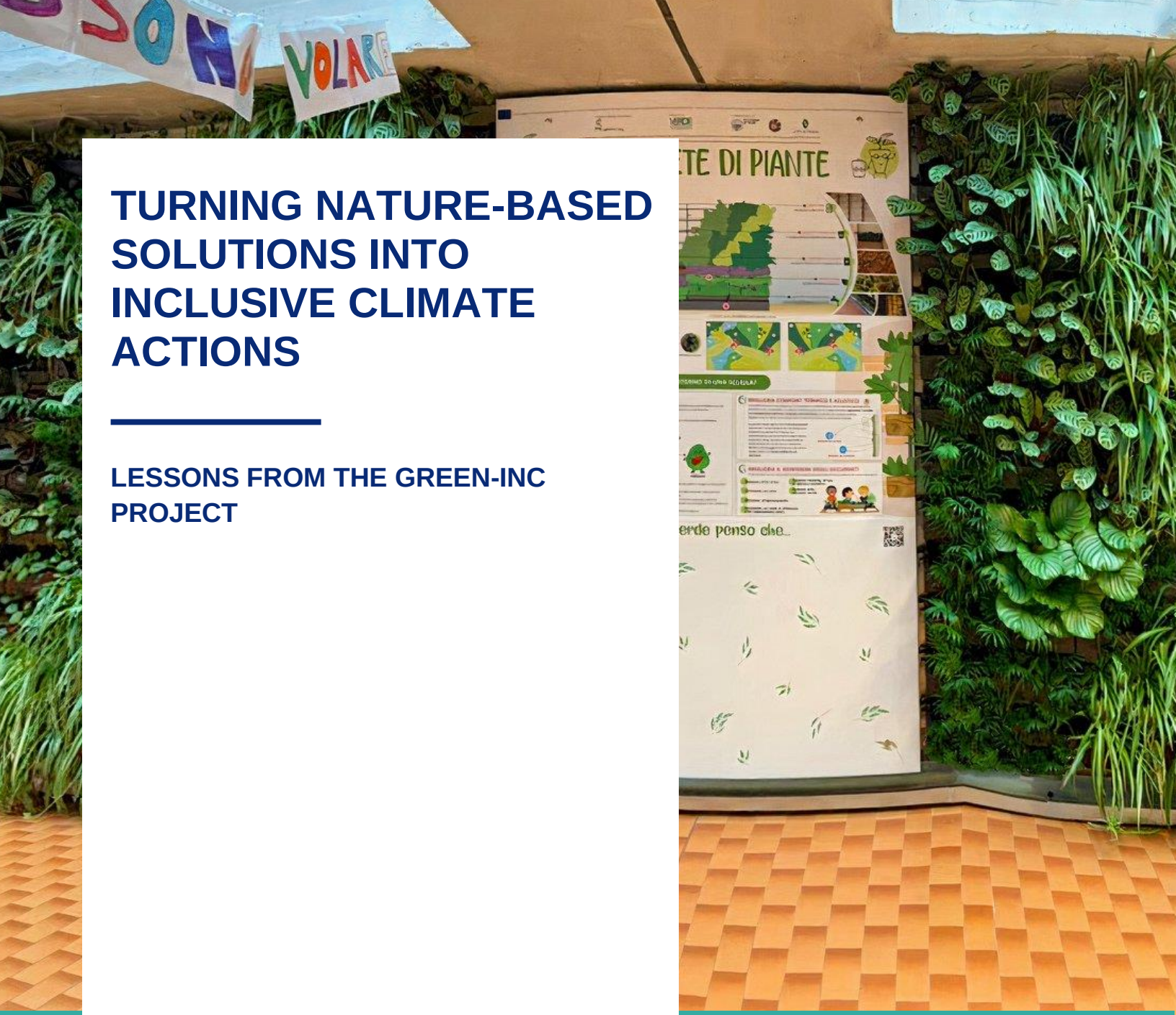

TURNING NATURE-BASED SOLUTIONS INTO INCLUSIVE CLIMATE ACTIONS

LESSONS FROM THE GREEN-INC PROJECT

GREEN-INC

UNIVERSITY OF AMSTERDAM
Authored by: JANNES WILLEMS, DANIELLE MACCARTHY AND MENDEL GIEZEN
DECEMBER 2025

DUT Driving Urban Transitions

GREEN-INC report

TURNING NATURE-BASED SOLUTIONS INTO INCLUSIVE CLIMATE ACTIONS: LESSONS FROM THE GREEN-INC PROJECT, 2025

Deliverable 3.4

Author: Dr Jannes Willems (j.j.willems@uva.nl), Dr Danielle MacCarthy, and Dr Mendel Giezen
Institute: University of Amsterdam

This research was conducted as part of the GREEN-INC project: GRowing Effective & Equitable Nature-based Solutions through INClusive Climate Actions (www.green-inc.eu).

