



# Green and Blue Space Quality Metrics Scoping Review

## Quality indicators and their multifunctionality

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### Introduction

Green and blue spaces, urban and rural, are vital to the health of our communities, economies, and environment, and increasing access to the outdoors is a Scottish Government National Performance Framework indicator. However, not all spaces are created equal, and the quality of a spaces impacts the ability of the space to deliver societal benefits. Understanding how quality of green and blue spaces is measured, including the multifunctionality of these spaces, will therefore contribute to improving management, policy, and decision making.

### Objectives

1. Identify which quality indicators are currently being used for green and blue spaces.
2. Understand how multifunctionality of green and blue space is being captured in quality metrics.



Figure 1 – Example of blue space – Aberdeen Beach and Breakwater Source: Wikimedia Commons



Figure 2 – Example of green space – Holyrood Park, Edinburgh Source: Wikimedia Commons

### Methods

We conducted a scoping review of English language grey and academic literature on green and blue space quality published within the last 5 years. Academic literature was sourced from Web of Science and grey literature from websites of 22 organisations involved in green and blue space management within Scotland, and the Scottish Government. These included (for full list see Roberts et al., (2022):



We considered evidence from countries with similar environments and cultures as Scotland.



We considered quality in terms of direct contribution of green and blue space to the Four Capitals (Advisory Group on Economic Recovery, 2020): Environment (natural capital), Community (social capital), People (human capital), Business (economic capital).

From an initial 2079 unique papers identified, 83 were included in the final review.

### Results

We identified a total of 68 indicators of green and blue space quality, with over 80% of indicators associated with the environment or people category. Coverage overall was good for green and blue spaces, and across space types and habitats, in urban and rural locations.

#### 68 Indicators identified

- 29 indicators of quality for the environment
- 28 indicators of quality for people
- 6 indicators of quality for the community
- 5 indicators of quality for business

Multifunctionality was widely considered, with capitals either measured alongside each other, integrated into a single capital measure, or concerned with the impact of one capital on another.

Figure 3 – Percentage of papers which include each capital in combination: No papers looked at community and business, environment and community, or community, people and business.

Capitals	Environment	Community	Business	People
Environment	23%	14%	5%	4%
Community	1%	5%	4%	1%
Business	1%	4%	1%	1%

In terms of reusability of the indicators identified, although less than half of the individual papers tested the quality metrics they applied, the majority of indicators were tested by researchers at least once. However, most papers did not identify the populations for which they were testing quality. This could be a concern, as different users may have different priorities in the space.

### Conclusions

- Green and blue space quality indicators were found for a wide range of habitats and locations, though specifically rural quality indicators would be valuable for future research.
- Additional work also needed to understand business and community indicators.
- Users of quality indicators should also consider who they are testing quality for.

The outcomes of this review will inform workshops and interviews with green and blue space managers and business users, carried out in summer 2023, with the eventual production of a green and blue space cost-benefit analysis toolkit at the end of 2027. For more information or to be involved in future research please contact: [Michaela.roberts@hutton.ac.uk](mailto:Michaela.roberts@hutton.ac.uk) or [Hebe.nicholson@hutton.ac.uk](mailto:Hebe.nicholson@hutton.ac.uk)

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