SBIF Workshop

Biological recording and the SBIF recommendations

29th September 2020, 16:00-18:00

Virtual workshop via Zoom

Facilitators: Claire Lacey (CIEEM) & Rachel Tierney (SBIF)

Workshop Report

Attendees

Annie Robinson	CIEEM
Christopher Cathrine	Caledonian Conservation Ltd
Elaine Anderson	WYG Environment Ltd
Gareth Ventress	Forestry and Land Scotland
Guy Harewood	Stirling Council
Helen Embleton	Stantec Consulting
Iain Sime	NatureScot
Paul Gill	Environmentally Sustainable Systems Ltd
Jennifer Reid	Amey
Andrew Francis	AECOM
Kathleen Murphy	WSP UK Ltd
Stephanie Ferguson	Landcare NorthEast

Apologies

Kelly Ann Dempsey	Angus Council
Kim Kirkbride	Forestry and Land Scotland
Rachael Boden-Hall	Jacobs UK Ltd
Flora Grigor-Taylor	Landcare NorthEast
Andy Tharme	Scottish Borders Council
Irene Tierney	IMTeco Ltd
Julie Dewar	City of Edinburgh Council

Summary

The SBIF Review previously identified 10 benefits to improving our biological recording infrastructure (set out in a Benefits Dependency Network on page 77 of the [SBIF Review).](#)

12 attendees contributed to the workshop and identified the key benefits to be:
- **Benefit 2:** All data are of known quality, quickly and openly available and easily accessed through a single central data repository
- **Benefit 6:** Organisations that provide or govern key parts of the infrastructure as a public service have sufficient funding and resources to do so effectively
- **Benefit 7:** Out skills base is increased with more people engaged in biological recording, more records being collected and verified and few taxonomic gaps overall

There was support for the proposed SBIF Review start up project which aims to provide consistent biodiversity data services across Scotland via the network of existing Local Environmental Record Centres and supported by a National Hub to provide a common, overarching profile for LERCs in Scotland and liaison with the NBN Trust as the lead UK biodiversity data governance body.

Purpose of the workshop

Following considerable stakeholder consultation during the initial development of the [SBIF Review](#), the aim of this workshop was to bring together commercial data and service users again to understand:
1. Of the ten SBIF benefits, what is the highest priority for this user group to focus on enabling and why?
2. What are the key changes that need to occur to realise the priority benefit

Outcomes
1. Understanding commercial data user needs from the biological recording infrastructure
2. Understanding the key benefits for commercial data users as a user group
3. Identification of key changes to develop into future projects to make these happen

Session 1: Prioritising the benefits

The SBIF Review has previously identified 10 benefits to improving our biological recording infrastructure (set out in a Benefits Dependency Network on page 77 of the SBIF Review). Prior to the workshop, attendees had been sent a list which they had been asked to consider.

Session 1 of the workshop focussed on working with this list to identify the top benefits for commercial data users and to understand the attendee's priorities across the biological recording infrastructure.

The attendees indicated their top three priorities using a Zoom Poll – without ranking them 1st, 2nd and 3rd. Benefit 2, that all data are of known quality, and quickly available through a central repository, was voted as the most popular, with almost a third of the total votes. The full results of the poll are shown in Figure 1.

Figure 1 Results of poll showcasing the benefits which attendees perceived would bring greatest value to them in their role

Benefit	Poll outcome (%)
2. All data are of known quality, quickly and openly available and easily accessed through a single central data repository	91
1. Clear data flows and submission points, with feedback on quality and use	55
6. Organisations that provide or govern key parts of the infrastructure as a public service have sufficient funding and resources to do so effectively	36
7. Our skills base is increased with more people engaged in biological recording, more records being collected and verified, and few taxonomic gaps overall	36
3. Services are consistently provided and Service Users know what services are available to them	27
9. Changes in species' distribution and abundance are more rapidly understood	18
4. Recorders, Verifiers, Recording Groups and Recording Schemes have consistent access to high quality training and support	9
5. A single organisation with oversight of the whole infrastructure creates cohesion	9
8. The infrastructure makes a key contribution towards delivery of the Scottish Government's strategic goals	9
10. Compliance with statutory requirements such as GDPR and good practice/standards	9

Breakout Groups

The workshop was split into two groups to consider the results of the poll and shortlist them further to a shared top three (ranked 1st, 2nd, 3rd).   When considering the benefits, attendees were asked to think about their current role, but also any other perspective they may have.

