

Design and analysis issues for ME evaluations

What are the strengths and weaknesses of quantitative and qualitative data for evaluations? Is one better than the other?

One is not better than the other, they are complementary and they serve different purposes. It is important not to under-rate the value of qualitative data. An important part of data collection is the feasibility of answering the questions. Qualitative data can be used to highlight areas needing more attention and monitoring with quantitative data. Qualitative data is often better at providing breadth of information whilst quantitative is better for depth. Collection of data is also driven by resource availability.

The data you collect needs to answer the question; it is not a question of quantitative versus qualitative. Don't collect data you can't use!

Data quality is sometimes limited with qualitative data. Rangers are not considered to have scientific knowledge or represent expert knowledge base. Field staff tend to pose responses in terms of solutions, not problems and are often closed to problems where solutions are hard to recognise. Field staff can also be isolated in a park and be unaware of the bigger picture. Systems need to be designed to reduce bias. This can be achieved by information sharing and by the data providers seeing the results of the evaluation and its future use. It is important to include people in the process.

Evidence based approaches are more appropriate but different tools for different purposes. Don't have enough resources to monitor everything. We need to monitor things where we can detect change in appropriate time scales. We also need to track management action and intensity. Need to be realistic about the starting point and acknowledge past land use.

Should evaluations be carried out for some or all parks in a network? And how does this influence the depth of data collection

It depends on the objectives of the evaluation. Not all parks need the same level of detail but all types should be captured. Evaluation should be tailored to reflect park value and associated prioritisation. The depth of the evaluation will depend on the story that needs to be told and to what audience it is told. Data requirements will be different at different organisational levels.

Evaluators need to be aware that rangers are overloaded with new systems and there is frustration due to lack of feedback from previous systems. Information also needs to be tailored to suit the different organisational levels.

There is a need for increase clarification of management objectives and standards that moves away from generic motherhood statements.

What are the implications of design on the analysis of data?

Clarity on the objectives of the evaluation is needed from the outset to ensure that only what data is needed is collected. This can be achieved by working backwards by considering what analysis is required to address the questions being asked. What is needed will vary according to organisational level. Approaches should account for temporal and spatial scales. There are issues with too high levels of complexity, which may be necessary to collect information that is useful to management at a park level. This relates also to staffing and what is feasible. The design should be simple.

Introducing trigger points for when more data is needed is a good way to optimise effectiveness. For example data is collected on the presence of scale insects, which when in high densities are obvious on the infected plant and can be immediately identified. These are an indicator of abundance of another vertebrate pest species which can then be managed. It is much easier to monitor the scale insect than the abundance of the vertebrate pest. The important thing is that the data collection is suitable for field staff and feasible in everyday activities.

There is also a school of thought that monitoring is a 'money pit' and the limited resources available should be spent on daily management requirements. We therefore need to think about how we can get observation to precipitate action. Also be aware that catastrophic events change priorities, but fire shouldn't be thought of as an unusual event but a common issue for management.

There is a need to be able to communicate to the public about parks more broadly.