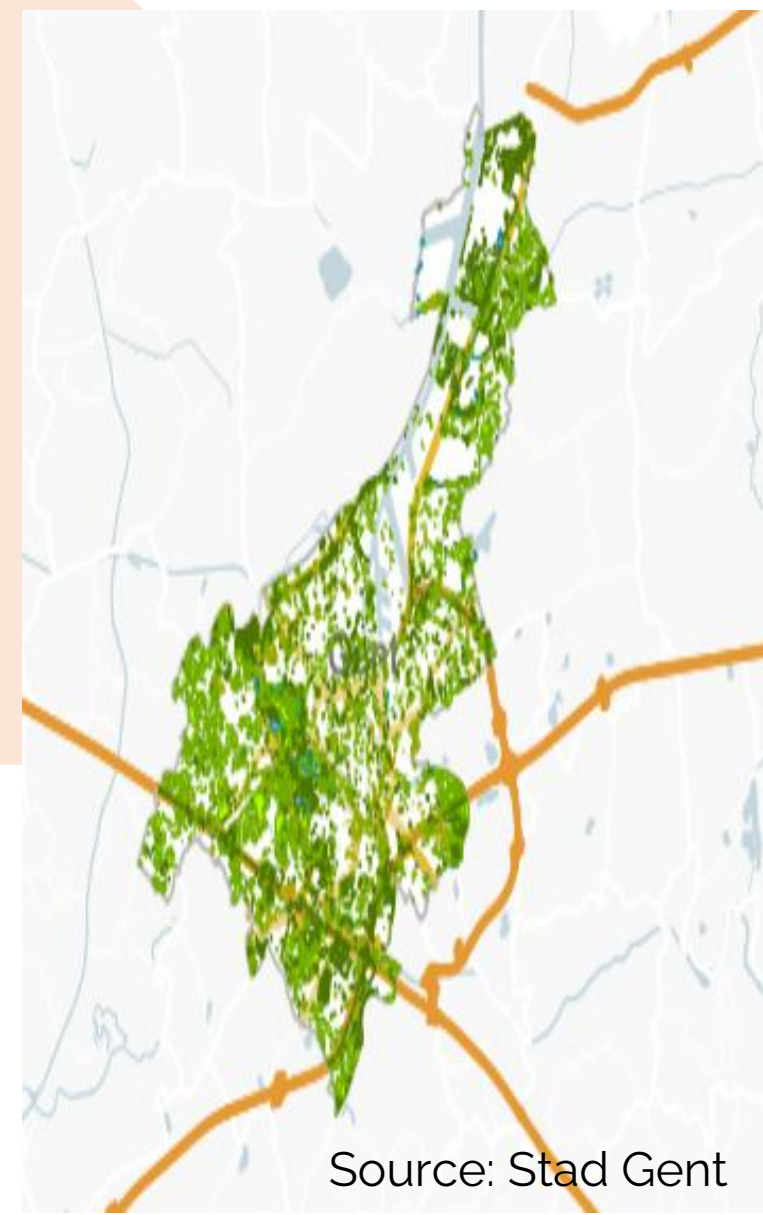


BeBrit Extreme Heat Risk Project City Case Study Ghent

About Ghent

Ghent is a city in East Flanders, in the northwest of Belgium with a population in 2023 of 268, 122. Ghent has a historical city centre characterized mainly by low-rise buildings. Towards the outskirts of the city, the densely built and populated area extends into suburban neighbourhoods with more detached houses interspersed by green patches.



Key Climate Change Challenges

- **Pluvial and fluvial flooding** because of soil sealing and precipitation extremes
- **Heat stress, Urban Heat Island (UHI)** effect, higher temperatures, more heatwaves
- **Water shortage** because of high water demand, drought and low water supply

Key Climate-related policies

- **Climate Plan 2020:** By signing the Covenant of Mayors, the City of Ghent commits to monitoring the CO2 emissions.
- **Climate Adaptation Strategy:** Is part of the Climate Plan 2020 and aims to prevent and reduce the negative effects of climate change.
- **Heat Action Plan:** The city of Ghent produced its first Heat Action Plan (HAP) in 2009, with an update in 2023.



Nature-Based Solutions (NBS) for Cooling Ghent

Green Structure Plan

- **Five Layers of Greenery:** recreational green, forest, nature, landscape, climate green. **Hop-Step-Jump Approach:** *Hop* to small green spaces close to home; *Step* to larger neighbourhood green; *Jump* to one of five green centres on city edge

Green Centres

- **Large parks and nature areas** (100+ hectares); **Accessibility goal** (within 5 km of every home); **Multifunctional use** (playgrounds, sports, nature, reforestation); **Interconnected green network** of large and small areas

Green Climate Axes

- **Eight Green Axes/Corridors** form a green-blue network connecting city centre to open spaces and the five green centres on city edge. **Climate Benefits** (cooling, rainwater retention, flood prevention, biodiversity); **Mobility Shift** (encouraging walking and cycling); **Implementation Plan** (structure plans for each axis)



Public Green Spaces for Climate Adaptation includes projects such as:

- Pavement Removal & Water Retention
- Urban Greening Guidelines
- 365 Façade Gardens Annually
- 1,500m² of Green Façades Each Year
- Planting More Trees (1,500 new street trees)
- 10 ha of New Residential Green Spaces
- 14 New Neighbourhood Parks
- Greener Waterways
- Greener School Playgrounds
- Shared Green Spaces
- Nature-Inclusive Building



Source: Climate Action Plan 2020 - 2025, p141

Heatwave Communication & Adaptation Strategies

Integrated Climate Adaptation Approach: focusing on internal and external communication about heat risks and management.

Public Awareness Campaigns: encouraging residents to reduce pavement and increase greenery (since 2018).

De Energiecentrale Support: providing renovation and climate-proofing consultations.

Heat Stress Reduction Measures: promoting green roofs, permeable pavements, and rainwater management.

Community Engagement Initiatives: "Planting with Neighbours" program for façade gardens and resilient streets.

Action Events: "Gent breekt uit" (Ghent breaks out) weekend for removing unnecessary pavement.

Dedicated Communication Budget: ensuring both public and private sectors contribute to climate resilience.

Ways Ghent Can Improve

- **Shift from Reactive to Proactive Measures** – Focus on long-term resilience instead of emergency responses.
- **Integrate Heat Mitigation into Urban Planning** – Embed cooling strategies in public infrastructure projects.
- **Expand Green Initiatives** – Accelerate efforts in greening, de-sealing surfaces, and protecting open spaces.
- **Enhance Communication Strategies** – Develop inclusive outreach targeting vulnerable populations.
- **Broaden Public Engagement** – Partner with local organizations and use diverse media for awareness campaigns.
- **Invest in Heat-Resilient Infrastructure** – Increase shaded public spaces and establish cooling centres.
- **Balance Climate Focus** – Strengthen heatwave adaptation alongside existing water management efforts.
- **Expand Educational Campaigns** – Raise awareness about the health risks of extreme heat.

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