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# Report launch

## Advancing Urban Sustainability in Cities through Nature-Based Solutions: Lessons from Asia

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# Objectives

1. Collect and analyse data on urban NbS projects in Asia to enrich their understanding and application
2. To put forward recommendations for scaling up NbS implementation in Asian cities

Nature-Based Solutions (NBS) are deliberate interventions that are inspired or supported by nature.

“living solutions that bring more nature and natural features and processes into cities ... through locally adapted, resource-efficient and systemic interventions” (European Commission, 2017).



**1. Building greens (external)**



**2. Green areas connected to grey infrastructure**



**3. Parks and (semi)natural urban green areas**



**4. Allotments and community gardens**



**5. Green indoor areas**



**6. Blue areas**



**7. Green areas for water management**



**8. Derelict areas**

Nature-Based Solutions can address various sustainability challenges



# Cheonggyecheon river restoration with highway removal in Seoul.

Source: WWF



# Countries covered in the report and urban NbS case selection criteria

100 NbS cases from cities in 13 countries

(Bangladesh, Cambodia, India, Indonesia, Kazakhstan, Lao PDR, Malaysia, Mongolia, Myanmar, Pakistan, Philippines, Thailand, and Vietnam)

- Address various urban sustainability challenges
- Have features that modify or enhance the function(s) of an area or structure
- Make use of nature as inspiration to address one or more urban problems through a physical and/or discursive intervention



Add project

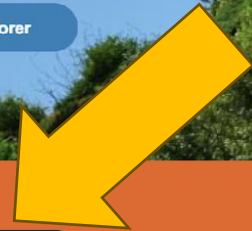
Suggest project

Recommender

Explorer

# Welcome to the Atlas

A collection of more than 1000 inspiring nature-based solutions from European cities and beyond