Both groups returned with the same three priorities, ranked in the same order. These were:

> *Benefit 2: All data are of known quality, quickly and openly available and easily accessed through a single central data repository*
>
> *Benefit 6: Organisations that provide or govern key parts of the infrastructure as a public service have sufficient funding and resources to do so effectively.*
>
> *Benefit 7: Our skills base is increased with more people engaged in biological recording, more records being collected and verified and few taxonomic gaps overall*

One group stated that that all of the benefits are good benefits and attendees would be hard pressed to disagree with any of them!

Detailed discussions covered:

> *Benefit 2: All data are of known quality, quickly and openly available and easily accessed through a single central data repository*

- The current setup for accessing data is good but some of the issues arise because not all data providers use the system. The system is there and good – people just need to use it.
- It would be nice to get data at a finer resolution than is currently available in all cases.
- There can be a lack of consistency in the data which are provided.
- There are challenges surrounding bringing data together from LERCs and NBN as there are multiple different data formats

> *Benefit 3: Services are consistently provided, and Service Users know what services are available to them*

- There are currently lots of regional differences between LERCs in consistency and quality and it would be great to address this.

Benefit 4: Recorders, Verifiers, Recording Groups and Recording Schemes have consistent access to high quality training and support

- There are currently issues in the current system around verification, especially how to support data verification coming from new apps and projects. Lack of understanding with verifier community impacts on data quality and often results in losing unverified data.
- Need to develop consistent standards for data collection and verification.
- Training verifiers and recorders is fundamental to preventing this.

Benefit 6: Organisations that provide or govern key parts of the infrastructure as a public service have sufficient funding and resources to do so effectively.

- Recognition that funding is perhaps the highest priority as this underpins all other benefits and the infrastructure as a whole.
- As a consultant, happy to pass on costs to clients.
- Recognition that council funding, and use of, the LERC network is inconsistent.

Benefit 7: Our skills base is increased with more people engaged in biological recording, more records being collected and verified and few taxonomic gaps overall

- Can be hard to contextualise information regarding the importance of findings from professional site-specific survey if there is not access to wider information about species prevalence in the area.
- Data searches are sufficiently important that filling data gaps is a priority.
- Lots of data gaps and also skills gaps
- It was noted that there may not be a training gap – people are trained, but not given the opportunity to practice their skills, as there aren't sufficient jobs.
- The solution to the data gap is both in improving the network of volunteers, but also in paying systematic surveys to get the full coverage across the country.
- EG Ayrshire has had a 2 year fully funded data drive to get something of a baseline. This was aimed at recruiting more recorders and persuading them to supply their data to the record centres.
- There are a lot of records which exist which aren't in the system yet – there needs to be a push to getting these digitized and into the system. Specific projects – such as making a new atlas – can be a good driver for getting these into the system.
- Easier to encourage the competitive learning based driven side by making it easy for people learning a new taxonomic group if we could join record data with individual profile data *(have I seen one, are they in flower now, habitat requirements)*

Benefit 9: Changes in species distribution and abundance are more rapidly understood

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- Surprise that this benefit didn't get more votes as this is the ultimate goal.
- It was noted that for some species this may be entirely aspirational (e.g. herps, spiders, plants etc.) The ability to track metrics for these species is in some ways contingent on the amount of involvement of other people

Prioritising the top three benefits

An Eisenhower Matrix was used to identify the urgency and importance of the three priority benefits to help provide an assessment as to which ones need progressing first and where any dependencies lie.

The matrix was used to rationalise the benefits into those that are 'most urgent' – i.e. demanding immediate action, and those that are 'most important' – i.e. contribute to achieving a goal.   The four quadrants can be described as 'Do, plan, delegate and eliminate'.

It was agreed that access to data (Benefit 2) and access to sufficient funding (Benefit 6) are inextricably linked and therefore held the same place on the matrix. Discussions included the need to have robust systems in place before we can expect to have access to data through a central repository and this will require funding to ensure appropriate implementation and use. Both need to come together. The invaluable role of LERCs in providing access to data was also discussed and it was recognised that some LERCs are in extremely vulnerable financial positions. There is an ever-pressing need to secure funding for the infrastructure as a whole so that LERCs don't fold before improved systems and data flows can be developed. Once the data are in a central place this will free up time to interpret data rather than managing the holdings in multiple databases.

