INT: So just should just pop on your screen.

INT: brilliant.

INT: So i'm aware that you work for the [conservation charity]and, but could you tell me a bit more about your role within the organization.

DEU04: So I’m the nature service manager, was the biological survey team leader and we've had a restructure and that's that teams now been abolished, unfortunately, but yeah so I kind of oversee our species and habitat data.

DEU04: that's my.

DEU04: In my spare time i'm.

DEU04: One of the organizers national weevil recording schemes, so I helped to run that national recording scheme, and I do a lot of recording myself.

INT: How often do you go out recording.

DEU04: ,, times a week.

INT: Oh yeah.

DEU04: Well, I mean I guess it depends on the season of you know moment and then, when the summer comes around they'll be a lot of entomology and as well.

INT: So the first section of the interview looks at the purposes for using species records data.

INT: So the first question I have for you is what species record  data, do you use, including species or species groups and spatial extent.

DEU04: The main spatial extent is the [conservation charity] state which is.

DEU04: much better than Wales and Northern Ireland.

DEU04: yeah and that's all all species we’re interested in.

DEU04: And then now sometimes there's a bit.

DEU04: off site as well if we're you know, working with other people nearby or.

DEU04: Looking at landscape projects or other people, but mainly it's it's you know, to do with what's on the national on [conservation charity] land.

sure.

INT: And you could you talk me through what use that data for.

DEU04: it's been.

DEU04: On the site it's been pretty neglected.

DEU04: In the past, and so I started a couple of years ago.

DEU04: And yes, and now it's for.

DEU04: informing us where are important places are which species are important for you know where I need to be focusing our habitat management, what we should be monitoring and we've got particular responsibility to look after important things, and what the impacts of management work might be.

INT: Thank you.

INT: So next one, is looking at the data requirements and So where do you obtain your data from predominantly.

DEU04: Historically, has been the in house team.

DEU04: Of yeah that's that's for the last years where most of it has come from and but again recently so we've we've moved to using our recorders as a main.

DEU04: way of entering [conservation charity]data and we're picking up lots of things through that so we've got about . million records from.

DEU04: I record and about , on our quarter six database and then we've got data agreements with [scientific society], [scientific society]and [wildlife charity], for the national.

DEU04: [species].

DEU04: scheme data.

DEU04: And then there's you know occasional sort of ad hoc bits or download things from the nbn and atlas if we doing a particular site, but you know in what I want to do is get that set up automatically set.

DEU04: main main source at the moment are those dates for for schemes.

Okay.

INT: And what format, does it come to you, and is it raw or as a data product.

DEU04: what's the difference between those two.

INT: The question I got given.

INT: I did have this issue and the other interviews, as well as the flag that question.

DEU04: Well, the data that we create I think more.

INT: To do with model data, perhaps.

DEU04: it's probably raw then yeah cuz obviously the stuff we didn't pass out that's that's our input from our thing and the I record data we just download.

DEU04: The columns that were the fields that were interested in from that data set so it's not kind of it's not been modelled or processed in any way by.

DEU04: People before we get it if that's what that's what I mean.

INT: I think that's what is getting it.

DEU04: has been verified.

DEU04: And the moth the [species] stuff has been verified by [wildlife charity] their volunteers yeah it's essentially it's it's who saw what where and when you know those things that we're getting.

INT: Okay, good.

INT: And the next question is what resolution of data do you use and does this differ for different purposes.

DEU04: We.

DEU04: So we use capture resolution most the time.

Okay.

DEU04: Which is usually what we want, and then we can aggregate up from that, obviously, if we.

DEU04: We need to yeah for us it's the most.

DEU04: The most you know the most precise but meaningful.

resolution

INT: And that's you use capture for most of your work.

DEU04: yeah because yeah it's yeah it's almost never that we don't.

DEU04: come when people have given us a one k or ten k in summary.

DEU04: And that's when they get difficult, but you capture is most of the stuff and then we tend to do what we.

DEU04: want to do with it, because a lot of time where either interested in bits of a of a [conservation charity] place or the whole place and, obviously, nobody captures data resolution of a [conservation charity] property boundary.

INT: For that I guess that can be quite difficult when when they give you something else.

DEU04: yeah I mean the trickiest thing is trying to work out if if you know it's come to us at one k revolution and half of that one k square is inside our badge and half is out, is whether or not it was on our land.

INT: Okay yeah.

DEU04: that's why yeah capture resolution is always better if that's finer.

