UK Terrestrial Evidence Partnership of Partnerships

UK Terrestrial Evidence Partnership of Partnerships 2025 Event:

Celebrations and Aspirations in TEPoP Biodiversity Monitoring Partnerships

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Contents

1.   Introduction

The fourth event in the 2025 UK Terrestrial Evidence Partnership of Partnerships (TEPoP) series of events celebrated the achievements of TEPoP monitoring schemes over the past ten years and looked ahead to ambitions for the next decade. The event featured presentations from each of the monitoring schemes, followed by presentations from the Country Nature Conservation Bodies (CNCBs), which demonstrated the impact that these monitoring schemes have had on their work and what they would like to see in the next ten years. The event concluded with a workshop in which participants were asked to identify priority areas for future collaborative work.

This document summarises key points shared by the CNCBs as well as those shared during discussions in the workshop, which were focused on common themes drawn out from monitoring scheme presentations. These priorities will be used to steer future work areas.

The presentations from the monitoring schemes and CNCBs can be viewed in the [event recording](#).

2. Country Nature Conservation Bodies' Presentations

We heard presentations from members of the four CNCBs, who highlighted some of the ways in which TEPoP schemes have had an impact on their organisations, as well as their ambitions for the next ten years.

2.1. Achievements

Each of the CNCBs recognised the significant impact that the long-term datasets produced by TEPoP monitoring schemes have had in meeting evidence needs and underpinning numerous projects, policies and reporting requirements. This impact has been particularly notable considering recent improvements in data precision and utility.

Examples of how these datasets are used:

- Development of long-term trend data and contributions to statutory reporting requirements, including the UK Biodiversity Indicators.

- Contribution to major reviews such as the State of Nature report and the Northern Ireland Priority Species Review.

- Data feed into significant projects such as Scotland's Big Biodiversity Layer.

- Data underpin site condition monitoring.

Natural England (NE) and Natural Resources Wales (NRW) highlighted the TEPoP partnership as a model for effective, efficient and valued cross-organisational collaboration and support for citizen science.

NRW also emphasised the importance and value of the Terrestrial Surveillance Development and Analysis (TSDA) partnership in providing additional analytical capacity. This has enabled further progress in the use of scheme data and in advancing thinking around monitoring bias more broadly.

2.2. Aspirations

NE, NatureScot and NRW identified the need to ensure that schemes target monitoring effectively, as organisations shift away from monitoring individual species towards restoring the health of ecosystems. This includes supporting condition assessments, understanding key pressures, and identifying the changes needed to restore ecosystem health.

NRW highlighted the importance of ensuring that collected data are easy to access and use, including through the creation of automated outputs such as statistical models and maps at sub-national scales.

Increased community engagement to broaden interest and consult on why we need to study nature and what we need to understand, will enable more informed and effective conservation. This includes collecting data that are genuinely of value for decision-making.

NE, NRW and the Northern Ireland Environment Agency (NIEA) also expressed ambitions to continue and increase partner collaboration and volunteer participation. This includes broadening scope and membership to support new schemes, such as freshwater monitoring, and expanding existing schemes, such as bat monitoring. NE also highlighted ambitions to

invest more in volunteers and better understand how volunteers work alongside professionals and technology.

3. Breakout Discussions

Following the scheme and CNCB presentations, event participants were divided into breakout groups and asked to participate in three structured conversations.

The first focused on highlighting topics covered in the presentations that participants found of particular interest, and that they would like to hear more about. The second invited participants to vote on areas of work they would most like to collaborate on. The third asked participants to prioritise areas of future work, considering both short- and long-term priorities.

Participants were invited to record their ideas on a shared virtual concept board, the contents of which are summarised below. See the appendix for the full list of responses.

3.1. Section 1: Topics of Interest from Scheme and CNCB Presentations

Participants were asked to highlight topics covered in the scheme and CNCB presentations that they were particularly interested in and wanted to learn more about. The areas of most interest included the following:

3.1.1. Improving Data Integration, Sharing, and Cross-Scheme Insights

- Dataset structuring and sharing standards (metadata, compatibility, alignment with international standards).

