Basic Project for Linear Park in Campinas

City Climate Finance Gap Fund

Campinas, Brazil

CONTEXTUALISED NATURE-BASED SOLUTIONS (NBS)

Through this intervention, the cities of Campinas and Rio de Janeiro joined efforts to develop a package of methodologies for strengthening and contextualising Nature-based Solutions approaches in linear parks in Brazilian cities. This is a relevant step towards increasing the ability of Brazilian cities to adapt to climate change, reducing the impacts of extreme-weather events, particularly on the socially vulnerable population.

Mapping the area in Campinas (Credit: Sarah Daher)

CURRENT CHALLENGES AND SOLUTIONS

Brazil has urbanised rapidly over the last 50 years, but on a precarious basis and with little attention to the environmental fragilities of the occupied locations; such as valleys and river plains. Such locations are naturally prone to flooding, thus exposing its populations to serious impacts – especially the socially most vulnerable. These problems are being aggravated by climate change increasing the frequency and intensity of flood events.

To address these challenges, municipalities such as Campinas and Rio de Janeiro are applying Nature-based Solutions to adapt to the effects of climate change in exposed urban areas. Linear riverside parks prevent occupation in flood areas and create spaces for rivers to flow, while also providing leisure options for low-income populations.

THE GAP FUND'S SUPPORT

The Gap Fund's intervention included:

1. Catalogue of NbS approaches applicable to open spaces.
2. Methodology for quantifying the benefits of NbS and guidance on the indicators used for this quantification.
3. Elaboration of a linear park project with an NbS approach, to be implemented by Campinas City Hall.
4. Development of a business model to assess the socio-economic viability of NbS, especially for linear parks.
5. Development of an implementation guide to linear parks based on the developed approaches.

Sector

Green Spaces & Urban Infrastructure

Project stage

Prefeasibility

Idea

Implementation

25,321

Number of beneficiaries (population living in the neighbourhood where the NbS will be implemented)

88,080 m³

Precipitation to be held back by dams for mitigating downstream flooding

4.05 Million EUR

Investment value

THE INTERVENTION AT A GLANCE

The foreseen components of the Bandeirantes Linear Park include an agroforestry park, community and rain gardens, bioswale and constructed wetlands. Moreover, the project also foresees the implementation of gabion dams and slope containment NbS to contribute to flood and landslide risk reduction.

The supported studies take NbS from theory to practice – including which solution to use and why – and present the costs and benefits of each intervention. These cases can stimulate the adoption of similar models in other cities. To facilitate replication, an NbS catalogue and a methodological guide have been drawn up.

BENEFITS OF THE INTERVENTION

- Flood and landslide risk reduction through specific measures
- Provision of habitats to support biodiversity
- Ecological connectivity between green spaces
- Reduction of air pollution
- Mitigation of urban heat island effect
- Positive health impact associated with physical activity and leisure
- Greater accessibility to public spaces and leisure opportunities
- Community cohesion and crime reduction
- Promotion of food security
- Real estate development
- Job opportunities

Example of linear park in Brazil (Credit: Nereu Jr.)

LESSONS LEARNED

NbS hold great potential for addressing key challenges faced by Campinas, i.e. effects of climate change in combination with social inequalities. However, for NbS to be applied in practice, it is still necessary to convince stakeholders of its wide-ranging positive effects. This includes attracting the private sector to invest in urban parks in marginalised neighbourhoods. To address this challenge, the city is exploring the integration of urban linear parks into broader hybrid infrastructure projects. Another challenge is the cost of maintaining the parks, which competes with other municipal expenses.

The city has envisioned the establishment of community-engagement strategies, such as co-design with the local community and the future use of these spaces by schools and surrounding health facilities as an extension of their activities.

NEXT STEPS

- Securing funding for implementation and maintenance.
- Carrying out technical and social work capable of forming the basis of social organisation for effective shared management.
- Implementing programmes to regularly monitor environmental, social and economic benefits in the pre-implementation period.

TA PARTNER AND BENEFICIARY

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THE GAP FUND IN A NUTSHELL

Since its launch in 2020, the City Climate Finance Gap Fund provides technical assistance to cities in low- and middle-income countries to support the early preparation of climate-smart infrastructure projects, including energy, transport, waste, water, wastewater and nature-based solutions (NbS).

Find out more about the City Climate Finance Gap Fund on: City Climate Finance Gap Fund

For additional information, please contact: gapfund_technicalsecretariat@eib.org

Summary of a working document of the TA "Methodology for quantifying the environmental, economic and social risks and benefits of Nature-based Solutions (NbS)".

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