

Environmental Audit Committee

Oral evidence: [Marine Protection Areas Revisited](#),
HC 597

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[Watch the meeting](#)

Members present: Mary Creagh (Chair); Peter Aldous; Glyn Davies; Caroline Lucas; Kerry McCarthy; John Mc Nally; Dr Matthew Offord; Mr Gavin Shuker.

Questions 1 - 60

Witnesses

I: Joan Edwards, Head of Living Seas, The Wildlife Trusts, Dr Jean-Luc Solandt, Principal Specialist, marine protected areas, Marine Conservation Society, and Jeff Knott, Head of Nature Policy, RSPB.

II: Professor Callum Roberts, University of York, Peter Jones, Reader in Environmental Governance, University College London, Professor Russell Wynn, National Oceanography Centre, and Dr Matthew Frost, Deputy Director, Knowledge Exchange, Marine Biological Association.

Written evidence from witnesses:

- [The Wildlife Trusts](#)
- [Marine Conservation Society](#)
- [RSPB](#)

Examination of witnesses

Joan Edwards, Dr Jean-Luc Solandt and Jeff Knott.

Q1 Chair: I welcome our witnesses today: Jeff Knott, Head of Nature Policy at the RSPB; Joan Edwards, Head of Living Seas, The Wildlife Trusts; and Dr Jean-Luc Solandt, Principal Specialist, marine protected areas, Marine Conservation Society. Welcome to you all.

We have been briefed on the history of the marine protected areas and we have read your evidence emphasising the need for an ecologically coherent network. How close do you think we are to achieving this coherent network today?

Dr Solandt: We are about halfway. We have had two tranches, as you know, that have led to large areas of inshore waters being protected. 25% to 26% of the English inshore 12 nautical mile zone has been set up in one form or other as marine protected area, and that is to be commended. There are gaps in the network remaining—significant gaps—within areas of sand and mud habitat, which is unfortunate because these are the most widely spreading habitats in UK seas. In the final tranche, which is fundamentally important, we have had advice from JNCC and Natural England of 50-odd sites that we need to complete the job. We are very, very supportive of those sites all being set up such that we can finish the job.

It is not just us doing this. This is a commitment under OSPAR, a commitment that meets IUCN criteria. This is not something we are doing in an isolated state, we are just following what other countries of the world are doing to try to make ecosystems healthier.

Q2 Chair: How do you think we compare to other countries, if you were ranking us? Are we top, bottom, middle?

Dr Solandt: We are doing not bad in terms of the numbers of sites and the area covered. I think we are slow on management. That is a disappointment. It is a difficult job. I have put in our submission about this feature-based approach, which makes it difficult for the agencies to provide evidence for every single feature and every single site. However, we are not doing badly. My colleagues might want to interject.

Jeff Knott: In the OSPAR regions, in the North Sea region, the UK has designated almost as much sea area as the rest of the states put together. About 1% of the OSPAR maritime area has been designated by the UK compared to 1.3% for everyone else combined, so we are doing really well. But there is still a long way to go, as Jean-Luc says, both in terms of the raw area, which is still certainly not enough to be an ecologically coherent network in terms of the features, where there are some big gaps missing, particularly around mobile species—hopefully we will get a chance to explore that a little bit later—and particularly in terms of the management as well. Just a raw measure of the area protected is



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not the full story unless it is backed up by really rigorous management measures as well.

Joan Edwards: We are particularly concerned about management of fisheries beyond six miles. Within six miles we can manage fisheries quite easily, and in fact we have made a lot of progress on particularly damaging fishing operations. But beyond six miles presently you have to have agreement with other member states through the CFP. That is causing us problems because other member states are basically not agreeing to fishing being stopped beyond six miles. What has happened is there has been a sort of zoning policy established, where you may have an area such as Dogger Bank where only 40% of the sensitive features are protected and 60% is left open to trawling, which is particularly damaging.

Q3 **Chair:** What is Dogger Bank?

Joan Edwards: Dogger Bank is an area of seabed in the middle of the North Sea. It was called Doggerland. It is very shallow and it is very important for sand eels and spawning fish. It is incredibly important for cetaceans as well—whales and dolphins—so in the winter you tend to find a lot of whales and dolphins feeding above Dogger Bank. The seabed there is very, very rich and very sensitive. What has happened is that the Dutch have said that they will only agree to 40% of that area being closed. It is a marine protected area and you would think it is protected, so you get a marine protected area, Dogger Bank, but we only protect 40%.

Q4 **Chair:** Is the Government likely to complete the ecologically coherent network with the sites that remain in consideration for the third tranche of MCZs that are going to be consulted on in 2017?

Joan Edwards: If they were to designate the areas that have been put forward by JNCC and Natural England, they would be doing a really good job. Natural England recently have published some options for tranche 3, which include many of the sites that came out of the network projects, and also some new areas of search and some new areas for mobile species, including white-beaked dolphins in Lyme Bay. If they were to designate all those sites and they were to manage them well, then I think they would be very, very close to an ECN.

Chair: Sorry, what was the dolphin?

Joan Edwards: There is an area in Lyme Bay that is particularly important for white-beaked dolphins, and we put that forward as a site for tranche 3.

Q5 **Chair:** The Government has made a lot of international commitments to marine protected areas under OSPAR and various biological diversity conventions. Do you think we are on track to meet the biological side of it?



Jeff Knott: We are behind schedule. For example, the OSPAR commitment was for an ecologically coherent network to be in place and designated by 2012 and for it to be well managed by 2016, so clearly we are behind progress on that. There is also the marine strategy framework directive, which has a requirement for a programme of measures to include spatial protection areas. So there is still a long way to go.

There are some particular gaps as well, and we have already touched on those, particularly around marine species. There has been some progress on those issues in some places in the UK, particularly in Scotland, where some mobile species sites have now been designated, but that remains a massive gap.

One important point to point out on those international commitments is that at sea, much more than on land, a lot of the network is currently designated as SPAs, and that is not underpinned by domestic legislation. In Scotland, 93% of the marine protected area network is not underpinned by any domestic protection, it is purely that European angle. That is a big question, post-referendum, that will still need to be addressed to make sure that when we do the tranche 3 of MCZs and equivalent processes across the four countries of the UK, we are getting as close as we can to an ecologically coherent network.

Q6 **Chair:** I think we are going to come on to that in a little while, but would the so-called Great Repeal Bill deal with that or not? You are saying it is not underpinned by UK legislation.

Jeff Knott: It is unclear at the moment how European sites will be dealt with by a Great Repeal Bill, so we do not know, but it is really, really important that they do. On land, the most common measure would be that a European site in an SPA would be underpinned by UK legislation, so it ought to be designated an SSSI. In the vast majority of cases at sea, that simply is not the case. You have the European protection but nothing underpinning it. How that will be addressed through a Great Repeal Bill will be a key issue for protected sites on land and at sea, but the risk factor is particularly great at sea because we do not currently have that safety net.

Joan Edwards: The other issue is that if the Great Repeal Bill brings across SACs and SPAs, we will lose things that were in the habitats directives. For example, if we are not particularly happy about something that is happening in an SAC—special area of conservation—we can make a complaint to Europe. Once we are out of Europe, if the SACs and SPAs come into domestic legislation, we have no place to make a complaint, there is no court to go to. That is one of the biggest weaknesses we have with the issue of leaving the EU.

Q7 **Caroline Lucas:** Can I get your understanding of how much would be covered by the Supreme Court if it chose to and how much just cannot be? I got a bit confused about this, looking at some of the legal assessments of what happens when you get rid of the ECJ and the



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Commission, and being able to refer something to the ECJ. Some people will say, "Don't worry, we have domestic courts and the Supreme Court can do it" and other people are saying, "It does not have the same scope".

Joan Edwards: Our understanding at the moment is that if SACs and SPAs are brought into domestic legislation, there is no court to go to within the UK process. We have been talking about should we have a UK framework-type legislation that provides us a place to go, but at the moment there is nowhere to go.

Q8 **Chair:** Can you talk a little bit about how it is working with the devolved Administrations? There seems to be some issues with Wales. Could you flesh out for us what is working well and where have there been difficulties?

Jeff Knott: There have been challenges with co-ordination across the four countries. There is to some extent a limit to what a UK Government can do, because it is a fully devolved matter. To some extent the four countries do have their own individual approaches. However, mobile species—seabirds and cetaceans—clearly do not respect national borders at sea. There has to be a sensible, joined-up, co-ordinated approach in these areas so that protected area networks benefit the ecology of the area as a whole. We do have some concerns about that happening, for example, in the south-west, where the sites proposed have effectively been cut off on the jurisdictional boundaries through the sea. When logically looking at a map, obviously it would make sense to work on both sides and do it coherently. There is still a long way to go.

There are also some subtleties around how the approach has been taken differently. Where we are talking about tranche 3, that is in England for MCZs. We have only just finished tranche 1 in Northern Ireland, and clearly a second tranche at least will be required there to get closer to ecologically coherent networks. Even just the analysis for what an ecologically coherent network is is being taken forward using subtly different criteria in the four countries. That means that it will just make it that little bit more difficult to judge overall whether the UK has an ecologically coherent network or not.

In terms of how it is being co-ordinated across the devolveds, there is still certainly room for improvement, but we do have to reflect that it is a devolved matter, so each devolved Government will have its own approaches.

Q9 **John Mc Nally:** It was interesting at the beginning of our conversation this morning to hear you mention Scotland, because we are very concerned principally about the reputation and the devolved matters, and that people can still take ownership of the matters that we have devolved over this period of time. We have designated 30 marine protected areas, as you probably know, in Scotland, covering about 20% of Scottish areas. The RSPB said that the UK has not designated a single site for mobile



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species, such as migratory birds, but Scotland has designated sites and Northern Ireland is expected to.

The worrying part is that the institute applauds the vision of the Scottish Government for introducing a mechanism in the Marine Scotland Act 2010, whereby sites can be designated based on their historic importance—eight have been designated so far—but no equivalent measures exist elsewhere in the UK. How are we supposed to take the UK Government seriously in their ambitions?

Jeff Knott: Scotland is leading the way on many of these occasions, particularly around mobile species, including in designating sites for mobile species. As you rightly say, there are sites for black guillemot that have been designated in Scotland, and we understand they will be very soon in Northern Ireland. To some extent Scotland is leading the way, and catch-up is required to build on that. Scotland has also—this might be more Joan's area—put forward a harbour porpoise SAC as well. There is still a long way to go to catch up with that.

