

FDRI Bytes: A First Look at the Digital Platform

Tuesday 15th September 2026, 13:00 - 13:30

Question	FDRI Response
the catchment area boundary looks very detailed and refined. does that mean these are a revision or update on FEH IHDTM boundaries	The catchment boundaries shown (for the 3 FDRI catchments) are currently the NRFA catchment boundaries (as the catchments outlets are all at gauging stations) based on the 50m IHDTM. We are considering whether it would be useful for people working in / modelling these catchments to have higher resolution boundaries e.g. based on 1m LiDAR.
For the upper Severn are more data collection locations to be added over the course of the FDRI programme?	Yes! This is just the start of the instrumentation of the Upper Severn catchment which includes the Severn area of the Plynlimon catchments and extends down to the Dolwen gauging station. We expect there to be many sites being installed for a range of measurement types, over the coming 2 years. Data should be available very soon after installation.
Are you planning to add Natural Resources Wales data sources?	Yes, we would like to do this. Currently it is possible to get hold of live NRW water levels and rainfall via their API but not historic data or real time flows. We have collated sub-daily flows for NRW, EA, SEPA and DoENI as part of the UK-Flow15 dataset and expect an updated version of this dataset to be available in the platform in due course, but the data will not be updated in real time.
Many thanks Matthew for a very interesting and promising talk. How will (could) this platform be used to monitor, predict and manage the impact of climate change on water quality?	The impact on water quality is outside the core scope of FDRI which is focussed on floods and droughts. There will be some water quality sensors installed as part of the core FDRI monitoring to support understanding of runoff and other hydrological purposes. We are keen for FDRI catchments to be used for research in other areas and there is a great deal of potential for complementing the FDRI and existing monitoring with additional monitoring to extend this scope into areas such as water quality in future.
Are the stories manually crafted from historical (non-live) data? Or is there an adaptive LLM-based element here?	Somewhere in between the two. The Data Stories link to specific data from the recent record, so they are not prepared static images, but live plots of actual data highlighting something of interest. But these links are not dynamically updated.

Any chance of building in MO MORECS data?	Assuming this is the MORECS soil moisture output, then unfortunately not, though there are other projects in UKCEH and elsewhere working on gridded soil moisture products which could be included in future. We are very keen to hear feedback from users on datasets that would be beneficial (e.g. soil moisture from satellite monitoring) for the FDRI catchments or more widely.
If there are data sets from sensor networks and other systems we can provide to the platform.. is that of interest? And accessing your data sets is totally free? Do you have a funding mechanism to maintain the infrastructure?	We can't support any and all hydrological datasets, as there is some effort required to pull in, reformat, and update datasets. However, we are happy to support them, and interested to do so if they are particularly useful to the research community. Criteria we would use to judge this include: relevance to the FDRI catchments (within or nearby), length of record, quality of observations, whether they fill in gaps in observations. Please do get in touch to discuss this (mfry@ceh.ac.uk). Yes, all the FDRI monitoring data in the platform is free to access, as are the data products we develop through FDRI (e.g. planned 15-minute 1km gridded rainfall dataset). We aim to make 3rd party data openly accessible where possible, though this might not always be the case.
Great work! Will you be able to run automated QC on the raw data from external data sources, such as the raw 15minute data from the EA?	We are planning to apply QC to 3rd party data such as EA and SEPA rainfall and flows. We aim to produce a single analysis ready dataset of 15-minute rainfall data, with QC applied (using the RainfallQC package in the open-source software section), along the lines of the UK-Flow15 dataset, as well as updating the UK-Flow15 dataset and QC. However, these are generally long-term QC checks which we would run e.g. on an annual basis, rather than being real time QC checks. We are looking to develop machine learning QC methods, primarily for our FDRI sensors, but these may have potential to be applied in real time or near real time to 3rd party data.
I am part of a citizen science group, what are the options/rules for sending in our data ?	We're very keen to support projects and provide integrated data for users, but there is a limit to how much we can do this as there is some effort required to pull in, reformat, and update datasets. We would be keen to hear from you if you are interested so please get in touch (email mfry@ceh.ac.uk). In general, the criteria we would have for this would be things like relevance to the FDRI catchments, and usefulness for research (often things like length of record, the relevance to FDRI of the types of measurements, and whether there is metadata that helps to understand data quality).

How is this being paid for	FDRI is being paid for from the UKRI Infrastructure Fund, which funds the development of research infrastructures. The digital programme falls within this and primarily aims to make hydrological data more readily accessible to researchers. See our website for more background on FDRI (https://fdri.org.uk/about).
What about we data?	Do you mean WQ (water quality) data? There are plans to install measurements of key water quality parameters across the FDRI catchments where these provide information to help understand flood and drought processes. Please see our website for more info on what and where we are measuring: https://fdri.org.uk/observatory
Water quality data from kiosks and private sector?	We are keen to bring in data where it helps research. It's likely FDRI will be installing water quality sensors in FDRI catchments, and we would be keen to access existing data within these catchments. Please get in touch if this is something you can help with.
Are there any plans to add an AI chatbot to the digital platform to make it easier for users to search, analyse, process data?	Not specifically though we are very keen to hear what people are interested in. We have tested accessing our APIs with AI chatbots with interesting results (even pulling out data and creating graphs). We would like to make use of this technology but also want to make sure it's properly understanding the data. We are planning to test exposing our data model, which describes the sites, sensors, variables, units, etc., and our APIs to AI agents / LLMs using technologies such as MCP to see how we can get the best results. We are also mindful of the environmental impacts of LLM use so looking at ways to run these as efficiently as possible, and ensuring default search options remain available. We're keen to get feedback from users as we start to test these systems.