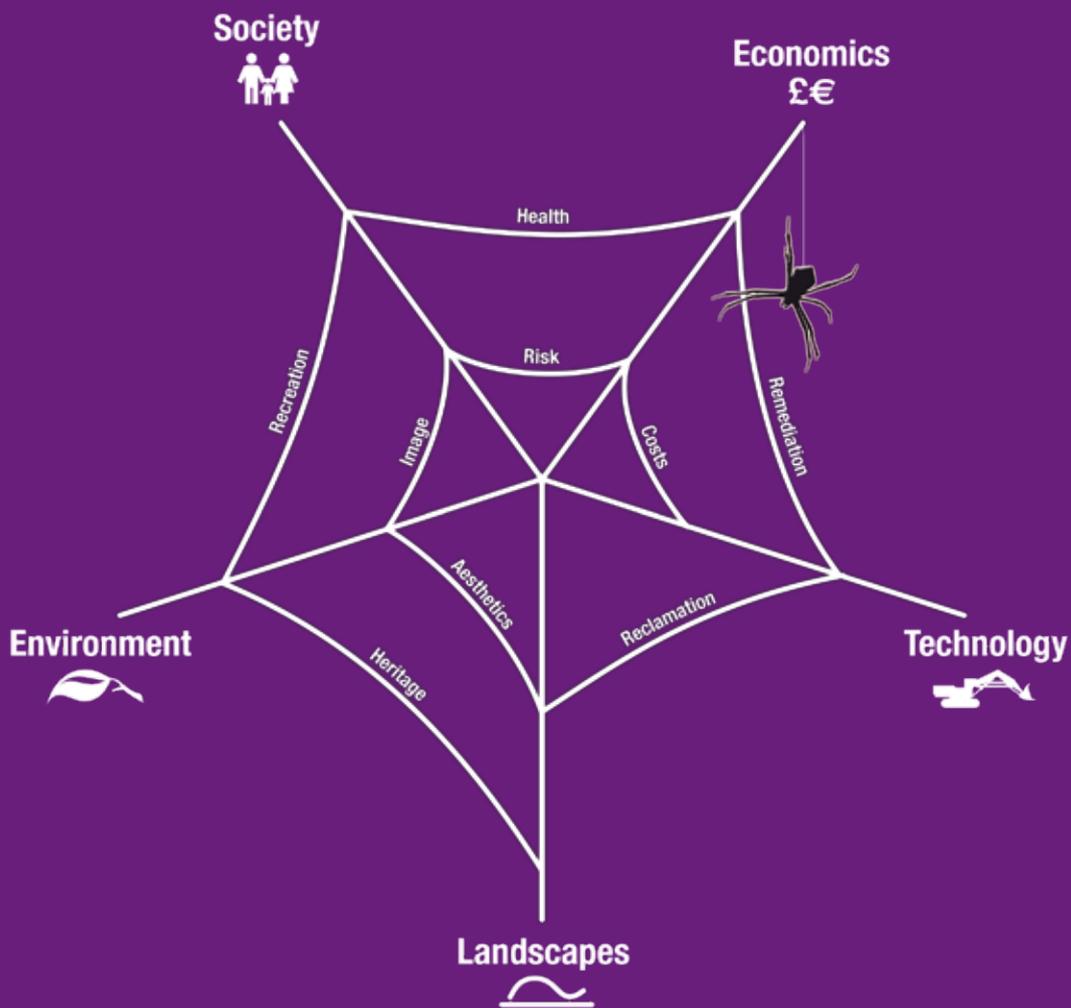


Methuselah



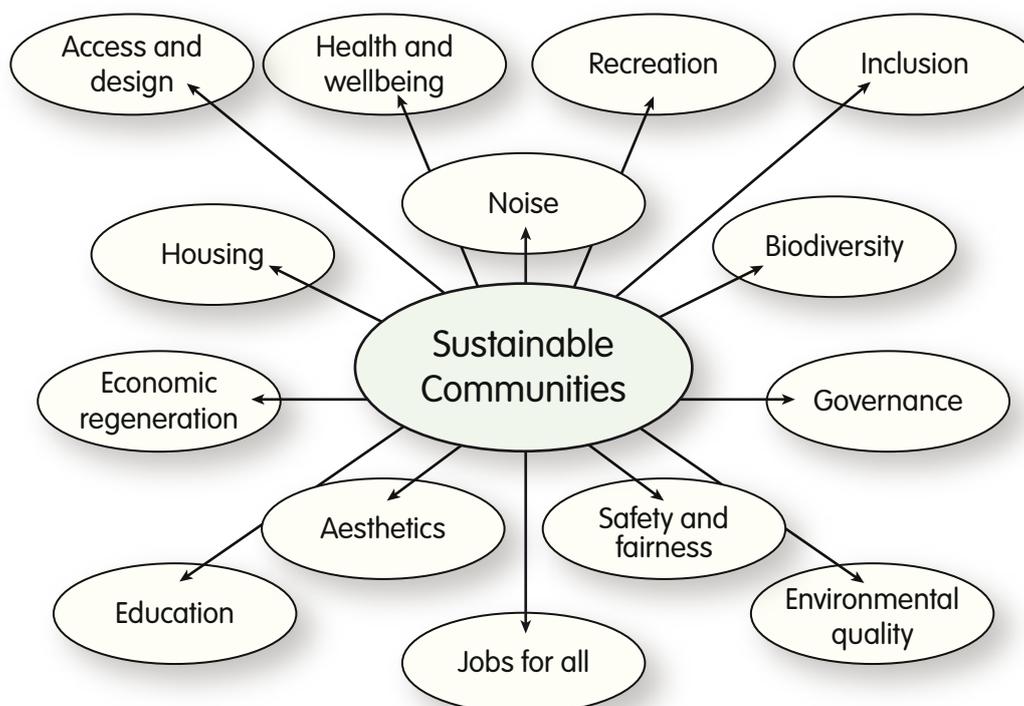
A monitoring and evaluation strategy for greenspace

Methuselah: A monitoring and evaluation strategy for greenspace

Introduction

The regeneration of land plays a key role in delivering the UK Government's Sustainable Communities agenda (Figure 1). Provision of greenspaces and green infrastructure such as green corridors, new habitats and community open spaces, contributes strongly to achieving a number of goals:

- achieving biodiversity targets
- improving habitats
- alleviating social deprivation
- improving air quality
- priming for economic growth
- providing an educational resource
- promoting recreational exercise
- abating flood risk
- helping to mitigate predicted changes in climate



The need for evaluation

The Forestry Commission (FC) is proactively involved in the delivery of greenspaces. When a site is regenerated, a web of interactions is spun across the fabric of life, impacting upon the social, cultural, economic, environmental and landscape dimensions within which people live. The challenge is to optimise the beneficial impacts of land regeneration within each of these dimensions.

Sustainability is a vital component of greenspace establishment. Only by encompassing all three pillars of sustainability (society, economy and environment) can the impacts of regeneration be usefully evaluated (Table 1). Funding providers also require evidence of efficient and effective use of regeneration funds to deliver both the project and its benefit to society. To