**INT:** Just to start off with, if you give me a bit of background about yourself, the organisation you are affiliated to and your role within that.

**DEU33:** Yes, okay. So, I work for [Environmental consultant]. I’m the manager of that organisation, so as far as [Environmental consultant] goes, legally we are a very small not-for-profit private company. So, we are an independent body, rather than being hosted by a local authority or wildlife trust, which is the case with a lot of other local nature partnerships. We are also a bit different to other local nature partnerships, in that most of the local nature partnerships around the country tend to be quite strategic in nature and a lot of their work is around influencing policy and quite high-level work, whereas because of our history, we are quite practical and hands-on in how we work with our members.

Quick history lesson, what’s now called [Environmental consultant], there’s been an organisation in place since end of 2002, so a long history of working on the [Estuary]. Initially we were set up as something called [nature organisation], which was Industry Nature Conservation Association, based on an organisation that had been operating on the [coast] since the late eighties. Our work with [NATURE ORGANISATION] was largely around helping most of the big industries around the [coast] work with wildlife on an around the sites. So, the [coast] is designated under various different bits of international legislation. So, businesses need to know how they can work and what they can and can’t do, both on an operational basis, but also from the point of view of carrying out new developments and so on. So, making sure they’ve got the right information to feed into planning applications and things like that.

The role with [NATURE ORGANISATION] was really being an honest broker between the conservation bodies on one side and businesses and developers on the other. So, similarities with a consultancy, but more on the lines of an honest broker, being neutral but trying to make sure that the industry could continue to do what it wanted to do, but not at the expense of ecology and wildlife.

Moving to the things… forward to 2012 or whenever it was Government started talking about establishing local nature partnerships around the country, a lot of people felt that there should be one for the [coast] and looked at what one might look like, and very quickly said “Look, we’ve got this thing called [NATURE ORGANISATION] and it’s probably all the same sort of people involved in that that would be involved in a local nature partnership.” So, essentially, [nature organisation] changed its name to [Environmental consultant] and we still continue that sort of work stream, working with businesses, local authorities, conservation organisations and so on.

That’s one element of our work. At around about the same time as [NATURE ORGANISATION] was being set up, with discussions that were going on about designating the [coast] under the Habitats Regulations, all the different bodies that have a say in the management of the [coast] , the −Relevant Authorities as they are known in the Regulations, with the local authorities, Environment Agency, Natural England, harbour authorities and so on were getting together and looking at how they might well co-ordinate their various different functions to make sure that the [coast] meets favourable conservation status, as required in the Habitats Regulations.

Within the Habitats Regulations there is a provision that all these different bodies may, it doesn’t say “must”, but may create this scheme of management, to co-ordinate their roles. So, the [Estuary] Management Scheme, as it is now called, was sort of set up around about the same time as [nature organisation] was and the two kind of organisations worked pretty closely together until 2012−13, when [nature organisation] was changing to [Environmental consultant]. They actually merged the two, so [Environmental consultant] is now working with business stuff under this [Estuary] Management Scheme stuff, which then brings in a bit more strategic element to our work, working on an [coast] -wide basis, but with that focus on the Habitats Regulations.

And then the third stream to our work is that we are also the catchment host for the [coast] Catchment Partnership, under the catchment-based approach to delivery of the Water Framework Directive.

So that’s three different work streams. We try to deliver them all as closely…so they are as synced up as possible, in terms of organisation size, because there are three of us – three full-time members of staff – myself as manager, we have a guy whose main job is going out and working with businesses and doing the practical and hands-on stuff, and then we’ve got a guy who co-ordinates the work of the [Estuary] Management Scheme. That then links in with the Catchment Partnership thing as well. So, small organisation, but fingers in lots of pies.

**INT:** Clearly! Yes, brilliant. In terms of the difference from the nature partnership that you run and others, what are the main differences in terms of the benefits that you have? Is there greater flexibility in how you work?

**DEU33:** Yes. Partly because we are a small organisation, we can be quite responsive and flexible. I think we do perhaps deliver more things on the ground than some other local nature partnerships, particularly with that working with industry workstream, I suppose. We’ve got a number of the larger industries on the [Estuary] as members of ours, some of which have areas of land that they own, which are not currently being used for industrial purposes. Can they be managed to benefit biodiversity?