Select Key Challenges



Select Nature-based Solutions



Collection phase

Asian extension, 2022 (ASEF) ▾

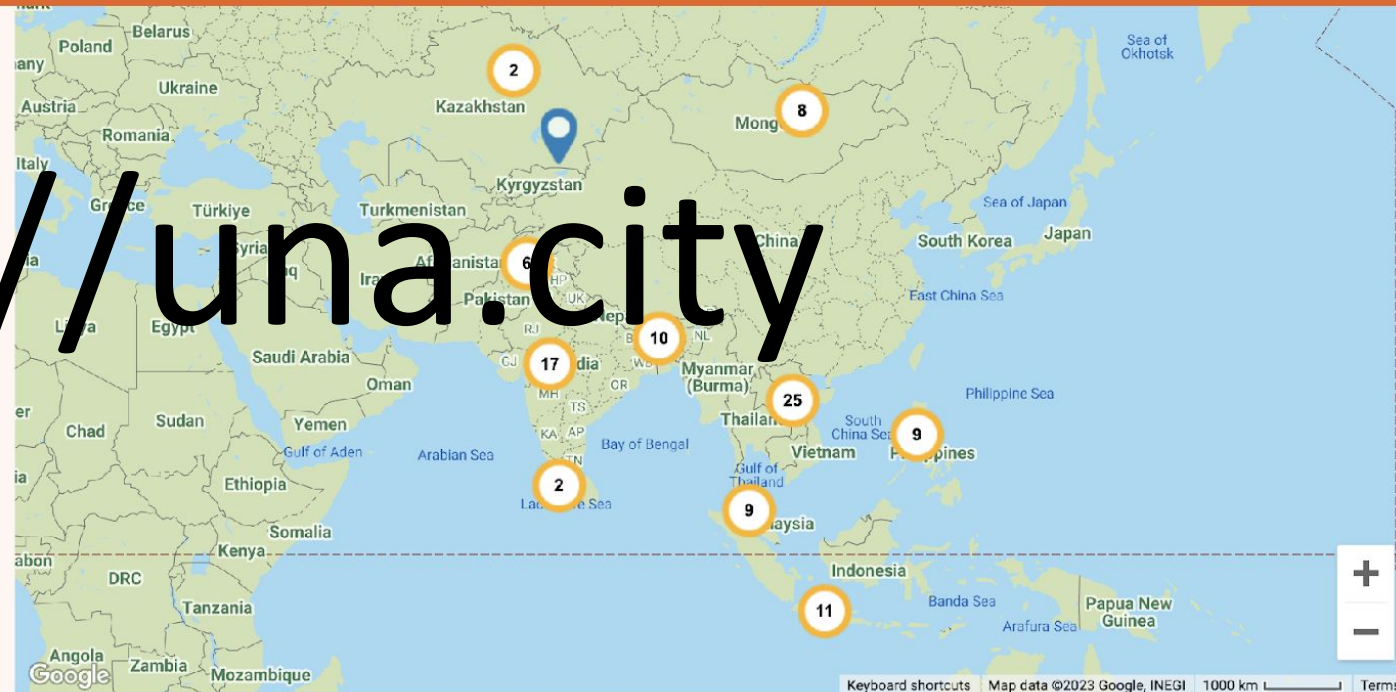
Search

## Advanced Filter

Reset filters

- Challenges addressed
- Nature-based Solutions
- Region
- Country
- City
- Management set-up
- Initiating organisation
- Project cost
- Type of financing source
- Environmental impacts
- Social impacts
- Economic impacts
- Presence of formal monitoring system

https://una.city



Asian extension, 2022 (ASEF) ✕

Reset filters

## Projects

100 Results  
1 of 7 pages



# Key message

## 1

- Asian cities are embracing Nature-based Solutions (NbS) as means to address various sustainability challenges.

NbS Types	Number of projects
Parks and urban forests	55
Blue areas	51
Grey infrastructure with green features	34
Food production areas	31
External building greens	17
Green areas for water management	17
Green indoor areas	7



# Intervention approaches

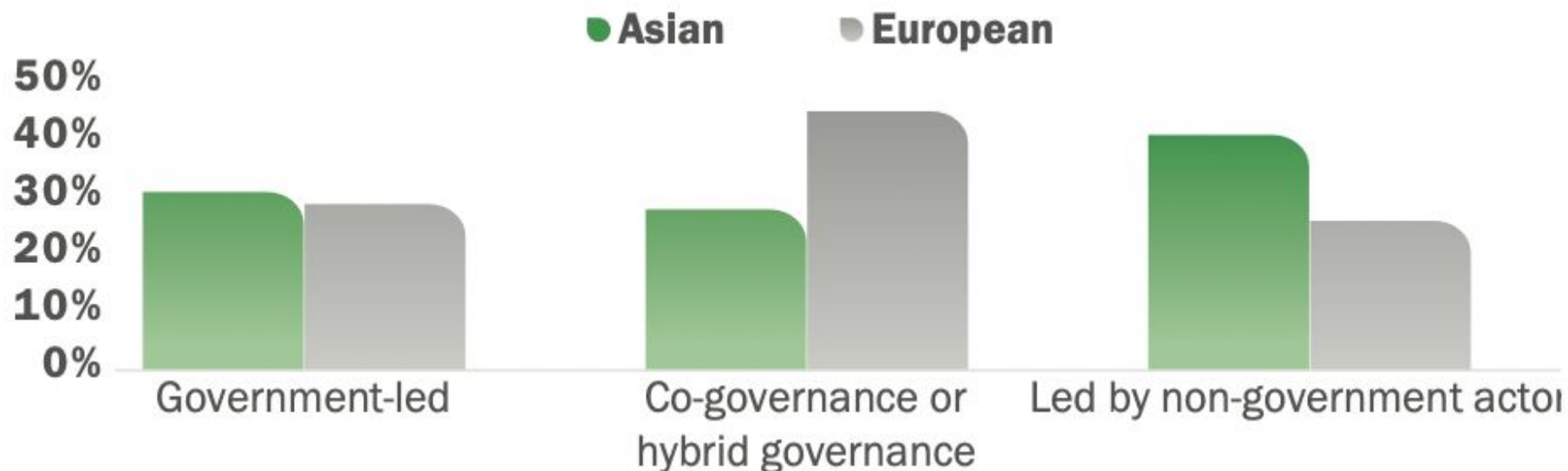
*Physical interventions:* **Infrastructural and technological activities aimed at establishing, preserving or restoring urban natural landscape.**