date, much of the evidence supporting the establishment of greenspaces is anecdotal, being based on 'common sense' conclusions and ad-hoc studies from around the world. The FC has identified the need for a considered and integrated approach to monitoring.

Closer assessment and evaluation of the impacts of regeneration will:

- provide the FC with solid evidence for expanded regeneration activities
- satisfy funding bodies and other stakeholders of the wider impacts of greenspace establishment
- allow alignment of regeneration activities with UK Government headline indicators of sustainability and policy objectives
- allow systematic identification of future headline indicators and targets for regeneration at site, regional and national levels
- identify required improvements in best practice, which will improve the FC's ability to deliver stakeholder needs more easily and cost-effectively
- allow thorough quantification of resources to sustainably manage and maintain vibrant greenspace
- demonstrate to local communities the benefits and rewards of their open spaces, encouraging ownership

Sustainability		
Society	Economy	Environment
Social integrity	Affluence	Ecological integrity
Equality	Regeneration	Impact
Social capital	Consumption	Conservation
Quality of life	Technology	Enhancement
Education	Vitality	Energy
Health and wellbeing	Enterprise	Resource management
Culture	Non-market benefits	Biodiversity

Table 1: Sustainability in the context of land regeneration. The social, economic and environmental dimensions of life impacted by land regenerated to greenspace.