The other thing that is worth mentioning is that Scotland also has protected areas for sand eels, which are an important forage fish for a lot of mobile species, particularly seabirds. When we come on to talking about mobile species, for me it is not just about directly protecting sites and having sites designated for those species. That is clearly important, but a true ecologically coherent network has to take into account the requirements of those species as well, and particularly forage fish like sand eels. It needs both, and Scotland is doing fantastic stuff there.

The other thing to say is that the other area where there has been fantastic progress, particularly recently, is in the UK's overseas territories, which I understand are not the focus of today but which hopefully the Committee will come back to separately. We have seen massive ambition in recent years, with huge areas being designated in the UK's overseas territories, and that is fantastic news. That does not have to be the either/or situation that it sometimes gets portrayed as—that we are doing it over there so we do not have to do it closer to home. Far from it. It is completely different bits of Government. But we have ended up in this situation where the FCO is perhaps slightly showing up DEFRA at the moment in the scale of its ambition, and the slightly weirder position where British seabirds off the Chagos Islands are better protected than they would be flying off Cornwall.

We have some really good shining lights for the ambition that can be delivered, how these systems can work and how they can be a really important tool in delivering the conservation objectives that they set out to do. But yes, there is still a long way to go to make sure that tranche 3 in particular takes us a big step onwards and gets us close to completing that network, and importantly, having it well managed as well.

Dr Solandt: Another exciting thing about the Scottish approach, of course, is to recognise communities. That is an exciting approach that



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has led to at least two or three more recommendations than the Community of Arran Seabed Trust. Seeing that bottom-up approach being allowed through the legislation is quite an exciting approach.

John Mc Nally: I think they also have an interactive map that you can look at and people can connect up on and see quite easily what is going on in their area, which again engages the communities, which is what you need to do in the first place to get the bottom-up approach.

Q10 **Chair:** Can I challenge on the harbour porpoise and the need to protect it? It is not in decline, it is not under threat.

Joan Edwards: The sites that have been put forward for harbour porpoise are areas important for harbour porpoise, but people get quite confused by why you would have a marine protected area for something that swims around and is migratory. But there are areas of seas where you get feeding and mating behaviour and young are born, so there are areas of sea where you get very large numbers of porpoise at certain times of year, and they are the sort of areas that are being put forward into special areas of conservation.

Q11 **Chair:** But why do they need protecting? My question is about the numbers. Why do they need protecting?

Joan Edwards: The view is that the numbers have been going down, partly because of by-catch, but also because of the effect of pollutants. Harbour porpoise, and any other whale and dolphin, are right at the top of the food chain. There is a considerable amount of pollution that goes into the sea, and it works itself up the food chain.

Q12 **Chair:** You say "the view is". Is that borne out by the science and the figures, or do we not know?

Joan Edwards: Yes. One of the reasons we use SACs for harbour porpoise is that we have a lot of interest in offshore renewables at the moment. When a developer is building a wind farm, they use a technique called piling and piling is very, very noisy. Harbour porpoises are particularly sensitive to noise. They are a strange animal. They eat and eat and eat. That is all they do. If you stop them eating, they die or they move to somewhere else where there is no food and die. So it is really important that you do not have a lot of disturbance in those areas that are particularly important for harbour porpoises.

By using the SAC process, we have been able to make sure that the developers are using good mitigation so that they create the least amount of noise where there are a lot of harbour porpoises. In some ways we are future-proofing. There is not a major issue with harbour porpoises at the moment, but there may be in the future. Obviously we are very pro wind farm development and we would not want to stop that—it is good renewable energy, but it has to be built in the right way so that it does not cause disturbance to porpoises.



Dr Solandt: One of the things that our sector always does when we give submissions and recommendations for management is look at the entire ecosystem. Those harbour porpoises obviously have a diet that is principally composed of fish, so we want to see fish successfully enabled, as Jeff said—for example, sand eels, which are a large part of their diet—to be high population densities, so that the harbour porpoise can be healthy as a population. That is the importance of this entire network. It is not just about individual units—and often the arguments that we face are about individual units—it is the whole that is so important. Enabling recovery of fish populations enables the recovery of harbour porpoises and their health, and seabirds and the like. We have to think of this thing more holistically.

Jeff Knott: One of the great things about the protection area network is that it gives development that certainty, which is important from a conservation perspective but also from a developer's perspective of exactly what is the art of the possible in a particular area and what the conservation requirements are, so it can be a win-win.

Q13 **Caroline Lucas:** It would be nice if we could have this illustrated; I want to know what these harbour porpoises look like.

You have talked a lot already about gaps, but is there anything else you want to say about any major gaps that remain in the network, and in particular what further sites should be designated in order to fill those gaps?

Jeff Knott: One of the major gaps, and one of the most important gaps from our perspective, is for mobile species. That is species such as cetaceans—whales and dolphins—and particularly seabirds as well. We have some fantastic data from seabirds now, using tracking material. We know that they do not just disperse across vast areas of sea; there are relatively discrete areas that are hugely important.

Britain's seabirds are massively globally important. They are probably the group of birds for which the UK is most globally important. We have about 8 million seabirds in this country, and many of the species are declining rapidly. We have lost about a quarter of our seabirds in my lifetime, and that masks some even greater declines. In Scotland, the decline over the same period is nearer a third, and for some species, like the Arctic skua, declines are even more massive—up to 80% have been lost. So we are seeing some really massive declines.

Protected areas have a really important role in helping to reverse some of those declines. As I say, we know where these important areas are, and MCZs can be a core principle for helping those species recover. The fact that we do not have any in England at the moment for mobile species is probably the single biggest gap that we currently have in the network. It creates a slightly weird situation, where the breeding colonies for seabirds are often very heavily designated, very heavily protected, but if we are not protecting the important areas where they go out to feed, all



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we are doing through that is creating safe places to starve. Clearly that is not going to work.

Through developing this network, one of the RSPB's biggest hopes for this tranche is that we can finally address this question, this oddity that we have in our domestic legislation, and create a proper network for seabirds, for divers, for grebes at sea so that we can properly protect their full life cycle and help these species recover.

Joan Edwards: There are two other major gaps that we would like to talk about. The first is offshore Wales. Offshore Wales at the moment is English Secretary of State waters, and there are a number of sites for mud and sand in those areas. At the moment Welsh waters go out to 12 miles; beyond 12 miles to the median line is Secretary of State waters. Those waters will be devolved in the next year or two. For that reason, DEFRA in Westminster has decided not to designate in tranche 3 the sites in that area. We are particularly concerned because the Welsh Government have shown no appetite for marine conservation zones at all. They have only designated one MCZ, and that was an area already protected as a marine nature reserve.

We are very concerned that the Welsh Government will not designate those areas in the future, and that will leave a major gap. You will have marine conservation zones off north Cornwall, and you have marine conservation zones potentially off the Isle of Man, but there will be a gap running all the way down that offshore area. Those areas are particularly important for mud and sand, but also they are very important areas for whales, dolphins and birds.

Q14 **Caroline Lucas:** Why is Wales so reluctant?

Joan Edwards: When the Marine and Coastal Access Act became legislation and both England and Wales started the journey through the marine conservation zone process, England followed a process where they pulled together network projects involving stakeholders. Stakeholders decided where these potential sites should be, and they are the sites we are now looking at for tranche 3.

In Wales they carried out a different approach. They did a very much top-down approach and basically said, "This is where the marine conservation zones are going to be, and there will be no activities in these areas". They chose places that were not of interest to the renewables and aggregates industry, but what they ended up doing by accident was identifying areas that were particularly important for local fishermen. There was a very big row over this, because they were basically telling potters, "You cannot pot for lobster and crab any more", and these are families that had been there for centuries. Therefore, the appetite for marine conservation zones was lost within the Welsh Government.

Q15 **Caroline Lucas:** But it is not inevitable, and they could have chosen differently and could still choose differently.



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Joan Edwards: They could choose differently, yes. Because of devolution, it is very difficult for Westminster to put pressure on the Welsh Assembly to do the right thing.

Dr Solandt: That gap that Joan is talking about is for sites that were recommended for the MCZ process offshore, a long way away from these inshore artisanal potting communities. They are absolutely fundamentally important in an ecosystem that has radically shifted from a healthy state to one that just supports prawns and scallops on the seabed. It has been completely degraded through industrial fishing for the past 100 years. The essential role of protected areas in the Irish Sea offshore is to recover that system to something that is more natural, at least in the marine protected areas, while allowing industrial activities outside it. We are not talking about artisanal communities that would be affected by those sites. It is much more the international fleets that come to prosecute their fisheries—large boats that have much greater ranges.

Q16 **Caroline Lucas:** Going back to mobile species, I know the RSPB had criticised the very short timeframe allocated for the consultation. What impact do you think that six-week timeframe has had in terms of the submissions that have been received?

Jeff Knott: It very much limited the number of sites that all of us were able to bring forward. Marine survey is complex, it is an expensive business. We have some really fantastic tracking data now that is vital in identifying those sites. But a combination of that very short timescale of just a few weeks and the very high evidence bar that was set for being able to propose sites meant that we, as a community, really were not able to bring forward the number of sites that would be required to deliver a true ecologically coherent network.

The Science and Technology Committee in 2013 said that a lack of full scientific certainty should not be a reason for postponing proportionate decisions on site selection. We are quite concerned that by setting the bar so high it becomes a very limiting thing, particularly if the Government is relying on NGOs to be the major source of sites being proposed, rather than pre-emptively investing in identifying potential sites themselves. It has certainly limited the number of sites that could be brought forward, but hopefully we can still make a big step forward with this tranche.

Q17 **Caroline Lucas:** One last question about reference areas, and the impact of the Government's decision to exclude reference areas from the first two tranches.

Dr Solandt: It is unfortunate, because we do not know what the seas could look like. Fundamentally we are flying a little blind here. If we do not have reference areas, we do not understand what the ecosystem can regenerate towards. Many of those reference areas that were set up—I think there were 65 in the original recommendations—were silly. They just were not practical. They were in areas of hugely intense inshore use



particularly. Speaking with colleagues, one of the best ways to progress the idea of reference areas is to have large sites that are in areas that maybe are less heavily used. We do have some areas within those initial recommendations that we can go for that will show us what the marine ecosystem could revert to in the absence of any anthropogenic, extractable, harmful activities.

Perhaps we need less of that original recommended tranche list, but we should pick the big units that should be protected and monitored, really to see what we are doing with the rest of our ecosystem in reference to those sites. Then maybe we use them as a management measure thereafter, because “reference areas” means obviously—it is in the term—that they are to be referred to, but they are also, from the global environmental dataset that we have of them, extremely important for fisheries and for ecosystem recovery. Let’s start.

Q18 Caroline Lucas: How would you respond to the challenge that sometimes gets raised that the socioeconomic impacts of these reference areas are too important?

