

MAIN BARRIERS TO IMPLEMENTING NATURE-BASED SOLUTIONS

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Nature-Based Solutions (NBS) face several challenges in order to normalise their widespread implementation. All of them are to some extent related to two realities. That NBS are something new and, like any process, require a path to mass implementation. And that, by their very nature, they are worth the redundancy, they are living elements that make the process more complex.

Nature-based solutions are increasingly recognised by public administrations, architectural and engineering firms, and construction companies. However, they still face certain barriers which mean that their implementation is neither standardised nor widespread. Based on NAIDER's experience in promoting these solutions at different scales and with different administrations, we believe that the main barriers can be grouped into four categories:

1. Institutional and governance barriers

- **Lack of specific rules and regulations:** The lack of a clear regulatory framework for the implementation of NBS makes it difficult to integrate them into urban and territorial plans. There is no concrete regulation that specifies how and when these solutions should be implemented.
- **Lack of inter-institutional coordination:** The implementation of BSS requires cooperation between different levels of government and sectors, which is often hampered by rigid administrative structures and a lack of interdepartmental communication.
- **Traditional decision-making processes:** In many cases, planners prioritise grey solutions (traditional infrastructure) due to a lack of knowledge or confidence in the effectiveness of BSS.

2. Economic and financial barriers

- **Difficulties in economic valuation of benefits:** Many of the benefits of NBS (such as biodiversity enhancement or urban climate regulation) do not have an immediate market value, making them difficult to finance. Cost-benefit analyses are key to highlighting the co-benefits of these solutions. They also capture the costs that are saved as a result of their implementation. This is in addition to the intangible benefits that are difficult to monetise. All of this is difficult to capture in a short-term vision.
- **Lack of incentives and appropriate financing models:** Most current financing schemes are designed for conventional infrastructure and there are not enough mechanisms to finance nature-based solutions.
- **Perception of high upfront costs:** Although NBS can be more cost-effective in the long term, private and public actors often prioritise investments with immediate financial returns.

3. Technical and knowledge barriers

- **Lack of standardised data and methodologies:** Few comparable tools exist to measure the effectiveness and benefits of BSS, making it difficult to evaluate and justify them.
- **Lack of trained professionals:** Designing, implementing and maintaining BSS requires specific expertise in ecology, environmental engineering and urban planning, skills that are not yet integrated in many disciplines.
- **Uncertainty about long-term performance:** The variability of NBS results according to geographical and climatic context raises doubts about their reliability. The need for maintenance and the associated cost and effort is also a concern.

4. Social and cultural barriers

- **Resistance to change:** Beyond the technical aspects, the human nature of decision-makers, both technical and political, has an influence. And they are also influenced by citizens' perceptions. Both citizens and administrations tend to prefer conventional solutions with more tangible and proven benefits.
- **Lack of community participation:** Successful implementation of NBS often requires involving the local community in their design and maintenance. However, the lack of adequate strategies or the lack of culture and habit of participation hinders this process.
- **Misperception of BSSs:** Some people consider BSSs to be merely decorative and not functional infrastructure for climate and urban resilience. It is accepted that they visually enhance a space, but they are not given the credit they deserve for the other, less tangible and immediate benefits they bring.

For each barrier, there is a line of work to be promoted in order to overcome it. To overcome these barriers, it is essential to develop strategies for the integration of BSS in public policies, to extend and specify a regulatory framework, to improve its financing, to invest in technical training and technical guides for its implementation and to promote the participation of citizens.

At Naider, we support public administrations in the formulation of these strategies and action plans, in order to guide, facilitate and accelerate the implementation processes of these solutions. We promote the drafting of bylaws in the municipal framework to ensure regulatory certainty and the widespread adoption of these solutions.

We also encourage participatory processes where municipal, technical and political staff as well as citizens have the opportunity to understand and value nature-based solutions. This allows us to remove one of the first barriers, that of lack of knowledge or mistrust.

It is therefore necessary for all stakeholders at all levels to work together to overcome these barriers. In such a way as to normalise the implementation of solutions that are already available to

us and that provide multiple benefits to the territory and to society.

Illustration: Note Thanun

