

Balancing biodiversity, recreational use and public health in designing green public spaces in the city

PROBLEM STATEMENT

Biodiversity hotspots and green corridors in cities are important to protect and improve biodiversity in cities. But these green spaces also provide diverse ways for recreational use and influence public health. Combining biodiversity and recreational use in urban spaces leads to opportunities and bottlenecks. Spatial coordination/planning is needed to combine both functions and guarantee both ecological and recreational quality. Different studies studied the relation between protecting biodiversity and recreation for nature areas. For example simulation models help to explore the effect of spatial design choices on ecological and recreational quality in nature reserves. How can this be translated to the context of biodiversity hotspots and green spaces in cities?

QUESTIONS

- How can we get insight in the effect of design and spatial planning choices on both ecological and recreational quality? For example zoning, types of recreational use, dog walking, sense of security (lighting).
- How should we deal with plant choices in relation to public health (hay fever and asthma) and stimulating biodiversity?
- What kind of data is needed to make an informed decision to adapt design and management/maintenance over time to guarantee ecological and recreational quality?
- How can we make sure that cool green/blue public spaces still offer shade and coolness during heat waves, while making sure that leaf fall from trees does not influence the water quality?

CONTEXT

Hilversum wants to promote biodiversity within its city boundaries and make sure that public spaces contribute to public health. Hilversum is surrounded by the Goois Nature Reserve on the west, northeast, east and south side. Goois Nature Reserve is a biodiversity hotspot that provides a space for heath- and woodland species to flourish and is part of NatuurNetwerk Nederland. For Hilversum the Goois Nature Reserve is a source population for several species when promoting biodiversity within its city boundaries. By improving the connection and quality of city edges and green corridors we can create habitat for these heath- and woodland species. In this way we provide spaces for these species to establish themselves within the city or use to migrate to other habitat in around Hilversum. The involvement of residents is needed because private and public gardens play an important role in improving the ecological connection with the surrounding nature reserves.

The Goois Nature Reserves also provides a space to recreate and enjoy natural beauty in a densely populated region. Since covid-19 the recreational pressure in the Goois Nature Reserve has increased. This will further increase due to the urbanization of the region. Lowering this recreation pressure improves preservation of this natural area and endangered species. City edges and green corridors offer the spaces to improve opportunities to play, exercise and do sports within the city boundaries. This might contribute to lowering the recreational pressure on the natural areas surrounding Hilversum.

PUBLIC SPACES PROJECTS THAT OFFER LEARNING OPPORTUNITY

Connection city edges with nature reserve

We aim to increase biodiversity by connecting our green spaces within the city with the surrounding natural areas. In Hilversum we focus on improving the quality of green corridors in the city edges on the northeast, east and south side of Hilversum. And at the same time improve the opportunities for recreational use in these city edges to lower recreational pressure in this nature reserve.

Green/Blue corridor Oude Haven/Gooische Vaart

The Oude Haven and Gooische Vaart is uniquely situated in Hilversum. It is the only green/blue corridor between the city centre and the surrounding nature areas. Characteristic for the Oude Haven is that it is situated 14-16 meter deeper than its surroundings, because the waterway was dug out of the pushed moraine Utrechtse Heuvelrug. The Oude Haven is a biodiversity hotspot that provides a space for residents to do sports, recreate, meet and enjoy coolness on hot days. It is a green space close to densely populated neighbourhoods. The Oude Haven is planned to have a quality boost in 2024/5 focussing on improving ecological water quality using nature friendly banks, improving air route for bats, taking measures to prevent erosion on the slopes and improve opportunities to exercise, do sports, and play.

The Gooische Vaart is planned to get a quality boost in 2025/6 focussing on improving ecological water quality using nature friendly banks and improving the green corridor with improvements for encouraging exercising, sports and play. The industrial area next to the Gooische Vaart wants to become greener.

Oude Haven is also part of research project BENIGN that focusses on blue and green infrastructure designed to beat the urban heat. This project studies interventions for more just distribution of the effects of heat stress based on spatial data, social-economic data and health situation of residents. Research project Benign is a collaboration between several Dutch universities, Institutions and the Dutch municipalities of Dordrecht, Haarlem and Hilversum.

HILVERSUM

Hilversum is a city with more than 90,000 inhabitants in the Dutch province of North Holland and the largest town in the Gooi region. At the beginning of the twentieth century, many national broadcasting companies established themselves in the city. These are now concentrated on the Media Park, profiling itself as the 'media city'. Hilversum is also a 'garden city' not only because of the green environment, which is part of the Goois Nature Reserve with the largest ecoduct in Europe, but certainly also because of the early urban development plans of the city architect Dudok. Hilversum therefore has many architecturally interesting buildings, including the current town hall, various schools and a number of working-class neighborhoods. Hilversum is therefore a city of young monuments. In December 2019, the municipality received the green light for plans to build 8,000 homes in a number of neighborhoods by 2040. The various plans offer space for greenery, living, media and other creative industries. The existing qualities of the historic center with the characteristic village greens, lively streets and plenty of space for cyclists, pedestrians and greenery served as a source of inspiration. The many nature reserves around Hilversum offer the necessary space for recreation and relaxation for the residents.

Hilversum wants to become a green and healthy city by 1) promoting biodiversity 2) working on climate proof design of public spaces and 3) ensuring that green spaces contribute to the well-being of inhabitants. One of the projects that contribute to these goals is connecting the edges of the city with the Goois Nature Reserve.

IMPRESSIONS