Sometimes that just includes little incidental bits of land around plants, but in other cases we’ve got… One of our members has a 50-acre woodland. It’s an oil refinery – the woodland was planted as a screen. It had never really been managed positively for biodiversity. We have gone in and developed a woodland-management plan with them and that’s now being managed by local volunteers. So, you’ve got the environmental, social and corporate social responsibility type benefits in there as well. That’s quite unusual for a local nature partnership, doing that sort of practical and hands-on sort of stuff.

**INT:** Are there a number of… You talk about volunteers there… The work that you do, does that involve volunteers a lot?

**DEU33:** It does, yes. As part of the actual team, there’s three of us. So, whilst we are an independent organisation, we have to work with lots of other different organisations as well, to deliver really. So, most of our work I suppose is co-ordinating and making stuff happen.

**INT:** Brilliant. That’s a great introduction, so thank you for that. Just moving on to the species-record data that you use, do you focus on single species, or groups of species?

**DEU33:** A mix, really. And that varies with which particular workstream you are looking at. Working with business, you can view that as more akin to what a typical ecological consultancy would use. So, interested in protected-species records, which might influence how a development application pans out. So, things like water vole and great crested newts and all the rest of it – that typical stuff.

When you start thinking about the [Estuary] Management Scheme side of things, it tends to be more the species groups, so the assemblage of particularly wading-bird species that the [coast] is designated for. That becomes interesting, so looking at overall numbers of groups of species as well as individual species.

Then I suppose the last one, [SL whilst there are 0:08:56] crossovers with all of these, with things like the Catchment Partnership and starting to get more interested in invasive non-natives and how they are moving into, and spreading around, the [coast] . So, it’s a mix right across groups and individual species.

**INT:** Is there an element of prioritisation towards invasive but rare and scarce species at all?

**DEU33:** No, I wouldn’t say so.

**INT:** Okay.

**DEU33:** I think in terms of priority levels, the big priority on the [Estuary] is and has always been around bird data. It’s just what the [coast] is known, important and designated for. Then probably we are on to habitat-quality data, particularly saltmarsh reed beds – inter-tidal habitats, certainly, in terms of both quality and extent, is an important one.

**[0:10:03]**

And I think [Name], when he sent the email through to me said you’re talking to [SL Fred Spencer 0:10:08] from the [wildlife public body] as well. So, a coastal squeeze is something that’s really important, and being able to understand habitat extent and how things like that are happening – that’s really quite important.

**INT:** You’ve alluded to it already, but the data that you do use, what decisions does that inform?

**DEU33:** We are not a decision-maker, that’s a first point to say. We will tend to get involved in other people’s discussions and decisions. But depending on what we are talking about, from a protected-species point of view, it can influence where and how developments are carried out. So, if you’ve got a pond with great crested newts in it, or something like that, then obviously there are implications as to how a development plays out.

From a more macro scale and the bird populations, really, that’s all about how new areas of… Well, that can have implications at a site level, but obviously more used to judge [coast] health and how various different projects are impacting the [coast] , but also guiding things like habitat-creation. So, there’s been a trend for a number of years, and it’s a downward trend in number of wading-bird species. One of the theories behind that – Natural England have done quite a lot of work on it – is around scarcity of wet-grassland habitat adjacent to the [coast] for roosting at high tide. So, using data to identify initially where main populations of birds are using the [coast] and therefore then using that to try and identify where it would be useful to create new high-tide roosts, and so on, around the [coast] .

**INT:** Where do you obtain your data from?

**DEU33:** A variety of places really. It can often be individual consultant reports coming in from developers. Statutory bodies, obviously, the Environment Agency, Natural England are good places to look. We have used open data quite a bit as well, on various bits and pieces. Local record centres, that’s important. We’ve got two different ones on either side of the [coast] – obviously the North and East Yorkshire one and then there’s one that covers Greater Lincolnshire as well, based with our colleagues at the Greater Lincolnshire Nature [SL Branch 0:12:52].

**INT:** And the data, does it come as a raw product, or has it been processed, or mapped, in any way at all?

**DEU33:** Again, it varies, depending on what we are asking for and what we are looking for. The stuff that we tend to get from… That’s quite an interesting question actually because, as a small organisation, we don’t actually have GIS at the moment. So, where there is map data we will try and find that produced already, whereas in some cases, and we are increasing recognising, it would be useful to have access to the raw data so we can do our own analysis and processing of that. At present it’s often more processed data, but it does vary.

