**INT1: Okay, should give you a pop up. The first section of the Interview is around your background. So, we know that you work for the [wildlife charity]** **and that you’re that the data officer there but, do you have any other kind of relevant affiliations associated with your role in around biodiversity data?**

DEU01: So, at the moment, yes. I’m also a Trustee of the [regional] Naturalist Union, so that’s like really the--

**INT1: Oh, yes.**

DEU01: --overarching National History Society, covering [region].

**INT1: Okay. So, could you tell us a bit more about your role as the data officer [wildlife charity]?**

DEU01: Yes. So, I have been here just over 10 years now, I think. So, I started primarily managing the biodiversity data holdings for our reserves. It quickly got overtaken by the GIS mapping side stuff. And it’s-- over the years it’s kind of become more of a- largely a- well I suppose I have feet in both camps. As well as being a day-to-day support role with helping reserve officers, project officers do, you know, service and the data requests and mapping needs they’ve got. I’ve also got the sort of more strategic side, where I’m trying to do things to improve overall data and monitoring across Yorkshire. To answer the biggest strategic questions around, like we’ve got the Big Wild, the Yorkshire campaign at the minute. And it’s a case of well, what’s the current base line. I mean there’s not much of a base line. It’s all about trying to do that. So, it’s kind of gone from one end, where the single site and organising bird surveys for that and like on the other sort of end of the spectrum, we’re looking at regionally, getting hold of the C and H data for land cover mapping and I come up with the big questions about what-- how-- what the change has been over the last 25 years, to come up with a state of nature report for Yorkshire and things like that. So, it kind of covers a whole spectrum of things. Which is fine and somewhat daunting.

**INT1: Yes. Okay. So, we’re kind of straying a little bit into the next section of questions which are about the purposes that you’re using species records data for. So, the records that your using, are they-- do you use the kind of single species records at all? Or is it mainly kind of sweeps of species? Or records for--**

DEU01: Of course, there is. Also, for some sites the funding was dependent upon things like breeding bittens, so like at [place name] they had, [nature reserve] a flagship site we’ve got in [Town’s name] and they do an annual [rare bird species] census because the condition of that is WWF and EU funded projects. There’s a bit massive extension and creation of this, sort of, 50/60 hectares of new bed wetland. And it’s on the premise of creating breeding habitat for the [rare bird species]. So, in that case there’s a need for a specific- species specific monitoring. And likewise, they’ve got the [rare bird species] monitoring project. It’s like HLF funded back from the brink. So that’s working in [town] in the [an area in Yorkshire]. And again, so that’s targeting a single species, [rare bird species]. And then there’s other things. There’s a Red Kite project. So that was obviously just reintroduced into Yorkshire by a joint project, RSPB and Yorkshire Water, back in-- I mean from like 2003 I think it was-- in 2000 actually. And we’ve-- so the volunteers are continuing monitoring and we’ve took over them and manage the volunteers doing the nest module. That’s again-- That’s a single species-- But by and large-- The more bigger, strategic stuff, it’s all about landscape or species assemblages or more- more often than that it’s habitats we’re interested in. It’s very easy to sort of quantify and we make those big, broad assumptions then that if you’ve got the right habitat the species will come. But the starting point, have the species dated, because actually you can’t rely too much on the literature for these things.

**[Irrelevant content]**

**INT1: When you’re using single species data, it’s primarily species which are protected in some way or, under threat, or--?**

DEU01: Yes, largely. Although there are cases where it’s more from a PR point of view. So, if we’ve got a campaign-- I mean, we did have a hedgehog appeal a few years back. They are in decline, and so the appeal was-- We were asking for sightings of hedgehogs. But it didn’t really feed into a proper strategic or-- What’s the word-- Like, a proper-- For a-- A standardised surveys. It was just kind of, opportunistic and-- Ask-- Have you got a hedgehog? We could ask for people hedgehog sighting. Which is a shame, because I said, “Well, [inaudible 0:05:51].” I said, “Oh, it’ll be really good to get localised data sets on hedgehogs”. Cause rather than using the 70 per cent decline, which is actually not based on the actual evidence, it’s based on anecdotal and internationally saying, “Oh, we think there’s a decline.” But there’s not-- There’s no systematic surveys to say that. And this is what we work on at the minute with the [wildlife charity] reports and like, [name] and [name], [city] and [unclear 0:06:17] are helping us with looking at, tracking that baseline data to have actual specific examples for Yorkshire, where we can say, “Yes, wildlife’s in decline, but which species in Yorkshire is that?” So, there is that kind of element to it as well, that we’re wanting the specific species examples to reinforce those narratives we’ve got around the likes of decline because the media and others-- People want to know which species are in decline, which ones are threatened. And we often don’t have that evidence. It’s just kind of what is. It’s based on the [organisation] reports biodiversity indicators which are largely butterfly monitoring but-- But, yes, there’s kind of-- So, if it goes basically from the-- From the-- What do you call it? The campaigning which is nice to have key stone species-- Poster species, to then matching other species as part of campaign to reinforce it with the scientific evidence to say yes, it is declining because of this.

**INT1: Okay.**

**INT2: Do you often-- Oh sorry. Do you often have more than one campaign going on at the same time?**

DEU01: Not now. Or in theory, not now. So, the membership team- We have a big apparatus behind the scenes that plan campaigns. So, the current one will be the marine appeal. So, they’ll probably look at-- And we’ve got the [unclear 0:07:33] re mammal monitoring on a [unclear 0:07:36]. That’s not a single species but is a single, quite discrete group. And that’ll go to support the mammal-- The Marine campaign. But yes. So, now we don’t generally. We’ll have one-- Well one big campaign, but obviously locally there’s ongoing projects that’ll be looking at single species still.

**INT2: Sure. Okay.**

**INT1: Right. Okay. So, thinking about it in terms of decisions. You were talking earlier about the kind of providing mapping needs for the project officers and single sites. So, are those primarily management decisions but they’re using that?**

DEU01: Yes. So, it’ll be either, one of two things. So, it’ll be either the funding, so they’ve got restricted funding sources, be it [unclear 0:08:25] what we all do. So that’ll be like, one or two examples. So, they might need to know, they’re on that site, they’ve got X number of whatever species-- Target species, there’s a requisite of the funding. Or it’s to do with the proscriptions around the maritime so their stewardship funding that we get for sites [unclear 0:08:39] alliance schemes might have certain species mentioned. If we pick-- Pick options on grazing or grassland. It could be that there’s some indicate species within that, mentioned to-- To try and- Yes so, the-- That positive may indicate a species often that we need to monitor to make sure we’re compliant with those management proscriptions.

**INT1: So, it’s about monitoring and reporting?**

DEU01: Yes.

**INT1: Okay. Right. And- So what other sorts of decisions is the data being used for? How about the more kind of strategic side that you were talking about earlier?**

DEU01: So, the-- Well, I mean in that case, it’s more on habitats are an individual species. So, it would be looking at. I kind find which habitats are in decline. But it could be using individual species records. Like getting it off the beach] or others to say. “We’re gonna flag what species are in decline in [unclear 0:09:42] data sets.” Which we can associate because of the assemblages. Think, well that’s part of the limestone vast lands or this is really coastal flood plain, grazing [unclear 0:09:51]. Species take a load of those sort of habitats. So, it just helps to reinforce that, yes, we’ve seen a spatial, confidal decline in those habitats based on site mapping of areas. But it’s not had the backup to reinforce it with-- And that’s why we’ve seen declines in the number of breeding pairs of waders or plant species.

