BlueHealth
Linking environment, climate & health

Using urban blue spaces to benefit health and wellbeing

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Water is essential for life, and the vast majority of human societies have grown up in places with access to it[1].

Today over 200 million Europeans live in towns and cities found on coastlines, along rivers, or on lakeshores[2]. Water has also been used for health and in healing practices for thousands of years, and today innovative and inclusive blue space design is being used to improve our quality of life[3].

What evidence do we have that there is a link between blue spaces and better health and wellbeing? Until recently, high quality research has been lacking, making it hard to back up decision-making with firm evidence. The BlueHealth project has been building evidence to improve our understanding of how better access to quality urban blue spaces can benefit people's health and wellbeing[4].

What is BlueHealth?

The BlueHealth project has investigated how blue spaces can help to address a broad range of societal challenges such as lack of exercise, poor mental health, and health inequalities. These findings are being used by decision-makers to bring positive change to urban areas, especially areas of relative deprivation.

What are blue spaces?

In the BlueHealth project, we define blue spaces as outdoor environments–either natural or manmade–that prominently feature water and are accessible to people.

What potential benefits can good quality blue spaces bring us?

Greater opportunities for exercise

Reduction of stress

Safe, appealing places for us to meet and socialise

Cognitive 're-setting' helping us restore our tired minds

Greater biodiversity

Safe bathing and recreation

Development of practical life skills, e.g. swimming

Cleaner drinking water

Better regulated urban temperatures

The challenge

Aspects of our modern-day lifestyles have major implications for our health. Physical inactivity, for instance, is associated with half a million premature deaths in Europe annually and costs the European economy €80 billion[5] per year. And it's not just physical health problems: for instance, 15-20 % of Europeans experience depression or anxiety every year[6].

Another modern-day challenge is dealing with the effects of climate change. Our changing climate not only threatens blue spaces, but also has consequences for our health. Flooding is likely to be one of the most serious impacts of climate change in Europe[7], and the annual costs of coastal flooding to the economy are expected to be ten times higher by 2050[8]. Managing blue spaces so that they help us to minimise risks to safety, live healthier lives, and adapt to climate change is a major challenge[9-10].

Take a look at the BlueHealth website for the evidence linking blue spaces to health and wellbeing in populations across Europe. **bluehealth2020.eu/research**

BlueHealth has been collecting data from representative samples of people across 18 countries. Check here for the latest updates as new findings emerge: **bluehealth2020.eu/BIS**

The evidence

Blue spaces can benefit physical and mental health. People who live near (within 1km of) a major blue space are often physically healthier and have better mental health than those living further away[11-13]. One reason for this is that these people also tend to be wealthier, with homes near high quality blue spaces costing more[14].

But this is only half of the story. In Europe, it seems that the health of the poorest in society benefits most from living near water[11, 13], especially where local blue spaces provide accessible opportunities for physical activity and building positive social networks[15-17]. What we need to do now is to improve access to high-quality blue space for deprived communities, while minimising risks, thus reducing health and environmental inequalities.

Exploring virtual blue environments

BlueHealth has been experimenting with "bottling" the benefits of blue spaces, and provide virtual access to people who cannot access them directly, such as those in hospitals or care homes.

We've tested virtual blue spaces and found that underwater virtual experiences reduced boredom and stress[29] and virtual coastal walks reduced pain during some medical treatments[30].

Keep an eye on the BlueHealth website for updates on the findings from our bespoke computer-generated VR from Sweden and the UK: **bluehealth2020.eu/research**

From evidence to practice

BlueHealth has been working with communities around Europe putting evidence into practice. Examples include:

Sweden

We explored swimming abilities of children from different ethnic groups and identified ways in which their water skills and confidence could be improved, such as targeted education efforts[27].

UK

Working in a partnership with a local council and residents, we improved facilities and access to an urban beach in a relatively deprived area, and witnessed better social cohesion and wellbeing[22, 23].

Estonia

Working together with local communities, we implemented a range of innovative ways to improve access to urban blue spaces (e.g. platforms, pontoons, seating areas)[24, 25].

Netherlands

By interviewing local stakeholders and analysing relevant policy documents, we identified governance recommendations for safe urban bathing sites[26].

Italy

We investigated how people use Appia Antica Park in Rome. Users highlighted the health and wellbeing benefits of the park, and the need for management to maintain the benefits.

Spain

We found that people living in a poorer area of Barcelona did more physical activity after public access to a major urban river network was improved[19,20]. In the centre of the city, wellbeing and productivity of office workers was increased with daily 20-minute walks in blue spaces[21].

Greece

We investigated how the regeneration of Thessaloniki Waterfront has impacted people's lives. Using psychological and physiological metrics, the results indicated reduced levels of stress and anxiety.

Blue Futures

The world is undergoing rapid climatic, environmental and societal change, and urban blue spaces will be widely affected. Blue spaces can also help to overcome the challenges set by these changes. BlueHealth has been trying to understand and predict what these changes will mean for societies and population health going forward.

While the BlueHealth project ends in 2020, its findings can deliver strong benefits to future public health, biodiversity, and social equity, and should continue to be considered in urban planning, related research and policy.

More info

The BlueHealth project has examined the links between urban blue spaces, climate and health. Find more information, evidence and resources at **www.bluehealth2020.eu.**
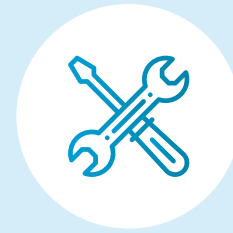
BlueHealth Toolbox

Interested in learning more about how to assess the risks and potential benefits of blue spaces in your local area, or even further afield?

The BlueHealth team has produced a 'Toolbox' of new assessment and evaluation tools which can help. Learn more about these free resources at: **bluehealth2020.eu/toolbox**

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