

**Transcript of webinar chat discussion 25 June 2020 'Working with natural processes in lowland environments - modelling, mapping, and evaluating' - Dr Jessica Fox, Senior Flood Risk Officer, Hull City Council**

from Sam to everyone:

Are sub surface land drains extensive throughout the catchment? How there be any work of them if so?

from Joanna Clark to everyone:

Interesting - such a wide range of responses to woodland planting. How did the models capture woodland processes? What factors caused differences between catchments?

from Ian to everyone:

Is any cost attributed at this stage to the reforestation to obtain a cost/benefit approximation?

from m292005 to everyone:

There is extensive sub surface drainage of varying ages. The vast majority discharge to the low level system.

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from m292005 to everyone:

No CBA for tree planting/natural regen as part of this study.

from rcrompton001 to everyone:

We have very similar conditions in west Lancashire, where I am keen to pursue NFM upstream of urban flood risk areas. Please can you advise how staff/consultants were funded to pursue the feasibility studies before modelling was commissioned?

from Ian to everyone:

How have you determined the direction of ploughing? Some of these fields could be already cultivated across the slope, as is considered best practice, or even moving to No-Till? The direction of any crop working is not necessarily the same as the direction of the cultivation.

from m292005 to everyone:

The study was funded by EA FDGiA and possibly LAs I think.

from Tom Nisbet to everyone:

How did you represent tree planting and woodland effects in the modelling - which processes were included - water use, infiltration or just hydraulic roughness? What type of trees?

from Chris Spray to everyone:

What empirical evidence do you have/ are you aiming to collect to further prove the models?

from veitcsus to everyone:

Was there good community buy in from the start, in particular the landowners. Was there a good understanding of what NFM is and the benefits of it as part of wider measures?

from Chris Spray to everyone:

What methods did you use to value the ecosystem services?

from m292005 to everyone:

There was good links with landowners, including some wh have alreday deployed NFM features. Wider engagement wasn't part of this study as it's cre aims were to assess potential use of NFM via modelling in the first instance.

from Katy Thorpe to everyone:

Were individual locations for interventions decided through modelling or were they all ground truthed?

from Ruth to everyone:

Another one on tree planting...were you able to factor in age of trees, in terms of extent of root penetration, groundwater absorption, evapotranspiration, ihydraulic roughness, all increased by mature trees rather than newly planted.

from veitcsus to everyone:

Have you noticed any particular land management changes outwith the project area. Are landowners embracing the options outwith the control area (for want of a better description), interested in knowing if there is a step change in relation to the land management within the area.

Laurence Couldrick

Were you able to factor in soil condition in terms of infiltration?

Ian

Clearly the costs of implementation are key to how deliverable these schemes are. Have land managers been involved in the assessment of the impacts and opportunity costs to land managers of the options? These will vary greatly between sites according to current land use and availability of funding for construction of measures and for ongoing compensation for income foregone.

IMCDONELL

Why are field corner bunds being suggested? Surface flow would indicate Soil Health / Soil Compaction issues and there they should be dealt with in the field. This also feeds into the Farming Rules for Water Regulations too.

Imogen Barnsley

Do you have a ballpark idea how much of an impact emitting groundwater influence from the modelling may have had on the results?

Dominic Martin

Thanks for sharing, do feed into discussion on FRMP and RBMP programmes of measures in the next year! Also, Are RFCC funding this work like they are in Thames?

Twhite01

Brilliant stuff Jess. Could the relationship between the matrix and the online 'nfm tool' be explained a little. I've not seen the latter (but know the GIS layers of the opportunity maps).

Robert Waite

Thank you for a really interesting presentation, I will definitely take a look at the evaluation matrix as we have an NFM project starting in the New Forest which is a lowland catchment.

Tom Nisbet

Need to be very careful applying the evaluation matrix. The effectiveness of individual measures will very much depend on how they are designed and managed, as well as represented in the underlying modelling.

Robyn Pender

Historic signs can give you ideas for NFM... for instance, locations of hedgerows.

Twhite01

Is there before and after monitoring of chalk stream functionality to identify gaps in function? (and that of ephemeral stream in which dry periods produce their own assemblages?)