Dr Solandt: I think I have answered that, Caroline. I have said yes, let’s maybe ignore the ones that are inshore, which were probably set up too hurriedly, but maybe offshore these larger areas that are less contentious, we could start with those and monitor them more effectively. We should all remember that the MCZ process in 2010-11 was stakeholder-led. We were able to put in the areas where there was the least economic interest for sectors. Best of a bad lot, some will say in the next panel, but let’s go with some of them, otherwise we will not know.

Q19 Caroline Lucas: Is that a common view?

Joan Edwards: Our view was that we need less—a smaller number of reference areas—but they need to be big enough. If you carry out the monitoring of the reference areas you can then use that knowledge to help you manage the rest of the network. We know whatever happens we are not going to have money to monitor all our MCZs, SACs and SPAs, but if we had a small number where we were doing very, very detailed monitoring, we could then possibly start to see what recovery looks like.

Jeff Knott: Yes, that is the key point. The whole point of reference areas is to give us something to compare to. If we do not have any, then we cannot truly assess how the network is performing, because all we are doing is comparing sites that are degraded to different degrees. It is an important part of the toolkit, but I would agree with the rest of the panel that the sites need to be carefully selected.

Joan Edwards: It is not an exact science. We know very little about our marine environment. Lyme Bay reefs were closed a few years ago and we expected to perhaps see recovery in 10 to 15 years. After two years we started to see recovery because DEFRA paid for a full monitoring



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programme. We need to repeat that in other areas, looking at different habitats.

Q20 Dr Matthew Offord: Following on with the point from Dr Solandt and also from Ms Edwards, we conducted an inquiry into the marine protected areas in the last Parliament, and one of the conclusions we came to was that the Government's communications were not effective and the Government did not get across the message of the benefits of marine protected areas. Could you give your experience of the way the consultations worked for this second tranche and how it compares to the first tranche?

Dr Solandt: I agree with you that there is a role to play within all of the regulatory regime, perhaps not just the Government through DEFRA, but the MMO and the integral fisheries conservational authorities in England, to show the benefits of MPAs a bit more effectively from the research within our country. We have well studied areas like Lyme Bay, and we have Lundy, where we have loads of understanding. Lamlash Bay in Scotland is heavily researched as well. We do start to understand what is happening when you take trawling away from areas or when you take potting away from areas. They are few and far between, but perhaps that confidence about what could happen in those other locales could be communicated more effectively.

The Government have, to a certain extent, shown a more positive light within their MCZ reports for each individual site, but they are perhaps rather traditional in the way they have communicated about those sites, "Here is a list of species. Here is a list of habitats. We are protecting them". Maybe more video would be useful, and more interviews with stakeholders would be useful. There are areas where the Government could engage with people to make it a more attractive proposition.

Q21 Dr Matthew Offord: You mentioned stakeholders. A number of the comments I heard about the first tranche were from the fishing industry, and the potting industry and artisan potters in Wales have already been mentioned. How do we communicate some of the economic and social benefits to them? I would have imagined they are a very small community of very small contribution to the economy, whereas there are other activities that can take place in marine protected areas that will provide a better and an increased economic benefit to the local communities.

Joan Edwards: I think the difficulty is that small fishermen and local communities are not part of a club. They all work on their own and therefore it is very difficult to get information across to them. DEFRA has improved the process, because rather than just doing a national consultation around tranche 2 and tranche 3, they have gone out to the coast to speak to the communities. You tend to find those local crabbers and potters want a healthy marine environment. They are often the people who phone us up if something is going wrong. You can put across to them what the benefits are of having a healthy marine environment,



such as the fact that there will be more fish—in Lyme Bay we have seen an increase in the number of shellfish in the area since scallop dredging was stopped.

But we have to do more to make it more accessible, because at the moment the consultations around the tranches has been near-enough impossible to take part in, because it is complicated, it is full of science and it is just difficult. There is a role to try to bring it to life, as JL has said, and make it more accessible to people on the ground.

Dr Solandt: We just need more management to be in place to start seeing how these things deliver, and people getting to see that management in their own patch. If they are from Scarborough they do not want to know what is happening in Lyme Bay, they want to know what is happening in Scarborough. I understand that. That is what you would do, because you fear what the ramifications are for your activities if you are restricted from it. You need to see reports from some scientific studies. That is perhaps why reference areas are so useful.

We should definitely monitor a suite of our protected areas regionally—maybe 20—very, very thoroughly so that we can reflect that to communities and involve them in what is happening. Until such time as we start managing them, everyone is going to fear what that might mean for their activities, and that includes the minor activities such as recreational activities, most of them, and potting. Those guys could be our advocates if they knew what they were going to be managed to do and if they could see some of the science coming out of places like Lyme Bay, Lamlash Bay and Lundy. We can start to be more positive about these stories.

Jeff Knott: There is a definite opportunity to be slightly more proactive about communicating the longer-term economic benefits of future-proofing sites. I sometimes think there is this immediate, almost reflexive fear that designation is going to mean the ceasing of all economic activity. I think we can be better about putting across the message that that need not be the case at all; it is about providing the right safeguards. Taking this slightly longer view about the socioeconomic benefits that can come from designation is going to be really key, and so is linking into other areas of work like the 25-year plans for the environment and for food and farming, if that includes the marine environment.

The other thing, coming back to the point that it provides certainty for developers, is that certainly the message we receive on land as well as at sea is that developers in particular value the certainty of knowing what the rules are in a particular area. A protected area network, well communicated to all the stakeholders can help deliver that.

Q22 **Dr Matthew Offord:** I want to ask Ms Edwards as well, in the submission to the Committee you highlight Lundy and north of Lundy as being a particularly good consultation. I would be interested to hear why



you felt it was so positive, and particularly to see if that positive experience could be translated elsewhere.

Joan Edwards: You have quite a unique example there, north of Lundy or on the north Devon coast. You have only really small fishers present there, and they are all part of a local community. They were very positive about having a marine conservation zone in their area. In fact, they campaigned themselves for that area. There is no other commercial interest in that area, there are no renewables and there are no beam trawlers or scallop dredgers. In some ways it is a win-win, because they want a site, but also they know and it has been explained to them that they will not lose their livelihoods, because the potting will continue. In fact, we need those potters to go out there because they are our eyes and ears.

It is quite exceptional, but I think there is a role there, because a number of local people, including the fishermen, have been very positive about marine conservation zones, so they have done the work themselves. They have persuaded each other that it is a good idea, and they have carried out lots of presentations in the evenings for the community and have been very involved, going out and looking at the sites as well. If we could match that in other areas it would be very, very positive, but because there is nothing there that we particularly want to stop that is particularly damaging at the moment, it has been welcomed.

Unfortunately, particularly in the English Channel, there are a number of contentious sites where people have just decided, "They are going to stop me doing what I want to do", and I do not think we have helped. Rather than sitting down and saying, "Let's look at what you are doing and let's think about how we can manage that so it does not cause damage", it has been very "us and them". We have ended up not going forward at Studland because people who go out there with their yachts are concerned that they will not be able to anchor. You have Hythe Bay where local fishermen are very concerned that they will not be able fish there, even though they are not fishing there at the moment. There is a lot of misunderstanding about what marine conservation zones are about.

Q23 **Dr Matthew Offord:** Someone on the panel mentioned the third tranche. Are there any lessons that we can be taking forward for that? Is there anything more that DEFRA could be doing?

Joan Edwards: Involving the local communities as soon as possible with some of the decisions is probably the most important thing. At the moment it looks like Westminster is making decisions. Westminster has to leave Westminster and go to the coast and explain what these designations are for and why. We need to talk about the positive sides of marine conservation zones rather than just talking about, "This is what we are going to stop". We need to talk about, "This is what will happen in the next 10 to 15 years, because if we have an ecologically coherent network of well managed marine protected areas, we will eventually have more fish, so it is good news for everybody".



Jeff Knott: I will just very quickly add to that. One thing that always strikes me when you visit these communities is that it is the local communities that are absolutely passionate about their environment and the wildlife that relies on that. Seabirds in particular are often iconic. If you go to somewhere like Lundy, you hear the local community talk about the times when there were the wheels of thousands of puffins coming in to roost in the evening. It is all very, very core to the feeling of sites. There is a lot more we can do to help communicate the role of a marine conservation zone and an ecologically coherent network of protected areas at sea in bringing back those really iconic features of places, and as Joan says, it is a win-win in that it secures a sustainable future both for wildlife and for people.

Q24 **Mr Gavin Shuker:** On that third tranche, we have received evidence that there is a risk to sites in terms of development before they are designated. Is that something you have come across?

Joan Edwards: I think probably you are referring to Goodwin Sands. Goodwin Sands is a recommended marine conservation zone. In fact, JNCC have just published a gap analysis—they have looked at the existing network and they have looked at where the gaps are. They have identified that Goodwin Sands must be designated in order to reach ecological coherence. At the same time, the Dover port authority wants to dredge for gravel for some of its works around the harbour, and they have chosen Goodwin Sands as a site. There is currently a consultation on that.

The gravel is the future of Goodwin Sands, and it is not replaceable; there is not a feedback mechanism into Goodwin Sands. The gravel that is in Goodwin Sands is a feature, and if you take it away you are removing the feature that that site will eventually be designated for. We have hit a problem, because basically the Marine Management Organisation is saying, "It is not designated, therefore we cannot take into account the importance". We have been pressing DEFRA to take action, because that just seems rather ridiculous. You have a site that you are being told by the JNCC is absolutely essential to reach ecological coherence, and on the other side a regulator is considering giving a licence for dredging.

Q25 **Mr Gavin Shuker:** Other than speeding up the designation, can you think of a practical way that these tranche 3 sites might be better protected?

Joan Edwards: Yes. If it was a fishing operation, for example—say somebody started to carry out scallop dredging on Goodwin Sands—the Government could bring in an emergency by-law and stop that scallop dredging. We are suggesting to the MMO that it should take similar action. It should say, "We are not going to give a licence to allow dredging, because it is going to be designated, possibly in the next 18 months".



Q26 Mr Gavin Shuker: That is great. Jean-Luc, what is wrong with a feature management-based approach?

Dr Solandt: There is nothing in principle wrong with it; it is about the cost of being obsessed with it. The problem with our protected areas is, as the panel have alluded to, that the cost of doing marine survey is extraordinary. Identifying sites by features is fine, but then managing them for the features by understanding exactly where everything is to the level of detail at which we require, perhaps to defend the decisions to stop potentially damaging activities in a court, is a high bar.

