Interreg
North-West Europe

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IB-Green

IB-GREEN MULTI-LEVEL STRATEGY

FOR FUTURE PROOF INDUSTRIAL AND BUSINESS PARKS WITH GREEN-BLUE INFRASTRUCTURE

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AIM OF THE STRATEGY

This strategy aims at developing a common comprehensive baseline of current conditions and challenges regarding climate adaptation in industrial and business parks, as well as identifying the main priorities to take action.
This common baseline serves public authorities of all levels - local, regional and national - as well as business parks operators from all NWE countries in order to reduce heat stress and increase climate resilience in existing industrial and business parks.
The commitment of IB-Green project partners to apply the strategy will be concretised in the derived two action plans.
One of the fundamental building blocks for climate adapted industrial and business parks is green-blue infrastructure in IBPs. The consequent transition of existing IBPs into climate adapted IBPs needs to create swamps for precipitation water in the areas, create green space with multiple functions for retention of water, improve biodiversity, reduce heat, create synergies with renewable energy schemes and improve the quality of working and living conditions in IBPs.

What are green-blue infrastructure?

According to the European Commission's definition, green-blue infrastructure is a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation. This network of green (land) and blue (water) spaces can improve environmental conditions and therefore citizens' health and quality of life. It also supports a green economy, creates job opportunities and enhances biodiversity.

CURRENT CONTEXT

In North-West Europe, existing industrial and business parks (IBPs) take up a decisive part of the settlement area - in average between 15% and 20%. Most IBPs were built between the 70s and 90s, at a time where climate change was not considered as a priority. Since 80 to 90% of their surfaces are sealed, industrial and business parks are especially vulnerable to:

MAIN CHALLENGES FACED BY IBPS

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Heat stress

Industrial and business parks are especially vulnerable to overheating. Increased temperatures have concrete consequences in industrial and business parks, such as: difficulty in storing heat-sensitive products, harder working conditions or additional costs for companies due to increased air-conditioning or cooling of buildings. The risk of overheating can be reduced thanks to the cooling effect of green areas.

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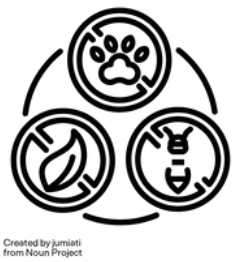
Flooding & heavy rainfall

Industrial and business parks are especially vulnerable to flooding. The high percentage of sealed surfaces prevents water from being absorbed into the ground in case of heavy rainfall, which can lead to tremendous damages to the buildings, roofs and facades but also to the means of production and machinery. The risk of flooding can be mitigated by retaining more rainwater in the soil, e.g. by unsealing, implementation of green areas, water retention systems.



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Biodiversity loss

Industrial and business parks have an impact on the biodiversity and the ecosystem services it provides. In addition to the high degree of sealed areas, industrial activities often lead to a significant pollution, which can harm ecosystem functionality by changing the composition of soils and waterways. Biodiversity can be brought back to IBPs by specifically designing green areas, for example flowering meadows or intensive green roofs.

GOALS

INCREASE GREEN-BLUE INFRASTRUCTURE

Green (unsealing to plant vegetation, implement green roofs/facades) and blue (water retention basin, river restoration) infrastructures serve to enhance natural cooling in industrial and business parks.

INCREASE IBPS' ROLE INTO STRATEGIC ENVIRONMENTAL PLANNING ACTIONS

Industrial and business parks could be used as green-blue corridors, e.g. by better connecting them with the surrounding areas through biking and pedestrian lanes, as well as connecting fragmented habitats

IMPROVE CITIZENS' HEALTH AND WELL-BEING

The well-being and health of citizens living and employees working in industrial and business parks depend on factors like air quality, cool and green areas to charge batteries, do sports, relax and have social interactions.

AWARENESS RAISING OF ALL STAKEHOLDERS

Raise awareness of stakeholders involved in IBPs (regional and local planners, companies, decision-makers) for the need to (re)build IBPs sustainably and in the most multifunctional way.

BETTER INCLUSION OF "BLUE" ASPECTS

Blue aspects of green-blue infrastructures are often neglected, they need to be better integrated.

RETHINK OF USE SPACE

IBPs can serve multiple functions: Not just for industrial and business activities but also for biodiversity, water retention and infiltration, hence heat regulation and risk management, as well as encouraging social interactions.

