



**NATURVATION**  
cities - nature - innovation



## SNAPSHOT - SOFIA: CITY FOREST



### KEY POINTS

- A change in the city starts with a change in the way of thinking
- Ecological and social urban development, as well as their sustainability, depends strongly on the experienced sense of belonging
- NBS are perceived as more cost-efficient and economically desirable, especially in the tourism sector
- Providing information for a better understanding and appreciation of ecosystem services is crucial for the introduction of an appropriate policy framework and mainstreaming of NBS

### ABOUT THE PROJECT

NATure-based URban innoVATION is a 4-year project involving 14 institutions across Europe in the fields of urban development, geography, innovation studies and economics. We are creating a step-change in how we understand and use nature-based solutions for sustainable urbanisation.

Durham University, LUND UNIVERSITY, eco logic, GRIMMA, Utrecht University, UAB (Universitat Autònoma de Barcelona), Newcastle City Council, I.C.L.E.I. Local Governments for Sustainability, ent (environment & management), CEU (CENTRAL EUROPEAN UNIVERSITY), Gemeente Utrecht, Malmö stad, PBL Netherlands Environmental Assessment Agency, Leibniz-Institut für Länderkunde, ifl.

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## Sustainability challenges and opportunities

**Sofia's sustainability challenges result from a legacy of a Soviet-era industrialisation with no attention paid to environmental issues, and from currently pressing issues of aligning economic growth with environmentally sustainable urban development.**

As the capital of Bulgaria and the largest city in the country, Sofia is an economic, cultural, and educational centre. It is a dynamic and continuously growing area, which at the same time holds significant natural resources, such as hot thermal springs, long sun hours, fertile agricultural land, and biodiversity. Yet, Sofia is not capitalising on this potential. First, the lack of data and information on the benefits and importance of ecosystem services as well as on the anthropogenic impact inhibit not only the introduction of an appropriate policy framework, but also the raising of awareness for and the mainstreaming of NBS. Second, the unsatisfactory conditions of green spaces, public infrastructure, and transport systems with no priority regarding pedestrian and bicyclist zones deepen the pressing issue of air pollution in the city: ***“Sofia is one of the green cities, [...] there are many parks and green areas, but we are considering other aspects [...] such as how many citizens in a radius of 300 to 400 m have access to these areas.”***<sup>1</sup> Nevertheless, there is a shift in the expectations and behaviour of citizens and public officials. Nature-based solutions are beginning to gain prominence in Sofia, which, for example, is indicated by the increase in the reconstruction of parks since 2010, rising number of new urban gardens, and new private afforestation initiatives or volunteer work in parks.

## Solution story and key actors

**The City forest initiative is an inspiring example of civic engagement and the variety of benefits provided by ecosystems in an urban environment. Funded and realised by the citizens of Sofia, the initiative is planned not only to provide environmental services such as the mitigation of air pollution and climate regulation, but also to become a landmark in Sofia's green heritage and elicit a sense of place and belonging.**

Planned as a community tree park, the “City Forest” project targets the biggest environmental challenge of air pollution in Sofia city and shows the shift-tendency in current society's awareness and understanding towards an ecological and cultural sustainable urban development. The intervention is being initiated and implemented by the non-governmental organisation Grupa Grad in collaboration with Sofia municipality and active citizens. The idea unfolded after the NGO Grupa Grad and other non-governmental organisations had started the initiative “Sofia – green capital.” This resulted in the City taking part in the contest for the European Green Capital Award. By planting trees on neglected urban land and simultaneously restoring one of the green eco-corridors that are allowing fresh air from the mountain to reach the city, the intervention is expected to improve the air quality, store and sequester carbon dioxide, provide a place for recreation and free time activities, and add to the green footprint of Sofia's history: ***“a new park in the smog-covered city – a new urban forest.”***<sup>2</sup>



### Governance strategies

Sofia municipality is setting new priorities, searching for more sustainable solutions and best practices to the city's environmental challenges. For this, it is also reaching out to NGOs, start-ups, and citizens.