While the need to increase our skills base (Benefit 7) is also urgent and important it was discussed that developing skills takes time and the need to get the systems in funding in place to support this learning journey was paramount. The group discussed that developing skills should not just be restricted to ID skills but also wider hard skills such as technical app development expertise and data management. We should be starting to develop these skills now to ensure that individuals have time to develop their skills ready for when the infrastructure is in place. It was noted that skill gaps may be exacerbated due to lack of jobs, the skills may exist within the wider workforce but they may not be able to apply them and so their skills loose relevance.
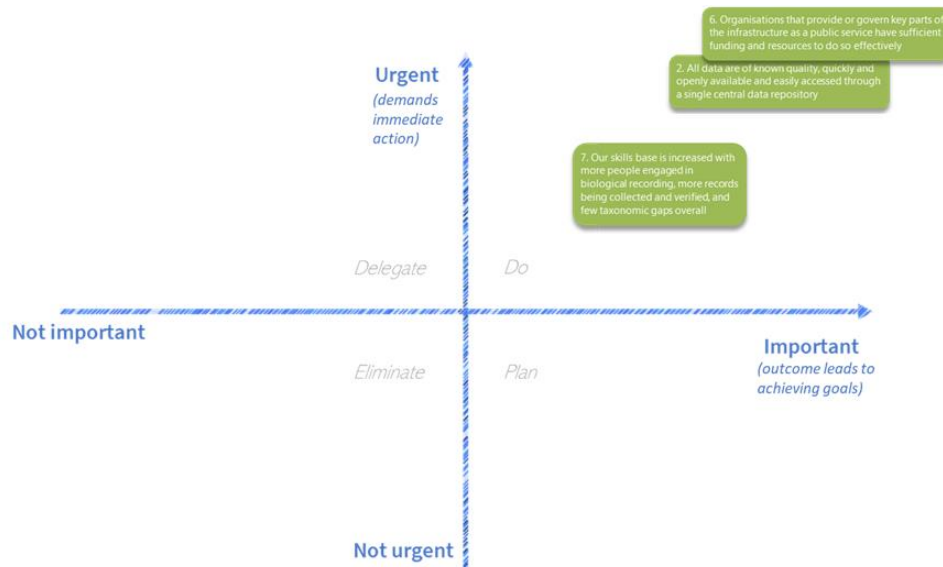
Session 2: What needs to change

Having worked through, and identified the most important benefits, the workshop moved on to understand more about attendees' views on what they would **change** with regards to the current infrastructure and what they think works well and therefore must be **kept**.

The workshop stayed in plenary and considered how attendees **'contribute'** data to the infrastructure and how they **'access'** data from the infrastructure.

It was stressed that when thinking about infrastructure consider the people and systems involved in the flow of biological records such as the LERC network, NGOs, NBN Atlas and iRecord as well as attendees own inhouse data management processes.

Contributing data to the infrastructure

What works well

- Existence of NBN Atlas
- That the system exists at all -it's a good initiative!

What doesn't work so well

- Client constraints with sharing data – however some attendees noted that they include data sharing in all their contracts and could consider redacting specific locations or other details if this encouraged increased sharing without stopping the records being useful.
- Even when there is client permission to share data, the point at which this is possible is not always obvious. Data can be shared when a project is "finished". If a project is never built, or stuck in planning for many years, it may never be classed as finished, so the data may never be released.

- It takes a long time to upload large datasets. This time cost has financial implications for consultancy businesses, and it can be hard to include cost of time to share data in project contracts –this isn't generally something clients will pay for. However, if there was an obligation to do this – such as a planning consent condition – it becomes easier to "fund" this time, allowing consultants to do more of it.
- Inconsistency in recording absence data. Linked – but inconsistency in providing absence data to record centres. It is much easier to submit a record than it is to submit an absence.
- Plethora of routes to in submit records. Need to promote a single point of entry for all projects rather than developing new data entry apps. A selection of standardized formats for doing this would also be very useful.