The research received financial support from the Driving Urban Transitions partnership partnership (F-DUT-2022-0013) (www.dutpartnership.eu).

Picture frontpage: vertical garden by Verde Profilo, Turin (as part of proGIreg living lab).

DUT Driving Urban Transitions
Co-funded by the European Union

Main takeaways

This policy brief outlines six main lessons drawn from the GREEN-INC research project to turn Nature-based Solutions more into Inclusive Climate Actions. We build on the three pillars of Urban Environmental Justice (Figure 1). This brief also proposes four co-design principles that could achieve more just, equitable and inclusive NbS. Adhering to these principles is expected to lead to a more inclusive process, producing more just outcomes – strengthening distributive and recognition justice.

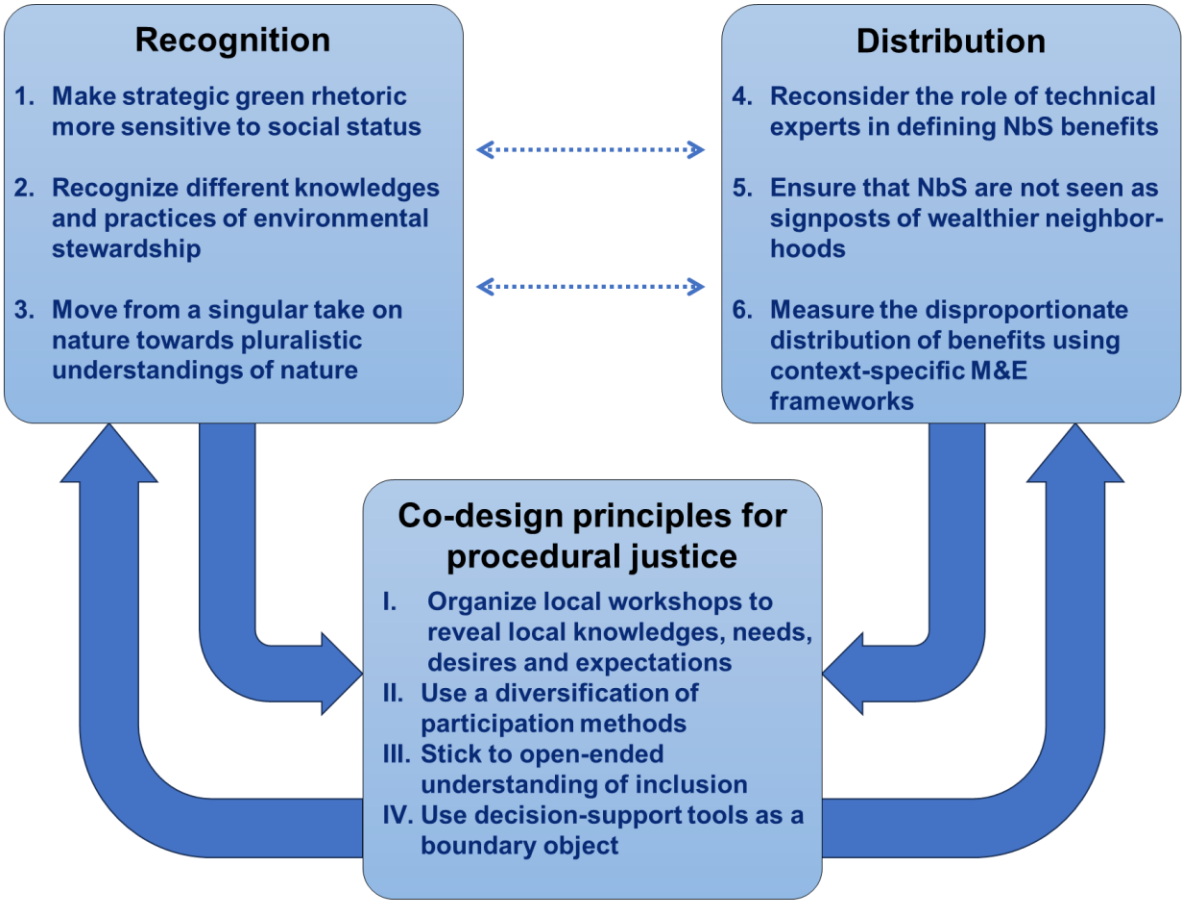

Figure 1: Areas of transformation and co-design principles based on the results of the GREEN-INC research.

