PESTLE and SWOT Analysis Report

Pilot Area – Middelburg, Deprived Area (Edelstenenbuurt)

Prepared by: Municipality Middelburg

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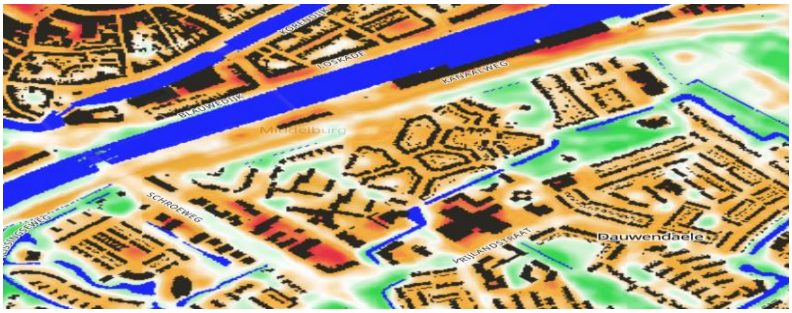
Project Overview

The Cool Neighbourhoods Project seeks to mitigate heat risks and improve liveability across the Interreg North West Europe regions. This report provides a PESTLE analysis (Political, Economic, Social, Technological, Legal, Environmental) for the Middelburg Edelstenenbuurt deprived area, identifying key factors that will shape the implementation of climate adaptation strategies. Additionally, a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis has been conducted to further inform strategic planning.

Summary

Middelburg's Edelstenenbuurt, classified as a deprived area, faces numerous socio-economic and environmental challenges. Developed in the 1980s, this area was not designed with climate adaptation in mind and currently struggles with heat stress due to its paved surfaces and limited greenery. Parts of the area appear dilapidated, and overall, the neighbourhood lacks spatial quality. This PESTLE analysis highlights the area's complex socio-political landscape, economic vulnerability, and environmental exposure to heat stress. Politically, there is increasing awareness of climate adaptation needs, but economic constraints and social deprivation pose significant hurdles. The technological and environmental solutions available are promising but must be implemented with careful consideration of the community's socio-economic reality. Legal and ownership issues related to housing corporations also add a layer of complexity. The pilot will focus on reducing heat stress and improving liveability through greening initiatives and shade creation, with the goal of making the area more attractive and resilient to climate impacts. There are ongoing infrastructural assessments in Edelstenenbuurt, particularly concerning cables and pipes. Coordination with these works provides an opportunity to implement Cool Neighbourhoods measures efficiently.

Image 1 – Heat stress identified in deprived pilot area Edelstenenbuurt



PESTLE Analysis

Political

- Growing political awareness of the urgency for climate adaptation, particularly in vulnerable neighbourhoods.
- However, political priorities may lean towards more economically vital areas, potentially sidelining deprived areas like Edelstenenbuurt unless specifically targeted.

Economic

- The rising costs of construction materials and labour, coupled with inflation, may further strain this already economically vulnerable neighbourhood.
- Economic deprivation limits the community's ability to invest in climate adaptation or even prioritise it, as more immediate financial concerns dominate.

Social

- Increasing awareness of the health risks posed by heat stress is an important driver for action.
- However, widening wealth gaps may exacerbate social inequality, further depriving the neighbourhood of necessary resources for adaptation.
- Cultural and language barriers exist due to the diverse community, potentially complicating public engagement.
- The low socio-economic status of the area often places heat stress and environmental concerns lower on the priority list for residents, who may face more urgent issues such as housing, employment, and basic welfare.

Technological

- Technical solutions to combat heat stress in public spaces are advancing, offering potential interventions for the neighbourhood.
- Technology can play a vital role in facilitating communication and encouraging participation in climate adaptation projects. However, given the social dynamics, this will require visual, simple, and accessible methods.
- A lack of familiarity with technology among some residents may limit its effectiveness unless adapted to the local context.

Environmental

- The area faces increasing environmental risks due to climate change, with more extreme weather events likely to worsen conditions in the neighbourhood.
- Loss of biodiversity is also a concern, and the lack of green infrastructure exacerbates the area's vulnerability to heat stress.
- Evolving techniques in green roofs, walls, and other greening solutions offer a potential path forward, but the area's socio-economic conditions may complicate their implementation.

Legal

- Parts of the land in Edelstenenbuurt are owned by housing corporations, which means their cooperation will be crucial for implementing long-term adaptation measures.
- Legal frameworks may need to be navigated carefully, particularly where private land ownership and public projects intersect.

SWOT Analysis

Strengths

- Growing political and community awareness of climate adaptation needs.
- Technological advancements offer scalable heat mitigation solutions.
- Opportunities to implement greening and shading initiatives in pedestrian-heavy areas.

Weaknesses

- Economic vulnerability of residents, limiting financial resources for climate adaptation.
- Language and cultural barriers in the community may hinder engagement and participation.
- Limited existing green infrastructure, leading to heat stress and poor spatial quality.

Opportunities

- Advancing technology and greening techniques can be adapted to reduce heat stress in public spaces.
- Potential to engage housing corporations and local government in collaborative adaptation strategies.
- Gradual introduction of affordable, small-scale interventions (e.g., mobile greenery and shade sails) can set the stage for long-term improvements.

Threats

- Rising costs of materials and labour may delay or limit climate adaptation projects.
- Economic deprivation could deprioritise climate adaptation efforts in favour of more immediate community needs.

- Legal and ownership issues with housing corporations could create barriers to implementing necessary changes.

Conclusion

The PESTLE analysis of Edelstenenbuurt reveals several challenges, such as economic deprivation, social complexity, and legal hurdles, that must be addressed for climate adaptation efforts to succeed. While technological advancements and environmental solutions offer potential, they must be carefully tailored to the local socio-economic context to achieve effective results.

Recommendations

Political Advocacy

- Ensure that climate adaptation efforts include deprived areas like Edelstenenbuurt through targeted advocacy and resource allocation.

Cost-Effective Solutions

- Implement small-scale, low-cost interventions such as depaving and mobile greenery as a starting point for larger projects.

Community Engagement

- Use culturally sensitive engagement strategies, including visual communication and local leaders, to improve participation in climate adaptation initiatives.

Utilise Technology

- Employ accessible and easy-to-use technologies to combat heat stress while ensuring they are suitable for the socio-economic realities of the area.

Collaborative Legal Efforts

- Work closely with housing corporations and legal stakeholders to address land ownership issues and support long-term climate adaptation measures.

Strengthen Public-Private Partnerships

- Foster collaboration with housing corporations to leverage their resources and expertise for greening and climate resilience efforts, ensuring long-term investment.

Targeted Social Outreach

- Develop tailored community outreach programmes that address both climate resilience and immediate socio-economic concerns, integrating climate adaptation into broader community improvement strategies.

Addressing Vandalism

- Introduce community stewardship and surveillance measures to reduce the risk of vandalism to green infrastructure and public space cooling technologies. This could include fostering local ownership of public spaces, engaging local youth groups, and installing protective measures like vandal-resistant installations.

Long-Term Monitoring

- Implement a monitoring system to evaluate the success of small-scale interventions and assess their scalability over time.