INT: So do you do any processing or analysis of the data yourself, and if you do, can you describe how you do that.

DEU04: Yes, we take.

DEU04: The fast, but yes.

yeah.

DEU04: When it comes into us.

DEU04: We then marry match that up with things like conservation status, so that we can get that list to say all the.

DEU04: Regular species, a place or legally protected species in area, which is what we want to know if we were doing work that will planning management.

DEU04: And so often then we’ll take some of the data, so we might just want the last you know when was it last thing here so to make sure that we it's still there, or.

DEU04: All aggregated by property.

DEU04: to produce a report saying you know numbers of species at places numbers of species that had been seen how many.

DEU04: Rare or threatened species of regard places or things like that we do largely and then we can we do we have that might involve intersecting it with our data, like our habitat data.

DEU04: and property boundaries and other things if we're.

DEU04: using it to look at know what's where on different parts of the estate.

INT: Okay.

INT: So the final question of this section is what information do you use to inform your interpretation of the data so, for example, how do you deal with data gaps.

DEU04: largely by sweeping them under the carpet.

DEU04: which I think you know is largely the whole point of the decide project isn't it, yes, yes.

DEU04: Almost all the so some things we get a lot of the [species] monitoring transect data from I record but almost everything else is just ad hoc record and.

DEU04: So it's just such a huge reflection of survey effort and so yeah we tend to just produce these.

DEU04: These products and then.

DEU04: always have at the back of our mind yeah but survey.

DEU04: that's really the only way we've got at the moment of coping with the data with so many different.

DEU04: sources and so many different.

Taxa.

DEU04: So i've done we've done a little bit of things like with because the the BSPI databases, you know that's really huge and also.

DEU04: A lot a lot less gappy than a lot of other things cuz we know there's been sort of some effort to get all the Atlases done.

DEU04: And even with our own in house data almost every size has at least a visit by an entomologist which and.

DEU04: A survey, you know a sample which has one for a site is not great, but it's still better than almost any other national.

DEU04: organization have.

DEU04: Yes, and with the plant stuff yeah we can.

DEU04: Sometimes, look at that an exercise I did recently the pan, that was coming out of the vascular plant data was reflected in the other data, to which kind of gives you confidence and, yes, there probably is an underlying thing here.

DEU04: And then you know kind of matches up with what you know about where important habitats are, and that gives you some confidence in it, but it's largely a lot of feeling and guessing.

DEU04: And fumbling something around.

INT: How do you consider confidence accuracy and precision.

INT: To.

DEU04: is that just the question or I need to ask you what it means.

INT: In terms of.

INT: The interpretation of the data.

DEU04: yeah i'm not sure what.

No.

DEU04: Confidence we've.

DEU04: We get the verification scores from irecord, we also have our own verification score things that haven't been done so we've done a lot of checking of the rare and scarce of things and to make sure we're confident in that data set.

DEU04: and, similarly, with the spatial location as well, to make sure it's what it purports to be and it's where.

DEU04: it's where we think it is.

DEU04: and beyond that i'm not sure.

INT: Though that's great.

DEU04: What happens.

INT: Though Thank you very much thank you.

INT: The next section looks that data communication.

INT: So once you process, the data, what do you do with it.

DEU04: So for.

DEU04: Our data that we've collected internally is put onto the nbn atlas.

DEU04: And that's under a CCC license so anyone can use it.

DEU04: and

DEU04: The other the other products that we are mainly internal reports or they'll just feed into.

DEU04: External things they might feed into funding proposals or.

DEU04: Marketing and communications work with partners.

DEU04: But the main uses so main the most frequent use is probably internal reports and communications which is not necessary to say that's the use, that has the biggest you know happy to most people but.

DEU04: yeah the stuff that goes out tends to be quite device, you know just be a sentence in.

DEU04: Your sentence in the proposal, saying there were .

INT: yeah.

DEU04: Extra species here or something like that.

INT: are you annoyed by that well.

DEU04: Because we are working on it.

DEU04: And the thing that I find is.

DEU04: most frustrating is.

DEU04: Is today's from other people often comes with restrictions on that make it extremely cumbersome and unwieldy to try and manage all that and make sure.

DEU04: Everyone seems very guarded about data which, I think, because some people rely on it for their funding I kind of understand, but you know.

DEU04: it's just annoying if you want.