**INT:** You talk about how you would like to have raw data so that you can do your own analysis, did you say?

**DEU33:** Yes.

**INT:** Yes. Is that because you trust it more, or…?

**DEU33:** No, I think just flexibility of how it’s presented, really. Being able to display it how we want to, rather than it being presented in a particular way with, potentially, a particular slant put on it.

**INT:** And the resolution of data, does this differ again for different purposes?

**DEU33:** It does really. Yes, yes. From anything from point source to whole [coast] . You will sometimes find data sets… Yes, very variable.

**INT:** What information do you use to inform your interpretation of the data? For example, how would you deal with data gaps?

**DEU33:** A lot of our work is done in partnership with others and it’s really a case of peer review, I suppose – understanding who has what data, where the gaps are. My colleague that works on the management scheme, the piece of work that he’s had outstanding for a little while now is to meet with… and in fact probably one of the main data-gathering organisations, I suppose broader than just on biodiversity data, more on wider environment stuff, is the Environment Agency. And a lot of that data is linked to the flood-risk management strategy that’s been developed. So, a meeting is needed I think, to understand what data the [wildlife public body]is collecting, how it’s being used, how available of it is – some of it probably isn’t at the moment – then to really identify where some of those gaps are.

Bird data is always one that comes up as being a gap. There are regular web surveys carried out – BTO and Natural England are in partnership there. But that is focused on inter-tidal areas, designated areas. The main challenge is often where you get a development coming on one of the areas adjacent to the [coast] , where there’s a high-tide roost, but the bird data isn’t there to allow the assessment of that. For things like that, it’s often a case of… In one case, actually, several years ago now, we managed to secure funding for a project that carried out a suite of strategic-level ecological surveys – birds, badgers, water voles and so on – of a pretty wide area on the [Estuary], and that’s been made available to developers and decision-makers alike.

That was a key gap, because it was a prime area for development. It was also a prime area from an ecological point of view. And the two were just butting up against one another and nobody was getting anywhere, and there were delays. So, there can often be projects established which can help fill data gaps where they exist.

**INT:** And that project, does that involve volunteers at all?

**DEU33:** That one didn’t no. That was all commercial consultancy, so we secured funding and contracts.

**INT:** And in terms of the data, how do you consider confidence, accuracy and precision?

**DEU33:** It’s a case of looking what the source is, really. There’s a perception, often, that commercially sourced data can be a higher quality, but then the data that comes out… I’ve mentioned WeBS already. A lot of the WeBS-counters are effectively professional bird-counters anyway, in their spare time. They are volunteers, but that data is incredibly high-quality and important. It’s one of *the* most important data sets on the [coast] . So, looking at data sources is important. Accessibility of the data is important as well. Difficult question I think, that one.

**INT:** That’s fine. In terms of the accessibility, do you find that there… Are there any restrictions at all? Or is it all open-access to you?

**DEU33:** No, it’s not so, coming back to WeBS data again, you need to have access… You really need to be Natural England to get that, or you pay chunks of money to WeBS to get hold of that. Some data that’s out there has been collected by individuals, individual businesses, so there are commercial sensitivities around that. I wouldn’t say it’s all open-source. There’s a good amount of data out there. Some of it’s not easily accessible and I include some of the government data in that. I think Environment Agency’s data can be a nightmare to get hold of sometimes, not because it isn’t there. It’s just very difficult to know where to look sometimes. And even when you do find it, it can be difficult to figure out exactly what you’ve got and how to use it.

**INT:** Okay. No, that’s great. But from your point of view, would you say that the amount of data that you are getting is reasonable for your work?

**DEU33:** I think so.

**INT:** Perfect. That’s great. So, with your work, do you produce any reports? Are you involved in any major events? How do you showcase your work?

**DEU33:** Not very well, is the short answer. That’s something that is currently the hot topic amongst the organisation is that we’ve been going for a number of years. We’ve been quietly beavering away in the background, but we don’t tend to sing our own praises that much.

**[0:20:12]**

We used to go through, produce annual reports and so on. That is something that has, for one reason or another, dropped by the wayside, probably something that we’ll look to do again.

