GOVERNANCE FOR BIODIVERSITY – THE ROLE OF VALUES AND PERCEPTIONS

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We owe thanks to all the interviewees who gave us their time and shared their experiences and views with us. In this report we have mainly drawn out issues related to values and world views. The selection of quotes and issues is therefore not a complete portrayal of all the issues raised by the interviewees. Any errors in the material are our own. This work has been funded by Scottish Government's Strategic Research Programme (2016-2021).

SUMMARY

This report summarises key points from interviews with key stakeholders involved on biodiversity governance in Scotland. The interviews focused on what works, what does not work, what are the causes of biodiversity loss, and what are the barriers to improvements in biodiversity focusing on aspects of governance, that is, processes and structures which seek to influence decision making and behaviour, rather than looking at particular on-the ground management measures. In this report we focus on the perceptions and values in relation to people and biodiversity which underpin different understandings of what are the problems, and consequently what are seen as appropriate governance solutions to improve biodiversity.

Attempts to promote biodiversity conservation inevitably have embedded in them particular perceptions of biodiversity and people as well as the relationship between them. This includes aspects such as whether nature is regarded as robust or fragile, stable or dynamic, and whether human management and use are seen as compatible or even beneficial for biodiversity, or, on the contrary, the relationship between humans and nature is seen mainly as antagonistic and nature therefore as being in need of protection from humans. Most of the interviewees saw Scottish landscapes (and hence biodiversity) as the product of human management and tended therefore to emphasise approaches which seek to adjust human use of nature rather than creating protected areas where humans are kept out.

In addition to the importance of different understandings of the nature of people and nature and the relationship between them, the results show that biodiversity governance is also a reflection of particular sets of values. Values play a role in relation to determining what to conserve and where, what to regard as acceptable ways of using and managing land and biodiversity, and how to frame and negotiate trade-offs (between different land uses, species & ecosystems, and groups of people in society). Values are also important in relation to the ways in which to motivate stakeholders to engage in particular land management practices (linked to different perceptions of human nature as discussed in the previous section), and how to evaluate the virtues of different approaches to biodiversity governance. Biodiversity governance can therefore in many ways be seen as a question of what values and whose values are brought to bear on the use and management of the environment and will therefore also have important implications in relation to environmental justice.

The interviews highlighted the need for a variety of governance approaches that can promote human connections with nature and can reconcile different values, uses and needs. While some interviewees emphasised the importance of economic values and utilitarian arguments, others emphasised the complexity of different values and motivations creating a need for different solutions as ‘no one size fits all’. In addition, some interviewees also emphasised the need to enable a culture of participation, innovation and experiments in relation to decision making, on-the-ground measures as well as governance even though outcomes may be less certain.

1. INTRODUCTION

Biodiversity has for many years been high on the agenda of policy makers, environmental organisations and many citizens. As a consequence many different initiatives have been launched to try to safeguard vulnerable species and habitats and promote the recovery of those that have declined. While there have been success stories in the form of the recovery of habitats and species, many problems still remain with new ones likely to arise with developments such as climate change. As part of a research project on biodiversity management funded by Scottish Government's Strategic Research Programme (2016-2021) we conducted interviews with 15 experts in the field of biodiversity governance. The interviews focused on what works, what does not work, what are the causes of biodiversity loss, and what are the barriers to improvements in biodiversity focusing on aspects of governance rather than particular on-the ground management measures. Governance can be understood as the process through which the rules and procedures that apply to members of a defined group are made, implemented, interpreted, and changed (McGinnis, 2016) and which (seek to) influence motivations and behaviours. Governance encompasses both structures and processes, and can be implemented by governments as well as non-governmental actors alike (including interest groups, communities and companies). The interviewees all worked professionally with biodiversity in one way or another in a variety of public, private and non-governmental organisations. This report summarises key points raised during these interviews.