- Increasing visibility and sharing of outputs, processes, and feedback loops.

- Opportunities for cross-scheme data collection and analysis.

- Opportunities to validate EO (Earth Observation) with ground-based scheme data.

3.1.2. Technology, Methods Innovation, and New Monitoring Approaches

- Integration of new technologies (acoustics, DNA, mixed-method surveys).

- Structured vs. unstructured gap-filling in recording.

- Long-term datasets using both traditional and emerging methods.

3.1.3. Expanding Volunteer Support, Representation and Coverage

- Building and sustaining local volunteer networks (e.g. through regional coordinator roles).

- Investing in people and creating scalable support models.

- Enhancing recorder engagement, including feedback, immediate outputs, and demonstrating impact.

- Continuing to learn from each other about diversity, equity and inclusion (DEI) initiatives, reaching wider audiences and overcoming participation barriers.

3.1.4. Strengthening Links Between Species Monitoring and Ecosystem-Level Evidence

- Understanding the balance between the need to understand ecosystem health with the need to support specific species and where scheme data fits within this.

- Improving understanding of environmental pressures and ecosystem functioning.

3.1.5. Land Access, Permissions, and Operational Decision-Making

- Improving access to landholdings for monitoring.

  o Better coordination so multiple schemes don't duplicate asks to the same landowners.

- Continuing to improve monitoring at local scales as well as national.

3.2. Section 2: Areas for Collaboration

Participants were then asked to vote on areas that they would most like to discuss and see future collaboration on. Top priorities (based on the sum number of votes across all breakout groups) were as follows:

3.2.1. Scheme Growth & Development - 12 votes

- Expanding scheme scope (e.g. adding environmental data, engaging with freshwater communities) and participation.

- Sharing learning about operating coordinator/trainer models and effective approaches such as the use of super-volunteers.

- Supporting volunteer groups with their own DEI goals and sharing their experiences.

- Need for shared approaches to landowner engagement. Some approaches may include:

  - Mapping existing recording locations

  - Identifying land ownership

  - Coordinating between schemes to approach a landowner once

  - TEPoP Forum/discussion on expectations/approaches for landowners

  - Sharing experiences

  - Setting common standards

  - Making landowners aware of the high standard of schemes

  - FAQs for landowners to pre-empt potential concerns

  - Consistent approaches to volunteer insurance between schemes

  - Developing volunteer roles around obtaining land ownership permissions

3.2.2. Developing Data Collection & Data Flows - 6 votes

- Bringing different schemes' data together to characterise ecosystem health.

- Improving sharing and usage by increasing metadata alignment

    - Increase metadata alignment with international standards ([Humbolt](#))

    - Communication between [Better Biodiversity Data Scotland](#) and TEPoP

- Mixed-method, place-based surveys: monitoring different aspects of the environment focused in particular locations, to improve local biodiversity understanding.

    - Methods (how and who is involved to what end)

    - Sample Design (how to structure significance)

    - Support (enable - fund)

    - Participation (engage, train, mentor, feedback - empower)

3.2.3. Analytics, Trends, and Reporting - 6 votes

- Desire for automated interpretation tools.

- How to balance species vs ecosystem reporting?

- Explore opportunities for cross-scheme analysis (e.g. looking at changes in Pollinator Monitoring Scheme (PoMS) pan trap insects in relation to birds, as a key component in chick diets).

3.2.4. Other Areas with Moderate Support

- **Use of data & results - 3 votes**
  (Need for a shared catalogue of data use, feedback mechanisms, and mapping scheme outputs to policy areas.)

- **New technologies - 3 votes**
  (Challenges of multi-taxa monitoring)

- **Multi-scale monitoring - 3 votes**

- **Training - 2 votes**
  (Need for workshops on online training development, accessible materials, "train the trainers".)

3.3. Section 3: Short- and Long-Term Priorities

Finally, participants were asked to prioritize work areas on a short and long-term basis:

3.3.1. Short-Term Priorities (Next 1–2 years)

- Knowledge sharing/collaboration on coordinating landowner permissions as an urgent area of focus.

