

Webinar 2: Questions and Answers

Below are all the questions submitted through the Q&A function and the chat function relevant to content of the talks and to iCASP: not all questions were answered and some questions were answered live during the webinar rather than as written answers through the Q&A function. Questions could be answered by anyone, so the responses given here are not necessarily provided by iCASP

Question: Where do we find the data for specific areas for Soil quality. I would like to understand Kirklees district better if possible? Thanks

Answer: Use <https://magic.defra.gov.uk/MagicMap.aspx> and select Landscape/Agricultural Land Classification (need to zoom in to see)

Follow-up questions: Is the underlying datasets also available? I am looking at the site now. We are looking at GIS mapping various issues.

Answer: <https://data.gov.uk/dataset/952421ec-da63-4569-817d-4d6399df40a1/provisional-agricultural-land-classification-alc>

Answer: There is also the soil survey of England and Wales, now long defunct but subsumed into the Nat Soils Research Inst (NSRI) Cranfield. There is a detailed soils classification based on physical properties, not capability. Maps are available at 250,000 scale but many areas at 1:25000 scale.

Question: As a quick aside, is anyone thinking about COVID-10 and weather changes going into Autumn and Winter and the potential impacts?

Answer: iCASP have been considering post C19 project ideas. We would welcome suggestions and further ideas for catchment solutions we can help with

Question: Has there EVER been any formal soil monitoring or evaluation and if so, how long ago and how comprehensive? If so, it would provide very useful comparison to present soil quality.

Answer: Possible starting point is Countryside Survey from 1978 onwards. Not sure how many are in Humber or if they can directly compared etc. but this is a start?

<https://catalogue.ceh.ac.uk/documents/79669141-cde5-49f0-b24d-f3c6a1a52db8>

<https://catalogue.ceh.ac.uk/documents/9d1eada2-3f8b-4a7b-a9b0-a7a04d05ff72>

<https://catalogue.ceh.ac.uk/documents/85c71959-0f7c-4f04-b3a7-152673107a85>

Answer: Also the data from EU LUCAS soil survey from 2009 and 2018

Answer: This is the link to countryside survey <https://countrysidesurvey.org.uk/content/soils-report-2007>

Question: They talk about "limiting grazing", but are they going to reward grazing practices that can enhance soil health, e.g. mob grazing?

Answer: There have been some really good results from cover crops grazed off by sheep in Hereford last year. Excellent NP&K levels, good biomass figures

Answer: UoL have been visiting dairy farms in Cumbria that are doing this and they have had great results as well. We just need to collect the data!

Answer: The proposals for Tier 1 funding are still under discussion and if evidence emerges to support particular interventions having very positive results that are likely to scale to national scale I am sure Defra will be open to making further adjustments to the scheme- They do want a fairly simple system, but one that has a strong evidence-base.

Answer: What if there isn't enough data/evidence yet, given the multiple factors like soil type and past use, etc? I hope they will fund the most promising and monitor results!

Question: As soil monitoring and sampling is very intensive and expensive, how would you implement a nationwide system to gather this data?

Answer: Soil sampling is actually very easy and farmers send in soil samples regularly - they are required to do this at least every 5 years. It is my understanding, though, that the data is not collected centrally and made publically available. I'm not sure where it goes!

Answer: I guess it depends what type, how much and to what depth, you are sampling. Collecting samples at 30cm+ depth is harder than at the surface. How many samples do you need for one site?

Answer: I think they send 5. I don't know depth - but something is better than nothing....

Answer: Farmer's soil test are private to them -but a summary of all soil analysis carried out by a number of labs is published every year - see <http://www.nutrientmanagement.org/latest-information/news/paag-report-on-soil-analysis-2019/>

Answer: Soil changes at depth (below the layer of cultivation) take place quite slowly so deep soil samples would only need to be taken every 10-20 years, whereas soil samples at the surface might be better sampled every 5-10 years. For soil; quality monitoring there is little point in sampling at a frequency of more than about every 3 years- we found substantial, but just statistically detectable improvements in soil quality to 15 cm depth in long-term arable put into a 3 year grass-clover leys

Question: Could the enhancement of Soil condition be included within the new parameters for OM4 (EA Partnership Funding)?

