

Community Conversation Reflections

Reflections on our community engagement activities for National Capability digital work in 2025

Kelly Widdicks (lead author: KelWid@ceh.ac.uk), Eunice Agyei, Michael Tso, Gordon S. Blair, Michael Hollaway, Susan Jarvis, Faiza Samreen, Rod Scott, Jacky Chaplow, Kathryn Harrison, Hannah Dean, Jennifer Roebuck, and Marcia Spencer.

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For the **National Capability for UK Challenges (NC-UK) programme** under work package 2 (WP2), we are researching and developing digital research infrastructure (DRI) for environmental science. DRI encompasses all the digital technologies (e.g., monitoring infrastructure, computational resources, platforms/ tools) and objects (e.g., data, data science and AI methods, models) that underpin environmental science.

A core part of this research and development is our co-design process in close collaboration with work package 1 (WP1) focused on stakeholder engagement, ensuring the DRI meets the needs of the community – spanning a range of stakeholders such as environmental scientists, academics, businesses, policymakers, and the public.

To initiate this co-design process, **2025 has seen the start of our ‘Community Conversations’ series**. These are online workshops that allow us to showcase initial DRI ideas and work, gather perspectives and requirements from the community, and together, shape next steps for DRI research and development.

We had three Community Conversations in 2025 funded by NC-UK – #CC01, #CC02, and #CC04 – with #CC03 funded and led by the NC-Data programme, a programme closely aligned with NC-UK which focuses on the Environmental Information Data Centre (EIDC), the Natural Environment Research Council (NERC) Data Centre for the terrestrial & freshwater sciences. These NC Community Conversations – which we focus this reflective piece on – all shared the common theme of enhancing discovery and access to DRI and the digital objects it serves:

1. **Enhancing discovery and access to data** (May 2025), specifically spatial data focusing on a case study on the Land Cover Map dataset – sharing the Spatial Data Explorer, AI-driven search innovations, and improvements to the EIDC Catalogue (see [report for #CC01](#))
2. **Enhancing discovery and access to data science methods** (July 2025) – showcasing the [Environmental Data Science Toolbox](#), its contents and underlying metadata developments (see [report for #CC02](#))
3. **Enhancing data access and data deposit** (October 2025) – specifically access from, and deposit to, the EIDC. (see [report for #CC03](#))

4. **Enhancing discovery and access to environmental exposure data and methods** (December 2025) – demonstrating initial work under the NC-UK Environmental Exposure Hub (UK-EEx) project, aiming to develop a centralised knowledge Hub on the chemical state of the UK environment (see [report for #CC04](#)).

It is worth noting the four community conversations share outputs with various levels of readiness. #CC01 and #CC02 presented 'alpha' version tools that are ready-to-use, while #CC04 presented several components that could go into the tool. In both instances, input from participants provided important insights and helpful steer to the future of these elements that form the DRI.

These Community Conversations have been instrumental in ensuring our DRI research and development work **focus on the needs of the user community**, with the NC-UK milestones we have set for 2026 around these strands of NC-UK DRI (data, methods, and domain-specific needs such as UK-EEx) drawing on the workshop findings and participants' suggestions. They also **strengthen the connection between NC-UK and NC-Data** which is key for ensuring data and other digital objects generated from NC-UK projects are made available and discoverable for the community. This is reflected in the work planned for 2026 around the development of integrative and visual DRI interfaces – an objective in both NC-UK and NC-Data that will require alignment between both programmes.

These Community Conversations have been conducted in addition to workshops and discussions with key stakeholders, as well as presentations at various events in 2025 such as the NERC Digital Gathering, the Environmental and Ecological Statistics workshop, and the National Environmental Monitoring Conference (NEMC).

The reports from our Community Conversations linked above showcase clear next steps for each of these strands of DRI in NC-UK. Instead of reiterating findings and planned work moving forward, **this summary will focus on sharing reflections on our co-design process so far, and how we aim to improve this in the coming year**. Our reflections are formed into three categories around participant demographics and reach, the Community Conversation format, and exploring different engagement activities in 2026 – each detailed below.

1. Participant Demographics and Reach

Each Community Conversation has seen a different number of attendees. In #CC01, 90 participants joined the workshop (70 external to UKCEH); 55 joined #CC02 (38 external); 25 joined #CC03 (11 external) and 40 joined #CC04 (26 external) – see Figure 1. Whilst we are not sure on what exactly is the reason for the variation in participatory numbers across the Community Conversations, this could be due to the time of year they were scheduled (near summer breaks for #CC02, near winter breaks in #CC03 and CC04) or the conversation topics – with #CC02 more relevant to data scientists specifically in environmental science, #CC03 more focused around the EIDC, and #CC04 more targeted towards those interested in pollution science.