- Integration and effective use of new technologies.

- Sharing knowledge with the Better Biodiversity Project (Scotland).

3.3.2. Both short and long term/continuous work

- DEI improvement and increasing participation.

3.3.3. Long-Term Priorities (5–10 years)

- Collaboration on multi-method monitoring at landscape scale.

- Local biodiversity reporting linked to conservation action.

Appendix

The following tables show all the comments left on the breakout group concept boards.

Table 1: Topics of Interest from Presentations.

Work area	Comments
Improving Data Integration, Sharing, and Cross-Scheme Insights	Sharing data and outputs: • Ability to point people to opportunities of where data can be recorded that is valuable to monitoring and conservation - focus has been on attracting people to national protocols and resources to contribute to something wider. • Sharing outputs, processes etc so that we are all aware of them and can benefit for shared data and understanding. • Collaboration in data - how can we share/structure data to facilitate sharing? • Providing outputs and summaries to survey participants, partners, the public and internally. What lessons can be learned from those that have been developing these areas? (e.g. were they co-designed with participants, frequency of reporting) Cross scheme data • Opportunities for cross-scheme data collection on broad changes in habitat category and condition • Using scheme data to validate EO insights (or vice-versa). E.g. DigVentures project Increasing visibility and sharing of outputs • Demonstrating the impact of recorders work in contributing to science. How can we make this clearer/ more prominent?
Technology, Methods Innovation, and New Monitoring Approaches	Standards: • Collaboration and standards in techniques (e.g. DNA) Use of new technologies: • Collaboration in technologies and networks (e.g. acoustics) between different schemes • Longterm datasets following standard methods but looking ahead increasing interest in using new technologies and methods Analysis: • Incorporating stratification into trend analysis - something to be addressed in UKBMS Gap-filling between structured and unstructured recording: • How can we target/support recording effort to fill these identified gaps?

Work area	Comments
Strengthening Links Between Species Monitoring and Ecosystem-Level Evidence	• Focus of agencies is on ecosystems and ecosystem restoration. Most TEPoP monitoring is on species - people engage with species more easily than e.g. ecosystem health (and species do make up ecosystems). How do we bridge this gap between species monitoring and the need for ecosystem restoration? • NRW has just produced a report on threatened species in Wales - lots of internal discussion on balancing the need to understanding effective management of sites and ecosystems, with the need to support specific species. Being able to bring in skilled volunteers from TEPoP is crucial in this. • Favourable conservation status - monitoring species is crucial in facilitating reporting against targets and directing conservation at multiple scales. • Understanding whole assemblages of communities is crucial for understanding ecosystem functioning. Are there data from e.g. PoMS on invertebrate numbers that could inform changes in populations of e.g. bird populations recorded by other schemes? Using cross scheme insights to understand the bigger picture. • How can we gather information on key environmental pressures?
Expanding Volunteer Support, representation and Coverage	• Building and sustaining local volunteer networks (e.g. through regional coordinator roles) • Investment in People - how do we develop a scalable and supportable model for investment in volunteer networks (subject/taxa itemisation is not working) • DEI - still a lot to learn from each other • Lots of the monitoring schemes are thinking about immediate feedback to recorders, but how can this be made more structured/long term?
Land Access, Permissions, and Operational Decision-Making	• Can we work together to improve access to landholdings owned by major landowners? • Continuing to think about how national recording relates to local, and how local monitoring can be supported - this is an area JNCC have been actively working on with partners • Operational decisions - demonstrating and advancing the use of evidence to inform land-use decisions, management, mitigation at landscape to site scale

Table 2: Areas for Collaboration.