**[0:10:10]**

**INT1: Okay. So, the next set of questions are about your data requirements. So, where do you get your data from, at the moment? And does that vary according to what purpose you’re using for?**

DEU01: Largely, what with the current freely available bits that are-- So, we don’t actually collect a lot of our own. Or not as much as we could or would like. So, we do get our own through- We have some breeding bird surveys on some of our nature reserves. We have volunteers doing the butterfly-- The UK BMS butterfly monitoring on some sites. So-- I mean what I’ve been trying to do, is rather than collecting our own bespoke data that’s a lot of effort for answering specific questions and try to pull resources. So actually, I’d rather encourage and help volunteers do existing national surveys. Because as well as collecting data on our sites can benchmark that, you’ve got the national trend to compare it with. You could work with, you know, very specific monitoring on their site. Which all of that species is doing well there but you’ve got no context for it. And what-- What I want is to try and prove the monitoring that also ties in neatly with the national or regional scale. So, we have that-- It’s obvious that I’ve got a trend for a site. Or I’ve got an idea of what the species is doing on a single site. But It’s linking in with what it’s doing regionally or outside of nature reserves, or nationally. So, it’s kind of, that’s where I’m targeting most of my efforts at the minute. In terms of other data sources, it will be just-- Like the BSBI , [unclear 0:11:45] and the local records centres, see what they’ve got and the [nature association]. So, you’ve got the local-- It’s an opportunistic- With a local experts, national historians that- You know for their species groups. Which actually that’s another thing, I am-- I am currently an orthoptera recorder for [nature association] as well. So rather-- As well as a trustee at [nature association], I do, do the single species stuff. And-- And it’s, yes, just trying to leverage what-- What their knowledge-- Which often their motivations for recording is just cause their interested and it’s almost like a stamp collecting, they think, well I want to see every species going. But they’re not necessarily interested in the niches, like how it-- It fits in ecologically. Whereas I’d be, well that’s great. So, their quite happy going out collecting that. And I like to then try and reuse that data. I’m sure it’ll get used two ways, cause then-- Often then, they’re quite interested to see the data used beyond their, oh I’ve seen all 50 species of whatever’s in Yorkshire. Then they can see it being used for what they deem as like science or put to some kind of conservation use. But often I think it helps them as well.

**INT2: Yes. Sure.**

**INT1: So, it sounds as though you have range of statistics you’re getting from, that you must be getting data in quite a range of formats as well?**

DEU01: Yes. Yes. It’s a bit of a nightmare. Dataflows somewhat chaotic. It’s just some Excel spreadsheets everywhere as well as Word documents and-- Yes-- And- And then those are the worst, it’s the Word reports that somebody’s took a lot of time to transcribe the data straight from their head, not into a nice flat file, or you know spreadsheet. But into this longer narrative which reads lovely, but then when you want to use the data for anything else, it’s impossible.

**INT2: Yes.**

DEU01: A lot of that’s-- It’s not transcribing, up until the point I need to use it. So-- I mean in fact I’ve got a meeting tomorrow about water voles in [City] and I-- And I’ve got in my diary to go through the water vole records and like, say the reports are like 10 years ago cause-- I never got round to put in the database. I know where it is. But it’s very much reactionary, as when I need to use it. That’s when I’ll do it. Because I don’t have the capacity of trying to get it all nice and streamlined in the database. Which is a shame cause then if other people wanted to use it. Like-- And they only go off the record centres, they wouldn’t have access to that data. It’s only cause we’re so lucky that I know it exists and I have it on our systems. That I can use it when I need it. But it’s not great for wider conservation because it’s sat collecting dust basically, cause of all that time standardised.

**INT1: Yes. So, but is it largely raw data, rather than data products?**

DEU01: Yes. Yes. It’s a raw data. It’s a raw survey data that people, they wrote a report off it, but they didn’t necessarily- Because everything- Especially if it’s restricted funding for a project. It’s-- And like if staff turnover’s high. They’ll correct the data, they’ll do the report they need to do and then they might [unclear 0:14:41] they’ll leave, they’ll go to another job somewhere. So, there’s never that continuity and legacy. Which a lot of-- Lot of new funding is trying to address that now. Having better- Subject legacy, but it also extends out to the data side of it as well with data legacy.

**INT1: Yes. That’s really true. Okay. And what about resolution of data? Does that vary, or is it?**

DEU01: Yes. Generally. Especially with the-- The more traditional recorders would do site lists. Which for a small site, is fine? If you just get-- I found this list of species and it’s like that’s good. But if it’s got much bigger sites or they’re sort of-- heterogeneous sites where there’s a mosaic of habitats and they just give you a species list. And say if they use things like, there’s a champion database which is like nearest plants to watch out for. But essentially, it’s-- I think CEH developed it. You put in new species list- Like invertebrate records and it’ll tell you the most likely habitat associations that associate with that list. Which is fine if the data’s corrected at a habitat scale, that they’ve given you a list for-- Oh there’s a list of invertebrates got the pond, but here’s a list I got out of the margins, but it’s not actually-- You get an entire list. Which is from the whole mosaic where [unclear 0:15:57] around the site. Which causes problems then to-- To do anything other than looking at the list and say, oh there’s some red deer bucket species there or individually looking and saying, oh this is typical of this type of habitat. But you can’t do anything with it at the assemblage level. So, it’s kind of limited then. But that-- That’s data that we don’t collect ourselves but rely on others collecting and just use. It’s like volun-- The volunteers collecting. Which is-- Points out our weakness where we don’t do a lot of surveys. We’re quite beholden to just having to make do with whatever data we can get our hands on basically.

**INT1: Yes. Okay. So, that’s the data that’s coming in from recorders. If you are using those kind of freely available data sets from the BSBI or local record centres. What-- What kind of resolution is that coming in at?**

DEU01: To me-- I mean, the BSBI records when that was just really cause that’s all [NAME] could ask for as part of the state of nature report cause we’re doing it Yorkshire wide. So, we won’t looking at site level. But obviously we can get it at site level. But then they do-- Generally do it to-- Well it depends on their data set, I think. But usually they’ll give it to, like a certain square though, like 1km square is all. There’s no like that the full resolution that you only really get that full-- Full resolution when you prep it yourself and you get it to full, kind of figure references. Even like, straight off MBN, so they act as a kind of, meta data catalogue of- From local eco centres and others. And actually, you get data on them, from an academic point of view looking at you know, UK wide. It’s fine cause it’ll say ten kilometre resolution. From a site management point of view, you can often get-- Drill down to that, in factual full resolution of the record. You know, you possibly could if you went through all the loopholes of requesting access to the original recorders of-- But it’s not readily accessible.