If we have to describe where features are, that is one thing. The extent of them is very difficult, and then their condition is extraordinarily difficult. Other countries around the world, such as Australia and America, which have very diverse ecosystems as we do, have gone down the route of applying broad-scale habitat management regimes. There will be no trawling zones, no wind farm zones, no aggregate dredging zones over broad-scale areas, so we know what the management is, regardless of the features there.

It is something we are living with and I am living with—I did not necessarily agree with it, perhaps—and it will go on. But it is a danger to be obsessed with where everything is and the condition of it, because the cost of monitoring every single site for those features is prohibitive. In essence, it is fine for identifying sites, but it goes back to the best available evidence argument rather than cast-iron evidence. This is where this has shifted a little bit. I worry about it quite considerably in terms of the long-term resilience of our marine protected areas and their protection.

Q27 Mr Gavin Shuker: How does management and enforcement vary at the moment across these different sites?

Dr Solandt: Shall I start with inshore fisheries? We are doing a lot of work and have been working with the Government a lot since about 2012 on this revised approach to fisheries management. That is a very good forum for including everybody involved, including regulators, the Government and the fishing industry NGOs to deal with inshore fisheries issues. It has been quite effective at communicating—as we have talked about earlier—what is coming up and what is likely to happen to your activity if it is deemed to be damaging for certain features. That is being led from a matrix that says where certain things should and shouldn't happen. That has been quite effective. We have seen about 3,000 square kilometres of seabed protected from bottom-towed fishing gears in highly vulnerable areas. Probably a similar amount is about to be protected from less vulnerable areas in the next six months, which is good. It is progress.

Where that falls down is enforcement at the moment, because as we have put in our submissions, there is potential for a type-approved VMS Unit—vessel monitoring scheme Unit—on inshore vessels, which is very



cheap and very practical, using mobile phone technology on top of the wheelhouses of vessels. You can see where they are acting. They could be implemented and be very cost-effective, and we would be able to then know exactly who the bad apples are, if there were any bad apples. It is very important that we do see what the fishing industry is doing, but not us—a centralised MMO office will be able to administer that technology. We need that. We need that essentially so that we can see where people are carrying out their activities in lieu of the protected areas we are meant to be managing. So, please, MMO, hurry up and get this stuff on board the vessels so we can see what is going on.

Jeff Knott: Yes, certainly it is a mixed bag. As you know, there has been some recent progress, as Jean-Luc says, which is really good news, particularly for the high-risk red sites—things like reefs and eelgrass beds. That has been introduced in the last couple of years. However, there is still a long way to go for some of those sites that are considered relatively slightly lower-risk, where there are very few management measures in place. Damaging activities in some MPAs are still ongoing and continue unchecked, and effective mitigation is not in place.

It is important to remember though that in lots of places, particularly offshore, very few sites have even been designated, let alone managed. Clearly, to have a proper ecologically coherent network, sites need to be well managed, well enforced, properly funded and monitored to deliver that, but a prerequisite of all of that is designating them. It sounds like stating the bleeding obvious in a way, but it is, and we still have a long way to go just to get to that base level of having a properly designated network, so that we can then go forward and have more of these detailed discussions about management. As we have said, there are still some massive gaps in getting to that.

Joan Edwards: I think the biggest issue is that the revised approach has been implemented very well within six miles, but as I mentioned earlier, beyond six miles we have to work with other member states. They are blocking some of the recommendations that have been put forward by the implementation group and we are getting a zoned approach. I think that other member states will say, "If you only close 30% of the marine protected area, we will be happy". When we are trying to identify whether we have an ecologically coherent network, you could say, "Yes, we have 30% offshore, because 60% to 70% of it is open to damaging fishing operations".

Q28 **Mr Gavin Shuker:** Lastly, do you think there is evidence of soft targeting in enforcement? It is easier to target the recreational diver over the dredger who probably has a level of resource behind them?

Joan Edwards: That is not our experience. We work very closely with the IFCAs, and once a by-law is brought in or a permanent situation is in place, we tend to find that they too take action. In Lyme Bay, which has been closed for quite a while now, if there is scallop dredging, then the local IFCA does take action.



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Dr Solandt: The Marine Conservation Society is concerned over some of the decisions that the MMO might be minded to make in the next few months over things like the Fal port dredge or the potential port development in the Manacles area, which is a new MCZ. I am highly concerned about that. As a diver and a passionate person about Cornwall and its issues, it would be a real shock to me that that decision might go ahead. There are some concerns over the Kingmere, where the black bream nests, in an area that could be affected by such activities. I do not think it necessarily means that the small man, the recreational man, is being ill considered. I think there are some decisions that are rather worrying for our sector. I know the resilience of marine protected area and the community's understanding of what marine protected areas might be if such developments were to happen in them.

Joan Edwards: Recently we have become very concerned about Cromer. Cromer is a chalk reef off Norfolk. It is our own barrier reef, basically. There are a number of offshore wind farm developments being planned beyond Cromer, right out in the North Sea, and because of the National Grid those developments are being told that they have to cable through Cromer. They are not talking about one cable, they are talking about many, and each cable has to have a distance of 50 metres between them, and they are also talking about dynamiting the Cromer Reefs. It was even suggested in a meeting last week that they would build us another reef further up the coast. It is the only reef of this type in the whole of Europe, if not the world, and we are considering dynamiting areas for cables when those cables could easily be laid on other areas of the North Sea that would not cause that level of damage.

Q29 **Peter Aldous:** On that particular point, I represent a constituency on the East Anglia coast, and I am broadly supportive of offshore wind development. Are various developers liaising and co-ordinating to ensure that those cables are laid in a co-ordinated way to serve more than one wind farm?

Joan Edwards: We have questioned this, because it is a bit like when we see our roads dug up 10 times in a year because somebody wants to do a sewer and somebody wants to do a cable. That seems to be the approach that the wind farm developers are using. They will not work together and they will not share cables. In this day and age, that seems unacceptable. We are obviously going to try to meet with the National Grid and ask, "Is there somewhere else you can bring that electricity onshore that creates less damage?"

Q30 **Caroline Lucas:** Dr Solandt mentioned the Manacles example. Someone wrote to me—and maybe they wrote to others as well—with some background to what is happening there. It seems to me to be undermining the whole purpose of what these marine protection areas are trying to do that they have even got as far as they have with the process of seeking to start quarrying there again. Can you say anything more about how rigorous this protection is if that can get that far?



Dr Solandt: It would make a nonsense of the protection measures. It is about what they need to build in order to extract more stone at the volumes that would supply the Swansea lagoon—that is what the quarry would be for. In order to get two barges sitting there and to enable enough stone to make it economically viable to get the stone over to Swansea—there are other sources, of course—they would have to build these rather large pontoons that are about 200 metres long, which go over the exact feature for which the site has been protected, which is kelp forest, reefs, the pink sea fan and the type of anemone associated with the pink sea fan. We have dived them. I have dived them myself. These habitats would be destroyed. It makes a farce of these designations, at the very least, at the most obvious level. But also the water flow conditions around that site are very important for basking sharks and other species as well. It would be completely altered by such a structure.

Q31 **Caroline Lucas:** Does it raise questions though about how these zones are being perceived if the process can get as far as their talking about whether or not there is going to be an inquiry to see whether they go ahead with it? I am wondering, where we are spending hours and you are spending your lifetime setting up these zones—

Dr Solandt: Yes, I know. We have spent many, many hours working with the fishing community in the Sussex area, and they are rather worried about the dredging that is being permitted in the Kingmere site. These are issues that people will be worried about and will therefore think twice about future tranches of marine conservation zones in the constituency.

Nevertheless, we are talking about areas that are possibly 17% to 20% of our sea, so there are going to be some conflicts in this. We cannot lose the big picture because of some conflicts. That is the big gap—the big gape. We have to sort these things out. I would be sad if they go ahead and I think they affect the protected area itself. Then the communication, as was said earlier, will be problematic, because certain communities will think, “Why, in our neck of the woods, do we have this development?”

Jeff Knott: For me, the really important thing is to get on, designate, and properly manage and enforce the network so that we have a properly effective, coherent network. Otherwise we are left with a circular argument that if the network is not delivering then it is okay to undermine here, there and everywhere, and you end up with death by a thousand cuts. If we can get on and have a fully designated, properly managed, properly financed, ecologically coherent network, then the proof will be in the pudding and we can demonstrate that this is really delivering what we need it to deliver. Then I think it will, almost by default, become a more resilient network.

Q32 **Chair:** Can I take you back to the Goodwin Sands and the Kingmere dredging? What is to stop them quarrying for gravel? Why do they want to dig in the sea for gravel? Is it a cost issue?



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Joan Edwards: It is partly cost, but also the type of gravel. The type of gravel they need for certain activities is basically only available from the sea, otherwise it has to come from gravel pits on land, where there is a limit to the level of aggregate available and, as you say, it is costly.

Q33 **Dr Matthew Offord:** Which is the interesting part, going back to the Manacles marine conservation areas. They are taken from the land out to sea. I know that it was local residents who had to seek a judicial review to stop Cornwall County Council's decision to give them planning permission to do so, because the extractor had not even undertaken an environmental impact assessment.

Joan Edwards: It just shows you the lack of a joined-up approach. The Planning Inspectorate has given permission for the Swansea lagoon. While that was happening Tidal Lagoon Power said it would get the rock from Wales from a sustainable source. At the same time they were buying Dean Quarry in Cornwall, which is in the Manacles area, and that rock is going to be used in Swansea. If we are going to protect this network we need to make sure all of government is joined up. The National Grid should not be making decisions about where electricity comes ashore without considering the network, and again the Planning Inspectorate should be stronger in saying, "Sustainable source from Wales, but where?" Otherwise we find out six months later, "No, we are not getting it from Wales, it will be too expensive. We will get it from Cornwall".

Chair: We are going to leave it there, but we will have a final question from John.

Q34 **John Mc Nally:** Thank you, Chair. This has been extremely interesting. Going back to DEFRA in particular, in previous Committees meetings that we have had, we identified the need for a body to be given a clear brief for the strategy on conservation and the co-ordination of the MCZs. You are probably saying that this is what we are lacking at the moment. In considering again that DEFRA and all these bodies are under severe pressures economically, how do you think it could improve its leadership strategy to address what has happened—you have touched on it a wee bit—since the EAC's last report?

Joan Edwards: I think DEFRA itself has good leadership and is showing us all what it wants to do. What is lacking is that leadership being given to the regulators. Although DEFRA will say, "We are going to establish a network of marine protected areas and they will be well managed so we can meet international commitments", the regulator is literally sitting on its own making decisions, so that the MMO is making decisions about sustainable development without really considering the big scheme of the fact that we have this protected area network.

