

Medmerry Managed Realignment Scheme: An Ecosystem Services Valuation



Medmerry Managed Realignment Scheme

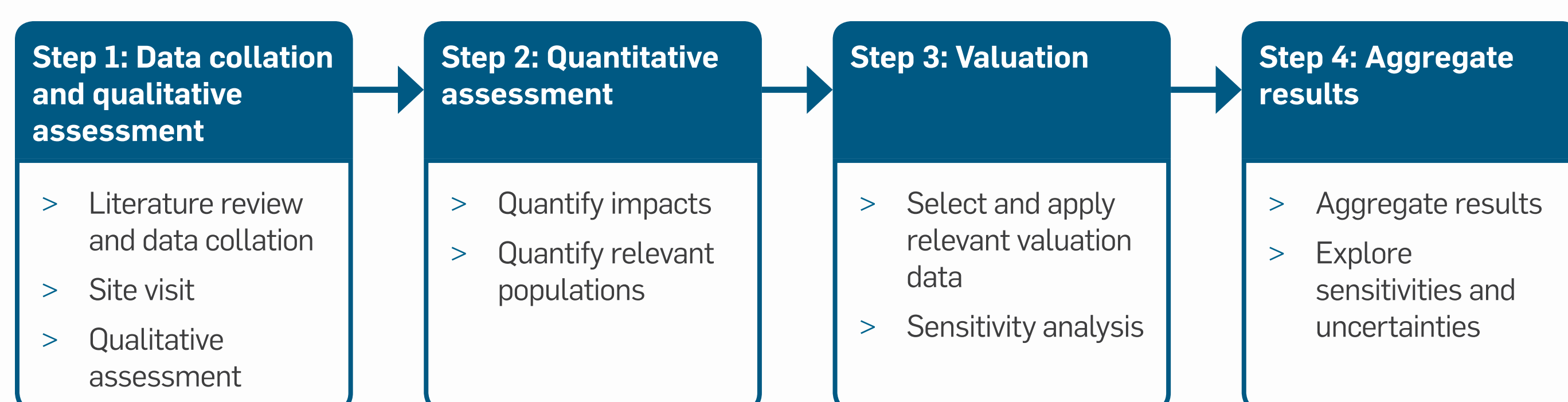
Medmerry Managed Realignment Scheme was completed in 2013 at a cost of around £28m. As well as protecting homes, businesses and critical infrastructure from flooding and storm events, the scheme has created around 183 hectares of new intertidal habitat, now managed by the RSPB as a nature reserve. Intertidal habitat, including saltmarsh, is generally accepted to deliver a wide range of ecosystem services.

An economic valuation of ecosystem services

The aim of this study was to undertake an evaluation of the ecosystem service impacts of the scheme. Ecosystem services assessments have traditionally been absent in flood and coastal erosion risk management (FCERM) schemes, despite the high potential to generate broader societal benefits.

Without a monetary valuation or assessment of how humans interact with the natural environment, the impacts on natural capital and ecosystem services may be under-represented or valued at zero.

The valuation method was divided into a number of steps, which included a qualitative assessment of the ecosystem service impacts of the scheme compared to a 'do nothing' baseline, followed by a quantitative assessment and monetisation of significant impacts, where possible. The overall approach is outlined in the Figure below:



The value of Medmerry

The net increase in ecosystem service provision (excluding flood protection) was estimated to be £3.0m per year, or £90m in present value (PV) terms over 100 years. This was significantly higher than the original business case for the scheme, suggesting that the typical FCERM business case may underestimate the wider environmental benefits of schemes. The value of the site is expected to increase further over time as the habitats mature.

The majority of the benefits relate to:

- > Non-use values from the provision of new, varied coastal habitats to sustain biodiversity
- > New opportunities for nature-based recreation and tourism
- > Carbon sequestration

In addition to this, the site plays an important role in delivering many other benefits, some of which are challenging to value in monetary terms and require further data collection:

- > The provision of nursery habitat for commercially-caught fish and their prey
- > Education and cognitive development
- > Relaxation and health benefits to residents and visitors

Policy implications

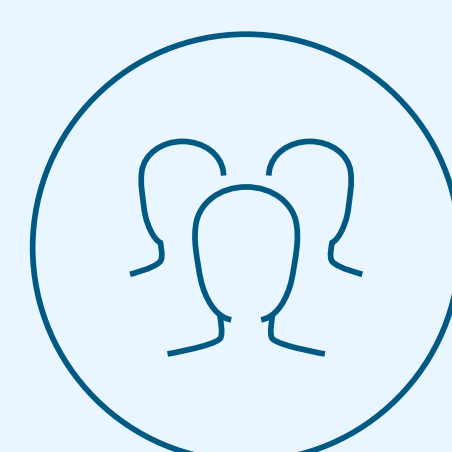
The frequency and intensity of flood events is increasing due to climate change. To ensure flood schemes deliver better value for society there is a need to adopt natural capital assessment approaches that consider the wider societal benefits that can be generated by schemes. This is increasingly important with the UK Government's focus on natural capital and 'environmental net gain' within the 25 Year Environment Plan.

£3m per year

The increase in ecosystem services value delivered by Medmerry Managed Realignment Scheme



CLIMATE
REGULATION
£51k



RECREATION
& TOURISM
£210k



NON-USE/
EXISTENCE
£2.8m



FOOD
(FISH)
£2k



FOOD
(AGRICULTURE)
£-97k

Atkins are leaders in applying multi-disciplinary approaches in policy appraisal and valuation for major infrastructure schemes. We regularly collaborate with academic institutions to apply state of the art approaches in environmental economics.

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