We’ll tend to get involved in projects and put out press releases and so on, when they are coming to fruition. But I think the short answer is we could do better in terms of showcasing our work.

**INT:** Brilliant.

**DEU33:** But then, I suppose, there are two sides to that actually. That’s probably more the external side of things, so within the day-to-day work, we have a series of different project groups so, if you take the [Estuary] management scheme, for example, that has an action plan and we have regular meetings with some of the other partners in the group, which highlights progress towards, or lack of progress in some areas, just how they are progressing. Some of those include practical on-the-ground things, others it’s more influencing, so there’s a current project on looking at the impact of recreation and how that disturbs wildlife and so on. So, there’s been quite a lot of work on that. There’s regular internal reporting to us, but we are not very much a public-facing organisation, if I’m honest.

**INT:** Yeah, no, I wasn’t saying that was a bad thing. I was just… Yes, no, I think particularly with yourselves, where you’re a nature partnership and you’ve got lots of people involved, I think the internal is probably more important than the external. That’s brilliant.

Would you share your data or your results with any other audiences at all, or your work?

**DEU33:** As much as we can. I kept going back to that, that recreation project that I mentioned. It was a few years ago, we commissioned quite a detailed study by a consultant looking at what recreational activities were taking place where on the [coast] , how they coincided with important ecological areas – mainly we were looking at bird populations and what the responses of bird populations were to various different disturbance stimuli.

That data and the reports from that have been shared quite widely, both locally and nationally. So, it would depend on what the data was, whereas some of the other stuff that we’re involved with, with businesses again where that comes into us operating a little bit more like a consultancy, that can be confidential. But the presumption is that, yes, we are happy to share, but occasionally there are some restrictions there that we have to work within.

**INT:** Of course. That’s great. And of the data that you do collect, is there any information that would help with your work, that’s not currently there?

**DEU33:** No. Difficult to think of anything we need on that one really.

**INT:** Okay, that’s fine. That’s great. Just finally, I’m just going to focus a bit more on model data. So, how would you feel about using model data?

**DEU33:** I think it always has to be that model data is only as good as what you put into it in the first place, isn’t it?

**INT:** Yes.

**DEU33:** Yes, so we have, or do use, or work with people that use a lot of model data. As long as you are aware of that caveat and what data has been used to inform the model, then we don’t have a problem using model data. It sometimes can be a good substitute when you don’t have the actual raw data and actual data, if you like. But yes, you need to be aware of assumptions that have been made in the model, what the model has been populated with and so on, but certainly wouldn’t say “No, we are not going to do this project because there isn’t the raw data.”

I think there’s, from my own point of view, I would fall into the camp of the sort of person that would say “Right, we’ve got some data, let’s put it into a model and use it to see what it comes out with,” rather than waiting until, say, we’ve got every bit of data on everything. So, I think being able to use model data to inform decisions and get things moving, rather than necessarily having to have every last piece of actual data, is definitely a position I would take.

**INT:** Brilliant, so even just to create that model would… It’s almost like another stepping stone that you take, in terms of your decision.

**DEU33:** Yes.

**INT:** Yes. Brilliant. Just on the examples of model data that you do use, or interact with, at the moment, how does this affect the type of decisions that you are making?

**DEU33:** The main area where it tends to come into our work at the moment is on the flood-risk side of things. So, it’s large Environment-Agency models of flow and erosion and that side of things, which obviously impact distributions of habitat around the [coast] – the inter-tidal side of things.

They are quite robust models although, having said that, they are regularly being reviewed as a result of different flood and tidal events that happen in the [coast] . So, I think that’s probably the main area we interact with at the moment.

Can’t really say that they have hugely influenced decisions that we’ve made directly, but that’s probably the main area we look at.

**INT:** No, that’s brilliant. Just to… So, like the last bit, I’m just going to show some examples of model-data outputs that part of the team have created.

**DEU33:** Okay.

**INT:** So, I’ll show you them and then ask if you can interpret them, and then whether you’d find them useful. I’ll just share my screen now. This is probably not a species you are interested in, but it’s for a five-spot burnet moth…

**DEU33:** Right.

**INT:** So, the model – I don’t know if you can see my mouse here?

**DEU33:** Yes.

**INT:** The model on the left here is a raw-probability distribution for this moth. Are you able to interpret this, just at face value?