Depending on their role and experiences, some interviewees talked mostly about particular governance mechanisms, while others focused on issues of governance more generally. In a previous report based on a review of the literature, we summarised the different governance mechanisms currently in use in Scotland and elsewhere and the strengths and weaknesses which are associated with these mechanisms (Byg et al., 2017). We here look at similar issues through the lens of the assumptions and values behind different approaches. Specifically, we look at the perceptions and values in relation to people and biodiversity which underpin different understandings of what are the problems, and consequently what are seen as appropriate governance solutions to improve biodiversity. Values are important in this respect as they determine what we are trying to conserve and as there may be trade-offs between the values of different groups. In addition, appealing to particular kinds of values is often part of governance mechanisms and it is therefore important to understand the implications of using different values and understandings to promote biodiversity.

2. THE RELATIONSHIP BETWEEN NATURE AND PEOPLE

Attempts to promote biodiversity conservation inevitably have embedded in them particular perceptions of biodiversity and people as well as the relationship between them. This includes aspects such as whether nature is regarded as robust or fragile, stable or dynamic, and whether human management and use are seen as compatible or even beneficial for biodiversity, or, on the contrary, the relationship between humans and nature is seen mainly as antagonistic and nature therefore as being in need of protection from humans. In addition, in the context of governance, there is also the question of whether humans are seen as motivated mainly by intrinsic factors or by external incentives, and, connected to this, whether they are seen as essentially trustworthy or not. These different views are ideal categories and are seldom held in their pure form by people. Nevertheless, it can be helpful to examine more closely in what ways these assumptions are built into different governance mechanisms and this was often touched upon in the interviews.

Conceptions of a mainly antagonistic relationship between humans and nature are for example at the heart of conservation approaches such as (some forms of) rewilding and the North American national park system. In contrast, most interviewees emphasised the cultural nature of Scottish landscapes (including the biodiversity housed by them) and therefore saw biodiversity improvements mainly as a matter of promoting the right way of using and managing nature rather than as a matter of setting aside areas of 'untouched nature' which are protected from human use:

> "[…] there's a kind of future scenario where you get strong public and especially local community support for conservation by involving them much more in understanding, exploring, and conserving, and expanding a place like this]. Um...and actively encouraging a wider range of cultural interests as opposed to simply seeing them as a biodiversity resource with a certain biodiversity count and a certain assemblage of species. And seeing them as places which are essentially […] the product of hundreds of years of interaction between people and forest rather than places that should be frozen in time through a designation that gradually has the effect of erasing any physical evidence of that interaction. There's incredible granny pines there which are 200 or 300 years old which wouldn't exist had it not been that they were...that the site has been managed intensively and overgrazed at times and allowing these massive old trees to emerge. So...if you look at the place it is the product of human nature interaction over centuries, and the public don't get a chance to appreciate that I don't think in ways that they could do." (I13)[1]

As illustrated by the quote this type of perception of the landscape or nature often entails an emphasis on multiple benefits as well as on collaboration and participation as part of the decision making process. A similar view is at the heart of the Scottish national park concept whose aims include 'to conserve and enhance the natural and cultural heritage of the area', and 'to promote sustainable use of the natural resources of the area' (Scottish Parliament, 2000). Similarly, governance mechanisms such as collaborative approaches as well as some measures included under agri-environmental schemes (e.g. leaving winter stubble) are also based on the view that human activity and use and biodiversity conservation are compatible with one another.

Despite the general emphasis on the anthropogenic nature of the landscape some governance mechanisms currently in use in Scotland do represent a more antagonistic understanding of the relationship between humans and nature. This includes off-setting (used in individual

[1] In order to maintain the anonymity of the interviewees each interviewee is indicated by a number.

development projects) and some agri-environmental measures (e.g. setting aside some areas on farms such as field edges for biodiversity). In both of these approaches, negative impacts of human activity on nature are accepted as unavoidable, and to promote biodiversity is therefore seen to require setting aside other areas to compensate or off-set these negative impacts.