**INT1: Yes. Yes. Okay. So, this generally doesn’t meet the kind of scale needs that you would have for individual sites. Okay. So, tell us about what kind of processing and analysis of data you do with that once you’ve gathered it in and does that vary according to the purpose as well?**

DEU01: That varies as well. So, yes, it’s not just standardised. So, I-- I often spend my time looking at-- Within--Within JSR and I use [unclear 0:18:17] we think. So, in my past job I liked the fishes that bit, low stock, because I did fisheries stock assessments. But it’s on like huge data sets. So ,if you get any standardised data sets from fish catching, so you could use R to like process data sets and account for things. I’ve found in my ten years here, I’ve been able to automate anything. Not that it-- I suppose you could but the amount of time of spent automating would be a waste of time, because I’d never need to use that bit of code again. So, it feels very much bespoke and just processed as and when needed. Which again is kind of logic around doing stuff. I think well I’ll just have our service as extensions of existing UK BMS ones or you know, Big York, because I can get like a butterfly conversation to share their data for Yorkshire or Northern England. So, I could run it through and use the same methodology they use to produce a trend analysis. Or there’s enough replicates for me to work, wait a few years for running it again. Just so I could create the same trend plots they do for the UK, but regionally for Yorkshire to say well the national trend is this, but Yorkshire is it the same or different? And also, ultimately, I’d like to do it for the Hower sites and like our accepted nature reserve sites and non-nature reserve sites. So, you can see the early decline in species X. Is it sort of the same on the reserves or are reserves showing as the last bastions of whatever species it is? Or, you know, it was basically to see, can we do anything about it? Is the decline on our sites as well cause it’s down to climate change, and you know factors beyond our control? Or are we seeing something where the species is declining but our sites are, you know the last refuge for them? What are we doing right that we can sort of try and advocate and do advocacy to try and get, you know landowners and- And partly me own system as well that coming in, the land managers to manage to say, “Well, we can provide evidence to say that well this works on our sites.” But obviously at the minute that’s a pipe dream and it doesn’t happen because it’s not enough data. But that’s-- That’s the sort of hope.

**[0:20:24]**

**INT1: Okay. So, the next questions about what information are you use to inform your interpretation of the data? And I guess that depends very much on the data source as well? And how you deal with data gaps?**

DEU01: Yes. So, I mean generally we use-- Well, I use JS heavily. So, a lot of the species data it’s all about the spatial location of it. So, we’ll get a map and so we can look at stuff like effort and see where the data gaps are. Generally, there’s a lot of gaps, so it’s not a case of, oh there’s one gap identified, I’m generally working the column there, it’s just surrounded by gaps. And it’s trying to make the best with the data you have, whilst acknowledging all the caveats around the fact that it’s heavily effort advised. So, it’s sort of-- It basically limits-- Ultimately limits what we can do with the data because it’s unlike- It’s saying that my previous experience with the fisheries example. I’m at university doing you know, post grad, doing sort of controlled experiments where you could account for all that. Basically, at the minute I find that It’s-- There’s no control. It’s just a-- Ultimately, not a mess, that would be being unduly harsh. But say, challenging. Which why when it comes back to how we do work, and that’s not necessarily always evidence led. But it’s usually the prescriptions that say action gets set out nationally, so that they’ll through academic studies elsewhere, will come up with or X, Y and Z works. And we’ll follow that almost blindly and not necessarily [unclear 0:22:04] to their [0:22:05] manage because of the lack of capacity and lack of data elsewhere. So, we can’t do things as well as we’d like. So-- We’re heavily reliant on others having already done the work. So, we just- It’s always useful to use like Earl Sutherlands contribution evidence web site and-- Or like other things like that where we try and get examples-- To-- Of-- That where others to sort of pool out resources and have collective experience to inform, rather than necessarily effecting the data ourselves to do it. Just cause of-- Like I said the sheer the number of gaps and the amount of resource that you require to perhaps plug all the gaps, to answer all the questions we have. We’re quite greedy and sort of ensure conversations circles, we’ve got a lot of things we want to do. So, it’s hard to sometimes focus. Which again comes back to that- Working more strategically. It’s really easier cause you’re looking at a larger overarching question. Whereas the site level is very more difficult. Where we have lots of competing questions and want an answer around that. What other conservation interventions are we doing? Is it right? Is it working? There probably the more difficult ones to collect data for, because there’s so many variables. I mean you can collect the data on the site and just to try work out, is that result of that intervention or is it down to something else.

**INT2: Yes.**

**INT1: Yes. So, how do you deal with confidence in the data that you do have as well?**

DEU01: It’s a lot to take with a pinch of salt. So, it’s-- I mean a lot of it-- If it’s the-- like the butterfly conversation, BSBI data, there’s more confidence to that. With our own data, I guess nothing’s ever-- It’s never assumed that it’s the be all and end all. It’s always taken with a caveat of because we use volunteers for this. The bird surveys, so it’s always a lot of caveats and I am well, has the survey changed recently? What’s their ID skills like? So, it’s indicative. A lot of it’s down to getting the time surveys in to say well the same person’s been in the same zone for 10 years. Whilst that data might-- We always acknowledge it’s never comprehensive, but at least it is indicative of that general trend of, well they’ve always been that site and they’ve always counted 20 territories of different known species. So, it’s all relative and if that goes down or up. Or going up’s difficult cause then you have the problem of you getting better. [Unclear 0:24:25] Then there’s lots of tricky-- So, we don’t ever do-- Thinking about it. I probably should some kind of annual competency test to be able to challenge-- When-- And be able to account for surveyors getting better year on year and then any improvements in them, would be territories improving. Basically, a lot of it we don’t have the luxury of worrying too much about quality. Just getting the data at all and seeing well we’ve got something. And then the technology with all the caveats with it.

**INT1: Yes. Okay. Yes. So, quite pragmatic.**

DEU01: Yes. Very pragmatic.

**INT1: Okay. So, the next section is about data communication and what you actually do with the data once- Once you process and interpret it. So-- Yes. Where does that data go? And how- How do other people then interact with it?**

DEU01: So generally, what-- I mean we don’t-- Actually don’t-- We make more use of other’s data rather than collect our own. So, there’s-- First of all there’s not much in terms of us being able to do much else with that, other than with our interpretation might do a newsletter to go to the volunteers to communicate what it’s shown or our membership. But then in terms of our own data-- So, like we’re doing bird surveys. We’ll do-- again a newsletter to feedback to the volunteers what it shows. And then it goes on our database and it also gets shared with the relevant site managers so they can see what the state of play is on that site, in terms of what data we have. And then it obviously ultimately gets shared by our database with the local records centre and then eventually up to NBN. So, others [unclear 0:26:03] usually. But again, the problem with that [unclear 0:26:06] there actually is-- There’s a modified version of the common bird census with regional stop. So, other people will probably have little use of it compared to-- Cause-- Cause probably more covered with the spoke survey [unclear 0:26:19] of use to anyone for a national or regional trend monitoring. Which is why more recently I’ve tried to piggyback more and more. Because it’s got that-- For the same amount of effort you’ve got much more use out of the data. Rather than putting a lot of effort into something only we can use. And even for our use only answers that specific question we’ve got now, and doesn’t necessarily future proof to answer questions we might have the future. I’m not sure what those questions are yet but I’m-- So other than keeping the data in its rawest form, with all the methodologies logged so people can see if they want to in the future. But-- Tryna future proof it’s difficult.

