

Good Practice in NbS Policy Integration in Europe:

Green Network in Hamburg and the Contract for Hamburg's Green Space

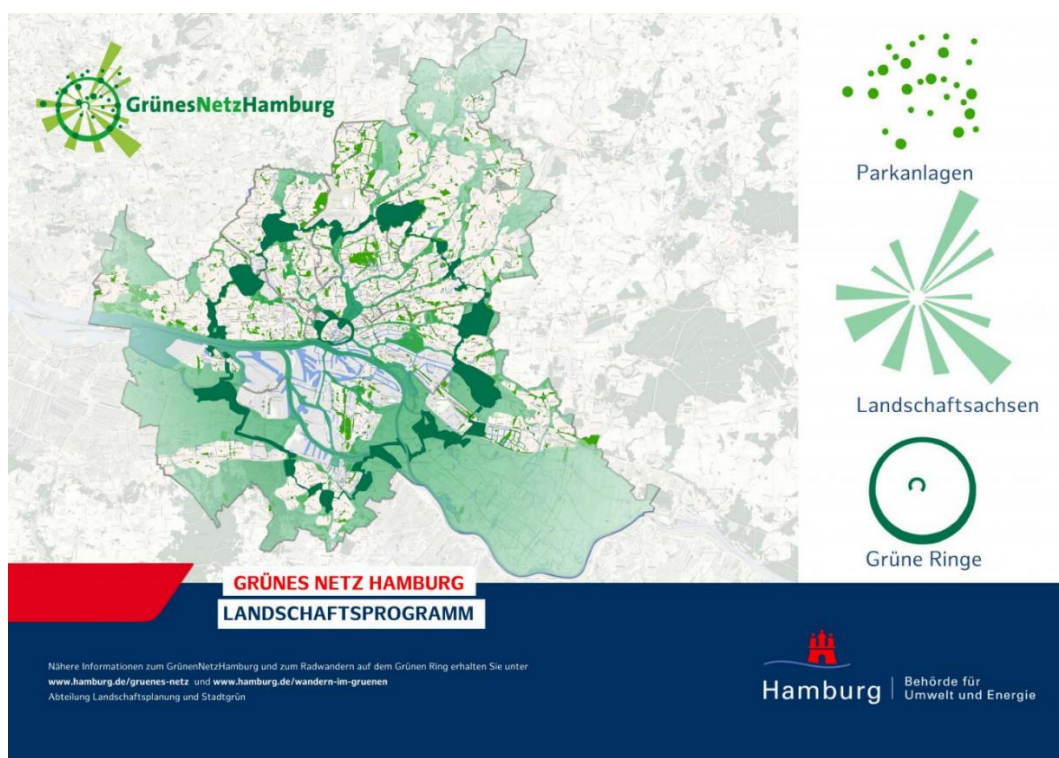
Policy summary

The Hamburg Green Network is a vision to safeguard and connect green spaces, supporting recreation and nature, across the urban region. A regional legal agreement – the Contract for Hamburg's Green Space – sets rules for the protection of green spaces and the compensation of open areas lost to development and dedicates an annual public budget and a tax to the green network.

Key messages on good practices for policy integration of NbS

- Hamburg's Green Network protects the green and open spaces from the city centre to the outskirts, providing vital recreational space, protecting nature, and enabling a nature-based approach to city design that tackles both environmental issues—like urban biodiversity and air quality—and social wellbeing—promoting a healthy lifestyle and making nature accessible.
- Hamburg's environment department prioritises continually evaluating options and looking for creative solutions and funding and invests in strengthening public appreciation of the city's green spaces. It requires continual dialogue and collaborations between the various city authorities, organisations, businesses and the public – and each planning decision must be specific to the local context.
- A regional legal agreement – the Contract for Hamburg's Green Space – allocates dedicated budget and sets binding targets for the city to compensate for losses of recreational green space from developments, create new spaces, and protect and improve the quality of existing spaces. The compensation for loss of public recreational space, budget and powers to acquire land are unique features of the Contract that enable the city to implement nature-based solutions that require space.