> "I think your question was what are the advantages [of off-setting], um…and I guess yeah, my first point was at least get people thinking about what they're doing and how much impact they have, and quantifying it. All that. It's really hard. But it's better than nothing, and then at least you've got them kind of identifying this total impact loss, and thinking about ways in which they could…even if it's purely you know giving some money to the government who's then going to do something as a tokenistic offset, which isn't great, but I still think I guess the majority of people working within this think it's better than nothing at all. If this development is going to go ahead anyway…"(I15)

In addition to perceptions of the relationship between people and nature, perceptions of the nature of people are also shaping the design and implementation of governance mechanisms. Perceptions of humans as generally trustworthy and motivated not only by extrinsic factors but to a large degree also by intrinsic factors lead to the design of very different governance mechanisms compared to perceptions of humans as generally motivated by self-interest and as not very trustworthy (see next section on the use of different values to motivate people). Ecosystem services frameworks and Natural Capital initiatives are for example to a large degree based on the assumption that it is necessary to demonstrate that nature delivers tangible benefits in order to motivate self-interested humans to conserve nature:

> "People are saying it's about commodifying nature and um...but...I just feel if we're going to complain and say the biodiversity interests aren't being considered properly in the decision making then you have to accept that the decision making is largely about the business model. And therefore it has to be costed so you have to be able to cost what is lost and seek...or what may potentially be lost and then seek to replace it so that...you've got to be on the balance sheet to be taken account of. So...if you resist that and say it's about virtue and morality then the trend will continue I think you know? We're continuing to be peripheral and shouldn't be surprised if biodiversity is not taken seriously. It's down at the bottom of concerns when it comes to economics and development, whereas...if you get on the balance sheet then the true cost of development should then be taken into account. So I think people need to overcome that moral concern really you know?" (I5)

The different views on the relationships between humans and nature also entail different perceptions of the causes of biodiversity degradation, though 'causes' can be analysed at different levels from underlying root causes to more immediate practical causes (e.g. particular on the ground management practices). Some of the interviewees for example focused on the disconnect they saw between humans and nature in present day society as a root cause for biodiversity degradation. This drew on an understanding that humans should be connected to nature but that the western worldview of humans and nature as separate and the resulting societal structures had led to a disconnect:

> "And I think there are some unintended consequences in there as well, so I suppose one of the concerns I have with the conventional...traditional conservation approach is that whilst I...I hugely value what protected areas have done in terms of conserving areas of natural...semi natural habitat and all of that wonderful kind of diversity um...but I do worry that um...by framing nature in that way which tends to lead to a view that nature is remote...mainly remote from people, not the nature that we experience every day. It's

> enough for me to know that it's out there, it exists. But for a lot of people if you don't know that it's out there and it exists it's literally you know another world." (I11)

Based on this understanding, it is necessary to foster connections between humans and nature and to promote a change in world views as well as values in order to conserve biodiversity:

> "But actually, it's about healthy function ecosystems or about people with a healthy relationship with nature…but that's what we perhaps should be moving more towards." (I12)

However, such approaches are often more resource and time intensive and require a willingness not to predetermine what should be the outcomes:

> "But on the plus side there is the potential for a kind of transformative change, a real conceptual impact rather than a direct instrumental one. It might change people's thinking to move towards a completely new paradigm. And that in turn might have an instrumental impact in ways that we didn't predict." (I13)

In the next section, we look more at the role of values in relation to biodiversity.

3. THE ROLE OF VALUES

In addition to the importance of different understandings of the nature of people and nature and the relationship between them, biodiversity governance is also a reflection of particular sets of values. Values play a role in relation to determining what we want to conserve and where, what we regard as acceptable ways of using and managing land and biodiversity, and how we frame and negotiate trade-offs (between different land uses, species & ecosystems, and groups of people in society). This is perhaps most explicit in governance mechanisms such as biodiversity off-setting where different habitats and species very literally need to be valued, not necessarily in monetary terms, but where characteristics such as rarity and vulnerability are weighed up against each other and compared to other criteria such as the area of a habitat or its accessibility to people when decisions are made about how impacts on particular species or habitats can be off-set by restoring or protecting other species or habitats somewhere else:

> "But that's a huge question of like how you place value on a particular species, or ecosystem. So, some would argue that the better is the more threatened, the more endangered, the more rare, so if you're going to impact…something that's of least concern in conservation terms, you can offset it with something else of least concern. Ideally the same species itself, or something more threatened. That's like…brings up huge debates about how and what we value, and what we prioritise in terms of conservation action […]." (I15)