Formulating a monitoring programme

The aims and objectives of a monitoring programme typically seek to demonstrate the success of the regeneration programme with respect to only a handful of stakeholders, omitting the interests of the wider audience; therefore a new approach is required.

FC research demonstrated the need to maintain an integrated assessment of impacts at multiple levels (site, regional and national) in order to achieve a comprehensive evaluation. The integrated approach encompasses the monitoring of impacts from all three pillars of sustainability: society, economy and environment. Monitoring programmes must also have sufficient longevity of study to capture the outcomes of greenspace establishment, and must not be solely orientated towards delivery outputs.

Criteria selection

Table 2 compares traditional monitoring approaches aimed at demonstrating the arrival at key milestones and the ensuing outputs to an integrated approach orientated towards project outcomes.

Indicator derived from:	Criteria		
	Site aesthetics	Job creation through regeneration	Improve biodiversity
Project outputs	<ol style="list-style-type: none"> 1. Area of land regenerated 2. Area of each new land-use created 	<ol style="list-style-type: none"> 1. Number of jobs directly created on site 2. Number of franchise opportunities on site 	<ol style="list-style-type: none"> 1. Areas of new habitats delivered 2. Land (by type and area) brought under new management
Project outcomes	<ol style="list-style-type: none"> 1. Changed perceptions towards site; increased number of site users 2. Improved land and house values 	<ol style="list-style-type: none"> 1. New jobs and businesses created local to or related to site 2. Regional inward investment (business, commercial or industrial) 	<ol style="list-style-type: none"> 1. Increase in floral and faunal diversity, including Biodiversity Action Plan (BAP) species 2. Increased numbers of nature watchers, tourists, visitors to site

Indicator provision

Evaluation requires data that inform on or about various criteria; this is the role of the indicator. Selecting the right indicators is an important part of designing a monitoring and evaluation programme (Figure 2).

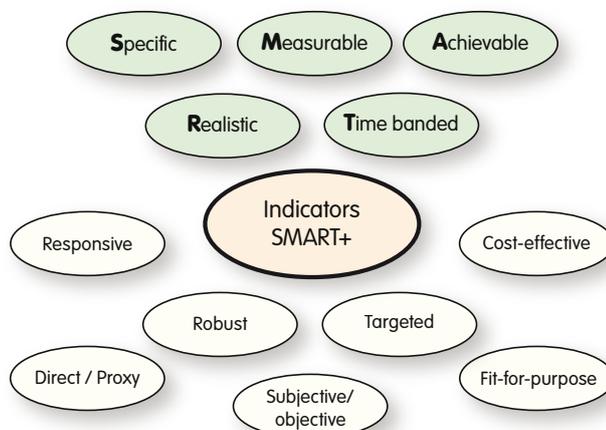
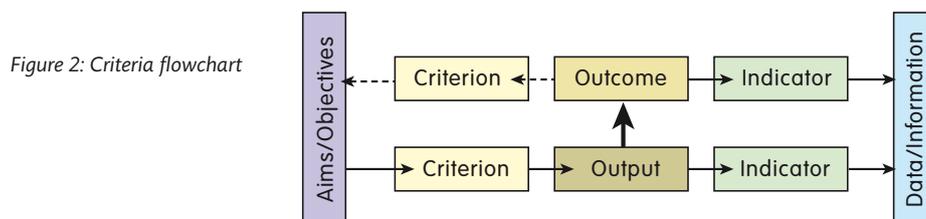


Figure 3: SMART+ Indicators

Methuselah – an integrated approach to monitoring and evaluation

Methuselah facilitates the design of monitoring and evaluation programmes to assess the impacts of greenspaces. Its founding principle is that monitoring of greenspaces should take a sustainability approach.