To understand the demographics of our participants in the workshops and gather feedback on the events to identify areas of improvement in future activities, we ran a short feedback survey at the end of #CC01 and #CC03. However, due to our ethical approach not storing participatory email addresses, we were unable to follow-up with participants to remind them of the survey – meaning participants had to have saved the survey link at the end of the workshop. This led to only a small number of participants providing feedback (5 in total for #CC01 and 2 in total for #CC03), which is a low response rate (8% and 5.5% respectively).

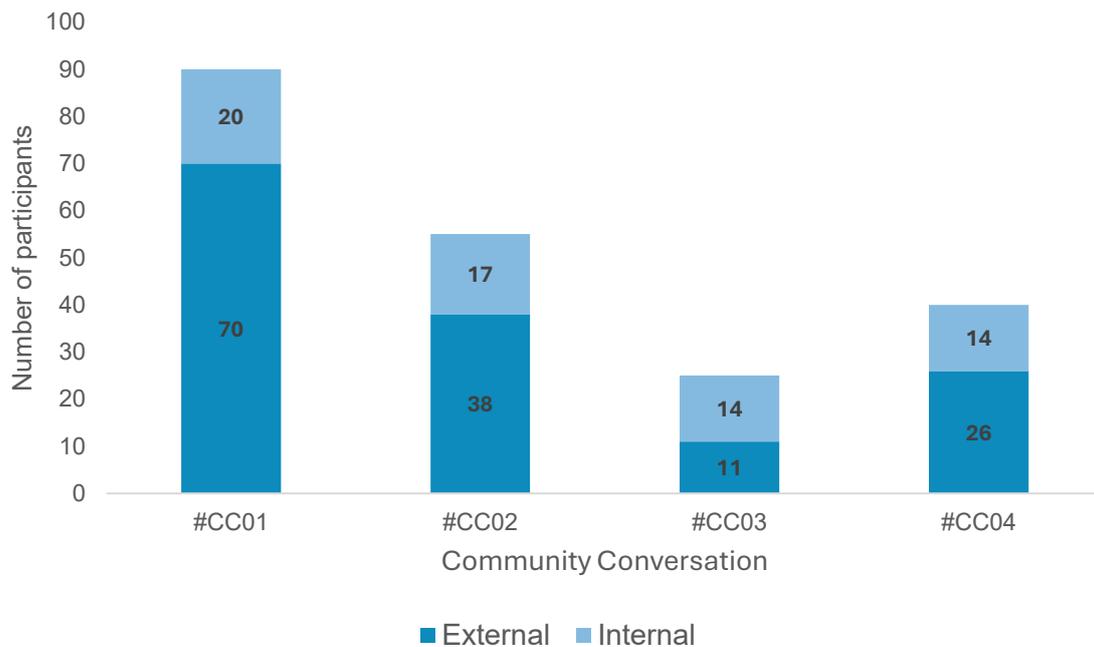


Figure 1. Organisational affiliation of participants, external or internal to UKCEH, in the four Community Conversations.

To ensure we gathered this data in #CC02, we **introduced two demographic questions into the polls during the event itself** – covering: 1) the type of affiliation of the participant (e.g., academic/research, government, industry, NGO (Non-Governmental Organisation), etc.); and 2) the participant’s most relevant area of expertise (e.g., data science, ecology, environmental science). Of those that responded to the poll, 29 participants had the academic/research affiliation, with 10 from government, 6 from NGOs, and others (4) in other categories; their role types included data science (11), ecology (11), statistics (11), environmental science (11), biodiversity (7), agriculture (5), DRI (5), and other (5). In #CC04, of those who responded to the poll, 17 were academic/research affiliated, 15 government/public sector, and 5 NGO/charity/environmental consultancy; role expertise included environmental pollution (7), data and analysis (6), design and software (5), and others (17) in other categories. Figures 2-4 show visual representations of this data. Role types were captured through open-ended questions, thus indicating the reasoning behind the variation. In future events, **we recognise the importance of standardising affiliation types – and role types where possible – to support consistency and cross-event analysis**. We also note the need to target more **industry stakeholders** to ensure their perspectives are gathered.

To further improve on our understanding of participatory reach in #CC04 and to meet the NC-UK programme reporting needs, we ran an event feedback and equality, equity, inclusion and diversity survey produced by the NC-UK programme office. To ensure participants had the time and ability to fill in the survey, we scheduled 10 minutes into the end of the event. Key feedback indicated positive satisfaction of the event (majority 'very satisfied'), with many deeming the event inclusive (65% 'very inclusive'). However, **suggestions were given to enhance inclusivity further** (e.g., accessible font sizes on presentations, better pacing for tool demonstrations, sharing of event agendas in advance) and the **ethnic diversity of participants was limited** – demonstrating an area to improve on in recruitment efforts for future events to ensure a variety of perspectives are included.

