological communities is working effectively! Essentially, a listed ecological community always just ends up being a comprehensive species list anyway. You select an area for protection or otherwise based partly on whether or not it’s got the percentage of the species in the list.

Generally the species list contains mostly botanical species anyway. Not solely. I can be looking at an area in western Sydney and there might be four macropods, none of which is listed, but they may be regionally significant and an integral part of the community - but this is completely irrelevant to the protection of the Cumberland Plain Woodland Ecological Community in the area.

Claire De Lacey: There seems to be some misconception that the basis of an eight part test lies in science. It doesn’t. The eight part test consists of many value-based judgments and that’s all it comes down to. Very little science is portrayed in an eight-part test. That’s why it makes it so important to assess these things at a planning stage, because otherwise it eventually is simply at the whim of the government of the day.

If they’re having a bad hair day or a good hair day, then it shines through in terms of how they manage threatened species. Environmental management is something that we should be looking at in perpetuity and not something that is here today and gone tomorrow. That seems to be what’s happening at the moment, with so many value-laden judgments in environmental assessment.

Danny Hirschfeld: I work in Sydney’s eastern suburbs. We have about 300 ha of remnant vegetation left. Most people probably would not realise that it is that much. But a lot of it is endangered, most of it Eastern Suburbs Banksia Scrub, an endangered ecological community under both state and commonwealth legislation. Those pieces of legislation have worked, to a large extent. Development applications being assessed with regard to Banksia Scrub, and other endangered items, have resulted in 90 per cent of those areas being conserved. The listing process has been great, also for an endangered wattle. It has contributed to biodiversity conservation in the eastern suburbs.

Rob Whelan: Isn’t that a wonderful note on which to end this session? This example is one that has achieved the conservation of biodiversity. Thanks very much on behalf of the three of us for having the opportunity to do this. I think we hand over to Pat Hutchings for the next bit.

Pat Hutchings (Australian Museum): I should like to thank all the speakers. We’re going to go straight into the annual general meeting. It will only take 20 minutes. Then we can all go and have a drink... I promise!