Possible solutions
- Streamlining data flows
- Standardised files types to submit records to any Local Record Centre
- There was discussion around creating best practice guidance on sharing commercial data in a standard format, badged by NatureScot. The potential of adding further incentive via the planning consent process was also discussed, but it should be noted that it is unknown at this time whether it is legally possible to do this. Similar recommendations exist already in the CIEEM Code of Professional Conduct (2019).
- Submitting records at 10km square information rather than fine resolution but recognised this is not ideal
- One suggestion was to prioritise data on the basis of conservation status or abundance to concentrate efforts on proving continued existence of threatened populations or learning how to find unusual species on the basis of assessing suitability of an area on the basis of what else is there. However, it is worth noting that a lack of data on a species may prevent this approach being robust as a lack of data may be as a result of under recording rather than rarity.

Accessing data from the infrastructure

What works well

- Existence of NBN Atlas - but not all data available via NBN Atlas.
- There are some other very useful sources of data online. For example, council planning portals should be part of a standard desk study search to check for other developments in the area; if there are, the ES (or similar) and associated information can be useful given the likelihood of dedicated ecology surveys having been undertaken.


What doesn't work so well

- Politics – there is frequent duplication of records and data flows.
- Need to encourage more by-in to centralised systems. It was agreed that for many organisations, records are source of income and so a valuable resource and sharing at fine resolution, openly available doesn't occur.
- Current download format from NBN Atlas includes 55 fields with many superflous fields
- Not all data available on the NBN Atlas, or not shared with the NBN Atlas which increases the duplication of effort to submit data to multiple places
- Each individual council has their own development plans at varying degrees of quality and resolution. Maps of LNCS should be provided separately for integration at fine resolution.
- NBN Atlas issues (communicated after the workshop)
    - Doesn't consistently provide detail on the records and so it can only be used for presence rather than anything more qualitative.
    - Can only unselect 20 options at a time
    - There is no option to add a buffer around a site other than drawing it manually
    - Lots of irrelevant information in the download spreadsheet and in a complex order
    - Need data on the designations e.g. SBL/ WCA/nationally rare etc
    - Would be helpful if the records could be provided as 12 figure grid references so they didn't need converted from tetrads
    - Would be good for the NBN Atlas to show if a species is present on the relevant LBAP by relating it to the records grid reference
    - Council data issues
        - There are inconsistencies in how each LBAP lists their "Priority Species". Some lists are vague mentioning "pollinators" or "bats".
        - Difficult to find Local Sites e.g. Local Biodiversity Sites and similar on council websites as a whole. Normally you have to screenshot a map that is hidden away in a document that is referenced in the LDP and then georeference it to the GIS. Often these are only given as a point rather than a polygon, sometimes they don't have names and it's really difficult to find any other information about them.
        - A database of all species and the LBAPs they are present on would be benefitial

Introducing the SBIF lite Project Plan

A short presentation outlined a project proposal the SBIF team are working on with LERCs in Scotland.

The project will establish a National Biodiversity Data Hub for Scotland that can provide leadership and coordination to support delivery of biodiversity data at both national and regional levels. It will work in close partnership with the Local Environmental Record Centre (LERC) network as regional biodiversity data delivery nodes and with the NBN Trust as the UK's biodiversity data network. The National Hub will provide a single point of contact for national data enquiries and will work on behalf of the LERCs to develop central data agreements with key national data providers and data users. A shared online data management system will be implemented following an open tender process, to support the management and provision of data across the LERC network, ensuring continuity of services and security of data holdings. This system will be integrated with the NBN Atlas, UK Species Inventory and the Indicia Warehouse (to also integrate with National Schemes and verifiers) to ensure efficient data flows across the existing biodiversity data ecosystem.