**INT2: Yes. I can see that. So, if you’re putting something out in your newsletter to the volunteers or your membership. What form is that in? Is it in a text description? Is it a map? Would it be-**

DEU01: So, it’s a giant-- So, it’s max-- Some pretty pictures of the birds, birds examples. I can send you an example if you-- If it’s of interest. So, it’s got example pictures of the-- The birds that might have been seen, that is-- Yes- Something in the narrative around, oh this bird was seen, or started breeding four weeks earlier than usual. Then I’d have an image of that bird from our stock catalogue just to bring the narrative to life for the volunteers cause they’re usually-- You know, some of them are the entry level, they’re not all advanced, and they need that kind of visualisation to help. And then as well as-- I mean the only maps we tend to do, would be a map of what the current survey of sites. So, I have that-- So, It’s a visualisation of which sites are coming up to survey and which ones done. That’s more to encourage others to come forward and say, oh I’ll do that site cause it’s near me. We do the territory mapping. Because that’s so intensive we only do it as and when. So ,it’s kind of-- It’s on-- On a paper hardcopy map at the minute. So, it’s not in JS it’s on an almost scanned pdf. So, that visually somebody can refer to it. So, I’ll send copies of actual surveys so they can see where- Where- Analyse data right from there to the college stations. What it looks like. Then obviously the site managers get that so they can eliminate and make a decision around scrub removal. They can see which bits of scrub are more valuable to [unclear 0:28:32] birds. So, it’s kind of more used for an internal audience, for informing management than necessarily doing external [unclear 0:28:42] things.

**INT1: Okay. Right. So-- Next bit is about data aspirations. Sounds like you have lots of those. So how could the data be improved to help in your decision making. What would be the-- you know-- big things that would make a difference?**

DEU01: I think consistency, not just in terms of the skills of those collecting it but also temporary, so over time more [unclear 0:29:20] you can rely that it’s com-- That it is legitimately comparable you know, and no issues around bodies or [unclear 0:29:29] about them actually getting better. So, all those assumptions around change- Any perceived changes in the data is actual change and not down to anything else. But also, in terms of coverage, ideally if you- I’d want it beyond our sites. So, rather its [unclear 0:29:47] but there’s limited value to that because it’s-- It’s knowing the bigger picture. How our sites fit in to everything else that’s going on. And-- And a lot of our work is landscape anyway. We’re working on projects outside of nature reserves. So basically, having monitoring that’s robust, systematic, across Yorkshire, across a suite of sites. So, you’ve got controls sites, you’ve got non, like um, sites that aren’t manage for conservation but you know, the same data. Which are the hardest to get people for-- because if there’s nothing there, no one wants to do it. But they are some of the most- More important than the nice nature reserve. And we ran this with um, butterfly surveys, where you get people cutting [unclear 0:30:28] in half ’cause-- There’s not very much on the first half, so it wasn’t interesting. So, that’s very interesting, or there maybe one that did it since the seventies and then he stopped doing half of it because it stopped-- The first half was no longer any good, when it used to be. So, that’s really good, that’s good to know.

**INT1: Yeah.**

DEU01: But then he stopped-- He just stopped it. Which I mean, comes down to communication and trying to then feedback about why that’s um, interesting and important. So, I mean, yeah. Ultimately my-- I think my being-- Especially with how our restructure in [wildlife charity] having this [wildlife charity] Directorate. So, I’ll be moving teams there and then I sit within the finance team believe or not, because it’s a central service. So, I’m just sitting on the side that HR, Health and Safety, IT and then data. So, I’m very much like an add on, rather than as a-- a strategic thing with the trust. But the new director for [wildlife charity], will sort of, [unclear 0:31:24] with planning will go out [unclear 0:31:26] and will have a lot more-- And I’m hoping will have a lot more focus on trying to do more strategic data action and things. And working with partners to do it and like at um, universities as well to say, well we have the big [unclear 0:31:39] is a [unclear 0:31:40] style collection of things but then having targeted um, be it species habitat on sites for really specific detailed surveys to either draw down into some of those regional trends that some of the um, [unclear 0:31:55] surveys got. Or to answer really specific questions around individual sites.

**INT1: Um. Yeah, so I think you’ve probably answered my next question which is about additional information that would help you to interpret the data which is, is about knowing about those broader trends beyond your--**

DEU01: Yeah. Yeah.

**INT1: Is there anything else?**

DEU01: Um, I mean it’s probably just having the access to-- Or better access to academics and experts in fields of- With things like-- We had it with [Local wildlife site] campaign, where we got in extra expertise on hydrology and stuff. Because we don’t have a lot of knowledge-- I mean, it comes down to species data. But even the physical data like hydrology and things that actually—um-- features that would be driving a lot of species distributions and stuff on sites which is things like, water table height and all the rest that we don’t actually have, you know. I mean especially things in microclimate. But again it’s, it’s stuff that we probably would never be able to check on our own. But that’s where if a university, you’ve got specialists in things, is to rely on those and package up new projects that could be used as part of NC projects or even as part of the undergraduate program, that you know a repeated survey year on year. Some things like that. Basically, where we’re not trying to do everything ourselves. Just trying to find and use expertise that’s elsewhere.

**INT1: Uh-huh. Okay. So, the next section is about model data. So, how would you feel about using model data instead of raw data? Would that be helpful?**

DEU01: Yes, because of all the gaps. Yes, so, I mean we are-- In the past there’s a [name] at the-- When she’s at Leeds Uni their PhD, she did a [unclear 0:33:38] which is um, like a model, distribution model for bats and it’s, we did use it as part of our planning responses through Doc Copy so we could, because I can only respond to how many thousands of planning applications we as an NGO respond to because a lot of the statute agencies are at capacity. So, we have to try and find ways to prioritise and sift and stratify like how we reply. So, having data layers like that, model data layers that can say, well from this model, which, yes, from all caveats and issues of the other models but it’s-- Alright one of my favourite target lines I use people pull upon because they think I’m being negative, but it’s me being positive. I say well it’s better than nothing. Because the alternative is we have nothing. So, when people complain about it. I’ll say, yes but, that is better than nothing. Yes, a model could be wrong, but at least it something. And its basic methodology, to give you something work with. So, stuff like, any kind of model species distribution, a lot of the [unclear 0:34:33] will complain but, but we don’t know. So, I’ll say well you can go and find out, you’ve got somewhere to target. You could go and check if it’s there. In the meantime, when I’m talking with conservation planners you can say, let’s try stopping developments that would be detrimental towards these species in this area because for all intents and purposes, and best available data, it looks like it’s potentially important for them. So, it’s--

**INT1: Yeah. So, how do you view, in model data, accuracy versus completeness?**

DEU01: Oh, good question. It depends on the specific use I have of that model data.

**INT1: Okay.**

DEU01: So, if it was looking at site level, or like on a finer scale. The I’d be very interested in the accuracy of the model assumptions. But if I’m working on strategic projects, so say looking Yorkshire wide, then I’d be more the completeness. Because then, there’s actually a limited coverage, it would be of less value to me. So, it-- Yeah, both equally, it depends on the question that I’m trying to answer at the time.