Indicator selection is assisted in Methuselah by separating the social pillar of sustainability into ‘social-civic’ and ‘social-community’. By selecting indicators for each pillar (social-civic, social-community, economy and environment) a detailed picture of greenspace impacts can be obtained. Methuselah offers a library of indicators that are SMART+ (Figure 3). The indicators are currently being trialled in case studies at a number of regeneration sites across the UK to assess their suitability for widespread use.

Methuselah can be used to evaluate the impacts of greenspace establishment projects and existing greenspaces. Where a site is being regenerated, opportunities for monitoring are presented through the multi-stage, multi-output, multiple stakeholder process. These opportunities for monitoring are: site delivery; the annual site management review; evaluation of the long-term socio-economic and environmental impacts (Impacts appraisal); and site-specific research and development (R&D) projects (Figure 4). Figure 5 demonstrates that Impacts appraisal may be a stand alone evaluation or enhanced via the input of additional data from the project delivery portfolio, site management records and from site R&D. For an established greenspace, data are collected through monitoring during site management processes and via Impacts appraisal. Table 3 shows the important features of the monitoring processes for: the Project portfolio (greenspace delivery); the Site management review; Impacts appraisal, and research and development.

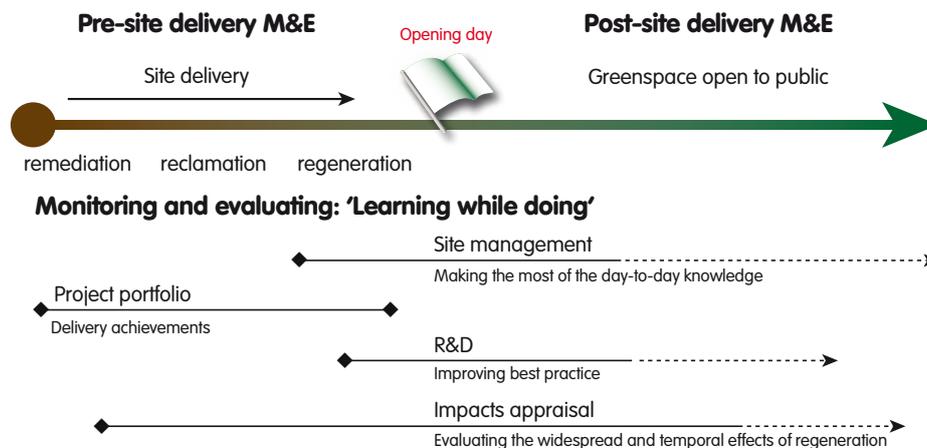


Figure 4: Project timeline for the regeneration of land into greenspace

- (i) Adopting the method presented in the Project portfolio section of Methuselah enables evaluation of the project's delivery.
- (ii) Year-on-year review of monitoring data collected through site management processes, standardised through the Site management section of Methuselah, enables evaluation of the sustainability of the management plan for a site and provides a basis upon which to improve management practices.
- (iii) Adopting the method presented in the Impacts appraisal section of Methuselah enables evaluation of the project outcomes and wider impacts of a new (or existing) greenspace.
- (iv) The R&D section of Methuselah recognises the opportunities in regeneration to advance technical and best practice know-how, to learn lessons and to optimise the regeneration process; it also presents a method to incorporate data arising through R&D into the site or project evaluation.