CHALLENGES

FACED WHEN IMPLEMENTING GBI IN IBPS

Public level

General lack or insufficient consideration of climate adaptation in urban development plans.

If local greening plans exist, they rarely focus on the potential of green-blue infrastructure in IBPs.

Cooperation between different departments within local authorities can be difficult to implement.

Insufficient data to understand the impact of an IBP on urban heat island.

Lack of financial means: Adaptation is less targeted and less financed than mitigation.

Lack of knowledge to speak efficiently with individual lot owners and motivate them to take action.

Big infrastructure projects: some existing buildings would need a total reconstruction.

Technical barriers, e.g. planting trees in an IBP can be challenging due to the high number of cables already present in the soil.

“Blue” aspects (raingardens, wetponds) are difficult to integrate because they require more engineering knowledge.

Public-private interface

Lack of incentives for private investment in green-blue infrastructure.

Difficulty to get in contact with private owners and tenants in IBPs.

Underdeveloped communication structures (between local authorities and businesses, or between businesses from a same IBP).

Lack of awareness about the benefits of green-blue infrastructure, also the financial ones.

Lack of IBP management structures.

PRIORITIES
FOR ADDRESSING THE CHALLENGES

1. Raise awareness

Raising awareness to encourage the implementation of adaptation measures is a key priority to make industrial and business parks fit for future. Not all stakeholders involved in designing, managing and planning IBPs are aware and informed about their vulnerability and the measures they can take to pro-actively adapt to climate change. Awareness raising is therefore an important component to face the challenges and extreme weather events arising from climate change. Awareness raising requires strategies of effective communication to reach the desired outcome. Awareness in the public sector is essential as local and regional policy makers are key actors in the decision-processes towards implementing adaptation measures. Awareness raising of private actors involved in industrial and business parks, such as companies, industries, private investors is central to have them work hand in hand with the public sector and increase the impact of adaptation measures.

2. Improve monitoring and evaluation systems

The monitoring and evaluation of adaptation policies or projects is central to help stakeholders take decisions on adaptation actions in industrial and business parks. Monitoring and evaluation approaches are already used at national, regional and local levels to assess policies, plans and programmes. The necessity of indicator frameworks in monitoring and evaluation of local adaptation action are increasingly recognized, yet there is currently no unified methodological framework or indicators for assessing the success of adaptation interventions.

3. Finance adaptation measures

Despite the clear benefits of implementing green-blue infrastructures, the financing of adaptation measures is still a huge challenge. Although green-blue infrastructures are primarily funded by public money, local authorities are still struggling to find secure fundings for local adaptation measure. In many cases private stakeholders are still not investing in adaptation to climate change, especially because quantifying economic and social benefits of green-blue infrastructure is challenging. Increase knowledge of public and private stakeholders of existing funding at local, national and European level is central, as well as showing companies the economic and social benefits from green-blue infrastructure to motivate them in including climate adaptation measures in their marketing strategies.

4. Develop multi-benefit integrated approaches

Having a holistic approach is key to make relevant and informed decisions and reduce the costs. Local authorities report the difficulty to develop integrated approaches to foster sustainable development and climate action. There is here a huge need of breaking the silos within public organisations and foster communication before different departments. When taking a decision about infrastructure improvement at local level, decision-makers should consider all aspects in a multi-benefit approach, e.g. if the ground of some specific streets needs to be opened to maintain the underground pipes of a heat network, the opportunity should also be taken to integrate climate adaptation measures such as planting trees or installing permeable pavement solutions instead of concrete, in order to increase efficiency and reduce the costs.

5. Support stakeholders' involvement focusing on public-private cooperation

Developing structures to increase and improve the dialogue and communication between the different stakeholders involved in an industrial and business park is central for an effective sustainable transformation. When relevant management structures are developed, public and private stakeholders have a better chance of understanding each other and finding common interests in implementing adaptation measures. Having local authorities and private companies working hand in hand is key to increase the motivation for action, acceptability of adaptation measures and find secure fundings for green-blue infrastructures.

ABOUT IB-GREEN

IB-Green is a project that aims to transform existing industrial and business parks into climate-resilient ones by creating green and blue infrastructure to mitigate negative climate impacts for enterprises and on city level.

We are 11 project partners from 6 European countries representing local authorities, business park operators/managers, networks, sector organisations and science institutions in the field of climate adaptation, who are joining forces to make industrial and business parks more heat- and climate-resilient.

https://ib-green.nweurope.eu/

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