**INT1: Okay.**

DEU01: So, for local site based stuff, accuracy. For like bigger strategic stuff, it would be completeness.

**INT1: Okay. Yeah.**

DEU01: I do that a lot. Um. I’m very in the space of being broad camps than I was in, depends on the question.

**INT1: Yeah. But in some ways, it’s difficult to get the accuracy or it’s difficult to get the completeness at a larger scale without having the accuracy scale.**

DEU01: Yeah. I mean it’s-- So we’ve got the upland peat restoration project at the you know, Yorkshire Peat Partnership and like I was involved in the very early days when we were looking at using like, the random forest algorithm within the R package. And then because somebody, there was a PhD student at Leeds Uni, who managed to use it to classify. So, they did an automated classification thermal imagery using that to NBC level which was amazing. But when we looked into it. Um, she, that PhD student was working on a like, a like single plot of, you know a discrete site. So, she-- The amount of control points and data she’d collected to feed into the model to have a high level of accuracy, was just not feasible for possible for us to do at a wider scale, for all uplands across Yorkshire. So, we compromise on accuracy and base it on, by taking less control points. Because we need completeness. We need to run it across, you know the Yorkshire [unclear 0:37:01]. It’s not possible to collect that level of control points. Basically, you might as well map it manually. It kind of-- made the whole modelling procedure pointless, because the amount of data you collect for that level of accuracy, well essentially, you’re mapping everything anyway. And so, there was that trade off. But obviously it is good proof of concept. She showed it could do it. Um, from our point of view, the data, the other data, not all the different data layers needed to have that level of accuracy across the comprehensive scale we needed. The data didn’t exist. Or the [unclear 0:37:32] data wasn’t existing or if it did, it’d take a lot of time to collate. So, it’s kind of-- yeah. I mean my job is always based on the compromise of-- you know. If I’ve got a luxury of time and resources and accuracy. Absolutely accuracy, because you don’t want to make decisions off things that are inaccurate. But part of that-- A lot of my pragmatic approach to things, I have to take a lot of the time, I end up taking you know, completeness and comprehensive data sets over accuracy just because its, I need something to work with often.

**INT1: So, I have to show you some examples of [unclear 0:38:11] which the projects producing at the moment. So, these are obviously very early stage at the moment. Um, so they are um, it’s a couple of different Burnet Moths, which they have modelled. So, let me share my screen so that I can show this to you. So, can you see that okay?**

DEU01: Yes.

**INT1: Um, so let me maybe just make it a bit bigger, if I can. Okay, and then I’ll, um, oop-- Okay, so we’ve got um-- this is a six spot Burnet which is modelled at a national scale. So just looking at those images. How would interpret them? What do you think that they are showing you?**

DEU01: So, one’s obviously the probability of find it, so the green areas are where you’re most likely to find it.

**INT1: Yes.**

DEU01: And there’s a variation, not sure what that’s? Is that showing the variation in terms of the records?

**INT1: Yes. So, um. It’s actually-- It’s the variation within the model. So, what they’ve done--**

DEU01: So, that’s how much they, the confidence basically they’ve got?

**INT1: Yes. Exactly. Yes. So, they’ve done that based on existing records of six spot Burnet and then they’ve run the model, just using those points where they know that there are existing records and looked at how much variation there is the model output based on places where they know there are existing records.**

**[0:40:04]**

DEU01: Right.

**INT1: So, we’ve got this at the national scale. And then there’s also, the same distributions at-- or the same outputs at a local scale. So, this is a point and radius, centred around Wallingford.**

DEU01: Yes. There’s a lot of mixed variation in the, the big block areas where their seen. Although, so this data, the variation’s based on existing data?

**INT1: So, the variation is based on existing data. Whereas the probability distribution isn’t. But obviously it’s based on our understanding of where you’re likely to find six spot Burnet. So, it’s, the model is based on 21 classes of landcover data, plus 19 different climatic variables. Then the knowledge of that species.**

DEU01: I like the probability one because it’s-- it gives you that nice target areas. I guess the problem with the variation one is-- it’s just my questions are—or alarm bells I have] is, how comprehensive was the data that that’s, the variation it’s assuming that everyone’s, that that data sets complete. So, then it’s tell you, if the model was right, then oh well here, in big areas of where the green bit is on the bottom right. They’re areas in that with more variation but areas of high variation. Although that’s probably down to survey I’d can imagine. Well, the fact that there’s more data in the actual collected data should say the model’s essentially-- Well not saying the models wrong but it’s assuming the models incorrect in this case because there’s no, it says probability there but there’s no records for it.

**INT1: Yes. So, the idea mainly, with, of having this measure of variation is that it then allows us to direct recorder effort.**

DEU01: Oh, right.

**INT1: You know, we think it’s really likely that there will be six spot Burnet found in this area. But there’s a lot of uncertainty around that. So, if you could survey in that area, down in the bottom right-hand side. Then that will--**

DEU01: Yes.

**INT1: Is-- is that-- So, looking at this, this model data which obviously, at the moment it’s just the model output. What would be helpful for you in terms of interpreting that data or what would be-- Would there be aspects to the way that the data is modelled that would make it more useful for you?**

DEU01: Um. As-- as a recorder or as a--?

**INT1: As a-- Well let’s-- let’s think about you as a data end user first and then we can maybe think about you as a recorder as well, seeing as you have that role.**

DEU01: As a user-- I like-- Yeah, I’m trying to think whether I’d have it [unclear 0:43:20] prefer a vector. Like a more-- [unclear 0:43:24] the same scale, rather than, like if it is, here’s the polygons of where it’s expected. Which I know is quite hard because it’s on a sliding scale. But you know, in terms of particular targets areas. But then, yeah, because I guess it’s saying some areas got potential. So, I’d be interested, I mean, not necessarily the six spot Burnet but you know, you’d have this kind of map for you know, a species of, the wild Kite species, on a site and it’s encircled within a site. So, you could pick out that, obviously the big dark green areas, oh yes we know that’s a stronghold of them. But we might have another field or plot of land that we’re managing to trying and get them there. So, it is interesting to see, you know, oh is in the red so it’s saying that there’s no chance of it there. Why is that? It would be nice to either drill down and click and for the composite is to know which layers contributed towards it. You see what’s missing since I- There’s a lighter green. So, why is that lighter green, is it down because it says, the land covers wrong, the hydrology is wrong. Is it, is it something that we could affect change on? Make it better. I mean, similarly we had a conversation with um, what is it? [conservation charity] and they are doing like a wildness indicator map and other outputs similar to this or based rather than it being on the probability of a species they’re doing it on, on wildness. But you can, you can tease the layer apart, because they’ve got all the composite layers that make that wildness. Like you’ve got all the layers that make the probability. It’s having access to the underlying, even if it’s like a [unclear 0:45:09] aspect. But where they have different products underneath, even if it’s problematic groups it’s in, based- This is a probably based on physical features, this is based on land cover, this based on animal management. So basically, you’ve got one that says, this is a probability and there’s, you know it’s down to the climate envelope. So, it’s stuff that you can’t affect any change on. But having one where probability says, no they’re not there yet, but it’s down to something that could be changed to make them there, i.e. land cover, would be useful for us using it as if we’ve got a target-- If we had a project looking at six spot the next. We we’re wanting to create a new habitat for them. We wouldn’t want to waste time trying to create habitat somewhere that it wasn’t possible or tying to even join the, the core areas. Because it-- it, especially with all our species, like the landscape modelling where we sit in a workshop and if wanted to create a new landscape or, landscape skill conservation. Everyone naturally will just join the dots. Oh, well there’s a green blob there, with a join between them. But like when I was [unclear 0:46:11] yeah, but it might not be physically possible to, because it could be a big urban development or it could be that the, the geology is not soil type for plants, it’s not right. But obviously people originally joined it. So, it’s having something that can hardwire into the, you know from a probability- From a distribution point of view, this is-- it’s not now and never will be.

