



Benchmarking the efficiency of asset maintenance costs

Project Summary SC140026/R

The Environment Agency spends £214 million each year (2016 to 2017 figures) to maintain flood risk management assets. This project explored methods to identify potential efficiency improvements by comparing local maintenance costs. The project identified an effective method for doing this but also concluded that data quality is not yet good enough to apply the method. This report is helping the Environment Agency to focus its efforts to improve data quality.

Flood risk management assets include defences, structures, channels, mechanical equipment and natural features. Maintenance costs are influenced by the asset's characteristics such as its type, size, age and accessibility – all of which are usually outside management control, at least in the short term.

Maintenance costs can also be influenced by chance events, including the need for repairs following flood or erosion incidents. Other factors that influence costs are management decisions on how maintenance resources are allocated and used. For example processes, scheduling, packaging and use of suppliers can all influence costs. The combination of asset characteristics, chance events and local management decisions makes it hard to judge whether one asset is maintained more efficiently than another. However, state-of-the-art cost benchmarking methods widely used by UK economic regulators (including Ofwat and Ofgem) can make comparisons possible.

This project identified that a cost benchmarking approach would be an effective way to identify potential efficiencies. The approach is based on comparing maintenance costs in each of the Environment Agency's operational areas. The approach involves building a statistical model using data on costs, maintenance needs, prices and asset characteristics. The aim is to determine how much of the differences between each area can be explained by these factors. Any unexplained cost differences could be due to efficiency differences. In the future, managers could use this information as signal for potential efficiency.

The viability of this approach depends mainly on data quality. The major focus in this project has been to:

- identify data needs
- assess the availability and suitability of existing data

The report's recommendations for future work include:

- improving the quality, accuracy and completeness of the Environment Agency's existing datasets
- collecting additional data that are not yet available
- ensuring there are data for multiple years

These recommendations will be addressed as part of the Creating Asset Management Capacity (CAMC) Programme. The intention is to revisit this project once improvements have been achieved.

Efficiency benchmarking is now widely used by UK regulators including Ofgem, Ofwat and the Office of Rail and Road. However, it has taken these regulators a number of years to develop their analysis so that reliable efficiency benchmarking is possible. By commissioning this project, the Environment Agency has made significant progress along a similar path.

This summary relates to information from project SC140026, reported in detail in the following output(s):

Report: SC140026/R

Title: Benchmarking the efficiency of FCRM asset maintenance costs

September 2017

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