Images



Source: Urban Nature Atlas © BUE 2016

Type of policy instrument	Location and Scale
PLANNING INSTRUMENT - regional spatial strategy and programme REGULATORY INSTRUMENT - regional regulation ECONOMIC INSTRUMENT - dedicated budget and tax	The green network strategy or guideline is centred on the city of Hamburg, Germany, but creates a green network that connects some neighbouring municipalities. Its scope extends to the regional, municipal, and urban levels.
Description of policy	
The Green Network in Hamburg is a regional spatial strategy or guideline ('Leitbild') that aims to create and protect a green network that safeguards green spaces and connects the city, supporting recreation and nature [1]. The main structure was set in a 1920 city plan that determined a set of axes for development from the agglomeration to the urban core (with undeveloped landscape axes in between), and two green rings. It has been developing in the century of urban planning since then. The green network maps connections between the green rings and the axes with parks, recreational areas, cemeteries, wildlife habitats, and green paths. The Hamburg environment department plans initiatives with the aim to improve the quality of existing green spaces and create new ones when there is the opportunity to unseal an area, close gaps in the landscape axes and the green rings and connect green spaces [1]. Since 2019, an agreement – the Contract for Hamburg's Green Space (Drs.21/16980) – sets rules for the protection of green spaces and the compensation of open areas lost to development [2]. The Contract was formalised in a legal document in 2021 [3]. It sets 20 goals ('Petitia') and remains in legal force indefinitely unless replaced by a future regional government response. The Contract established a general protection for all public green spaces and recreational spaces existing in 2021 and potential green spaces in landscape axes and green rings according to the green network policy (Petitum I.4 and I.5). It also establishes the principle of compensation for the lost recreational value of open spaces that are lost to development. In those situations where the developer is not required to compensate, the city must step in and ensure compensation for the lost recreational space. The regulation is an effective addition to the German federal legal requirement to compensate for lost environmental values [3]. The compensation regulation applies to the metropolitan area from the city centre to the second green ring. The Contract was adopted by the city's parliament in April 2019 in response to a civil society initiative called 'Preserve Hamburg's Green Spaces' (Volksinitiative „Hamburgs Grün erhalten“) supported by 23 000 signatures and submitted to the Hamburg senate in May 2018 [4]. The initiative advocated for the protection of the city's green spaces from further development and was initiated by the NGO NABU (Nature and Biodiversity Conservation Union).	
Network Nature Themes	Types of NbS
• Sustainable urban and regional transformation • Biodiversity enhancement and ecosystem restoration	• Urban green space (and unsealed space) • Urban nature space • Urban trees and vegetation
Policy Good Practice Criteria	
NbS mainstreamed in policy text and/or NbS are a central component of policy response	The policies and goals of the green network are well-aligned with the NbS approach, though NbS are not specifically identified in the Green Network plan or the Contract [5]. The Green Network is an ongoing and historical initiative and guideline, whereas the concept of Nature-based Solutions (NbS) is relatively new. The Green Network clearly delivers net biodiversity positive outcomes by protecting and improving the habitat quality of both the green spaces in the urban core and the protected areas and landscapes (mostly in the suburban periphery). Nature-based solutions to other urban challenges are being increasingly integrated into the network.

Societal challenge(s) are addressed and human wellbeing outcomes are identified	The Green Network is a response to the challenges posed by urbanisation and the pressures from housing, commercial, and transportation sectors in the Hamburg metropolitan region, that drive the loss of green spaces and undeveloped areas, and the negative impacts on health, on the urban climate, and on biodiversity. The Green Network is expected to improve human wellbeing by increasing access to green space for recreation, thus enabling improved physical and mental health [6].
Dedicated budget and/or funding stream	Funding is available from dedicated public budgets and from project funding as follows: The Contract commits the Hamburg authorities to allocate an annual budget of EUR 4.9 million to measures that compensate or mitigate the impact of building and EUR 3 million for land acquisition [3]. It also commits the state of Hamburg to allocate capacity to improve the monitoring and execution of compensation and mitigation measures. This budget may not be used for compulsory measures arising from other legal obligations regarding public green space. Hamburg has an innovative funding source for the Green Network: The 'Naturcent' is a higher rate of property tax on developments that have caused the loss of ecologically valuable land (land within a landscape protection area or a higher nature protection). The income is allocated to the maintenance of green spaces and parks and to nature reserves. Other funding sources include project funding from German federal budget programmes supplemented by private and other funding. Hamburg's environment authority has implemented a series of major projects with federal and regional funding that have contributed to the development of the Green Network, including [5]: • A redevelopment project with a budget of EUR 5 million restored one of the landscape axes from 2016 to 2022, including 1 million euros for citizen led projects [7] • Two major long-term projects funded by the German federal chance.natur programme from 2017 to 2031 and 2022 to 2035 [8] • A spatial plan for another landscape axis provided a basis for follow up projects at district level to further detail and execute the ideas [9] • A project restored an urban park to improve recreational value and resilience to climate change [10]
Indicators of impact and evaluation framework	The Contract sets binding rules for monitoring and evaluation. Since 2021, the Hamburg Senate publishes an annual report with progress on the 20 goals of the Contract [11], including these quantified targets (which apply to the whole metropolitan area): • high value habitat network on 23.2% of the city's area • nature reserves on at least 10% of city area; 50% of this area with increased habitat quality (one more point); European protected habitats (under EU Habitats Directive) improve from 2 to 11 in favourable conservation status • landscape protection areas on 18.5% of city area • present an updated map of the city's high nature value habitats every 5 years Hamburg has established a new monitoring programme to track changes in soil sealing using satellite data since June 2024, in accordance with the commitment in the Contract [11].