Answer: I don't know the detail of the proposals here- but agree that soil quality and its hydrological functional improvement does need to be embedded in flood risk reduction schemes- there is still insufficient recognition that different management of lowland soils can result in very large functional differences with respect to water infiltration rates and water storage capacity. Soils with poor aggregate stability tend to slump and compact when wet - and this is a widespread problem for intensively cultivated arable soils.

Question: What contribution can holistic planning grazing make to soil health and are there any farms in Yorkshire making use of this regenerative agriculture practice?

Answer: Yes - lots are engaging with this and sharing findings with other farmers

Question: The Nutrients Action Programme (NAP) 2019-2022 requires a soil analysis to demonstrate crop need before applying chemical fertiliser. Does anyone know where this data will go...?

Answer: This is the link to countryside survey - soils report
<https://countrysidesurvey.org.uk/content/soils-report-2007>

Answer: To the farmer I imagine –

Answer: Indeed. They must be having to show that they are doing it to show compliance, so I hope they also report to a central database!

Answer: No I don't think. The farmer has to record how much fertiliser he applies to each field each year and show it links to soil test recommendations. There is no central database

Answer: Yes, I know. I'm just hoping that this new nutrient management requirement might offer an opportunity to change that and collect the data!

Question: Studies of soil health - the SoilCare Horizon project in the Netherlands should be finishing and reporting soon (2021). <https://ec.europa.eu/eip/agriculture/en/find-connect/projects/soilcare-soil-care-profitable-and-sustainable-crop>

Answer: And their website <https://www.soilcare-project.eu/en/>

Question: How did the farmers get paid for the different levels of soil health?

Follow-up question: Is that enough to make it worthwhile for the farmer to make changes to their farm practices?

Answer: Just a follow on to my answer. The National Trust are also paying farmers for a pollinators option in our Payment for Outcomes Trial. This is an additional payment so both payments are available for the same field parcel. Land management changes which benefit pollinators will also affect soils in a positive way

Follow-up question: Have you calculated the staff spent with each farmer?

Answer: I work on this project full-time. We haven't got a definitive figure in terms of staff time but as the project has progressed the input for each farmer has decreased as they become more confident with assessments

Follow-up question: I've been hugely impressed with the NT approach and nat. policy to NFM, land management and ecosystems in the last decade. Fantastic work and keep it up. Let's hope the results and benefits are noted by central government and used as an example of best practice!!!

Answer: Thanks very much, We are feeding back all our findings and experiences to Defra so hope it is of value as ELM develops

Follow-up question: Re ELM, I just hope the delivery matches the rhetoric. I'll refrain from holding my breath.

Answer: I agree, but at least the recognition that soil health is important is a step forward

Answer: Absolutely. It's a question of whether the science can trump the corporate lobbying

Follow-up question: do you see there being sufficient resources to roll out this system nationally?

Answer: This is a good question as advice is needed, and Elizabeth, how much of your time is spent on this with 5 farmers? Over how many years?

Answer: It is a good question! It will depend on the amount of input the advisor gives. This will be greater at the beginning. A lot of my time has been spent on the development of the project and time actually working with farmers on field assessment is not actually that much. However, we are only working on a small part of the farm in most cases. A scheme which covered multiple public goods would require more adviser time – and expertise

As for national rollout, the question of staff resources has been raised by farmers as well but they do value the input of a local adviser highly in all our feedback, so hopefully this will be recognised as ELM is developed.

Question: How do you directly engage with farmers... other than with difficulty

Answer: In addition to what Kevin said, we have found they are very interested in engaging (at least many - not all!), but are very time poor, so go to them and pay them if at all possible or at least Continuing Professional Development points. There are a lot of great farmers out there!

Question: What impact does leisure use (eg walking, mountain biking, grouse shooting) on our uplands have on our soils? And then: can use for these be feasibly and safely sustained?

Question: Are any iCASP projects using drone technologies for multiple surveys of land, e.g. repeated NDVI)