Jeff Knott: The MMO was only set up in 2010 and has received 20% cuts since then, so clearly its capacity to deliver will be affected. But there is a massive opportunity. Whatever DEFRA have done to date in terms of



providing leadership, this tranche 3 provides a huge opportunity for them to really signal their commitment and their enthusiasm for driving this process forward.

I come back to why we are doing this and why this matters, which is about securing the sustainability of our seas for people and for wildlife. This is something that will have a lasting, generational effect on some of our most internationally important populations of wildlife and some of the most spectacular natural spectacles we have in the UK. I do not know how many of you have visited one of our big seabird colonies. I know some of you have.

John Mc Nally: I have been in the past to watch the gannets, and there is a clear indication of a healthy or an unhealthy scene.

Jeff Knott: You have seen flocks of diving gannets. It is spectacular, one of the most spectacular things we have in this country, and it is incredible. If anyone has not seen it, I thoroughly encourage you, go and do it. Go and see it. It is incredible. This is the mechanism, this is a vital part of how we secure those spectacles for future generations. If we do not use marine conservation zones and have a full network, properly funded and properly managed for all the available species, including mobile species like seabirds, then we are trying to save these species with one hand tied behind our back. I think it is vital that DEFRA show leadership now, step up and deliver on the promise that they set out and deliver on the potential that we have in this tranche 3.

Q35 **John Mc Nally:** Do you think they are being distributed effectively and efficiently through DEFRA? I know in Scotland, Marine Scotland is responsible for integrated management of Scotland's seas and has the statutory power to designate MPAs. Is this coming along?

Jeff Knott: It is progressing. The relative roles of DEFRA and the MMO have to be properly enforced and have to be properly financed, and they have to make sure that this is a priority that we are delivering. If we end up with a piecemeal approach, then we are going to potentially end up with the worst of both worlds. We have seen what can be delivered with some real leadership in other areas of the world. As I said, the FCO is driving forward some massive progress in the overseas territories, doing some great work with the RSPB and with territory Governments there. We know it works, we know it can be done, and I am really keen that we go away with the message that DEFRA grasp this opportunity. Undoubtedly there is a role for this Committee in terms of keeping them honest and keeping their feet to the fire. I know this is the second time that you have had this subject, but please come back to it again in the future.

Dr Solandt: Yes, that is something we are all agreed on, that it is wonderful that you are here talking to us again. So please do it again in another couple of years. This is a long game.



Q36 **John Mc Nally:** This is the roundabout way of saying that the governance could be improved, maybe.

Dr Solandt: But it is difficult. Marine protection areas are inevitably difficult. There are lots of people out there. It is the sea; it is not the land. But the fact that you are asking us questions and the rest of society is interested in the seas is really important. It is a long game, this.

Joan Edwards: It is important that DEFRA seems to be showing good leadership about designation and seems to have ambition for tranche 3. It needs to make sure it is telling its regulators that these sites must be protected for the future, and I do not think that is happening at the moment.

Jeff Knott: I agree with that.

Chair: Thank you very much indeed. That was a fascinating panel. Next time can we have pictures? That would be helpful. I am sure this is to be continued, but that has been a fascinating beginning to our inquiry. Thank you all very much.

Examination of witnesses

Professor Callum Roberts, Peter Jones, Professor Russell Wynn and Dr Matthew Frost.

Q37 **Chair:** Can I welcome our second panel of guests? Sorry we are starting a bit late. We have had a very interesting first session. This morning we have with us Peter Jones, Reader in Environmental Governance from University College London; Professor Wynn, National Oceanography Centre; Dr Matthew Frost, Deputy Director of the Knowledge Exchange at the Marine Biological Association; and Professor Callum Roberts, University of York. It is always good to see a Yorkshire representative on our panel. You are all very welcome today.

Can we kick off by looking at some of the hard science? How has the evidence base improved since the designation of the first tranche of MCZs, and what are the gaps that we still need to fill? Who would like to start?

Professor Wynn: I was personally involved at the National Oceanography Centre in some of the evidence-gathering programmes around the T1 sites. I think it is fair to say that under very tight timescales the additional funding that was provided to improve the evidence base was used well. What was welcomed within the community was the opportunity whereby Cefas provided the lead that engaged industry and research partners in developing that evidence base. For some of the sites that we were personally or institutionally involved in looking at, it was pretty clear that the underpinning mapping that was done as part of that evidence gathering did improve the quality of data for those sites. I would say in terms of the output, yes, it did lead to marked improvements at some of the sites, certainly the ones that we



looked at, and I think it also provided a good model of wider engagement outwith the DEFRA group where industry and research partners were brought in to help deliver that evidence base.

Peter Jones: One of the areas of confusion with the evidence base is that there are two terms that are bandied around in terms of evidence at the moment. There is “best available evidence”, which is kind of where we started off post-Marine Act—and the Marine Act itself talks about “reasonably obtainable evidence”—and then in the same circles we also talk about an “evidence-based approach”. There is a certain amount of ambiguity as to whether we are pursuing the best available evidence, which is really the evidence that is readily available, and not calling the process to a halt because we do not have enough evidence and just going forward with the evidence that we do have. Then when it comes to the crunch point when we are going to start designating these MPAs and taking decisions about their protection, it suddenly transpires that we must have an evidence-based approach. I think we need to make it clear what the evidence burden is in terms of the justification for designating and, perhaps more importantly, protecting these sites.

We are talking about millions of pounds that have been spent on surveys to do with the designation. Obviously that is just the start of the process. Then the evidence burden increases even further, because as Jean-Luc mentioned, we have gone down this reductive features-based approach, so we have to map in detail the distribution of the features, and we have to prove that they are vulnerable to human activities and that we can measure the impact of these activities. When you go around the world—I do case studies in MPAs around the world, and England is one of my key foci—you explain that this is how we are dividing our MPAs up: we are subdividing them into features, we have to prove distribution, we have to prove vulnerability, we are increasing our evidence burden. I think that, coupled with this occasional flick to an evidence-based approach, is still causing some confusion, and it is largely political to a degree. If DEFRA were to swing in behind the need in principle for marine protected areas, then perhaps we could take a more sensible best available evidence and site integrity approach.

Q38 **Chair:** One of the conclusions of the Science and Technology Committee was that the Government had moved the goalposts during the marine conservation zone designation process. They went from the best available evidence point that you made to robust evidence showing these marine features. That has created uncertainty, has it not, and potentially the possibility of legal challenge?

Dr Frost: Yes. It has definitely raised the bar, and there were a lot of complaints that the goalposts moved during the process. But I think there are two important points, and Peter has touched on one of these already. We often ask, do we now have all the evidence to move forward? Do we have all the evidence to designate? I made the point the last time I sat before a similar Committee that it is an ongoing process, and part of



establishing marine conservation zones—and in particular reference areas, if we can come back to those—is that it will enable us to continue research, to understand how ecosystems can recover, for example, and that sort of thing. We have to be very careful about the idea that we are ever going to get to the stage where we can tick the evidence box and then get on with doing something else. Evidence collection will go on all the time.

The other thing to point out is that I am always very concerned about how evidence-intensive this process is becoming. When you look at the UK as one of the top places in the world for marine scientific research, the level of the evidence we have compared with many places in the world is quite high, yet we are still always being hauled over the coals with wanting more and more information. We need to be very careful that rather than say, “We have enough evidence to move forward”, we are always using it as an excuse to hang back.

Q39 **Chair:** There was a pause, wasn’t there, in the designations around 2012-13 with this £7 million for extra evidence? That sort of paused it.

Dr Frost: Exactly.

Q40 **Chair:** It is obviously good news for your evidence centres, isn’t it?

Dr Frost: For the ones who get the money it is, yes.

Q41 **Chair:** That is always good news. In their evidence to us, RSPB said that DEFRA is still requiring full scientific certainty for site designation, despite little or no investment in the gathering of further evidence to support designation. Do you think DEFRA has itself in a bit of a twist in terms of chicken and egg, and that we need to go back perhaps to the first principles of best available evidence? Because as you say, once you have designated the sites, you have to see if they are working, and that is another evidence burden, isn’t it?

Dr Frost: Absolutely, and you need to then have the evidence of your management measures—whether they have had the required effect once you put management measures in place, for example. There is always going to be this need to go out to undertake surveys, to have a look at what is there. I think we just need to be very careful. I would agree with what you have just said, which is that we need to go back to those principles of best available evidence.

Q42 **Chair:** Are any of you involved in any of the socioeconomic evidence? There is a lot of sea creatures evidence, it seems to me, but we seem to be a bit light in the impact assessments on what the socioeconomic benefits are. That was something that came from our previous panel. Does anyone have anything robust on that?

Peter Jones: My understanding of the tranche 1 process, which I follow particularly closely, was that a great deal of good work had been done predicting the potential ecosystem services benefits of the marine



conservation zones—direct and indirect economic benefits. Certainly if these protected areas were on land, we would be poring over the ecosystem services benefits, the public health benefits and the access and recreation benefits. But in tranche 1 and subsequently in tranche 2, the focus was an almost obsessively thorough search for costs and a very light-touch analysis of the potential benefits. They were being quite inventive and lateral-thinking when it came to seeking potential costs, but quite blinkered in their thinking when it came to looking at benefits. I think in terms of selling these marine protected areas, a great deal more could be done to present them as opportunities that could potentially provide benefits, rather than just framing them in terms of costs that we must defend our decisions against.

Professor Wynn: I would agree with that. There is a real missed opportunity potentially to say that this is a fantastic experiment that we are doing to UK seas. We are taking pretty big areas and restricting certain damaging activities in those areas, but we are not going to get the full benefit of communicating that to the wider public from the current approach. For example, you would hope that this network of marine protected areas would and should be of benefit to commercially important fish and shellfish in these seas, and it would be really nice in 10 years' time to have an evidence base to show what the economic benefit of that has been around spillover effects etc. But because of the feature-based and habitat-based way in which the MCZs are being designated and monitored, we are missing that opportunity. That is a real shame, because I think in 10 years' time that would be a really good way to promote the success of the network, to show that it has some economic benefit commercially to fish and shellfish.

Professor Roberts: I have been listening intently this morning. I feel that I must occupy a different country to the one that some of my co-panellists do, because I do not see that this network is going to deliver what it is intended to deliver, and that is conservation of biological resources and an increase in wellbeing in the country. At the moment we are building a world-class network of paper parks. There is virtually no management in them and there is very low ambition for management. The most damaging activities continue in most marine conservation zones. Mobile fishing gears are entirely incompatible with nature conservation. If you think about bottom trawlers and scallop dredges, these are activities that cause a great deal of harm to virtually any creature occupying the sea, and to allow those to continue within protected areas is to essentially hamstring the entire network right from the word go.