Even though it is maybe less explicit in other governance mechanisms, the focus on particular species, habitats or practices to be promoted still reflect value judgements with consequences for who for example becomes eligible for particular agri-environmental measures or who and what is targeted through regulation. The outcome of biodiversity governance is therefore in many ways a question of what values and whose values are brought to bear on the use and management of the environment with important implications for environmental justice:

> "We can bring Ecosystem Services type analyses to the table but we should...not be constrained to that because that tends to push us in a certain direction. It tends to value things more than others and...it values certain kind of decision making over others and a certain kind of impact." (I13)

Accordingly, some interviewees argued for the importance of more local and participatory approaches to decision making in relation to biodiversity or for the creation of spaces for public debates and dialogues on biodiversity and use and management of local habitats. Currently, this is most strongly embedded in the ecosystem approach (Convention on Biological Diversity, 1998) but can also be found in for example arts-led dialogues on nature (Edwards et al., 2016). Nevertheless, even when the importance of dialogue and deliberation is acknowledged it can be difficult to define who are the stakeholders to be included, and how to weigh up the claims, values and interests of for example recreational users from far away against those of local people depending on the land for their livelihoods or silent groups who may have an interest but whose voice is absent from the debate:

> "But yeah I think I mean if you're going to…if that's the contrast I would say the utilitarian side is the one that most people will get better because especially if their livelihood depends on the area so you know if you're a landowner or a forester, or a crofter, or a fisherman, and your living depends on the biodiversity or the natural heritage depending on how you want to…or a…someone with a B&B with a nice view, all of that…that's all the utilitarian side of things whereas, I think the more intrinsic approach you know biodiversity is great because it's really important, and we need more of it internationally. I think that very often is people who are living elsewhere who don't…whose direct livelihood doesn't depend on what's going on and it doesn't cost them anything either usually." (I6)

In addition to their impact on environmental justice putting different values on different types of habitats and forms of nature also feed back into the relationship between humans and nature. Some interviewees raised the point that a focus on rare species and 'pristine' or 'wild' habitats may reinforce the perceived divide between humans and nature and can lead to a devaluing of more 'everyday' species and types of habitats, such as agricultural or urban areas, thereby legitimising damaging practices in these types of environments as they are not seen to count as proper nature, while creating the perception that nature is only where humans are not, and that the only way to preserve nature is consequently to keep humans away:

> "I think there's a danger and there are lots of people who've written about this of course, that if you cling too much onto that as your ideal you effective devalue the everyday nature that you see around you and so there are people who live in cities who love nature, who go off at the weekend and go off into the wilderness and feel at last they are reattached to their true selves and to the true nature and they've escaped the kind of corrupting influence of modern society. Only when they're away on their weekends do they really become themselves, there's this kind of idea that goes back to Jean-Jacques Rousseau. And if you live like that I think there is a danger some people argue that um...you devalue the everyday. You devalue the nature you see around you in the garden, in the park and so on, or the scrap of...the brown field site in the city because...and you...tend to perhaps relinquish responsibility for looking after those places because what really matters is that ideal that you find yourself engaged with when you go off into the countryside at the weekend. And...so you don't care about the problems with pollution and environmental injustice that you see all around you, or you see in other parts of the world, because what matters is what's protected in those pristine nature reserves. So I think it's a danger to create that [...] that idea of um...wilderness is all that matters." (I13)

Likewise, it may also lead to the creation of perceived trade-offs and therefore potential conflicts:

> "...the degree separation as it were or polarisation between nature here in protected areas and productive land is potentially quite a dangerous one I think because it kind of leaves you exposed to the argument of whether it's more important to feed birds, or people. And most people are going to agree that it's more important to feed people. I think that's a false argument, I think you need to do both and that we need to have...we need to produce stuff off the land whether farming, forestry, or the sea, fisheries and so on in ways that are much kinder to wildlife, because many of the farming systems depend on wildlife." (I11)

Furthermore, some interviewees also highlighted the role that values in the form of norms, traditions and identities play in determining what stakeholders see as the 'right' way of managing the environment and how they react to particular governance mechanisms:

> "So in that sense there's…you've got to find ways to work with the grain and the cultural peculiarities of the people. I think farmers are…probably the best way to persuade a farmer is to give them the feeling that what they're doing is valued within the local community, and allows them to still be boss and still have a vision of their own piece of land, as to where they're going to rather than being forced by their throat by far away pen pushers who don't understand farming." (I9)