**INT1: Yes. So that’s-- that’s one of the things that they’re trying to do at the moment is to add other layers of information. So, from the point of view of recorders, they are doing things like adding access, so the public footpaths, bridal ways, minor roads, so ways-- And also mapping on public open space. So, you know where you would easily be able to access in order to go and survey that bit. But from a point of- From you point of view as a data end user, are there things like that, that would be useful to show in connection with the data?**

DEU01: Um, as an end user, that would be potentially one thing to target volunteer surveyors, then yes, the accessibility areas is. Um, as an end user that might be looking at just our bits of land or project sites. I’d not be bothered about accessibility then. If it was looking at, we want to create habitat or join up populations, um. Because access wouldn’t really, you know, that’s actually purely just for the volunteers, survey-- but from a we want to join it up, I’d be worried that that would skew it too much around- Because obviously we work with landowners, although they don’t make the accessible, they might want to create a vast lovely hay meadow or whatever habitat. So, I’m more interested in the physical, all the layers down to actually what, what makes it suitable or not for the species?

**INT1: Yes. Okay. Right.**

DEU01: Would be useful.

**INT1: Um. Need to find my questions again now. I think I’m gonna stop sharing Okay. Okay. So, a quick question about the scale of that output. So, having-- having data available at that kind of 5km scale and the resolution within that. Is down to, I think it’s about 100 meters, is that the kind of scale that would be useful to you?**

DEU01: Um. Yes, for projects, so say if that was a-- Which actually [unclear 0:49:05] I try to do something similar to other places and it didn’t work because their habitat climes are so precise, the scrub and structure, that we don’t have the data to do that. But that’s what I wanted to say, where could they have-- Where aren’t they? And where could they be? To then target our conservation work. So, I think 100 meters would be perfectly acceptable for-- We would give the option at a site level but if the site was within that. You know that, oh I’ve got plenty. So, in terms of for targeting where, when we’re building projects, to what projects sites, what land manager want engaged and for me it would be, yeah, perfect. You wouldn’t want to go too much further down, like it would just be distracting.

**INT1: Okay. So, I think, I think we’ve probably run to the end of the questions pretty much. But is there anything else that you’d like to tell us. Particularly around that kind of relationship between model data versus raw data and how they-- How they are relatively useful to you?**

DEU01: Um, I think model data is more useful because it’s, the fact that it can produce a comprehensive output and that-- yes, the reality is, with the best will in the world, you’re never gonna get-- especially for Yorkshire wide recover, the raw data you want. Yeah, I mean, water voles, otters and [unclear 0:50:26]. Um, to-- to be able to predict which areas are important and you know, from our point of view, you know campaigning or projects or planning responses, um-- You never have the raw data that maybe could tell us, oh it’s important for otters or water voles. What we find really useful is that on this model which can stand up to scrutiny because it’s got methodologies and it’ll say what data layers have been used, um-- That can then be used for those big decision making and influencing and publicating for things. And you can refine it. So, all the um, you know, I mean it’s the same with EDNA the, a lot of the old school naturalists hate it and they’ll complain about it and say you can’t, it’s ridiculous, it’s wrong. I say-- well, It’s getting cheaper, it’s getting better and the issue is that you don’t have to [unclear 0:51:14] and wait for an expert two or three years to identify anything. Particularly not, if you’re really interested in all individual species, which is nice [unclear 0:51:22] if it’s looking assemblages and we’d come up with a habitat type or something. Then it’s absolutely, you know the scale which can work and operate is much more useful and beneficial than relying on those individual records. But the model can be complemented by target surveys. So, I think it’s good that people are, have passion and hate them, or some people hate them. Because then you can say, well come along and volunteer and collect data to prove it’s wrong. Can’t argue because you played devil’s advocate and it, it’s quite good because I can-- I did similar in my last job, well I say last job 10 years, when I worked at [environmental agency] doing fishery surveys and we’d commission fishermen who would do like a standard grade over the Irish sea. And the skipper of the boat refused point blank. He didn’t want to go and do the crab surveys that is near [a nuclear site]. You get nothing there, you get nothing there. It’s like, yeah that’s fine, we’re paying you to do them, we’re gonna do them and sure enough the grab samples came up with other interesting stuff. Because that that perception was, that there’s nothing there. And you’re like, well we think there is. And we’re here to test whether or not there is. And sometimes you’re wrong, sometimes you’re right. And I think it’s quite good to get-- The fact that people feel pressure either way, is good, because it means we’re engaged with it. Even if it’s to try and prove you wrong. But I think it’s, you know, it needs that to refine it and take [unclear 0:52:39] so well, it’s based on the best of environments at the minute. It’s not, you don’t have the best environments, that’s why we’re modelling. And then if it’s wrong, if it gets people to go and record some more. So, it’s the same with um-- like species distributions like, that’s why I need orthopter stuff. And generally, you’ve got their record out of it. You know [a Foundation] have. So, it’s reasonably-- And it’s a relatively um, you know easy group [unclear 0:53:03] other species, quite charismatic for invertebrates. So, you can relatively easily get people to record them areas. But obviously, at the minute people just go to the usual haunts. The local [unclear 0:53:14] on the doorstep. And It’s not that people aren’t willing or interested in going other places, it’s just they don’t, they’re not posed that question, or they’re not asked. Oh, could you go and check here, because there’s a [unclear 0:53:24] and it should have, you know, like Roesel’s bush-cricket. It’s like expanded north in the last couple of years, you’re getting them up there by [town]. And then, you know obviously big long-- a long flight. There’s no data really in between. There’s some records actually of um, in York at the, I’ve forgotten the name of it. [a park] in the middle of York.

**INT1: [nature reserve]**

DEU01: [Nature reserve]. Yes. Yes. So, a volunteer that was with us. Was a volunteer at [Nature reserve] and he sent me a, a video clip, saying, oh this sounds like a Roesel’s bush-cricket, is it? I went, yes, it is. And I had one at [Village] that I guess really, it’s, a lot of people can’t hear it now. But like, there’s so much missing data because people just, either assume everyone else has recorded, and it sometimes takes a model on the distribution map, that kind of, make people think, oh that’s not right. Or for them to go and sense check it. But yes, I think if I had to choose. I’d probably go for the modelled, just because of the, the scale that it can cover. It can be way more useful. And I’d much rather have a model distribution that, may be wrong, than no clue on the distribution at all. Because you know the data.