**DEU33:** So, it would appear that you are more likely to encounter that species in the South West.

**INT:** Yes, brilliant. Straightforward. Excellent. That’s good, so I probably don’t need to describe that any more. That’s great. Then this, again, is a raw-probability distribution at a five-kilometre scale around a point in Wallingford in Oxfordshire. Again, similar sort of concept, are you able to interpret this?

**DEU33:** Patchy distribution, but probably more found in the… around the outside of the survey area. Yes, so patchy with areas where it’s unlikely to be found, but looks… Green is high probability, I’m assuming. Oh, no, it’s further out. That one’s more tricky to interpret. Probability on the left, variation on the right. Yes, so I know… Yes, so more like to encounter it towards the outer edges of the survey area.

**INT:** I’ve sort of lost you, I’m afraid. The joys of online Zooming. Can you hear me now?

**DEU33:** Yes, yes…

**INT:** Oh, you can. Brilliant, sorry. Do you mind just explaining that again, sorry?

**DEU33:** Yes, my interpretation of that one, certainly with the left-hand side map is that there is a patchy distribution of the species, but it’s more likely to be encountered towards the outside of the survey area.

**INT:** Brilliant, yes, no, absolutely. And would you add anything to these raw-probability distribution models to make them more useful? I’ll just leave it on this one.

**DEU33:** Depends what you are trying to be useful for. If it’s an average member of the public, then that’s going to be tricky for a member of the public to interpret, whereas…

**INT:** Of course.

**DEU33:** …if it’s somebody who is reasonably familiar with scientific data, it serves its purpose, I think.

**INT:** Brilliant, so I’ll just focus on the variation model now.

**DEU33:** Okay.

**INT:** So, this one on the right here is again for the five-spot burnet moth and it’s a model that works together with the raw probability on the left, so I don’t know if you are able to interpret that?

**[0:30:05]**

**DEU33:** There is greater variation. So, whilst you’ve got a greater probability of encountering the species in the South West, variation in that probability is greater in the South West as well.

**INT:** Yes, brilliant. And, with the greater variation, there’s less confidence that…

**DEU33:** Yes.

**INT:** Yes, brilliant. And, again, this is on a localised scale around the point in Wallingford. Is that easy to interpret as well?

**DEU33:** Yes, same sort of comment. In the areas where there is higher probability of encountering the species, there is also higher variation around the results and, as you say, less confidence in the results.

**INT:** Brilliant and, again, in terms of adding anything, does that again go back to the audience and—

**DEU33:** I think so. Yes. Yes, same sort of comment.

**INT:** That’s brilliant. Is there anything else that you wanted to comment on these at all?

**DEU33:** Don’t think so.

**INT:** No?

**DEU33:** No.

**INT:** That’s brilliant. I’ll stop sharing my screen now, then. So, I’ve asked all the questions that I wanted to ask, which is great. Was there anything that you wanted to ask me, or you thought I should have asked you?

**DEU33:** No, I don’t really think so. Just in terms of the study in general, what’s the timescales and so on. How are you working to?

**INT:** Yes, of course. So, in terms of the timescales, it’s a two-year project and we are already six months in. In terms of how it’s going so far, they are currently developing an app [INDISCERNIBLE. BREAKS UP 0:32:09−0:32:12] to them, to hopefully help them aid in that process. That’s generally the sort of timescale at the moment.

**DEU33:** Okay.

**INT:** In terms of any developments, in terms of the project going forward, is it something you’d be interested in, getting involved in?

**DEU33:** Potentially, yes. Definitely interested in hearing more about it as the project develops. Yes, by all means keep in touch.

**INT:** Brilliant, that’s excellent. Was there anything else at all? Sorry, my explanation of that wasn’t very clear.

**DEU33:** No, no, that’s fine. I think Zoom seems to be starting to struggle a little bit, now we’re getting a bit [INDISCERNIBLE 0:32:52].

**INT:** No, that’s great. Well, thank you very much for talking to me [DEU33].

**DEU33:** Okay. Best [SL 0:32:57] with your job and best of luck with the rest of the study.

**INT:** Thanks very much. Take care.

**DEU33:** Alright.

**INT:** Cheers then, bye.

**Audio ends: [0:33:04]**