COMMUNITY UPDATE

Floods and Droughts Research Infrastructure (FDRI) Scoping Study

Introduction: Community consultation is central to the FDRI scoping study. The high level of enthusiasm and engagement across the community has been invaluable in making the most of this timely opportunity for an investment in an innovative, national scale observational and digital infrastructure. An early workshop (January 2021) identified community infrastructure requirements and these were used to generate proposals for different infrastructures that were discussed and developed in a second workshop (June 2021). This note summarises the outcomes of the second workshop, the subsequent progress these enabled, and outlines what the next steps are to realising FDRI.

Workshop #2, held to discuss and develop infrastructure proposals: At this workshop, facilitated by GameShift, the FDRI project team were joined by over 50 representatives from the stakeholder community. The day was organised with plenary and group work, to ensure that all opinions could be heard and captured. Participants contributed to discussions on "Observational Infrastructure" and "Digital Infrastructure", as summarised below:

Observational infrastructure: Participants worked in groups, focussing on a pre-allocated theme with a flood or drought bias, to consider catchment infrastructure proposals. The scope of the theme, and its associated science challenges, were discussed before specific proposals for infrastructure were shared. Participants discussed the suitability of the proposed infrastructure (including consideration of required accuracy and transferability of observations) and provided feedback to the team on how it could be enhanced. Finally, the group considered potential locations for the infrastructure investment.

Digital Infrastructure: Participants reviewed proposals for different levels of investment in digital infrastructure. Break-out groups were encouraged to discuss the strengths and weaknesses of each and identify opportunities and threats. They were also asked to identify those elements that should be prioritised (e.g. moved from Silver to Gold), or deemed less important, and suggest any new additions. Ideas from the break-out group were fed-back in plenary for all to hear.

A closing poll confirmed the community's continuing enthusiasm and optimism for FDRI.

Post workshop progress: The FDRI team have reviewed the proposed observational infrastructure since the workshop. The infrastructure has been organised into seven thematic modules (i.e. precipitation, river discharge and overland flow, land surface exchange, groundwater (flow, storage and interactions), water quality and sediment transport, soil water (flow and storage), and catchment characteristics.) and the associated capital- and staff-costs estimated.

The workshop helped to prioritise elements of digital infrastructure and provided useful pointers on how some elements could be implemented. It reaffirmed that the approach being taken should deliver valuable outputs to the community.

Next steps: The FDRI team are currently looking across all modules and making adjustments to produce a coherent options-based proposal reflecting different levels of investment. These options will outline their respective capacity to deliver a step change in research and innovation and wider societal benefits. Final FDRI options will be shared in a community report that is planned for January 2022.

Scoping study findings will feed into a NERC submission to the UKRI Infrastructure Fund, due at the start of November 2021. An indication of the funding outcome is anticipated middle of 2022 and if successful, a business case will be developed and further timings will be confirmed.

For more information, please email the FDRI project team: fdri@ceh.ac.uk

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