

Evidence

The social benefits of Blue Space: a systematic review

Project summary

This project reviewed the published literature on the social and health benefits of rivers, lakes and coastal waters – referred to collectively as ‘Blue Space’.

The project’s main aims were to capture the positive social and health benefits of Blue Space and compare them to the benefits of the environment in general – often referred to in the literature as ‘Green Space’.

The review focused on studies that quantified the social and health outcomes associated with people’s interaction with Blue Space. It captured the evidence of what is distinctive about the social and health benefits provided by rivers, lakes and coastal waters. The report sets this out and compares it against comparable evidence of the positive effects of Green Space.

This evidence will help the Environment Agency to develop its understanding of the contribution made by the water environment to achieving environmental and social policy outcomes.

Method

The main question addressed by the review was: What are the published evidence of positive social effects arising from exposure to Blue Space and how does that differ from comparable published evidence of positive social affects arising from exposure to Green Space?

The review process took a systematic approach based on the following stages.

Stage 1: Defining the scope of the review and evidence eligibility criteria. To be eligible for inclusion studies needed to consider one of the following interventions in relation to Blue space and Green space: sensory exposure to Blue / Green Space, visiting Blue / Green Space, proximity to Blue / Green Space or participation in activities where exposure to Blue / Green Spaces is necessary (for example sailing).

Studies published in the English language between 1 January 2004 and April 2018 using quantitative and qualitative methodologies were included.

Stage 2: Selecting and querying appropriate evidence databases. Science Direct and PubMed data bases were queried using the chosen search terms. This process was supplemented by a manual search to make sure all eligible studies were captured. A Google advanced search was used to search grey literature. These searches generated 5766 studies in total. Duplicates were removed using an algorithm, leaving 3710 studies.

Stage 3: Title, abstract and full text review. The title and abstract of these 3710 studies were reviewed from which 209 studies were selected for the full text review, after which 77 remained for detailed analysis.

Stage 4: Data extraction. Relevant data and information from these 77 studies was extracted and reviewed.

Stage 5: Summarising the findings. The benefits from Blue Space identified in the review were summarised and compared to similar evidence of the effects of Green Space where such evidence existed.

Benefits of Blue Space

Rivers, lakes and coastal waters were found to provide a range of social and health benefits.

Access

- Half the British population interacts with Blue Space at least once a month.
- Visits to Blue Space reflect the seasons. This was found in studies in two countries, including England.
- People from ethnic minority groups are less likely to access Blue Space than other people. This has been reported consistently in England for the past 10 years and to some extent a similar pattern exists in Wales.
- Older people in England are more likely to visit Blue Space and younger adults less likely.

Activities

- There is evidence from national studies in England and Wales that people engage in different recreational activities in different types of Blue Space. The most common activity in all Blue Space settings is walking, often with a dog. The type of interaction people engage in influences how long they spend in a Blue Space.

- While Blue Space is used for exercise, there is evidence at more than one scale and from more than one country that the majority of visits to Blue Space are not active.
- Living near the coast is associated with more frequent use and more physical activity. This was supported by evidence in England

Benefits

- Living closer to the coast is associated with lower levels of being overweight or obese, and a lower BMI. This was supported by evidence at more than one scale and from more than one country, including England.
- There is some evidence in England that self-reported levels of mental health also increase in proximity to the coast.
- Evidence from qualitative studies found coastal environments to be associated with the opportunity for restorative experiences and reducing the amount of 'noise' in people's minds.
- People who use Blue Space say they gain psychological benefits from the experience and report feeling happier when they are in proximity of Blue Space.
- There is some evidence of Blue Space increasing the opportunity for beneficial social interaction. This included evidence from qualitative studies in an English coastal setting.
- Blue Spaces can be important for people's attachment to place and can define a city or region.

Comparing the benefits of Blue and Green Space

The comparison of the social benefits of rivers, lakes and coastal environments to the benefits of the environment in general produced the following findings.

Access

- There is national scale evidence in England and Wales that most visits to the environment are to Green Space and only 20% are to Blue Space.
- Visits to Green Spaces are less influenced by the seasons than visits to Blue Spaces.
- People with children are prepared to travel further to visit the coast than other natural environments. This is supported by national scale evidence in England.

Activities

- People are more likely to take part in intense physical activity at Green Spaces than at Blue Spaces.
- Blue Space is associated with appreciating surroundings, longer visits, improvement of mood, and feelings of restoration to a greater degree than Green Space. This was found in England and in studies from Finland and New Zealand.

Benefits

- Evidence from national surveys in England and Wales show that people from ethnic minority groups are more likely to access Green Spaces than Blue Spaces.

- Women are more likely to visit beaches than men and men are more likely to visit woodlands, moors, hills and mountains than women. This was found at a national scale in Wales.

This summary relates to the following project:

Title: The social benefits of Blue Space: a systematic review

October 2020

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This project was funded by the Environment Agency.

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