The project is being implemented in collaboration between the NGO Grupa Grad, the Sofia municipality, and its citizens. Coordinator Grupa Grad is ***“a unit in which architects, urban planners, and landscape architects are involved.”***<sup>3</sup> The local population can make monetary contributions and take part in the tree planting and maintenance of the park, while the municipality is involved in organising a suitable location and will be later responsible for the management and maintenance of the forest. To implement the initiative, Grupa Grad is negotiating with the central administration department ‘Green Systems,’ managing parks and green areas in the city, as well as with several of the specialised regional (district) administrations. The initiators are being supported by various institutions with an essential know-how: ***“We found a way, where we assist those citizens in every step, e.g. counselling or [...] contact with the other involved institutions.”***<sup>4</sup> The key factors for a successful implementation are being identified in committed and experienced initiators, engaged participants, as well as an open-minded and motivated municipality administration, which balance slow procedures and unsatisfactory policy framework.



### Business models

The municipalities' plans and strategies for NBS are being discussed in the context of the development and expansion of the tourism sector. Investing in NBS is being seen as a 'booster' of the local economy and as a conservation strategy.<sup>5</sup>

In terms of finance, the initiators rely on contributions from citizens, following the crowd-funding principle. The initiative launched a fund-raising campaign in 2016 and has already a certain amount of means available for the purchase of saplings. The land will be provided by the municipality as its future management body. In general, there is a risk associated with the relying solely on citizen's voluntary engagement and donations in terms of emergence and implementation of such intervention, since it can lead to a ***“tendency of selective and small scale, inhomogeneous activities.”***<sup>6</sup> The municipality has yet to widen its scope of investment to other areas besides the reconstruction of parks. For this, it already initiated the first steps in assessing cultural and natural amenities and public space quality.



### Citizen engagement

**“The main principle we want to base our work on is engagement. That is why it is good to have a maximum number of people involved.”<sup>7</sup>**

The idea for the initiative originated in a civil society movement and the citizens can directly participate and contribute to any of the implementation stages voluntarily, e.g. by planting or buying a tree (by making a donation). There are already various established communication channels, especially via the social media and the experience from previous similar forestation initiatives which proved to be very effective. Looking at the expressed support during the first fundraising campaign, the continuously growing interest towards the project, and the highly organised lead initiator and coordinator Grupa Grad, there is a significant involvement of citizens to be recognised. To enable even further engagement and voluntary activities, the municipality has to work on the provision of **“information for a better understanding of ecosystem services.”<sup>8</sup>**



### Innovation pathways

**The “City Forest” project was created by the citizens of Sofia for Sofia, and its future generations.**

In a city like Sofia with an emphasis on growth, infrastructure, and mobility, these factors have traditionally been prioritised in urban planning. The motivation and openness from the municipality’s side towards the realisation of the project shows a changed perspective in terms of a sustainable urban development. This reflects the changed public demand and perception of the urban environment and its challenges. Additionally, the initiative is not only a good example for the multiple benefits of ecosystems in urban areas, but has a strong emphasis on historical, cultural, and social values as well as on cost efficiency: **“[...] the green areas are the lungs of the city and studies show that in comparison to the other methods for reducing greenhouse emissions the afforestation is the best and more cost efficient one.”<sup>9</sup>**

<sup>1</sup> Coordinator “Green Sofia,” 2018; <sup>2</sup> Citizen’s Initiative “Sofia - Green Capital,” 2016; <sup>3, 8</sup> Coordinator “Grupa Grad,” 2018; <sup>4</sup> Director “Parks and city gardens,” 2018; <sup>5</sup> Sofia municipality, 2014; <sup>6</sup> Representative “Association of Urban Planners in Bulgaria,” 2018; <sup>7</sup> Director “Sofprekt,” 2018; <sup>9</sup> Karapavlova et al., 2018; Photo credit: Vassia Atanasova