

# Monitoring and evaluating your projects

This factsheet provides a short introduction to the following areas:

1. Why monitor and evaluate your projects?
2. Planning your monitoring and evaluation
3. Monitoring planner
4. Key monitoring principles
5. Monitoring methods
6. Finding support for your monitoring
7. Further information

## 1. Why monitor and evaluate your projects?

There are a number of key reasons as to why you should monitor and evaluate your restoration projects:

- ⇒ To demonstrate **project outputs or successes** to current funders and partners
- ⇒ To allow an **adaptive management approach** and identify the need for further restoration works
- ⇒ To provide data towards the overall **scientific understanding** of the benefits of restoration

Monitoring and evaluation has a key role to play in the **long term success** of your organisation. If you are able to monitor and evaluate your projects, then you can demonstrate exactly how successful your past projects have been, encouraging confidence in your ability to deliver successful projects in the future.

## 2. Planning your monitoring and evaluation

Monitoring and evaluation need to be a part of your **initial project planning** and can help to secure future funding and engage local communities (Figure 1). Once you have your SMART project objectives (Project Planning factsheet coming soon!), which define what your project will achieve and how, you can set your **evaluation requirements**.

*What information do you need to demonstrate success to yourself, funders and project partners?*

Monitoring should primarily focus on demonstrating that **project objectives have been achieved**. It can be tempting to monitor what is convenient or of personal interest but this may not produce the evidence you require to demonstrate success. Given the common issue of a lack of funding for monitoring, you may have to limit what you monitor so it is important to consider all options. The [monitoring planner](#) is a useful tool to help plan your monitoring.



**Figure 1** Flow chart of relationship between monitoring/evaluation to increasing future capacity



### 3. Monitoring planner

The monitoring planner is a **simple but effective tool** to help you form a project monitoring and evaluation strategy, providing a systematic approach by answering 10 important questions for each project objective. The planner should be **used at the project scoping stage**, applied and revised throughout the project, and into the evaluation period. It is a tried and tested tool, already used widely by practitioners across the UK. You can download a blank [monitoring planner](#) from the RRC website.

<b>Why</b>	<b>Why are you doing the project, what are the project objectives?</b> These should be specific (e.g. to improve fish spawning and invertebrate suitability by increasing the area of riffles and clean gravel habitat by 80% over 2km of river). Your objectives may require revising as you work through the planner, particularly to ensure they are measurable.
<b>What</b>	<b>What is your monitoring objective/ what are you trying to observe?</b> One or more for each project objective (e.g. to monitor increased habitat diversity and change in macro-invertebrate assemblages)
<b>How</b>	<b>How will you collect data and what assessment methods are you using?</b> E.g. habitat mapping, 3 min macro-invertebrate kick-sampling; $\alpha$ -diversity, PSI index.
<b>Data</b>	<b>Do you have any access to pre-project baseline data?</b> If so, what? If not, this needs to be collected. (e.g. previously collected 3 min macro-invertebrate kick-samples from two locations in autumn).
<b>When</b>	<b>When are you collecting data?</b> Month/season, duration of monitoring, sampling repeats? (e.g. habitat survey: pre survey 1 month before works; post survey 1 year after. Macro-invertebrates: pre survey spring and autumn samples 1 year before; post survey 1 and 3 years after both including a spring and an autumn sample).
<b>Who</b>	<b>Who is going to monitor data? Who is going to evaluate data?</b> E.g. habitat mapping in-house by Jo Smith; macro-invertebrate pre survey by consultant, post survey in-house by Jo Smith.
<b>Cost</b>	<b>How much will the monitoring AND evaluation cost?</b> Review the questions you have answered above to estimate costs. Include cost of staff time, equipment, etc. Can be in-kind. Further guidance on costing monitoring methods is available in RRC PRAGMO monitoring guidance (section 9). If funding is insufficient, prioritise and go back to 'how' and think about alternative techniques and methods.
<b>Confidence</b>	<b>How confident (H/M/L) are you that the monitoring is robust, suitable and has potential to show what you are trying to observe within the project time frame?</b> If your confidence is low, go back to 'how' and consider alternative monitoring techniques.
<b>Evaluation</b>	<b>How will your collected monitoring data be processed, analysed and reported?</b> E.g. By Jo Smith using standard protocols, as end of year reports, uploading information to the RiverWiki.