Figure 2 Draft proposed structure to improve coordination between the regional and national data infrastructure.
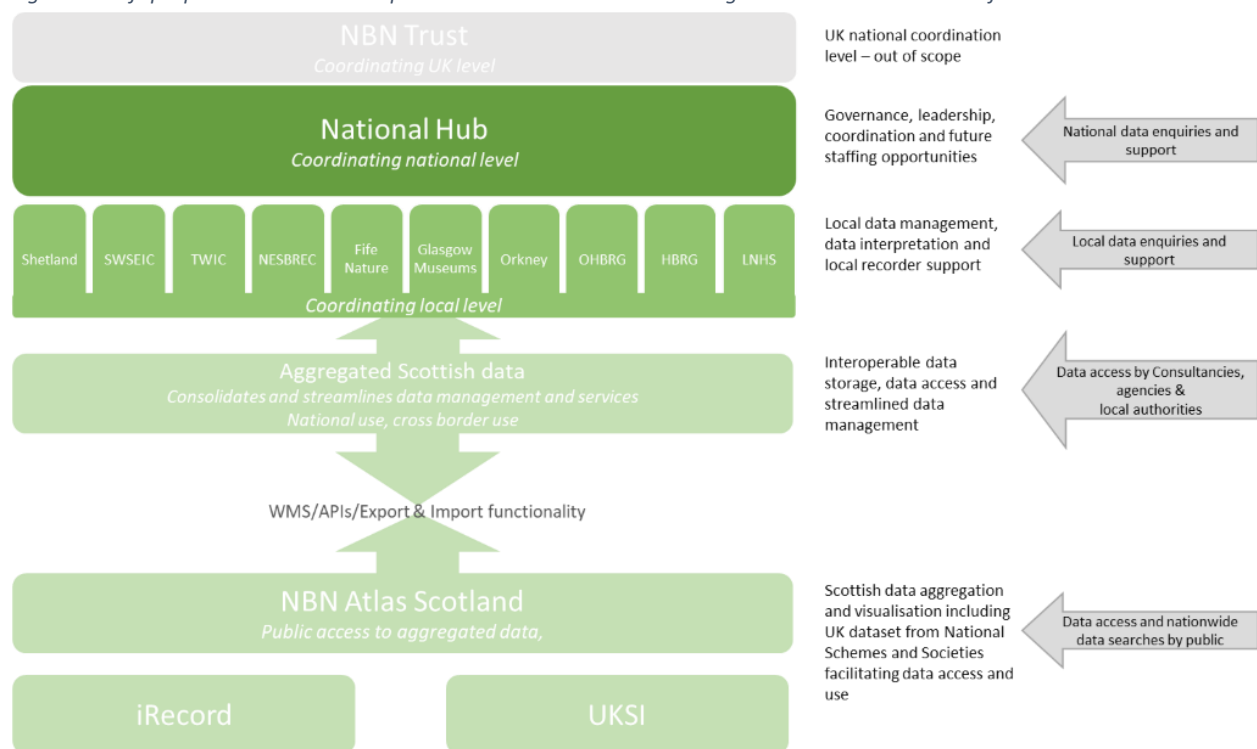
To provide consistent biodiversity data services across Scotland, it is proposed that all LERCs in Scotland have access to a shared biodiversity data management system. This aggregated Scottish data (Figure 2) would be interoperable with the NBN Atlas Scotland (for wider data sharing), iRecord (for data verification and data input) and the UKSI (for consistent species

naming). The National Hub would provide a common, overarching profile for LERCs in Scotland and would liaise with the NBN Trust as the lead UK biodiversity data governance body.

Following the introduction on the future SBIF plans, for the remainder of the workshop attendees were asked to provide their thoughts on three questions via the chat box.

Question 1 : Do you see any red flags in the suggested approach?
- All participants were in agreement with the suggested approach and no red flags were raised.
- It was asked if the suggested approach would help achieve consistency of service across Scotland – this is one of the key drivers for this project.

Question 2: What services do you require from the future infrastructure?
- Consistent pricing
- Consistent file types for data processing to streamline aggregation of data when a site falls across multiple LERC boundaries
- There was support for subscription access and it was recognised that this should stabilise income if there is a good uptake. There was a suggestion that this should be tiered to the organisation size and type.
- Reports showing other data about LBAP priority species and designations

Question 3: Where would you like to see us target our initial effort over the next 2 years?
- Securing longer term funding for LERCs
- Plugging gaps in recording centres is really important for that centralised system to work
- Implementing first steps to developing centralised reporting systems
- Having consistent timescales for providing data search results
- Make as much data as available as quickly as possible and mobilising these records onto existing platfroms such as NBN Atlas

Wrap up and close

Annie closed the workshop by stressing that this is just the start of the process and in time the SBIF team will need further engagement from consultants. The CIEEM Committee would like to thank Claire Lacey for representing CEIEEM on the SBIF Advisory Group for the last 3 years and we are delighted that Elaine Anderson will be taking over this role from Claire. If you have any further questions about the project or process please do not hesitate to contain Elaine at Scotland@CIEEM.net as our CIEEM representative.