SOCIAL AND CULTURAL VALUES AND IMPACTS OF NATURE-BASED SOLUTIONS AND NATURAL AREAS

KEY POINTS

- **From the reviewed literature 42 articles addressed values of nature and 65 benefits of NBS;**

- **Commonly identified values: education, social interaction, aesthetics and recreation;**

- **Most frequently referenced benefits: well-being enhancement, social interaction and recreation opportunities;**

- **NBS and their associated values often overlap and there is evidence of co-benefits;**

- **While most of the literature identified positive values and benefits, negative aspects were also found.**

ABOUT THE PROJECT

NATure-based URban innoVATION is a 4-year project involving 14 institutions across Europe in the fields of urban development, geography, innovation studies and economics. We are creating a step-change in how we understand and use nature-based solutions for sustainable urbanisation.

Nature-based solutions as enablers of urban sustainability

- Climate change is already affecting ecosystems across Europe, with consequences for biodiversity, functioning of ecosystems and people.

- Climate change impacts are often multiplied in urban areas.

- As 75% of the EU population is currently living in urban areas innovative approaches to overcome these challenges should be a priority.

- In this context, nature-based solutions (NBS) are seen to hold significant promise in enabling the urban transition to sustainability and address urban challenges by exploring nature's features.

- NBS are deliberate interventions that are inspired or supported by nature. They can be cost-effective and provide environmental, social and economic benefits while also helping to build resilience.

Figure 1. Nature-based solutions attributes.

Context

The literature review studies the social and cultural values and impacts of NBS. Its aim was to integrate and present the existing knowledge regarding the concepts of NBS and their associated social and cultural values and benefits, with a focus on urban environments.

For this purpose, a conceptual distinction between values and benefits was adopted, and a categorisation of social and cultural values and benefits was provided.

- Values can be seen as held values which include modes of behaviour (e.g. bravery, loyalty), end-states (e.g. freedom, happiness), and qualities (e.g. beauty, symmetry).

- We distinguished impacts as the consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society and benefits as a positive change in wellbeing from the fulfilment of needs and wants.

Based on the literature review we came up with adjusted social and cultural value and benefit categories:

- **Social values**: (1) educational, (2) well-being, (3) life sustaining, (4) intrinsic, (5) safety, (6) social inclusion

- **Cultural values**: (1) aesthetic, (2) cultural heritage and historic, (3) biological diversity, (4) recreational, (5) spiritual and religious, (6) place-based values

- **Social benefits**: (1) well-being enhancement, (2) opportunities for social interaction, (3) enhancement of equality, (4) growth of employment, (5) education development, (6) safety advancement

- **Cultural benefits**: (1) aesthetic improvement, (2) spiritual connection, (3) preservation of cultural heritage, (4) recreation opportunities

Findings

Values

A quantitative analysis of the findings showed that in terms of cultural values, **aesthetics** (e.g. scenic attributes, aesthetical experiences) as well as **recreation** (referring to outdoor activities, tourism, or recreational activities) are commonly referenced, while under social values **education** (e.g. opportunity to learn about the environment by observation or experimentation, learning from direct experience of nature) and **social interaction** (e.g. social cohesion, feelings of community and social harmony) are the most common.
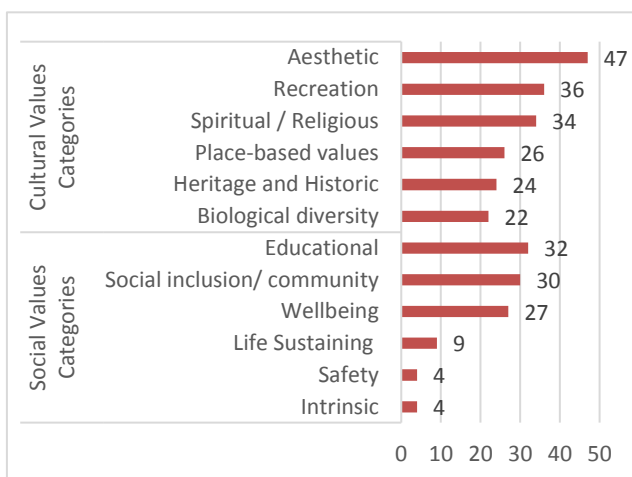
Social Values of NBS

Out of the 42 articles which identified social and cultural values, social values were identified in 35 cases. The research was built on the definition of NBS by "ecological domains" in the project, and out of the total number of articles addressing social values, 35% were found regarding parks and (semi)natural urban green areas, 20% were related to allotments and community gardens and another 20% connected to blue areas.