#### Top tips for planning your monitoring

1. Plan with project partners/advisors who may have access to baseline data sources, have experience in monitoring or be able to contribute towards costs and efforts
2. Monitoring can often get overlooked so allocate time and money to monitoring methods at the beginning of your project so results are as effective as possible
3. Look at previous examples of monitoring strategies and lessons learnt - some examples can be found on the RRC website [here](#).

## 4. Key monitoring principles

To ensure you get the most out of your monitoring, the following section sets out some useful things to consider.

### *Monitor both the environment and wildlife*

The restoration measures may result in the river form and habitats you designed, but the **wildlife may take longer to colonise**. Initial assessment of river processes, habitat composition and other environmental variables such as water quality will help identify if there are other pressures which may need addressing as well as the physical form. Ensure you consider your river and restoration scheme in the **context of its setting and catchment**. Benefits often extend wider than the river channel.

### *Follow a Before-After-Control-Impact design*

Ensure you have **sufficient baseline data** and **control sites**. This will help you distinguish the effect of the restoration scheme from the general trends in the whole river or catchment. Don't forget that there may be data already collected and available which you can use as baseline data.

### *The scale of your monitoring*

Monitoring should be conducted at the **appropriate scale** (spatial and time). For example, a scale that reflects the habitat needs of the wildlife you are interested in and at all of their life stages.

### *Adaptive management*

Regular evaluation of your monitoring results will enable you to **react to unanticipated effects** and trends to ensure the success of your scheme.

### *Engage local communities and organisations*

**Share your results** and experiences. You can make an important contribution to further understanding the success of restoration measures and monitoring methods. You can share your **lessons learnt** by adding monitoring information to the [RiverWiki](#), an online tool used for sharing information on river restoration projects across Europe.

## 5. Monitoring methods

There is a **diverse range of monitoring techniques** and approaches due to the variations in objectives of river restoration projects and funding streams. Covering all methods of monitoring is beyond the scope of this project but the RRC have compiled a guidance document '**Practical River Restoration Appraisal Guidance for Monitoring Options**' - or '**PRAGMO**' - which provides guidance on suitable monitoring for river and floodplain restoration projects. PRAGMO is a 'living' document so is updated with new information and methods when they become available. Find information and the full document [here](#).

One simple monitoring technique, which requires little expertise, time or funding, is **fixed point photography** (FPP - Figure 2). This should be carried out where there is likely to be a visible change after restoration over a period of time. This technique is covered in full in another [factsheet](#).



**Figure 2** Example of fixed point photography with pre-, during- and post-photographs within a reach where restoration work was carried out

## 6. Finding support for your monitoring

Despite its importance, securing funding for monitoring can be difficult. It is common for projects to not have enough money remaining or were not been able to secure funding for monitoring specifically. The following are some tips on how to **increase your monitoring capacity**.

### *The 15% rule*

It is advisable to allocate at least 15% of project budget to monitoring and evaluation.

### *Consider the language you use in funding applications*

The term 'monitoring' can sound off-putting to some funders so consider using 'evaluation', 'learning' or 'demonstrating success' as these may be more effective.

### *Link with universities*

Universities are often interested in the effectiveness of monitoring techniques so student projects can be utilised to undertake some monitoring or evaluation of your project.

### *Citizen science*

There may be an aspect of your monitoring which could be done by volunteers - this may satisfy a community engagement project objective and **attract future funding**. Although volunteer time is 'free' in principle, citizen science takes time to organise well, and volunteers may need some training.



Figure 3 Getting local people involved can help increase the capacity of the monitoring you can achieve

## 7. Further information

This factsheet is only an introduction on planning monitoring, so further information is available:

### [Monitoring Guidance \(PRAGMO\)](#)

Expands upon all of the information here, including further information on different monitoring methods that can be used. Available via the guidance pages of the RRC website.

### [Monitoring planner](#)

Described on page 2, the monitoring planner is a simple and effective way to plan your monitoring strategy. Available via the guidance pages of the RRC website.

### [CaBA Citizen Science & Volunteer Monitoring Guide](#)

A showcase of monitoring methods which involve volunteers. Case studies from across England providing examples of their application. Available from the CaBA website.

### [RiverWiki](#)

Using the advanced search option, search for projects which have used the techniques you are interested in. Available via the restoration projects pages of the RRC website.

### [RRC](#)

If you need advice just ask! RRC will either support you, or put you in contact with the organisation or individual best placed to help.