However, this not only holds true for land managers such as farmers, but also for those organisations and individuals responsible for designing and implementing governance mechanisms:

> "...sometimes it's just about who you work with and you know what the culture of a particular organisation is." (I5)

Some interviewees also suggested that values are important in relation to the ways in which different governance mechanisms try to motivate stakeholders to engage in particular land management practices (linked to different perceptions of human nature as discussed in the previous section). Governance mechanisms which are based on a view of people as motivated by self-interest (see preceding section) will hence tend to appeal to extrinsic motivations to change land managers behaviour. This often consists of 'making the business case' either by providing information on the benefits or costs of doing or not doing particular things, the contribution of nature as an asset or by creating monetary incentives in the form of for example subsidies:

> "…if you're talking to say a landowner, a farmer, um…whatever you're talking about, it's got to be relevant to their business. So, if biodiversity…if you speak about biodiversity in terms of their business operations then that's going to make sense. But if you just go to them just to talk about biodiversity generally they'll be like…I don't think…" (I3)

> "It's about changing public attitudes and changing business attitudes to biodiversity and to the environment more generally so the whole thing around the Natural Capital agenda about looking after our natural assets and how important they are. Um…and getting people to factor those into their decision making." (I7)

Appealing to extrinsic, utilitarian values and motivations may be easier in relation to some groups or cases compared to others:

> "…the further the sector moves away from direct interface with a natural system, the lower the recognition of their impacts, the risks, associated risks and dependencies on

> natural systems. So for example, if you're in the primary sector and you see...or a utility company where you see your business is directly related to natural systems then you generally view your business model as heavily reliant, and heavily kind of integrated with the natural...with the management of the natural environment. Say for example, if you're a technology company its very, very hard for you to...for you and your employees to really recognise how do I...how do I depend on natural assets and the Ecosystem Services they flow from." (I2)

Other governance approaches are based on views of humans as mainly motivated by intrinsic factors and these will tend to appeal to other motivations and arguments. Many of the interviewees talked about the need of employing different approaches in relation to different people:

> "And maybe there are other ways to reward the farmers, other ways to acknowledge their good management, giving them some kind of certification. And then help them to label their farm products that way, you're from a highly biodiverse farm because your grandfather was such a great guy to plant trees along the river. I think yeah certainly there's no one size fits all formula." (I9)

This is especially important as payments are often seen to entail the danger of crowding out intrinsic motivations:

> "I mean I think there is a risk that you um...undermine people's kind of intrinsic motivations to manage land in a particular way by incentivising things." (I8)

In addition to crowding out, reliance on extrinsic motivations may not work as intended, e.g. when farmers implement subsidy supported interventions even when they suspect these are inappropriate or insufficient to achieve the desired results:

> "I remember talking to a farmer and he was telling me that [he participated in a scheme] to delay the mowing of his wet grassland, so meadow birds could nest there. And he said…obviously he was very keen on the subsidy, it was a good subsidy, but he said it was totally and utterly daft and stupid because it was right next to a hill which was absolutely full of fox holes and badger holes and they went about at night and plundered the eggs that were there." (I9)

However, subsidies can also be seen as something that is necessary in order to enable already interested land managers overcome barriers in the form of resource constraints:

> "Even ones who maybe culturally inclined to do it because they're personally committed to values such as biodiversity, even they will often discover that they can't afford to do it unless they are getting at least some support. I mean which isn't to say that there isn't a...a latent or an innate willingness to do it, as long as they're given some support." (I1)

While it may seem an unimportant distinction, the difference between subsidies as incentives in their own right (extrinsic motivation) or a helping hand to overcome barriers can have important practical implications in relation to setting the right payment level and to determine what values to appeal to. Schemes appealing to extrinsic motivations need to do more than just compensate land managers for cost in order to be attractive and may work best when making use of rational language and logical arguments. In contrast, schemes appealing to intrinsic motivations (i.e. appealing to people's wish to do what they regard as good and right) may work better if more emotive language is used rather than relying on rational arguments, and also

need to be careful in the way payments are presented in order to avoid crowding out (i.e. replacing intrinsic motives with extrinsic ones):

