

Increasing Knowledge Production from Citizen Science Data

Day 2 | 11 July 2026, 4:30-6:00 PM

On the second day of IWECC 2026, twenty people from all career stages and different areas of wildlife ecological research gathered at around 1630 for 1.5 hours to discuss the challenges and opportunities associated with generating knowledge from public data generated from Citizen Science platforms. The discussion was informed by a questionnaire that we had circulated nationwide among citizen scientists and researchers prior to the conference, which aimed to identify key barriers and opportunities. We had received a total of **83** responses. We focused on barriers to accessing, processing, interpreting, and integrating citizen science data, as well as potential ways to increase its use for research and knowledge production.

A key theme of the discussion was that the availability of citizen science data does not necessarily translate into its effective use for research or other forms of outputs. Participants identified several challenges, including spatial and sampling biases in the data, with observations often concentrated around cities and areas with more contributors; difficulties in accessing, downloading, and processing datasets; and limited technical skills for working with raw data and programming tools. Several participants were also unaware of existing tutorials and resources, highlighting the need for better dissemination of available resources.

Participants also highlighted the difficulty of using citizen science data for research questions beyond species occurrence and abundance, particularly behavioural studies that require photographs or videos. The lack of appropriate platforms and data-collection frameworks for such questions was identified as an important gap.

Data quality, taxonomic identification, and interpretation presented additional challenges. Limited reviewer systems for some taxonomic groups, particularly insects on iNaturalist, can affect the reliability of observations. Participants also discussed the difficulty of distinguishing true absence from lack of observation, assessing sampling completeness, and accounting for duplicate records. More broadly, the group identified both a “data gap” and an “idea gap”: researchers may not know what datasets are available for their questions, while existing datasets may remain underused because researchers are unaware of the questions they can address.

Other barriers included uncertainty around licensing, copyright and attribution, language barriers to both contributing and using data, and the fact that some datasets collected through citizen participation are not openly accessible.

Several potential solutions were proposed. These included developing a resource on “**100 questions that can be answered using citizen science data**”, creating mechanisms to connect researchers with relevant datasets and analytical expertise, and improving integration between citizen science and formal monitoring programmes. Greater cross-platform connectivity, potentially through resources such as GBIF, could make

datasets easier to discover and combine. The necessity for multiple, institutionally hosted, and easily extractable **databases** was discussed alongside **workshops**, **webinars** and **practical tutorials**, particularly for widely used platforms such as **eBird** and **iNaturalist**.

A major outcome of the discussion was the proposal to establish a community of people interested in using citizen science data for research. Possible formats included an online forum, regional networks, WhatsApp groups and other existing citizen science communities. As an immediate next step, one participant volunteered to establish a Citisci Discord channel, and participant contact details were collected for follow-up. Another participant who was involved in the establishment of biodiversitycount.asia discussed it as a potential platform for expanding this community.

The discussion was particularly well received when concrete examples demonstrated how citizen science data can be used for ecological research, including the use of such data for population estimation. Overall, the SIG highlighted that increasing knowledge production from citizen science will require not only greater data availability, but also better access, processing support, guidance on data interpretation, clarity around licensing, cross-platform connectivity, and stronger communities of practice. The proposed online community provides a starting point for continuing these discussions and connecting researchers, citizen scientists, data managers and analytical experts beyond IWECC 2026.