DEU04: that's why I put my day say that CC zero, partly because I think that's really good people and also it says, I don't have to then deal with loads of request can we use it.

INT: Thank you.

INT: that's brilliant.

DEU04: yeah some of it actually yes goes into.

DEU04: You know other recording schemas.

INT: Okay yeah.

INT: So.

DEU04: You know we've.

DEU04: we've continued to that international atlas projects and.

DEU04: Other things, but our main our main response you know, our main way of getting that to people is by nbn atlas, so we don't.

DEU04: I don't know.

DEU04: When it's gone to you, but I know you know.

DEU04: there's been millions of downloads of our data from there, so I know it's I know it's being used, but I don't know exactly by WHO what.

INT: When you talked about recording schemes is that local recording schemes or more on a national level.

DEU04: Because I work at the head office I tend to deal with people nationally.

DEU04: Individual properties have other arrangements with.

DEU04: local environmental record centers and local natural history groups, so I do know stuff goes out locally, I know stuff goes out locally, that I don't know about.

DEU04: I know it happens, but I don't know where and what scale.

INT: So okay.

INT: So i'm just going to move on to data aspirations now.

INT: So how could the data be improved to help your decision making.

INT: And would it be helpful to have data at a higher resolution.

DEU04: Yes, and the second one.

DEU04: So if we had a more comprehensive data sets if it were getting more of those records that are currently not picking up.

DEU04: That would be useful, and then.

DEU04: Then, the main problem is the one you've mentioned about yeah.

DEU04: How do we account for survey effort, and you know the gaps and not knowing where.

DEU04: Whether whether to negatives are.

INT: is there any additional information that would help you to interpret data.

DEU04: I imagine there is but I don't know what.

DEU04: I can do more easily that someone else knows.

DEU04: yeah so we just talking about species data.

INT: Yes, yeah yeah.

DEU04: yeah I mean a lot of the things I think we use we do take you know, we make quite good use of, you know things like ellenburg.

DEU04: values and plant at.

DEU04: Data set Pantheon.

DEU04: Things.

DEU04: But other other well well researched sources of you know, trait information and.

DEU04: would always be useful.

DEU04: More.

DEU04: don’t know whether more red list and can obviously only a small portion of species have a red list at the moment but.

DEU04: Having that for a great variety of species could be useful, but it seems like we're already pushing that beyond where it should go for.

DEU04: Law, the register recent invertebrates and fungus groups are just based on so few records.

DEU04: you do wonder how useful that is.

DEU04: The alternative is it completely neglected so.

DEU04: yeah at the moment we use it, but.

DEU04: i'm not sure how how sound, it is.

INT: OK.

INT: So i'm just going to move on, finally

INT: So, focusing in on what model data.

INT: So, how would you feel about model data, instead of raw data.

DEU04: It would be exciting wouldn’t it.

DEU04: yeah that’d be good.

INT: And how would this affect how you interpret the data so i'm gradients of accuracy against completeness.

DEU04: I don't think I understand that.

INT: we'll move on.

DEU04: yeah are you saying that you know if you're.

DEU04: If you're collecting or interested in data at meter resolution you won't have a bigger scale as a fewer modeling one km.

and

DEU04: So that that would depend on the questions that we're asking, but for us, I think.

DEU04: If we're looking at what's happening.

DEU04: On the ground, it's probably more useful hundred meters or below because that's the kind of sizes of the passes of land that we're.

DEU04: Talking about that and but.

DEU04: Looking at a more.

DEU04: So, in terms of helping with things like a red lists, if you are modeling at say km or tetrad level, I can see that be very useful for helping us have a lot more confidence and whether those flat assessments.

DEU04: are based on.

DEU04: observer effort or or something more real so that would be very useful.

DEU04: So I think i'm time in most of most of he kind of yeah there are models that will fit what your your outcomes are.

DEU04: yeah.

Okay.

INT: that's great so just the final bit.

INT: i'm going to try and show you some examples of modelled data outputs.

INT: Which they've created on the decide project as prototypes.

INT: So i'm just going to share my screen.

share.

INT: you're able to see that.

yeah.

INT: Are you able to interpret that.

INT: On the left one on the left.

INT: Does it make sense to you.

DEU04: yeah it looks like i'm finding whatever six five or six Bob burnett.

DEU04: And with a higher probability and the greener areas.

INT: yeah absolutely yeah that's great yeah lovely and simple.

INT: And then, this one at the bottom left is the same around the point five kilometer points around Wallingford.