**INT2: Yeah.**

DEU01: So, to have the same model of distribution like that for the Roesal’s bush-cricket across Yorkshire, I’d really like because then you can target other surveys. So, well these other sites should have them as well.

**INT1: So, the next part of the project is to codesign with the people like you, the outputs of the model and what kind of outputs they should be, what sort of form they should take? So that they will actually meet the users-- Meet the needs of the people who will be using them. So, would you be willing to be involved in that? Would that-**

DEU01: Yes. Yes. Again, it depends on which users, because see like, [unclear 0:55:15] might be assured I like it to either scale but I was thinking from recorders, it means you almost as too torn of yes or no.

**INT1: So, there’s a separate process for recorders which is going on. So, when I showed you that, that output which I’ll just go and find it again.**

DEU01: The recorders are only interested in where are they? Or are they not? I mean, I guess there’s a chance of the probability that they might be there obviously changed but, we almost like don’t need to know when you send them to a site with low probability that they’ll be there. Because we want to control the check, and then you might find that, oh blimey that’s useful. Because then if they, they tell them it’s low probability they’ll not as thorough check.

**INT1: Yes. So, this is--**

DEU01: You say this is where oh it’s a really high chance. They’ll search the end of the earth, they’ll spend all day, they’ll email me back, saying I spent weekend. I went back there and I couldn’t find em.

DEU01: If I told them, it’s a low probability site, they’ll have a half hour walk around and say, yeah it wasn’t there.

**INT2: Yes.**

**INT1: Yes. That’s true. So, we’ve got--**

DEU01: I’ll spend a lot of effort not, trying to not pre-empt them and say to them and say to them, and you know I’ll say to them, don’t have any prejudices, just go in blind.

**INT1: Yes. So, what they’ve now tried to do is to take these two things, the probability distribution and the variation and put them together in one image. So, you’ve got something that reflects both probability and the variation. So, the scale will be-- So you’ll know where there’s high variation and high probability in areas. So those are the areas that they are asking people to target. But what they also want to try and do with recorders is to try and incorporate other motivations that recorders have. In terms of how they like to record. The kind of places that they like to record. And what their motivations are for recording to start with. To try and direct them towards places which would be-- Which would have characteristics which are appealing to them. So, it’s trying to combine both, what’s useful in terms of the data, and filling gaps in the data. And also, what appeals to somebody as an individual, as a recorder.**

DEU01: Yes. Because I think that you have ones that would be happy to go to sites that are nice sites and there’s a good chance. They’ll be much fewer other people that will be happy if you sent them somewhere that wasn’t nice. I mean, it’s-- Because our response to recorders [unclear 0:57:55] of it, they’re not a singular group that like, there’s lots of passionate individuals. And you might get the one or two that would be quite happy if you had a- I mean it’s like the CH had the for the orthopter who did a squares map of under recorded of squares and in recorded last in years. And it’s in the Selby Natural History site in Sheffield is [name] who loved the idea of square bashing and looking at which site has, which square hasn’t been recorded this year. Just go there, irrespective of what the site, or that squares like. It could be, it could be barren wasteland or just arable, you know crop. But they’ll go there on the principle of, well I want to say that that square’s been well covered. But the others won’t. They’ll just want, they’ll just want, well I want another nice meadow and a chance to see this. So, it’s a hard one. I guess that, yeah. It’s a point at where it’s to have that product so you can tailor it to all different recorder [inaudible 0:58:47].

**INT1: Yes. And my feeling is that we need to try and tailor it as much as we can to the individual, because as you say then, recorders aren’t homogenous and they have quite different motivations for recording, so trying to tailor it according to motivations of a particular individual, whilst taking into account what the needs are in terms of filling the gaps in data.**

DEU01: So, I was trying to work on like, and even now, like when I’ve had EDNA conferences and there’s this whole issue around you know, especially from raw specialist groups. Like heat maps and your variation map would be skewed towards that, assuming that it is just based on records and not- Is it- Does it stand out against [unclear 0:59:29] that variation map?

**INT1: So, the variation is just, is based on several runs of the model through sites where there are records.**

DEU01: Right. So, it’s not. So, it-- it is potentially skewed by where-- Although I guess not necessarily for the species, but for some species where you’ve got people who go to particular sites because they know they’ll see that species. So, the effort-- So, in the model we look at that site as being particularly-- It doesn’t take out effort. It’ll assume because of all the records that because it’s perfect for the species, whereas it could be suboptimal but it’s just that it’s really accessible for the species. That’s a slight issue. But um, i forgot where I was going there. Yes. But I-- So-- Is to say-- Like to communicate to the volunteers like I do the butterfly [unclear 1:00:22] to try and keep them doing it. Saying yes, I know it’s not great and you thought you were going to see loads of butterfly’s but emphasise how important it is that they keep going there because that place has more, [unclear 1:00:35] trying to communicate that to them and allowing them-- Pander to them too much and say to them, well okay I’ll find another nice site for you to do. But I’ll be well, that’s got little value to me, just a nice site that I know is gonna have you know, common [unclear 1:00:48] or whatever the species. I’m like well, I’d rather you go to a site that you, potentially would--

**INT1: Yes. Yes, it was--**

DEU01: I try-- try and be honest and communicate with them. And which, it depends on I guess, if it’s entry level recorders you kind of-- they won’t be on that, that, you know the, you haven’t had an engagement. But they’re not at, not at that stage yet. So, I’m quite happy to say to them, okay, send to nice places. But anyone’s that, it’s that ten per cent rule, that every other thing you ask for somebody, you have all intention that they’ll go and do it. But I have sort of said, oh, you know-- Which I say [wildlife charity], I would want us to be less law bound and try and engage more with telling people why we need the data or trying to bring them on that journey better, so that they-- You get more people up the ladder towards wanting to do this much robust, systematic surveying. Um, and I think a lot of it comes down to that we don’t always communicate out the advances or why we are trying to do it. Um, like as a-- a Trust not necessarily the science which is a shame. Which is why I like the model outputs because that is usually the, the feature that coalesces people to make them think, oh hang on their saying there, and they’ll go and look to see if they’re there and then complain or otherwise. So, just a very simple map of-- not this because that, the different colours would confuse people. Just having like that kind of singular polygon um, you know. You have a cut off somewhere that says, oh we expect to find this species this here. So, people have that kind of simple boundary to go and look at. Um, I mean, it’s hard to say what cut off you go for but, the probability, I suppose from lime green upwards and I guess some of the yellow um.

**INT1: Yes.**

DEU01: You know that kind of really simple [unclear 1:02:35] where we reckon, we’ll get them. And then within that you could have a list of the public parks, open green spaces and footpaths and say, well look I’m here you could walk within that and find, we assume find six spot Burnet moths and stuff. But um, at least it’s a simple visual cue for them. Whereas I think most people, even internally in the Trust, I wonder like the bird survey maps. I did a heat map with a overlapping bird territories as a [unclear 1:03:03] because it varies. But then I found that it’s easier- Just, they just wanted a simple giant blob essentially saying this is where they all. And then anyone that asks, asks the right questions then I’ll get out the master maps, the heat maps and say, well hopefully, here you go. This is where, you hold their hand through the journey, and make sure they don’t misinterpret it as well.