One of the points about evidence that we have been talking about this morning is that, as Jean-Luc mentioned, we have problems with demonstrating what marine protected areas can do because all of the reference areas were left out of the marine conservation zone network in England, for example. Those areas were going to be a key part of the evidence base moving ahead. There is 100,000th of the UK area of its



exclusive economic zone that is fully protected from fishing. That is a miserable amount. 7.5 square kilometres out of 750,000 square kilometres is what we have that is fully protected from fishing, and that is the gold standard in terms of marine protected areas worldwide. That is what we have seen—a very large evidence base collected globally demonstrating that there is a strong benefit of protection. Yet what we are seeing is claims being made that we will achieve that sort of level of protection with almost no management whatsoever, that we can continue trawling and dredging marine protected areas and still call them a marine protected area. That is mis-selling the concept of nature conservation.

In Scotland, for example, many of these marine protected areas, the ones that have management plans now, leave large areas open to activities such as prawn trawling. Scallop dredging has been limited in some of them, but only after appeals were made by the conservation community. Continuing those activities is essentially undermining any sort of protective area element to those marine protected areas. The Welsh Assembly Government is going to reopen Cardigan Bay special area of conservation to scallop dredging. That will remove its specialness and will undermine any possibility of conservation of seabed habitats.

The other source of evidence that we have that tells us what MPAs could do is from history. If we look at the history of UK seas we see that things were very, very different 100 years ago or 200 years ago. The Dogger Bank was mentioned earlier, and one of my students has just done a study on 200 years of change in the Dogger Bank. It looked at the level of ambition inherent in the conservation objectives of three countries that share the Dogger Bank, and frankly the level of ambition is fraudulently low. If you look at what it was like in the 1840s, this was an area that contained spectacular areas of fish, very big fish as well. As an example, one small boat operating there in the 1840s could catch 1.2 tonnes of halibut per day; the entire catch by the UK fleet on the Dogger Bank over the course of a year today is 2.1 tonnes.

If you look at the landings per unit of fishing power from the UK fleet, which is a measure of how much fish there is out there to be caught, it has gone down by 25 times since the 1860s. In the 1880s we landed more than twice as much fish using a fleet of sailing vessels compared to what we land today using a highly sophisticated industrial fleet. That is because there is far less in the sea today. We should have an ambition to bring some of that stuff back. Fish are second-class citizens when it comes to conservation. There are many fish species that will benefit from high levels of protection from exploitation, yet they are not even on the list of things that we want to come back in these marine protected areas. They were left out completely. We have feature-based conservation, which is like protecting trees and ignoring all the birds and insects—everything else that occupies the forest.

Chair: Thank you for that. We are interested in your opinion.

Q43 **Peter Aldous:** I am just interested to know, having heard Professor



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Roberts, would he agree that inadvertently perhaps, Brexit and the withdrawal from the CFP, and the potential to create a new UK fishing policy, might present an opportunity to address some of his concerns with properly resourced local management, and also perhaps putting the 12-mile zone limit back to fishing just by the inshore fleet?

Professor Roberts: I think there are major opportunities to be had from Brexit in that we have domestic laws that stronger than EU laws in terms of marine conservation. The Marine and Coastal Access Act, if applied well, could lead to very high levels of protection and an ecologically coherent network of marine protected areas—in other words, one that is representative of the full diversity of habitats and species in the seas around the UK and that delivers very high levels of protection from harm. We can do that domestically. It is better than the habitats directive and birds directive from that point of view. We can extend our sovereignty out to the borders of other exclusive economic zones, and we can protect those sites without having to consult through the common fisheries policy.

That is all good, but we have to understand that conservation and commercial fishing, intensive commercial fisheries, can co-exist very well, and protected areas can provide much that is of benefit to those commercial fisheries. There is a lot of evidence around the world to support that, but not in the same places. That is the whole point. You have to have them alongside each other.

We talked about spillover effects from these protected areas. You use them to start rebuilding stocks towards higher, more productive levels. There are benefits to be had from spillover into surrounding fishing grounds, but if you fish inside the protected areas you will effectively not get those benefits; you will not get the recovery. Even very mobile species can benefit from these sorts of protected areas.

I can give you just one example from the Øresund, which is the strait between Denmark and Sweden. It has been protected from bottom trawling for the best part of 80 years now, because it is a major shipping lane and it is too dangerous to have people fishing that way. It has been exploited by hook and line fisheries and net fisheries since the 1930s, and cod populations are something like 20 to 40 times higher in that Øresund area than they are in the Skagerrak to the north, which is being exploited using bottom trawls. This is a significant refuge for cod and for a whole variety of other species, because we have excluded the most damaging forms of fishing. We could do that domestically. If you find big cod in the North Sea today, they are either underneath oil rigs or in wind farms that are protected from fishing, and that is an indictment of policy elsewhere, frankly.

Chair: Would anybody like to come back on that or violently agree or disagree?



Dr Frost: Yes, I agree in the sense that we are not getting the socioeconomic benefits, and we will not if we do not manage it. I agree with that entirely. I think, to go back to the original question, that the problem we have is that if you look at the recent Institute for European Environmental Policy report, which was about the socioeconomic benefits of EU marine protected areas, it can tell you about the value of tourism, the value of increased health of fishery populations and all the rest of it. Of course, that is something that is seen at very large scales, and often over long timescales as well, and we end up comparing apples and pears.

If you look at socioeconomic impacts in an impact assessment for an MCZ, for example, you will often have somebody come along and say that the cost to the Ministry of Defence or the fishing community will be X pounds over the next few years. That is a very real figure that the Government can understand. They like those figures. But when we come along and say, "You are going to lose billions of pounds ultimately because of the state of your fish stocks down the line and because of flood defences", that does not quite balance up. I think the problem when we come to looking at socioeconomic evidence is not the weight of evidence on either side, it is the way we compare them. At the moment it is not quite working.

I raised the example two years ago of what happened down in Falmouth, where one of the proposed sites at the time was rejected because of a cost of £1,000. I think it turned out to be a single potter, a single person, who would lose £1,000 income, yet the site was not taken forward. If you cannot say that 25 kilometres squared—or whatever it was—of seabed is worth £1,000, then we are really messing up the way we value MPAs. That is the issue with socioeconomics: it is not the weight of the evidence, it is that we are trying to compare two things that are very difficult to compare.

Q44 **Kerry McCarthy:** If we can go back to the impact of Brexit, which we have touched on already, obviously quite a few of the areas you are talking about are designated under the birds and habitats directives as well, so what impact do you think Brexit could have? Do you think there are any opportunities from Brexit, or is it just all bad news?

Peter Jones: At the moment it has increased the size of the question mark, because if we look at what is happening throughout Europe with marine protected areas, we have thousands of marine protected areas in waters that are subject to the common fisheries policy, but we still have less than 10 restrictions under the common fisheries policy specifically focused on marine protected areas. So Europe is littered with paper MPAs simply because the common fisheries policy, before the recent reform, did not have a mechanism, an article, for putting restrictions in for MPAs. The reformed CFP does have an article for MPAs, and it has only been used once so far.

Q45 **Chair:** Was that in the UK? Where was that used?



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Peter Jones: It was used in Denmark, most recently, to put in place some protection measures for a European marine site.

At the moment, my fear is that we should be really pushing forward now to get the restrictions for UK MPAs that are beyond six nautical miles, because they all have to go through the common fisheries policy. There is obviously still a question as to whether we will have sovereignty over our waters out to the edge of our exclusive economic zone. There are some very plausible arguments to suggest that in eight years' time we may still be fully functioning members of the common fisheries policy, because if there is one thing that Europe is going to be likely to want to remain in place for us to retain access to the common market, it will be the common fisheries policy.

My concern is that while Brexit is unfolding, I suspect very slowly, we will have this continued paralysis in getting the protection measures in place under the common fisheries policy for all those MPAs—the majority of MPAs beyond six nautical miles. While that question mark is in place, we will end up with the paper parks that Callum rightly pointed out are almost making the UK a laughing stock in terms of marine protected areas around the world. We spend millions of pounds on designating them and then once they have been designated, they just sit there with a monitoring and watching brief. Not enough ambition and effort has been put into getting those protective measures in place. Inside of six, at IFCA's like the one that I sit on in Sussex, a great deal of very good work has been done to put zone protection in place, but beyond six, it is all a bit stalled. So uncertainty about Brexit is a concern in that respect, because it is going to prolong the uncertainty.

Kerry McCarthy: Anybody else?

Dr Frost: Yes, I would like to raise the point, which I think was made briefly in the first panel, about the oversight issue. There is no reason why these SACs and things cannot just be kept. We have regulations in UK law. The difficulty is reporting and oversight. At the moment there are two main things we get from having European sites. One is that we have to report on them. We have to report on their condition; we have to monitor them. Who will we be reporting to? Do we still need to do that?

Secondly, of course, on the back of that reporting is who then has oversight if we are not meeting the objectives and obligations that we want to meet for what are currently European sites. One example is that when the European legislation was originally transposed into UK law, the UK Government argued that it only applied out to 12 nautical miles. Greenpeace were able to take the UK Government to court and argue that it was applicable out to 200 miles, and indeed it was the European Court that found against the Government and said that the habitats directive applied to the UK continental shelf up to a limit of 200 nautical miles. So what you had there was the UK Government trying to say, "We don't want to apply this right across the board," and people were able then to go to Europe and had recourse to say, "We don't think this is



being done properly". I do not think there is any problem at all with keeping these sites and bringing them into UK law, but I do have some concern over the oversight of these things. Who is going to be managing them? Who is going to be holding people to account if we do not meet the objectives that we have said we will meet?

Professor Roberts: We are a member of OSPAR, though, and OSPAR has oversight of nature, conservation and marine protected areas and has a commitment to establishing an ecologically coherent marine protected area network to the edge of the exclusive economic zone and beyond into the high seas in the north Atlantic.

Q46 **Chair:** Is there a legal mechanism attached to OSPAR?

Professor Roberts: That is a good question. I don't know.

Chair: That is probably a no, then. What we are saying is, we are moving from a system of courts and accountability to treaties that may or may not be enacted by different member states. We have heard from the previous panel that we are quite good under the OSPAR convention compared with the other—

Professor Roberts: We are, in designations.

Peter Jones: We have obligations under OSPAR convention law.

Q47 **Chair:** What happens if we don't fulfil those obligations?

Peter Jones: A political process. It is extremely unlikely—it is almost impossible—to end up in the UN court for breaching a convention, but it is political pressure. We want to be seen to be fully functioning members of OSPAR, so it could be a useful fallback, as could indeed the Berne convention that is behind the birds and habitats Directives, which is independent of the Commission.