INT: yeah and now i'm just gonna go, so the one on the Right does that make sense to you.

DEU04: no I don't know what that means.

INT: So i'm just going to give you the description that i've been given.

INT: By the creators of this.

INT: So the one on the right is shows the variation at these two scales, so the variation is calculated using a sample of the background data to give a range in the predicted probability.

INT: So in this case the model was run times on different data samples, which includes some points, whether the target species records and some whether our records other lepidoctra species.

INT: But not the target species.

INT: Does that make it a bit clearer on.

DEU04: So is that telling me then.

DEU04: that's.

DEU04: So i'm kind of interpreting that as it been kind of like a standard deviation on the.

DEU04: The one on the left and we're going yeah so the green have a more variation you've got in those different runs.

DEU04: yeah and that for the less confidence we have.

DEU04: In the data.

yeah.

INT: that's good.

INT: just got another quick question.

INT: Is there information that is not shown in the images that would be useful to include.

DEU04: yeah, but I think, as it is it's quite.

DEU04: it could get cluttered.

INT: Okay yeah.

DEU04: I mean it depends what i'm using it for if i'm using it just to get you know, an idea of where.

DEU04: Where there are more [species] then that's fine.

DEU04: As it is, and you know if we were if I was using that data I would.

DEU04: Totally want the.

DEU04: The data, and then we can put it in our maps with whatever else we need to want to do overlay on top of it so um yeah, so I think the answer is probably, yes, but as an output, I would be I would find the data far more useful so that I can make my own map.

INT: Okay yeah.

DEU04: Because you mean you mean things like rivers and mountains and contours and that kind of stuff.

INT: So.

DEU04: Is that what is that what you mean.

DEU04: yeah.

INT: I think yeah.

yeah.

DEU04: Well, whoever you talk to, or have their own ideas about that, so it seems it's much better to just make something either this where people have a control over what they can add in or or give me the data.

DEU04: map out of it.

INT: that's good that's very interesting and so i'm just going to stop sharing this now.

INT: So i've asked all the questions that I wanted to which is great, and was there anything else you want to tell me it's all about the project itself or day to use.

and

DEU04: I think, so I mean it's it seems yeah we really interested to see what comes out of it it's a big big gap.

DEU04: In what we can do at the moment.

DEU04: Whenever i've seen this.

DEU04: model distributions for.

DEU04: Things that are reasonably well known, they always look pretty pretty good and usable and.

DEU04: I think my question is how well does it work for the much more under recorded groups, which is the things that we’re.

DEU04: interested in, because the models i've seen for those in pretty.

DEU04: consultants be pretty wacky.

DEU04: And seem to be very.

DEU04: You know if you've got so few data points is there anything you can do.

DEU04: And if there isn't.

DEU04: Do a.

DEU04: Are those species, essentially, not very useful for us to know about.

DEU04: And if so, is there a better way that we can take care of their.

DEU04: needs by looking at you know habitat use and niches and things like that.

DEU04: And the.

DEU04: correlating those things with.

DEU04: yeah I was about to say something which didn't seem to make sense, because you will have used environmental variables, to make the model won’t you rather than.

DEU04: correlating environmental variables is not the right things today because that’s just getting back to where you started.

DEU04: presumably as part of the modeling process, you get an eye, you can get an idea can you have how strongly associated they are with different types of habitats and.

INT: Yes, yeah.

DEU04: yeah so that would be pretty useful.

INT: Okay that's kind of.

DEU04: A good thing to get out.

INT: And so just My final question for you.

INT: The next stage of the project would involve working with people to co design.

INT: The data visualizations.

INT: Would you be willing to get involved in this work.

DEU04: And yes, unless unless you think i've said it all already.

INT: Now it's great.

yeah it would be useful.

INT: I think more in terms of the actual modelled data itself and you'd be willing to.

DEU04: Help by design That would be good yeah yeah.

DEU04: particularly useful for us.

DEU04: That level.

Excellent.

INT: Well that's everything I wanted to say, and was anything else.

DEU04: and

Good luck.

DEU04: really useful work.

INT: Excellent well I hope we can collaborate with you in the near future.

INT: And in terms of getting in contact with you is the email address that we, is that okay to contact you on.

DEU04: probably the easiest yeah.

DEU04: yeah.

it's brilliant.

INT: Okay well thanks again mark and have a good day.

DEU04: Thank you,[Name] Thank you.

INT: yep take care.