Areas of transformation

Lesson 1: Make strategic green rhetoric more sensitive to social status

Nature-based solutions are often presented as “green” solutions that will benefit the society as a whole, but research in WP2 demonstrates that (newly created) public and private green spaces do not automatically benefit their community. Also results from WP1 demonstrated that NbS do not always have social impacts. Policymakers should be able to outline the multiple possibilities and benefits of NbS and relate them more directly to the everyday practices of heterogeneous groups of residents.

Lesson 2: Recognize different knowledges and practices of environmental stewardship

Marginalized residents often engaged in practices of environmental stewardship, but found minimal or little to no recognition of their actions (WP2). Social status, then, becomes a structural barrier in NbS participation. Policymakers should account for the different knowledges present in communities. Rather than imposing a new maintenance regime, they should build on and foster existing practices within communities of environmental stewardship for NbS maintenance.

Lesson 3: Move from a singular take towards pluralistic understandings of nature

NbS are rooted in more neoliberal and instrumental ideologies, emphasizing that urban nature should be of use to society. However, professionals and residents alike espouse more pluralistic understandings of nature, for example foregrounding relational and intrinsic values of nature (WP2). Policymakers should critically re-assess NbS as *solutions*, and instead promote co-habitation.

Lesson 4: Reconsider the role of technical experts in defining NbS benefits

Technical expertise plays a central role in shaping NbS, while other forms of knowledges and experiences are more limitedly incorporated. Yet, technical experts seem not able to communicate the NbS functionalities and needs well

(WP2). Policymakers should be more open to other forms of (local) knowledges in scoping NbS; while residents could be empowered more to learn this technical language.

Lesson 5: Ensure that NbS are not seen as signposts of wealthier neighbourhoods

NbS are prioritized in wealthier new build areas, while marginalized residents perceive environmental degradation in their own neighborhoods (WP2). Policymakers can address this sense of (mis)belonging by constructing NbS across the city. A way forward is demonstrated in WP4, which showcased that many NbS can actually be low-tech solutions.

Lesson 6: Measure the disproportionate distribution of benefits using context-specific Monitoring & Evaluation frameworks

The Monitoring & Evaluation framework (WP1) is a helpful tool to monitor impacts of NbS projects. By organizing participatory workshops to let stakeholders and residents express their preferences and needs, the framework meaningfully acknowledges local needs, values, and desired outcomes associated with the implementation of NbS.

Co-design principles for NbS

Based on these six lessons, we have defined four co-design principles for NbS:

Co-design principle I: Organize local workshops to reveal local knowledges, needs, desires and expectations

The workshops organized in WP4 demonstrate that participatory processes involving multi-level actors—citizens, NGOs, public administrations, academics, and professionals—enable the exploration of questions across different domains simultaneously. Such co-production/co-design settings make it possible to address socio-economic dimensions of NbS implementation alongside environmental objectives.

Co-design principle II: Use a diversification of participation methods

The activities in several WPs emphasize the importance of employing diverse participation methods, tailoring them to communities and areas. Policymakers should ask themselves which sub-sets of actors they want to engage with, and subsequently build on existing neighborhood structures (e.g. schools, churches) to reach these groups.

Co-design principle III: Stick to open-ended understanding of inclusion

Policymakers should adhere to a more open-ended understanding of which marginalized groups to include, and not operate with preconceived ideas of how inclusion should work. This will enable engagement upfront, building on the needs and ideas of marginalized groups, and helps to overcome the difficulties of working with vulnerable groups.

Co-design principle IV: Use decision-support tools as a boundary object

Assessment tools, such as the Monitoring & Evaluation Framework developed in WP1, can be used as a material boundary object that offers the potential to translate viewpoints and develop a shared language.