Q48 **Kerry McCarthy:** That was something that the Farming and Fisheries Minister used during the referendum campaign—that the Berne Convention, would be there as a fallback, so that protection would be there. Would that be strong enough?

Peter Jones: Yes, because the UK is an enthusiastic participant in these UN conventions, including the convention on biological diversity and the International Whaling Convention, so I think that it is one encouragement. There aren't many encouraging signs from Brexit, but one of the few encouraging signs that is available is that we will still have the Berne convention and the OSPAR convention, and I am confident the UK Government will take their obligations under those conventions seriously.

Q49 **Kerry McCarthy:** When you say you are confident they will and were enthusiastic participants, that sounds like you are relying on Government good will and good intentions, rather than their being a means of forcing them to do it. If it was a Government of a different view, then we would



be in trouble.

Peter Jones: We could be, yes, because it is a question of political will, and if that political will evaporates with a regime change, then we could have problems. At the moment, one of the nice safeguards that we get from the European Commission is that from a governance analyst's perspective it is a safeguard against the vagaries of national democracy, frankly.

Q50 **Kerry McCarthy:** That is a lovely phrase, which probably goes down better with some of us than some of the rest of us.

Can I ask about the Aichi target? How are we doing on that? I also want to tease something out: there was a slight cynicism in what you were saying about us being good at designation but designation doesn't mean as much as it should do.

Professor Roberts: The Aichi targets include percentage cover, which is the target that is the most looked at because it is the easiest to measure. You can say that we are aiming to protect 10% of our seas by 2020, and from that perspective it looks like job is done. If you count up all the areas for various forms of designation around the UK, we have surpassed that in terms of area, but in terms of actual delivery of management, we have fallen far short. These things have to be effectively managed to really act as wildlife refuges. If they are not, then no amount of area is going to solve the problems in the sea. We have to deliver real protection to get any real benefit, and the simple calculus is that high levels of protection give high levels of benefit; little protection gives little benefit.

For example, in terms of fisheries we talk about the potential spillover benefits to fisheries. None of that will come about if we do not protect the things that are of interest to fisheries, because there will be no uplift of stocks and there will be no improvement in their habitats, in the feeding opportunities and so on. These things are not going to be delivered by wishy-washy protection. We are far short of the intent of Aichi targets in terms of delivering a proper, rounded package of conservation.

Q51 **Dr Matthew Offord:** Having published an article entitled "England's maritime conservation network is worse than useless", I think Professor Roberts has anticipated that we intended to ask you about paper parks and why you thought they were paper parks. Building on that question from Kerry McCarthy, perhaps I can ask you, Professor Roberts, how you believe that the management—or as you describe it, protection—can be improved. If it can be improved, or if there is a lack of improvement, is it due to financial resources or technical resources?

Professor Roberts: The whole model of designating and protecting marine protected areas in the UK is flawed, and the Government were warned that there were these fundamental flaws inherent in the process at an early stage.



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One of the key things was the focus on feature conservation, which really has been incredibly undermining of the whole process. First, if you are going to be obsessed with features, then you have to find them in the first place to make sure that all of the right features are protected. But if you are going to designate something as a proper, full ecosystem protection, if you look at best practice from around the world, the ecosystem approach to protection is seen to be the best, where you protect intact ecosystems, essentially. When you start picking out features, you end up on a high road to nowhere.

To give you one example, off the coast of Norfolk there is a special area of conservation that has within it a tiny, pocket handkerchief-sized area that is protected from trawling in order to safeguard worms. If that is the pinnacle of conservation action in the UK, and it comes pretty close, it is not good enough. Under the law as well, there is a defence that you couldn't have avoided damaging something if you were inadvertently damaging it. You could trawl across this piece of worm habitat while making a cup of tea on the bridge of your boat, it is such a small area. First, it fails in terms of size. Secondly, it fails in terms of implementation. The complexity of implementing something based on designating lots of different areas with lots of different sorts of activities that are limited and allowed means that it becomes impossibly complicated to implement and impossibly complicated to monitor and enforce and undermines protection.

If you look at other countries that have wrestled with this problem, they have produced much simpler categories of marine protected areas in which everything is protected—everything except, let's say, open water fisheries. With a simpler suite of designations, all of which have higher levels of protection than are being envisaged in most of the UK protected areas, you will get a lot of benefit. California, for example, is rightly considered to be at the leading edge of the implementation of marine protection. Australia was until the Government changed a few years ago and they put their network on hold, but certainly areas like the Great Barrier Reef are managed incredibly well. They are facing other challenges there in the form of global climate change, but we are all going to face those in the sea, and what we need to designate are well protected networks of areas that cover a sufficiently large traction of the sea to make a meaningful contribution to improving resilience, so that the marine environment can see out the tough times that lie ahead in terms of global challenges.

We could rescue it by offering a higher level of protection to a great fraction of the sites that have already been designated as well as, as some other speakers have said, designating more to fill out the rest of that representivity in the network. The best available science suggests that we need to be going higher than the 10% Aichi target for protected area coverage and upwards of 30% in terms of marine protected areas. If we got to that, with a higher level of protection, we would have a world-



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class network of sites that would deliver a huge level of benefit to marine industries, to the marine environment.

Q52 **Dr Matthew Offord:** You are saying, in summary, this: it is not about innovative approach; it is more about a holistic approach.

Professor Roberts: Exactly, and ambition—raising our ambitions.

Professor Wynn: I think it is fair to say there are things we can do and ways in which we can work with what we have. The IFCAs and the very regional-based approach to some of the management of inshore sites, European marine sites, has made good progress, and it would be good to see that approach pulled more widely through to the MCZ network as it develops.

We have mentioned technology. There are things that we can do, such as satellite remote sensing, particularly for the more extensive offshore sites or UK overseas territories. NOC and elsewhere have been involved in looking at new autonomous technologies for monitoring distant sites. Fundamentally, though, we can only close the gap with technology, to some degree, and ultimately it is going to come down to the long-term commitment of funding. If we do not have that long-term commitment of baseline funding to monitor and manage what we have, then essentially we are going to end up with paper parks and we are not going to demonstrate the benefit of the network that we have, from either a conservation or an economic point of view.

By not having a long-term commitment funding for maintaining the sites we are designating, it also makes it very hard for external partners to come in and engage with the DEFRA group, like the research or the NGO community, and put plans in place to work in partnership, which in the current fiscal climate is going to be really important. We can throw the new technology at this, and that is great and we are doing it, but there needs to be a strong commitment of a baseline level of funding going forward over several years to get the benefit of this network that we are putting in place now at great expense.

Dr Frost: It boils down to a decision. It is the old joke about, “How do you get there?” “Well, I wouldn’t start from here.” Callum has explained quite eloquently that we should not really have started where we started; however, that is what we have at the moment. One issue is to say, “Can we go back to the drawing board and say that the feature-led approach is not correct and we should have highly protected reserves on a broad habitat basis?” We have not done that, so I am not sure we can ever go back there.

As a compromise though, what we can do—and I assume, Callum, that this is what you are suggesting anyway—is that for the next tranche and then beyond that, we can have a much higher ambition to go back to this whole concept of reference areas. That would really help, because what it would do is enable us first to work with what we have. As Russell and



others have pointed out, there is some very slow progress—a few by-laws here and there. It is not going to change the world, but slow progress is what we are working with.

But if we move forward and say, “What we really need now are some areas where we can completely close these areas off and these areas will then provide all the management targets, because they will tell us what a non-impacted area looks like. They will provide monitoring, so that we can see how things recover” I think we then have a two-stage process. We can work with what we have—we do not have to scrap it and start again—but as has been pointed out, we can raise our ambitions. If we end up with no areas like this at all, so we are not actually protecting anything at all, then I would agree we are ending up with a paper park. Designation does not equal protection; it purely equals designation. That is all it means.

There is a very good study in “Nature” that went through all the different aspects of how you get benefit from your marine protected areas. It came up with design, management and compliance as the three main ones, and the size of the marine protected area was less relevant than all of those things. If you have 200 square miles designated but you don’t do anything in it, you are getting no benefit from that at all, but 10 square miles of really well designed, really well managed MPA is much better. That is what we need to move towards—some of these areas that are proper protected areas—and from the scientific point of view that is what I would put forward.

Professor Roberts: If I could just add this, we are not going to solve it by adding a few reference areas. “Reference areas” is just code for areas that are already known from other parts of the world to be the most high-performing protected areas. If you implement those and then wait until you have the evidence from them, then you will be waiting for a very long time, because although you see a turnaround quickly in some of these areas such as Lyme Bay, which Joan Edwards mentioned, which has been protected from scallop dredging, and there is a welcome recovery over the short-term timescale that it has been studied, what the evidence from around the world shows is that those benefits keep building. From those changes to habitats the build-up of fish stocks keeps happening over periods of 30, 40, 50 years. We already know this from those other studies. We have enough to go on to start improving the management of the marine conservation zones and the marine protected areas that we have. We don’t need to drag our heels on this one. We can just get on with it and do protection that is going to really make a difference.

Q53 **Kerry McCarthy:** This may have been covered earlier before I arrived. With reference areas, they were originally intended as no-take areas, is that right?

Professor Roberts: Yes.



Kerry McCarthy: But they are not.

Professor Roberts: There aren't any.

Q54 **Kerry McCarthy:** They have been dropped, yes. I think you were quoted as saying that is the one bit of the network that was really critical, and it was dropped. If you had a choice between these 66 reference areas as no-take zones as opposed to a bigger network of 127 zones, you would go for the no-take areas, from what you were saying.

Professor Roberts: In terms of delivering benefits, yes, but with the proviso, the caveat, as Jean-Luc said, that a lot of those were very poorly designed, based on where a group of stakeholders could tolerate not fishing, so they were not really—

Kerry McCarthy: They were not the best choice of protected areas.

Professor Roberts: No, they were not the best choice at all. Some of them would have worked very well; some of them could have worked much better. But we have been studying in the Isle of Arran for the last 10 years or so how their marine protected area, which is no-take, has been delivering benefits, and it is very gratifying to see that full protection from fishing and other sources of damage does deliver a big comeback in terms of marine life and real ecosystem protection benefits. If you compare that with areas in the dredge zones, there is almost nothing in some of those places.

I have dived in the Irish Sea in areas that are scallop dredged, and even the boulders on the seabed are polished because they have been rolled over and over so many times that there is virtually nothing alive on the seabed. But if you go to an area that has been protected for over 20 years, Port Erin Bay in the Isle of Man, which has been closed to mobile fishing gears for over 20 years, you dive out and it is a totally transformational experience. You see the seabed covered in invertebrate life, lots of fish, dinner plate-sized scallops; it really is a testimony to how things can come back if they are given the right kind of protection.