Moving forward, we recognise the need to **build a more comprehensive stakeholder map** and understanding of 'who' DRI in environmental science is for, what stakeholders we can draw into our community engagement in collaboration with WP1, and how we can ensure the DRI meets their varying needs. This will form an important activity for NC-UK in 2026. We also see value in **better understanding the engagement across NC activities** and whether we are extending community engagement across topics – thus in 2026, in feedback surveys, we will ask participants whether they have been to one of our NC-UK events before.

2. Format of the Community Conversations

Whilst #CC01 had the most participants attend, the workshop did not achieve its main aims of encouraging conversation with the community and gathering feedback specific to enhancing data discovery and access in the DRI. This was primarily deemed to down to two issues: 1) technology issues on the day, with the polls via Microsoft Forms not working as planned when embedded into the presentation; and 2) the design of the workshop, focusing primarily on polls and open question and answer (Q&A) panels.

In #CC02, we aimed to rectify these issues: **setting up technical backup procedures** for the polls; and adding **anonymous Q&A options** as well as a **breakout session** to the format for small-group discussions to encourage participation. Given the openness of the event to all interested and given that not all those registered attend the event on the day, it did make **planning for the number of breakout groups difficult** – with additional support having to be asked for by the team last minute. Overall, the new format seemed to work well, however, with more questions being asked by participants and the team gathering lots of useful feedback surrounding the Toolbox and where to take it next.

In #CC03 we focused on spending as much time as possible in breakout groups, giving participants ample time to provide their views and feedback, and keeping presentations to a minimum – providing only the most relevant information to guide their discussions. Despite the small number of participants attending the event, we were able to collect a large amount of detailed information leading to the development of clear development priorities. We **planned to accommodate more**

breakout groups than we expected and therefore had surplus staff on hand to facilitate and take notes.

In #CC04, building on the successes of #CC02 and #CC03 in running breakout discussions, we ran a similar format, grouping presentations of work to date on the UK-EEx project into themes and asking poll questions around those themes. Fewer questions in the Q&A part were asked by participants than in #CC02, which may be due to the fact that both the Teams Q&A feature as well as the anonymous Mentimeter Q&A features were available to participants; this was noted in the event feedback survey as confusing and moving forward we will ensure the anonymous Mentimeter Q&A is the **single platform for asking questions**. Breakout groups were easier to plan in this session, perhaps due to the smaller number of registered attendees and pollution-specific nature of the event (rather than cross-environmental science). Moving forward, we need to ensure a **clear strategy regarding registration numbers and breakout group planning** in future Community Conversations, exploring options such as limitations on registrations, as well as the utilisation of Teams' 'Whiteboard' feature for collaborative capturing of discussions or working through tasks (e.g., scenarios, case studies) – reducing the need for notetakers.

Each Community Conversation has involved different team members in organising, presenting, facilitating and notetaking. As we have become more experienced in running the events, we have developed guidance documents to share with team members to ensure they can support effectively. As an example of best practice, we plan to **share our resources in running an online workshop of this type for the NERC Environmental Data Service [Co-Creation Toolkit](#)** (led and run by the British Geological Survey).

3. Engagement Activities in 2026

In 2025, we focused on the Community Conversations as the main way to gather feedback from the community on the NC-UK DRI developments and help shape the future of DRI under the programme, as well as data-specific efforts under NC-Data. This suited the first year of NC-UK, spreading the word around DRI developments, capturing feedback from a broad audience in a relatively quick way, and aiding our ability to start to build a picture of 'who' this community is.

Moving forward, and drawing on our more comprehensive stakeholder mapping, we aim to **run different and more specific types of engagement activities** – offering various ways for members of the environmental community to share their insights and feedback. For example, we could offer in-line feedback options within the Beta tools we develop or run individual interviews to capture user needs. These also may be **broken down into interest areas or topics** that have crosscut the Community Conversations (e.g., metadata). More targeted activities may help **improve the inclusivity of our co-design approach and engage a wider, more diverse range of stakeholders**. We encourage the community to share their ideas and preferences for different engagement activities.

As noted above, one of our NC-UK and NC-Data milestones for 2026 is based on integrating the different tools developed so far, supporting a seamless user interaction experience and visual approach to the DRI. For this, we aim to trial a **new and creative ways of engagement** (e.g., activities for users to ‘draw the DRI’), as well as utilise **more traditional user interface and experience design activities** from the field of human-computer interaction (e.g., personas, wireframes). We also aim to **run at least one Community Conversation again in 2026 on NC DRI** to support a broad update and feedback mechanism for the programme, and we update this based on the improvement reflections above.

Summary

In summary, we have identified three key areas of improvement in our NC engagement mechanisms moving forward:



Get in touch!

If you're interested in collaborating or inputting into our co-design approaches for DRI, please sign up to our mailing list via [NC-UK Website](#) for updates or get in touch with us via the NC-UK programme email address: nc-uk@ceh.ac.uk