**INT1: Okay.**

DEU01: But I mean it’s hard with the recording community, because at least with mine internally it’s a [unclear 1:03:31] so far on that kind of engagement [unclear 1:03:35] the ladder as it were of understanding it. If you gave me wider recording community like, even from the [unclear 1:03:42] perspective you’ve got such a range of breadth of experience and then I-- Because there’s some recorders that’ll either be-- You’ve got your [Name] and [Name] now doing moth stuff. So, you know you don’t want to be condescending to them and assume-- But they’ll have such a high level, they’ll be probably really happy to help with the model stuff, whereas others that might have retired from working somewhere else, that you know it’s hard to know. Which I guess to have those range of products at the end-- I can imagine you’re going to have a lot of different products. I mean-- Is the pilot project going to profiling the recording community to find out who they are?

**INT1: It is. Yes. So that’s part of what we’re trying to do with recorders at the moment. Is to work out what types of recorders to target because as you say. There’s going to be variation in terms of the level of willingness to survey different sites from where people survey currently. And the motivations for surveying a new site or a different place will vary according to the recorder. So, it could be about, we know the range of this species is changing and therefore it’s more likely to be found in these sites now, which haven’t been surveyed, or there are no records for. So, now’s your chance to go and find new records for this species somewhere where it hasn’t been found at all. Or it could be more about understanding the value of a particular site in more detail than it is at the moment. So, yes. The-- Being able to typologies recorders to a greater extent will help us to target according to their motivations. Because I think um, from the work that we have done, at the-- Existing work on recorder motivations. Recorders who are motivated by somebody else asking them to something tend to be more at the inexperienced end. Whereas recorders who are more experienced have a much more kind of, personal set of motivations about why they go and record in a particular place. And it might be because it’s more about it being their hobby necessarily than it being about the national picture of data. It could be about having that kind of personal satisfaction of the understanding of a particular species or a particular site. So, yes. It is so variable.**

DEU01: Yes. I mean, we’ve got the [unclear 1:06:29] expert lives at [Village] so [nature reserve] is one of the most biodiverse fly sites in Yorkshire because it’s next door, it’s essentially next door to where he lives. And I asked him to try and do some more systematic surveys of stuff to use that pantheon to get an idea as to-- He was quite honest. He went, no I’m not interested. All I wanna do is improve my reference collection, that he’s sending to [City] Museum. So, he purely was trying to get the, of the current woodradriptan species got him out a bit. You know bit of a wing’s broken off or something. He just wants to replace that with a better specimen to send off to Liverpool Museum. So, even though he’s got all the knowledge and he’s not, he’s actually not interested in doing anything remotely technical. But then there’s other people of equivalent skill and stuff of him, that absolutely love being into this. So, it makes it really hard because then I’m like, well I don’t wanna put off those entry level, he said that he’d be quite happy but you don’t tell them, almost don’t tell them anything other than, oh there’s gonna be six spot Burnet moths there eh. Go to your local park and see if you can see any. And all you do is have a crib sheet, show them how to identify it. You probably don’t want to tell them all the background stuff because they’ll be easily scared off. Then there would be somebody that would want to know more. So, we have this like sliding scale [unclear 1:07:44] and say well, if they ask, then we can provide them more information. But if they don’t, if they’re just happy to walk round there every day. I’ll look out for that for you and tell you. Right to academic, sort of retired academics who um, if you told them that. They’d not even engage in the project. It sounds too low brow to them. So, then you want to tell them all the detail about the modelling improvement and stuff. But then it must makes it so time consuming because all your time is spent doing that, because you’re liaising with them. Which I’ll try and get across to like my managers here saying, I have managed over a 100 volunteers just doing the bird and butterfly surveys. I’d love to all other surveys but- And I’m saying I need a volunteer survey coordinated role, so a paid staff role, whose sole job is, to coordinate volunteer surveys. And I know- It’d be nice if they’re trained ecologists and [unclear 1:08:31] but I said ultimately, [unclear 1:08:33] all their doing is holding hands, liaising and talking to volunteers because an area that we-- It’s only up until recently, up until now [Place] changed with the [wildlife charity] campaign program we’re going into. Is fully appreciating how much effort needs to go into that kind of, advocacy side of recording. And it’s the same with the [Management Agency]. So, like, as a trustee there I’ll have meetings and there’s a lot of what the [Management Agency] does like the bird reports, is reliant on individuals that are willing to do that. But increasingly there’s fewer and fewer people coming forward. It’s like the bird reports, chance in three years’ time. Not to-- Will be impossible to do, because there won’t be the volunteers willing to do it. And I think it’s down to a lack of advocacy that, like while our Trust is always quite good at getting people involved at the lower levels. But we’re needing more of the high levels to bring people on until you know we’re getting you know, the next stage and the next stage and next stage. Some people fall off. And it’s only those that are willing to do it off their own back. The trouble is not others that would have done with a bit of support and help, um. So, I mean I think like, stuff like having these kind of models where it’s got-- We’ve something to use to help or to you know, to guide people to do surveys. Because at the minute-- I mean we’re quite well placed as a Trust with like 40,000 odd members of magazines to improve like, recording in Yorkshire and get more recorders going. But that’s not something you ever engage with, um-- And it’s something I’ve tried to change and hopefully will with the [wildlife charity] stuff because it’s all around the, how the baseline of what Yorkshire’s habitats and wildlife’s like now. But going forward we need to be able to monitor it and the only way we can do that is by having lots of surveyors everywhere.

**[Irrelevant content]**

**INT1: There was-- the only final thing that I wanted to ask you was about other end users of data. So, we’re trying to make sure that our range of interviewees is as complete as possible. So, it’s reasonably easy for us to identify the obvious end users of data like, local authorities and utility companies and consultants. Research interests and the kind of friends of type groups. But are there kind of other users of data who might be less obviously who we might not have thought about?**

DEU01: Um. No, I think you just mentioned all the ones I was thinking of. I think local authorities to use it for their-- what they’ve now got their climate [unclear 1:17:30] to get people out and join stuff. Um. I mean I guess it depends on what the models are from-- what species, because a lot of the-- The initiatives now are doing-- If you get modelled stuff for species that are seen as particular good for carbon devastation and stuff, like say that’s not us then, it’s useful for those that are looking at investigating that stuff and they kind of put things-- And then to help target, oh we’ll buy this bit of land over here because it’s been identified as having probability for a species that is seen as a carbon suppressor. But um--

**INT1: Okay.**

DEU01: But that’s only [unclear 1:18:17] are actually doing stuff at the minute. But if I think of anything I can send you an email. But yes.

**INT1: Yes. Thank you. Right, I should probably let you go on and do other things. Um-- but thank you very much and we’ll be in touch about the coproduction process. To let you know how that going to work.**

[Irrelevant content]

DEU01: You know, it looks good [unclear 1:18:52].

**INT1: Alright.**

DEU01: I’m hoping models because they just need to play with our data. Aye up, here’s a model.

**INT1: Alright, okay. Well thank you.**

DEU01: Right. Cheers. Goodbye.

**INT2: Brilliant, thank you, [Name]. Bye.**