Professor Wynn: I support the comments here, and I think the genuine reference areas are absolutely essential, not just from a scientific point of view but from a conservation point of view, but being pragmatic as well, they are much easier to manage. There is no ambiguity around it. It is a no-take zone, you can get into the realms of looking at the MS data and trying to work out what gear is being used by an individual vessel, on an individual site, but it is very labour intensive. If it is a very clear-cut, no-take zone, it means that the management in the longer term is much easier to implement and it is potentially much cheaper. That is the pragmatic reason, which we have not discussed yet.

Chair: Thank you. That is very helpful.

Peter Jones: A final note, if I may, on the reference areas. The very title "reference areas" was derived from this features-based approach,



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because we need evidence of unimpacted areas. That is why they were reference areas. I agree with Callum that we would be reining in our ambition too much if we just settled for the original batch of reference areas. I think they represented less than 1% of the territorial waters area. It really was a very small area. We need to be a bit more ambitious than that, and ideally 10% total closure should be a realistic target, but, please, we need to move on from the title “reference areas”, call them something a bit more inspiring like “restoration areas” or “recovery areas”.

Q55 Chair: Is there agreement that 10% is the right number?

Professor Roberts: In terms of fully protected?

Chair: Yes.

Professor Roberts: You could go north of that and still deliver benefits that would go to the fishing industry. In terms of the science that has been done on it, then more is better, up to a point, and then you are going to get diminishing returns, but that point is going to be of the order of 30% to 40% of the sea.

Professor Wynn: If they were sited in areas where you could take a more holistic approach to the ecosystem, where you benefit both benthic and pelagic species and environments—you have lots of areas where you have high benthic biodiversity and very rich seabed environments, which are also very attractive to pelagic, mobile species fish, cetaceans, seabirds, and so on—a few of those in good locations could become the jewels in the crown. I think they would be a fantastic way of promoting the network going forward and potentially provide tourism and other opportunities as well.

Q56 Kerry McCarthy: There has been a lot of talk about how it does not work unless you get this big network, but what you are saying seems to be slightly different in that it is about the quality; you have to start with the quality and then extend from that. There is no point in just lots of zones adding up together to make a big geographic area.

Peter Jones: In theory they connect and in theory they represent everything, when in reality they are not protected.

Chair: We have to move on to John’s question.

Q57 John McNally: I quite liked the reference earlier on to Lamlash Bay. I think it is particularly successful. I do not know whether you could sail over it in the time it takes to boil a kettle and have a cup of tea—it is probably more like a cafetière—but nevertheless it is good progress, and it is extending out as it goes along, as far as I know. However, I would like to move you on to the voluntary agreements and the legal sanctions and managing the protected areas that you were speaking a bit about.

As you know, the previous Committee recommended that where possible the Government and regulator should stick to facilitating voluntary



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agreements. To what extent are the management organisations making use of these voluntary measures? Are the voluntary measures effective, or are legal sanctions required?

Professor Roberts: If I might have a go at that, there was a good experience—as in a salutary experience—with voluntary measures prior to the implementation of the Marine Act. For example, the St Agnes Point voluntary reserve, as I think it was called, in Cornwall, which was protected for lobsters, was undermined completely by a few rogue fishermen who would not comply with those regulations. In Lyme Bay, there was a voluntary protected area that was repeatedly infringed by scallop poachers. It had to be replaced by statutory protection, which excluded the scallop dredgers and which is now being well enforced. On the back of that, there has been a very successful engagement with the local fishing community, who are using less damaging fishing methods to be able to fish inside that protected zone.

So that is a good marriage of statutory and voluntary, but the voluntary works because of the close involvement of a marine organisation, the Blue Marine Foundation, which has provided a lot of incentives and inward investment towards the fishery so that it can benefit from an Ecolabel for its reserve seafood. They have introduced areas where they can improve the quality of the landings and maintain high-quality fish by having freezer facilities in various bays there. There has been a real engagement with the local community. We need to see more of that kind of model rolled out around the UK, where there is a combination of strong protection—statutory, legally enforced—alongside community engagement with the parts of the fishing sector whose activities are more compatible.

Dr Frost: I would agree with that totally. The process really should be that we are aiming for some sort of statutory protection, but in bringing in that protection we are involving the community almost to ask for that protection, if you like. That would be the ideal. One or the other does not work. If it is purely voluntary, you are always at risk of the rogue element. The trouble we are having—you have heard about the manacles and other things—is that even where you have statutory legislation, you still have the problems of people trying to overcome that, so I don't think you are ever going to achieve anything purely by trusting people's goodwill and good nature. However, if you want to bring in that legislation, it is great to get people to a place through communication, engagement, workshops or incentives where they say, "We would like you to bring in some legislation here to manage this process". I think that is the way forward.

John Mc Nally: Does anyone else want to comment?

Peter Jones: I would just underline those points. I agree that there is a need to rely largely on voluntary compliance, but for that small recalcitrant free-rider population, who will not voluntarily comply, it does need to be legally encoded. Certainly on the IFCA that I sit on, I have



asked, if there is quite wide buy-in for voluntary restriction, why do we not legally codify it, safe in the knowledge that everybody will have to comply? Most of them will probably voluntarily comply, but you do need those back-up legal sanctions.

Q58 John Mc Nally: So you are proposing legal sanctions that would be a back-up to the voluntary agreements if they failed.

Peter Jones: No, not on a reactive basis. If you have quite wide buy-in for the restriction and most people are agreeing to voluntarily comply with it, you should legally encode it from the outset, not on a reactive basis when it fails, because it will fail.

Professor Roberts: One small point: as protection benefits increase, the incentive for people to illegally fish in a protected area will increase too. It is important that you have that statutory law with suitable punishments in place to put people off breaking the law and going in and taking all the scallops or whatever else is in one of these protected areas.

Q59 Peter Aldous: I was going to ask about ongoing management, defining objectives, monitoring progress and achieving success, but as we have gone along, I think you have answered that question and the answer is a definite "Could do better". I would just like to ask you two questions—and some of this has come out already. The first is where you think it has worked, which MPAs are a success and a beacon we can show up as good practice, and the second is one recommendation each of you will be making to Government as we move forward with this policy.

Professor Roberts: I would point to the areas where a high level of protection has been given. The community-based reserve in Arran is an absolute beacon in a rather dark sea, I think, but Lundy has its own no-take zone, which is an area that has been delivering significant benefits over time. But if I was to make one recommendation—well, two recommendations. One is to protect fish as well as the habitat, and the other is to give a very high level of protection from exploitation and damage, because without those two things, you are going to limit the effectiveness and value of this protected area network.

Dr Frost: At the risk of sounding completely dull, I agree pretty much with everything Callum just said. The key recommendation has to be these highly protected marine reserves and a suitable level of ambition to go with it. I think that is the way forward.

Professor Wynn: I would support that, and again, having that long-term funding so that we can measure and realise the benefits over a long timescale will be important to get buy-in in the longer term. That will help compliance, once people can see those benefits coming through.

The other thing I would say is that it is very important that we don't put a one-size-fits-all approach to the different types of MPAs we are dealing with. For the IFCAs with the European marine sites, as Matt said, it is slow, but we are making progress in protecting some of those sites and



they are putting in relevant regulations to do that. The regional approach for the coastal and inshore sites is yielding some good benefits. It is getting a level of trust and community buy-in that is good.

It is harder for the offshore sites. I think we need a level of national and international co-ordination to deal with sites in deep water around the UK and outer shelf, and we need big ship infrastructure. That is where we need a lot more co-ordination and a national-based approach. We have not talked much about EUCOS, but that is where the new technology that is available, like satellite remote sensing, unmanned systems, can yield the greatest benefit, because however much funding we have available, it is unlikely we are going to have enough ships to go to these remote areas to collect the data we need to understand, first, what is there, and secondly, whether we are managing it properly. There are very different approaches we can use, going from the small coastal inshore sites to some of these big open-ocean overseas territories MPAs. The toolbox needs to be quite varied, depending on what we are trying to tackle.

Peter Jones: The take-home message from myself would be a shift from an evidence-hungry, reductive, features-based approach towards a site integrity ecosystem approach, shifting towards more full protection. We must also start engaging with the European Commission through the common fisheries policy and the new article on getting restrictions in place for all those marine protected areas—both the domestic ones, the marine conservation zones, and the European marine sites that are in waters that are under the CFP, because until we start getting these restrictions in place through the CFP, they are, by definition, paper parks.

Q60 **Peter Aldous:** I was just going to ask one very final question. Professor Roberts did touch upon this, but there is perhaps a danger that as the EU and the CFP sail off into the sunset that MPAs, as far as the fishing community are concerned, might replace them as the big bad wolf. How are you going to address that concern?

Peter Jones: MPAs potentially can be a benefit to the fishing industry, but the fishing industry must stop seeing MPAs purely in terms of a risk and a cost. We can look to MPAs around the world where the fishing industry has now come to be quite enthusiastic supporters of MPAs, not just because of the spillover and export benefits, but because when some wide-scale climate change-driven impact does occur, we have resilience and recovery potential stored away within these MPAs. Stop seeing them as a cost and start seeing them as an opportunity.

Professor Wynn: The vision would be to not just have one case study that we keep going back to, which is Arran a lot of the time, it would be in a few years' time to have 10 or 20 or 30 case studies of equivalent weight showing the economic benefit, and then the compliance would start to get a lot easier.

Dr Frost: Also it goes back to something that was talked about earlier, which is the more general point about communication. The benefits of



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MPAs are huge, but we are landed with a process that is so complicated. Just very quickly, I was involved in a project translating information to Ministers and others on our MPA network. There were four or five of us, who I have to say I think were very bright and very capable, but it was really hard work trying to produce maps of all the different legislation for all the MPAs—there are pictures here, for those of you who wanted pictures of it—of the number of features. It really is very complicated for people even on the inside and much more effort needs to be made to communicate not just to the fishing community, but the broader community, about how useful these things are.

Professor Roberts: One final point. There is a great deal of benefit to be had, as Peter says, for the fishing industry for marine protected areas. In the reform of the common fisheries policy, something that did not quite make it in as a mandatory part of it was the concept of fish stock recovery areas, which are essentially fully protected marine reserves. The language that did make it in was that “Countries should move towards implementing networks of fish stock recovery areas and monitor progress”, but it was not something that they had to do. It is seen as a benefit by regulators and by people who have experience of using them, but I think there is a misapprehension and fear of them in the fishing industry, which is not justified by the evidence.

Chair: Thank you. If you can leave us your map, we have been grappling with the various acronyms and we would like to see some pictures certainly and maybe get through this complexity. Thank you all very much indeed for a very stimulating session.