Figure 2. Number of references to various cultural and social values associated with NBS found in the studied literature.

Cultural Values of NBS

Out of the 42 articles which identified social and cultural values, cultural values were identified in 38 cases. Regarding the "ecological domains" in which cultural values were identified, and out of the total number of articles addressing cultural values, 37% were related to parks and (semi)natural urban green areas, 22% to blue areas and 18% to urban green areas connected to grey infrastructure.

Benefits

The findings showed that in terms of cultural benefits, **recreation opportunities** are commonly referenced (e.g. provide opportunities for relaxation, enjoying nature). As for social benefits, **well-being enhancement** (e.g. improve physical and mental health, relieves stress) and **opportunities for social interaction** (e.g. improved sense of community, feeling of collective activity) are the most common.

Social Benefits of NBS

Out of 98 articles, 65 documented benefits related to social aspects, while only 49 identified social benefits. In connection to the NBS "ecological domains" in which social benefits were identified, and out of the total number of articles addressing social benefits, 32% related to parks and (semi)natural urban green areas, 17% to blue areas and 16% to urban green areas connected to grey infrastructure and allotments and community gardens.

Cultural Benefits of NBS

Out of the 65 articles which identified social and cultural benefits, cultural benefits were identified in 37 cases. Regarding the "ecological domains" in which cultural benefits were identified, and out of the total number of articles addressing cultural benefits, 35% were connected to parks and (semi)natural urban green areas, and 17% to blue areas and urban green areas connected to grey infrastructure.
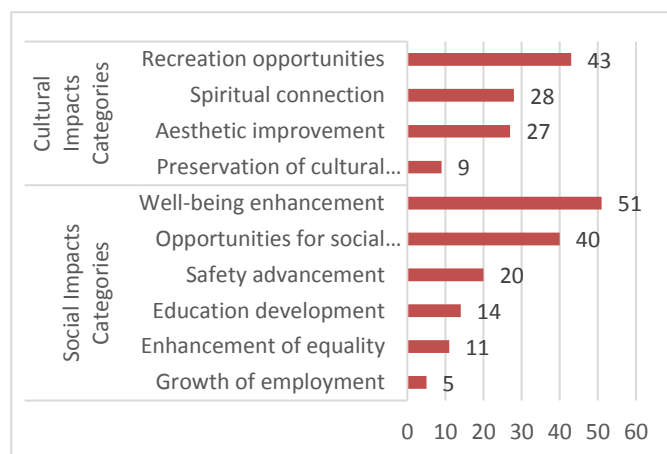

Figure 3. Number of references to various cultural and social impacts of NBS found in the studied literature.

Final remarks and Future Research

- The highest number of values and benefits identified related to urban parks, followed by green areas connected to grey infrastructure, community gardens and blue infrastructure;

- NBS and their associated values often overlap and produce co-benefits simultaneously.

- While most of the literature identified positive values and benefits, negative aspects and ecosystem *dis*services are also mentioned (e.g. in connection to aesthetics, health and safety).

- There is no systematic evaluation of negative social and cultural impacts related to NBS and are dependent on the case study context. Therefore, assessment practices with a balanced perspective on positive and negative impacts should be developed.

- Understanding the diversity of perspectives based on the worldviews, social and cultural identities and interests of social stakeholders is an important consideration.

- Studying the benefits and impacts of NBS by age group, gender and cultural groups can result in important lessons about how social position and stratification influences the valuation and management of urban nature and natural structures. Moving from case-study based, one-off evaluations to systematized, regular assessments of nature-based solutions should therefore also consider the role of different stakeholder groups.