> "…if you're going to have utilitarian values attached to nature then you needed to be...they need to be logical in the way that those were formulated. A clear kind of progression of cause and effect or whatever. Um...they needed to be quite transparent in the way that they were formulated and um...what was the third thing? It was transparency, logical, and open I think was the third one so that you'd have a clear basis on saying those are the values we're attaching and why. However, with intrinsic values, more or less exactly the opposite applies, they're deeply personal. They're not necessarily transparent and they're almost certainly not logical at all or rational in that sense." (I11)

However, not all interviewees saw it as necessarily problematic to appeal to different values at the same time:

> "...some people will see themselves as businessmen, other people see themselves as custodians of the countryside, other people will see themselves as something different. Most people would probably see themselves as all of those. Just...where I think we'd like to get to is a position where one is not seen as being contradictory to the other. Either by the farmers or by the agencies and NGOs. So...just because someone wants to make a profit it's not a bad thing, you should help them make a profit and do the right...thing for the environment. But equally um...we want to say to [farmers] yes you do need to take care and attention over biodiversity on your farm because you are a steward of the countryside." (I4)

In addition, some interviewees suggested that different types of mechanisms may work together by appealing to similar values. For example, self-interest may drive both compliance with regulations and the adoption of voluntary actions:

> "It's seen as a critical way in them actually addressing these regulatory frameworks early within their business models before there is hard legislation, or hard regulation comes in. Um...and also it kind of gives them an edge in terms of like showing that they have those kind...I suppose those softer policy options you know? They're going above and beyond compliance I think and that's what a lot of the industry leaders are looking to do in order to access different markets and getting that licence to operate that they're going above and beyond compliance." (I2)

Some interviewees felt that there had been a shift from an emphasis mainly on intrinsic to more extrinsic and utilitarian values over time:

> "But increasingly the agenda I suppose, the policy narrative for biodiversity I think has increasingly become more utilitarian, probably in the last 10 years. A lot of work which shows you know the benefits of biodiversity, to health, education, to the economy. We talk about the value to tourism, um…and that kind of thing. And increasingly we're seeing that narrative starting to come into um…government narrative. So, um…for example, the government Economic Strategy recognises the importance of the environment to the economy. It recognises the importance of the environment to health, it's wider than biodiversity but obviously that's a subset of it. Um…and so I think it's increasingly becoming a more utilitarian narrative that we're seeing in public policy…" (I7)

In addition to the distinction between extrinsic and intrinsic motivations and their associated values, relational values may also be important in influencing people's attitudes and behaviours.

> "Relational values becomes hugely important and they are about you know what we think other people will think about the way that we act and make our choices. And the extent to which we...or the boundaries that we draw around that so who are the other people that we're concerned about you know? They tend to be...people that we socially or...from a value point of view...define as part of our group and then where we start drawing the boundaries between our group and the others who we don't care about what they think about...those are the points where you know conflicts of interest start to emerge and um...and so all of those values of intrinsic relational and um...and utilitarian value I think are...probably need a better understanding of how they're working to define conflicts of interest around nature and choices about the natural resource management." (I11)

The relevance of these types of values were seen in examples of attitudes and conflicts between groups such as farmers and environmentalists:

> "[…] I think intrinsic motivations are very important to people. I think farmers get very frustrated that they feel people don't understand what motivates them, don't understand that actually they do care about the environment. I hear a lot of farmers talking about how they will stop the combine harvester, get out, walk over and lift a bird's nest in the field, a lapwing nest, or something like that. But no...to a lot of people they're...in the environmental community, they get branded as environmental vandals, and they don't care and all that motivates them is money. Well...they're in a business situation, so money is important but it's not the only thing. I think it's about asking farmers what motivates you?" (I4)

In addition, there can be negative values that can prevent people from doing things which they see as being in conflict with core values:

> "Again what environmental psychologists call taboo values, there are certain things that farmers will not do for the love of money." (I9)

