# Research Proposal

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## Abstract

# Literature review

Most large cities are located near water, either inland like rivers, lakes or harbours, or on the coast like salt water. Water is important for the city. It serves as a life source, a communication channel, a motor for industry and the economy, for recreation and exercise, for cultural and spiritual practices, and for community forming and belonging.

With urbanisation, water in cities became polluted or transformed by industries (Kampa et al. 2016). Waterfronts became unattractive and unsafe to swim, thereby disrupting the relationship people had with water and its surrounding environment. Starting in the 20th century, post-industrial European cities started considering waterfronts as strategic opportunities to revitalise the city (del Pulgar 2021). In the last few decades, the importance of water in the city has entered public consciousness due in part to climate concerns. Most recently, the COVID-19 pandemic made people acutely aware of the benefits of urban blue-green spaces (Kohsaka and Uchiyama 2021). Through local, national and international political pressure, public demand and (neoliberal) urban renewal, governments have invested significant resources in revitalising waterfronts into attractive natural places for people.

## The benefits of blue spaces

Blue spaces are defined as all surface water. Gascon et al. (2017) summarise the benefit of blue spaces as "stress reduction, increased physical activity, promotion of positive social contacts, increased place attachment and the reduction of extreme temperatures" (Gascon et al. 2017).

***Climate adaptation and mitigation*** In the context of climate change, blue carbon ecosystems can naturally alleviate pollution, heat stress, flooding or drought, and increase the climate resiliency of cities (Lin et al. 2020, Manteghi et al. 2015, O'Donnell et al. 2021). This is because blue spaces have a surface temperature lower than green space, high evaporation and thermal capacity which creates a cooling effect, and a spillover mechanism which extends the cooling effect up to 200 meters (Lin et al. 2020). However, the potential of blue spaces for climate mitigation is not well known relative to green spaces. As a result, less urban planning recommendations exist, not to mention that they are more difficult to provide and maintain (Manteghi et al. 2015, Völker et al. 2013).

***Health and well-being*** The best known way in which blue space has a positive impact

is on people's physical and psychological health. Being exposed to water makes people feel better, happier, and be more active. There is an extensive repertoire of quantitative studies demonstrating these effects on people's health and well-being (Gascon et al. 2017, Britton et al. 2020). Qualitative studies also show that exposure to water improves mental health, regardless of how people interact with it (Garrett et al. 2019, van den Bogerd et al. 2021). In deprived neighbourhoods in particular, people tend to have poorer mental health and lower life satisfaction compared to wealthier areas. Projects that increase access to high quality blue spaces in socio-economically disadvantaged neighbourhoods have the potential to greatly influence the well-being of their residents (van den Bogerd et al. 2021).

***Connection and community*** Lastly, waterfronts give people with the opportunity to connect with each other and with nature. People develop a sense of place attached to water, and even polluted or degraded waterfronts can play a central role in the community, providing refuge, connection, entertainment, and even food (Toomey et al. 2021). Furthermore, blue space revitalisation projects can be an opportunity to create community bonds by engaging residents in the design and building process. During the "urban acupuncture" intervention conducted by BlueHealth in a deprived area of Plymouth, UK, residents who participated in the project reported a greater sense of well-being and life satisfaction due to feelings of community belonging and safety (van den Bogerd et al. 2021).

## Social and environmental repercussions of blue space revitalisation

Despite the undeniable benefits of urban blue spaces, interventions can have harmful consequences on people and the environment.

***Disrupting community*** In stark contrast to the social bonds that can be fostered when residents are involved in revitalisation projects, when the local community's perceptions and values are not understood by planners, changes can disrupt human-to-human or human-to-water connections (Toomey et al. 2021).

***Neoliberal urban renewal*** In perverse cases, cities prioritise growth over well-being and community. With "glitzy green" (Anguelovski and Connolly 2021) renewal projects like the Amsterdam Noord waterfront, cities try to attract a new creative class rather than addressing public blue spaces as a common good and prioritising the concerns of existing residents (Wessells 2014, Anguelovski, Brand, et al. 2020, del Pulgar 2021).

***Gentrification*** Such projects privilege the values of new groups over that of existing residents, who risk displacement. Those who can afford to live near green or blue spaces will move in and price out the lower classes, who will be forced to move to neighbourhoods with worse access to attractive natural spaces.

Thus, how do we make sure that everyone in the city benefits equally from high quality blue spaces? The benefits are well known by governments, planning offices and academics; we see this through the promotion of waterfronts (eg. Madrid Río (EsMadrid 2022), or Oslo's urban waterfront promenade (VisitOslo n.d.) on the city's tourism website), as well as by the numerous qualitative and quantitative studies on health and well-being or climate adaptation. On the other hand, the social and environmental consequences of revitalisation projects are not systematically taken into account by planners.

## Achieving equity and justice in urban blue spaces

If cities are to reduce inequalities stemming from access to vital, natural spaces, the social and environmental trade-offs must be understood, and greening (or blueing) projects must be accompanied by "bold, progressive social policies" (Anguelovski and Connolly 2021).

***Environmental justice*** Environmental justice (EJ) provides a lens through which to understand these inequalities. By bringing together social and environmental concerns, the environmental justice paradigm advocates for the equal access to the benefits offered by natural spaces; and, in turn, sharing environmental burdens. EJ is traditionally broken down into three dimensions: distributional justice, procedural justice, and recognition justice (**todo:cite schlosberg**).

Distributional justice focuses on where blue spaces are situated in the city and whether they address social, economic, racial or ethnic inequalities by striving to"avoid displacement and new negative green, ecological, climate and health effects" (Anguelovski, Brand, et al. 2020).

Procedural justice deals with questions of discrimination in public participation and decision making situations, even if ideal participation doesn't prevent spaces from being captured by gentrifiers[1] (Anguelovski, Brand, et al. 2020).

Finally, recognition justice addresses individuals' and communities' perceptions, values and preferences which may influence how they interact, or not, with public space (Anguelovski,

[1] urban community gardens

Brand, et al. 2020). Marginalised or stigmatised communities may find it hard or impossible to communicate their experience to the mainstream because they lack the words to articulate their reality. And vice-versa: white, heteronormative societies may not be capable of understanding the experience of 'others'. This of course does not mean that minority communities do not attach meaning to place, but that two or more groups with distinct value systems need a common language to communicate. To this end, Toomey et al. (2021) propose using language like "place-disruption" and "place-protection" to promote mutual understanding and avoid privileging the values of mainstream groups over those of marginalised communities.

***Recognition*** Recognising the experience of those who do not fit into the 'norm' also means acknowledging that some practices take place in the private and not public sphere, because of historical racial, sexist, ethnic discrimination. For example, women who disproportionally carry out domestic and care work have a different daily pattern which does not match that of the average 9-5 worker, and the spaces and mobility options should be adapted for them to reach blue spaces with ease. Or, they may feel more vulnerable and less safe in public, and prefer private spaces (Wessells 2014). How can blue spaces be inclusive of a diversity of people, carrying out a diversity of activities at all times of the day, week, or year?

## Problem statement and research question

Ideal- everyone can access blue spaces equally in the city, this is important because interacting with blue spaces is good for mental and physical health Real- physical and psychological barriers can restrict access to blue spaces () Consequence- , ultimately leading to environmental injustices (not everyone benefits fairly from blue/natural spaces), discrimination (racism, sexism...), displacement (green/blue gentrification)

Reviewed RQ: to what extent are the perceptions and values of Copenhagen's communities represented in the blue spaces?

## Research design

- specific context of copenhagen, similar to hongkong

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