Work area	Number of votes	Comments
Scheme growth and development	12	Increasing scope and participation: • Explore opportunities to expand scope, drawing in environmental data collected alongside species data. • Engage with freshwater schemes/ groups and offer them opportunities to participate- Rivers Trusts, Riverfly, Earthwatch. • Combining approaches and best practices to maximise participation (link to NERC funding?) • More generally, use of super-volunteers to manage/train volunteers is something that BTO have experience of. • Sharing learning about operating local coordinator/trainer models and effective approaches Volunteer engagement, DEI and feedback • Enabling audiences to identify which approach works best with them through partnership and collaboration • There is lots of good DEI work in progress among our schemes - are there examples of schemes supporting volunteer groups to address DEI issues themselves? For example, in the unstructured schemes that BRC supports but does not directly manage - how can we help these groups in their own DEI aspirations? • Keen to learn from others regarding DEI approaches (generally engaging wider audiences). Also generally building the recording network - e.g. through partners (including other eNGOs) for finding sites, securing permissions, using staff resource as surveyors Landowner permissions: • Sharing information on landowners. Engaging together, sharing techniques for engagement • Suggested action: mapping existing locations, sharing experience, identifying land ownership • Suggested action: Forum/discussion on expectations, insurance variation between schemes and setting common standards • Interest in NPMS developing volunteer role around land ownership permissions

Work area	Number of votes	Comments
Developing data collection and data flows	6	Bringing scheme data together: • Bring together data from different schemes to somehow characterise ecosystem health/function (and to agree what that actually means!) Data sharing: • BTO working on sharing and collaborating to maximise data usage • E.g. Data sharing with dragonfly society - different databases and methods of collection acted as barrier to data flow • Suggestion: Increased metadata and alignment with international standards (Humbolt) - maximising richness of ecological data and integration • Suggestion: Communication between Better Biodiversity Data Scotland and TEPoP Mixed-method place-based surveys • Methods (how and who is involved to what end) • Sample Design (how to structure significance) • Support (enable - fund) Participation (engage, train, mentor, feedback - empower)
Analytics, trends and reporting	5 (+1 in comments)	• Develop automated interpretation • What is the balance of species recording (which volunteers like to do, and there are reporting requirements for) and conserving ecosystems (which is harder to measure and define) which is increasingly the focus of action and funding? PoMS and bird schemes have an opportunity to analyse insect data sampled in PoMS pan traps to look at changes in key components of chick food, including small cryptic insect species not well monitored elsewhere. Similar opportunity to analyse co-located plant and pollinator data from PoMS and NPMS

Work area	Number of votes	Comments
Use of data and results	3	CNCB use of data: • It would be useful to have a repository or shared record of what scheme data are being used (and in what way) by CNCBs (and other groups). This sentiment was shared by many of the discussion's participants. • Can we develop a "catalogue" that maps schemes and their data/outputs to uses/policies? Can be used from either direction, e.g. it easily tells a user what a scheme is producing, but also if interested in a policy, it would highlight what data is contributing to that • How can we ensure that scheme data are consistently used by CNCBs? Increasing findability: • Do potential users know where to go to find results, visualisations etc? There may be quite limited awareness beyond a core group of people Feedback: • What mechanisms exist for groups to provide feedback to schemes on the data collected?
New technologies	3	Challenges with monitoring multiple taxa - links to bioacoustics working group
Multi-scale monitoring	3	-
Training	2	Developing online tools: • Which schemes have developed successful online training courses for their participating volunteers, and coordinating volunteers? Would like a workshop on how this was done, lessons learnt and tips for other schemes to do something similar. • Taking in-person training and converting to an online offer to encourage broader participation. • Would be beneficial to see what other schemes have done in terms of training documentation and guidance to make surveys more accessible (especially training videos/online resources to provide) • Shared Engagement & Capability Pathway/Ladder • Recruitment and training of support network ('train the trainers, volunteer regional coordinators) - also ties to **scheme growth and developmen**t

Work area	Number of votes	Comments
Other collaborative area	-	Volunteer recruitment: • Recruitment & retention of new (& younger) surveyors • Younger volunteers - how to engage in survey work Landowners access: • Working with major landowners to help facilitate access to land/reserves – even just making them aware at a high level of schemes • Issue with asking same landowners for similar things multiple times for different surveys. Better co-ordinated site network would help. • FAQs for landowners to pre-empt potential concerns