	No specific social and economic assessment approaches or indicators have been developed for the network, as it is not easy to quantify. However, a recent climate map of Hamburg demonstrates the air quality and cooling benefits of the network, allowing cool air flows to enter the city [12].
Inclusivity and stakeholder engagement	The city is committed to community involvement and dissemination of information and education. Emphasising the societal value of the Green Network helps secure the continual support of the local communities and their engagement. This effort involves producing maps and brochures, an interactive online platform, and tools to collect public opinion [5]. The online platform is a tool to include the public in planning, as they can share their knowledge, express wishes, and comment. Public participation is mandatory for new development projects. Most of the in-depth stakeholder engagement happens at the scale of individual projects, so it is led by the municipality and tailored to the outreach and engagement needs of the project or development [5].
Consistency within policy mix	Consistent with regional spatial planning The Green Network is an important part of the landscape programme [13], the spatial masterplan [14], and the municipal land use plan of Hamburg [15], and is therefore embedded in regional spatial planning. Addition to German national impact mitigation regulation [Eingriffsregelung] and Urban Code The national regulation requires the avoidance, mitigation, and compensation of the environmental impacts of any developments that change land use. The rules in urban areas are defined through the Urban Code in accordance with the regulation. In Hamburg, the federal rules put legal limits to what the city can require from landowners and developers, allowing small developments on green space when alternatives are not possible [16]. In the cases where the landowner /developer is not required to compensate under the German federal regulation, the Contract establishes an additional responsibility for the city to compensate for the loss of recreational value caused by the development [16]. Complementary to Hamburg green roof strategy and legal requirement Hamburg funds the installation of green roofs and green facades since 2015, and the Hamburg green roof strategy set the goal for 100 ha of green roofs to absorb 60% of rainfall on the city [17]. From January 2027, the installation of green roofs (with solar PV) will become mandatory on all new builds (unless roof has more than 10% incline), and all existing buildings that have more than 50m² roof or undergo a roof renovation [18]. Green roofs are expected to have a major role in absorbing rainfall and cooling the city, therefore complementing the green space network's contributions to these objectives.
Knowledge development and transmission	Because of the Green Network's long history, its social benefits are relatively well recognised. The city is making efforts to ensure these benefits remain visible and celebrated to maintain the social recognition and momentum needed to maintain the network. These include the maps and flyer and the online platform, as well as events like activity days to highlight specific projects [5].
Success Factors/Uptake/Impact	
Hamburg has lost very little of its green space and some new space has been created (unsealed) since the Contract for Hamburg's Green Space was agreed [5]. The Green Network is widely recognised and makes the value of dedicated green space visible, and over time it has become much easier for the city to promote and defend the green network against conflicting interests [5].	

Implementing the Green Network and nature-based solutions in a large city requires continual dialogue and collaborations between the various city authorities, organisations, businesses and the public – and each planning decision must be specific to the local context. Hamburg's environment department prioritises continually evaluating options and looking for creative solutions and funding and invests in strengthening public appreciation of the city's green spaces [5].

Barriers and Challenges

Hamburg has a very high demand for new housing and aims to develop 10 000 new housing units per year. Each urban development or redensification project requires a considerable investment of time and energy in negotiating between conflicting interests regarding public green space. Opportunities to open (unseal) built areas to create new space are rare, and human resources in public administration as well as private planning sector are limited.

A key challenge is demonstrating the value of green spaces and quantifying their benefits, and the city does not currently have established approaches to assess societal and economic benefits to the city residents [5]. Increasing an area's biodiversity score means first measuring the baseline and understanding local constraints to improvement. This requires training city gardeners and changing the practices of private contractors, a time-intensive process.

Potential for Replication or Upscaling

The Contract for Hamburg's Green Space is well known in Germany and serves as an inspiration for a communication and goal-setting strategy in other cities [5]. The compensation requirement for lost recreational space that goes beyond the federal law is unique to Hamburg. It gives Hamburg a head start on implementation of Article 8 of the EU Nature Restoration Regulation, which requires no net loss of urban green space across Germany by 2030 and an increasing trend thereafter [19], and it might make it easier to operationalize these new requirements [5]. The new city monitoring programme to track changes in soil sealing using satellite data is directly relevant to this [20].

More Information & Sources

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