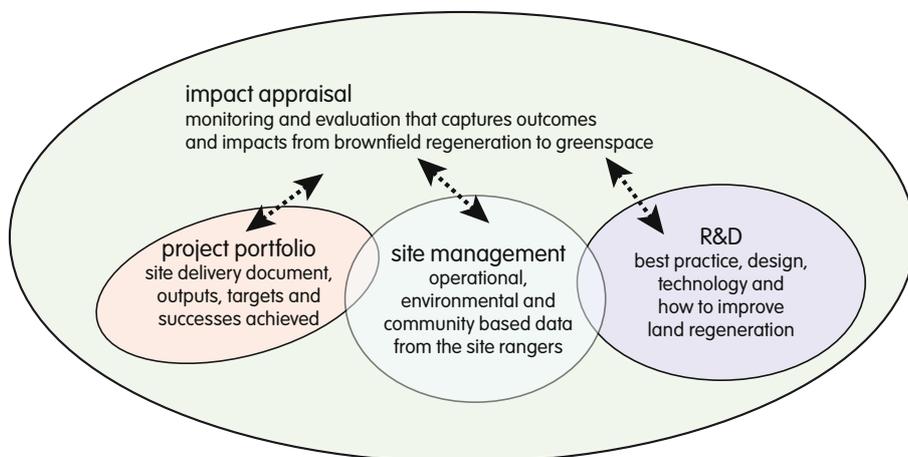


Figure 5: The opportunities for monitoring and evaluation of greenspace and how these interlink

	Project portfolio	Site management review	Impacts appraisal	Research and development
Sites involved	All sites	All sites	Most sites	Exemplar sites
Monitoring timings	During consultation, remediation, reclamation	Weekly through to annually, as required	Indicator specific	Project dependent
Quality Assurance (QA) requirements	Documentation control	Standardised monitoring forms	Standard Operating Procedures	Full QA requirement
Type of data collection	Evidence base — qualitative and quantitative	Quantitative, plus qualitative	Qualitative, plus quantitative	Project dependent
Data source	Delivery documentation Impact assessment Stakeholders Photographic evidence	Site assessments and surveys	Desk-top studies Surveys Government PI Site assessments Web-questionnaire	Project dependent
Example indicators	Best practice use Public engagement Outputs and deliverables	Tree performance Visitor numbers Events information	Example outcome indicator: greenspace is widely used, widely enjoyed	Impact of land regeneration on aquifer recharge

Table 3: Features of Methuselah's monitoring processes

Reporting procedure

The outputs, outcomes and impacts of a regeneration project, as well as the value and importance of regenerating the site to greenspace, needs to be proven to a number of diverse stakeholders. Widespread and fruitful dissemination of results, conclusions and lessons learnt through data evaluation is the ultimate goal of monitoring and evaluation. Methuselah's approach is to suggest a range of literary outputs, specific to each part of the monitoring programme (see Table 4). This approach to publication promotes good stewardship of information and dissemination to pertinent and interested audiences.

An inherent benefit of the dissemination approach is the option for risk management; this should not be under-valued.

<i>Data evaluation</i>	<i>Literary output</i>	<i>Year 1</i>	<i>Subsequent years</i>	<i>Interested stakeholders</i>
Evaluation of project documentation and delivery data Evaluation of qualitative and quantitative site management data Evaluation of qualitative and quantitative impact appraisal data from monitoring network	Executive summary Project portfolio working document Full chapters	Web alerts Email updates Press releases Glossy leaflets Funders' report Journal articles Magazine articles Web pages Local council publications Leaflets Posters FC audit report Online	Web alert updates Email updates Press releases Glossy leaflets Journal articles Magazine articles Web-page updates Local council publications New leaflets New posters FC audit report Online Interpretation publications including books, articles and Best Practice guidance notes	Funding bodies FC national offices Members of Parliament Policymakers Site management — regional and site Local communities Non-government organisations Local businesses Teachers and youth workers Regeneration bodies Best practice promotion Programme advisors Regulators

Table 4: Reporting procedure

Benefits of Methuselah

Methuselah facilitates the design of a valuable monitoring and evaluation programme for greenspace by targeting data collection at a range of social, economic and environmental dimensions of life.

Process-based, Methuselah provides a mechanism to learn lessons and evaluate:

- ➡ land regeneration
- ➡ greenspace management
- ➡ the benefit of greenspace establishment

Obtaining evidence of successes and public benefit arising from greenspaces will enable funding to be secured for the long-term maintenance of such sites and promote the creation of more greenspace, for example, through brownfield land regeneration.

Closing remarks

Pressure from Government and funders to undertake monitoring and evaluation is increasing. It is important to plan resources and budgets for all new projects to ensure that monitoring and evaluation will be performed comprehensively, using an integrated approach such as prescribed by Methuselah.

Forest Research welcomes the opportunity to work with organisations involved in greenspace establishment and brownfield land regeneration and to test Methuselah on new and existing sites.

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