Finally, interviews suggest that values also determine how the virtues of different approaches to biodiversity governance are assessed and consequently what is seen as good governance mechanisms. Focusing on economic efficiency in contrast to environmental justice or a desire to reconnect people with nature will for example lead to very different conclusions with regard to where conservation should be targeted and who should be included in decision making as well as implementation of governance mechanisms:

> "…our policy documents have expressively said we want it to be an equitable policy. And with equitable they meant that all farmers can apply for it rather than what some farmers refer to as the accident of geography, that one farmer can get payments and the next door can't because…some ideological model has said that you're in a nitrogen sensitive zone and you're just outside of it." (I9)

While such criteria are sometimes explicitly stated in governance mechanisms as in the above quote, in other cases this is not the case and it is then mainly in terms of unintended outcomes that it becomes clear if some criteria are being violated by particular approaches:

> "…the other thing about those contracts from a rural development point of view is that they have minimum kind of planting requirements to reduce transaction costs. […] And it's really only the kind of rural elite who had enough spare land that they could turn over [the] minimum to this a forestation scheme. [...] That actual model I think prevented poorer people in a local relative sense, from actually being able to join the scheme." (I8)

In addition, risks associated to governance mechanisms may also have justice implications which may undermine 'good governance'. This may be particularly relevant when considering novel mechanisms, such as result-based schemes:

> "You have to choose your...you have to choose your surrogates well really. So you can't say well I'm going to pay you for each pair of dotterel you have here you know, because you know that well first of all dotterel are really quite rare and they have a mind of their own. You can't be...you can do everything right and you won't necessarily have dotterel there or whatever. So there has to be some justice there and something that the...the applicant thinks well okay if I do something I've got a fair chance of seeing an increase in payment or of being fairly rewarded at least compared to my colleagues within the lifetime of the scheme." (I14)

However, different groups are likely to regard different criteria as desirable and there may therefore be trade-offs between different interests, not just in relation to the environment itself but also in relation to characteristics of governance mechanisms:

> "I think this...your question can be looked at can't it from the point of view of the...of the user, and the point of view of policy, and okay we would say that they should be as close as possible to each other of course. But they still are different, I think we have to accept they're different. So from the point of view of the user you know you want a system don't you that is responsive to the changes out there really, that doesn't hold you back for no reason at least. Or if it does hold you back it has some mechanism to make up for that. And you want to be able to make the best of the situation the way it is, but without fossilising it for the people who might join later […]one of the good things surely should be that the status quo is not to entrenched really that there's a possibility of change happening. Social change you know. Um...but from the point of view of policy then I think...well certainly policy wants to ensure that whatever it wants to deliver is delivered […]" (I14)

Another aspect raised in some of the interviews relates to the tension between traditional governance approaches and the implementation of more flexible and experimental approaches, which may also entail higher degrees of uncertainty:

> "It's a difference of looking at it from saying it's not a perfect world solution. I think sometimes folk don't initiate things because they're worried about the complexity and thinking everything has to be in place before you start but it doesn't. If you've got the main building blocks and you start the journey down the road...there will be various hurdles to overcome but I think if there's no change in the land use or the land management then everything is just theoretical you know?" (I5)

While fostering innovation in relation to governance approaches was seen as important it was also regarded as something equally challenging to governance itself that often depended on particular individuals:

> "And where we see things that work or things where innovation has happened, or things have been...innovation that's not to do with policy necessarily very...even policy innovation let's be honest [...], it hinges on one or two individuals almost always. I think that's...to go back to the policy question that's the...that's the question for policy isn't it really? Is how it...not minimises the dependence on that kind of people because they are essential and they're not a weakness, they're a strength really. But how it's...how it tries to um...to encourage the development of such people […]" (I14)

4. CONCLUSIONS

The interviews highlighted the role values place in biodiversity governance as they mediate the relationships between nature and people, decisions on what to conserve and what trade-offs to make in relation to different species, habitats or groups of people. In addition, values play a key role in motivating different stakeholders and in defining what is seen as appropriate governance solutions to improve biodiversity. However, often these underlying assumptions and values are not made very explicit. Consequently, it may be helpful to bring further attention to them as mismatches between values and perceptions of different stakeholder groups may be part of the reason why certain governance mechanisms do not function as anticipated.

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