

Potential Methods of Collaboration for Environmental Monitoring

INTRODUCTION

This paper provides an overview of the types of collaborations that may be possible between organisations carrying out environmental monitoring in a defined area. Collaboration between organisations has the potential to lead to more efficient and cohesive working, enabling improved monitoring activities. The paper highlights the different types of collaborations that are possible for resource sharing, knowledge exchange and data synthesis.

RESOURCE SHARING

Sharing Equipment

Monitoring activity often requires expensive, specialist equipment. Sharing resources, particularly when budgets are constrained, can be a way forward for organisations to carry out or expand upon their monitoring activities cost-effectively.

Benefits:

- Reduced costs without reducing monitoring activity
- Ability to expand monitoring programmes with specialist equipment
- Ability to collect more robust, accurate measurements
- Data collectors develop new skills
- More feasible to keep up with technological advances

Barriers:

- Issues over ownership of equipment
- Issues over maintenance and storage of equipment
- Difficulties allocating time to organisations for use of equipment

Example: In Kent on SSSIs, Natural England shared expensive machinery with the Forestry Commission in return for labour from the Forestry Commission. This reduced costs and allowed woodland to be better managed.

Sharing staff / transport

Where monitoring sites are geographically close in location, sharing data collectors or transport to and from monitoring sites can be an effective option to make best use of resources.

Benefits:

- Potential to increase amount and types of monitoring activity
- Sharing of skillsets and knowledge between staff
- Economic saving where sharing transport (petrol, parking etc)
- Time savings and ability to refocus staff effort into other activity

- Sharing of support infrastructure and engineering teams to install and service observing systems

Barriers:

- Difficulty in sharing staff/transport if site locations are sensitive
- Different data collection protocols between organisations could make sharing staff difficult
- Training requirements? E.g. if staff need to carry out multiple monitoring activities?
- Relying on another person to carry out data could be problematic, e.g. illness could prevent measurements being taken at a specific time.

Example: A number of organisations have collaborated through the Wildlife Crime Network in the East of England, including the Environment Agency and Natural England. Through this scheme, trained EA staff carry out some work on behalf of NE, resulting in more efficient use of resources. There has been greater engagement with the community as a result of the collaboration, as the EA 24 hour help line is used for landowners to call when concerned about damage to SSSI land, when NE staff are unavailable.

Sharing facilities

Organisations could share facilities, for example laboratories, I.T. equipment or meeting spaces within a catchment area.

Benefits:

- Reduced costs on hiring meeting space/laboratory time
- Access to facilities/equipment that was not possible before.
- Greater potential for information-sharing and expansion of skillsets
- Time and transport cost savings where shared facilities are in a more convenient location

Barriers:

- Training for specialist equipment at a facility (e.g. GIS software) – should this be done by the hosting organisation?

Example: A sub-group of the Marine Science Coordination Committee, led by CEFAS, are investigating the potential for sharing facilities and equipment. A list of potential facilities for sharing has been compiled, listing the facilities and equipment available and the appropriate contact.

KNOWLEDGE EXCHANGE

Exchanging information and advice

Exchanging knowledge, and coordinating training needs can improve monitoring activity by creating webs of information and skills across a catchment area.

Benefits:

- Widen the knowledge base for monitoring within the catchment
- Identifying common training needs and responding to these collectively will lead to a broader skillset without duplication of effort.

- Better coordination of monitoring activities, for example leading to better engagement with land owners and local communities
- Awareness of breadth of monitoring activity within a catchment may lead to increased research and knowledge, resulting in better catchment management
- More efficient monitoring can take place, following advice from other organisations (e.g. regarding survey sites etc).

Barriers:

- Reluctance to share information relating to sensitive monitoring
- Reluctance to share information relating to funding bids

Example: Collaboration through knowledge exchange has been successful in Scotland where Scotland’s Environmental and Rural Services (SEARS) has been set up. This is a partnership of eight public bodies which share information over their monitoring activities in order to provide efficient and effective service to improve land managers’ experiences. Through the scheme, land owners can deal with just one of the organisations within the partnership to find out information about any of the other organisations. Moreover, visits to the land are better coordinated by the partners which helps avoid duplication of effort.

Example: The Environment Agency has appointed Catchment Coordinators to work over designated Water Framework Directive catchments. The Hampshire-Avon catchment is an example of one of these catchments, where work is currently in progress. So far a workshop has been held looking at who is doing what on the Hampshire-Avon, and there have been positive outcomes from this including plans for a website for those working in the Hampshire-Avon to provide updates about their activities, and for a biannual newsletter about work on-going in the area. Although this example is not specific to monitoring activities, it is a useful case-study to show how broader schemes like this, that have already been set up in catchments, may be of benefit to monitoring activities.

Example: An initiative is starting in the Frome and Piddle catchment in Dorset, where the Frome & Piddle Catchment Initiative (F&PCI) Catchment Plan has identified the need for a monitoring network to be developed. A group of key stakeholders have met at an initial scoping meeting to discuss and identify the key monitoring issues, what is being monitored in the catchment area and what datasets exist. Following this, a task group is forming with relevant organisations to realise collaborations over monitoring within the catchment and prioritise actions for progressing the establishment of a more cohesive landscape scale monitoring network.

DATA SYNTHESIS

The various data-sets collected by different organisations across catchments may help provide context, or compliment other data being collected. By working together, organisations can share data which that may add context to the results of their own organisations’ monitoring activity, and expand smaller datasets.

Benefits:

- Extension/expansion of datasets, and fill in data gaps

- Provide context for better interpretation of data from monitoring activities
- Help streamline and focus monitoring activities
- Enable improved/new research
- Exploration of citizen science schemes – resource efficiency and potential for large-scale data collection

Barriers:

- Access to data – some data may be sensitive and be restricted to certain audiences. Where the data is held and any cost implications may also raise issues
- Willingness to share data across public/private/voluntary sector.
- Data quality and validation issues – data collection standards may vary and data collection protocols may need to be assessed before sharing can go ahead.

Example:

- DTC Archive Project – this project is ensuring that the data received from the DTC projects is stored effectively and accessible by those with an interest in it.
- NBN Gateway. Several organisations collecting biodiversity observations already submit their data to the NBN Gateway, which has varying degrees of accessibility.