*Discursive interventions:* **Soft measures focusing on cultural or governance activities to better manage or use nature.**

NbS Projects Scope		No. of projects
Physical interventions	Creation of new green areas	81
	Ecological restoration of degraded ecosystems	20
	Management of rivers and other blue areas	19
	Creation of semi-natural blue areas	17
	Maintenance and management of urban nature	15
	Protection of natural ecosystems	14
	Transformation of previously derelict areas	14
	Monitoring of habitats and/or biodiversity	12
	Coastal landscape management or protection	9
Non-Physical interventions	Knowledge creation and awareness raising	40
	Strategy, plan or policy development	7
	Improved governance of green or blue areas	6

**Key message 2:** Integration of NbS into city planning will allow for harnessing the transformative potential of nature in addressing sustainability challenges.

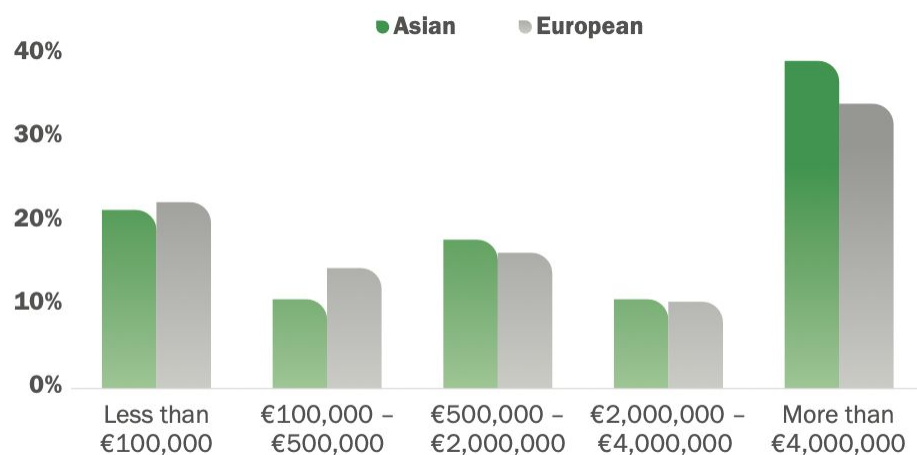
Governance arrangements	Percentage of projects
Government-led	31%
Led by non-government actors	41%
Co-governance or hybrid governance	28%



# Financing of NbS projects

Budget size	% of projects
More than €4,000,000	39%
€2,000,000 - €4,000,000	11%
€500,000 - €2,000,000	18%
€100,000 - €500,000	11%
Less than €100,000	21%

Type of funding	% of projects
Public financing	
Public local authority budget	23%
Multilateral funds/international funding	22%
Public national budget	20%
Public regional budget	10%
Private financing	
Corporate investment	24%
Funds provided by non-governmental organisation (NGO)	10%
Private funding by citizens	9%
Private Foundation/Trust	8%
Research organisation / University	5%
Crowdfunding	4%



Comparison of project budget sizes of Asian and European NbS

## Key message 3:

The role of local governments is essential in scaling up the implementation of NbS and promote *community-based approaches* to urban planning and development.

Type of actors leading or involved in co-governance arrangements	Percentage of projects
Non-governmental organisation (NGO)	49%
Private sector/Corporate/Business	45%
Citizens or community groups	36%
Researchers, university	22%
Public sector institution (e.g. school or hospital)	12%
Multilateral organisations	12%
Financial institution (e.g. bank, insurer, pension fund)	6%

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**Key message 4:** To enhance decision-making and planning processes, it is crucial to advance monitoring systems to measure NbS impacts, ensuring they are equipped with reliable, evidence-based data.

- Monitoring is essential for assessing and demonstrating NbS impacts
- Monitoring, reporting and verification is often absent
- Without evidence of impacts, making the social, policy and business case for NbS will suffer

## Key message 5:

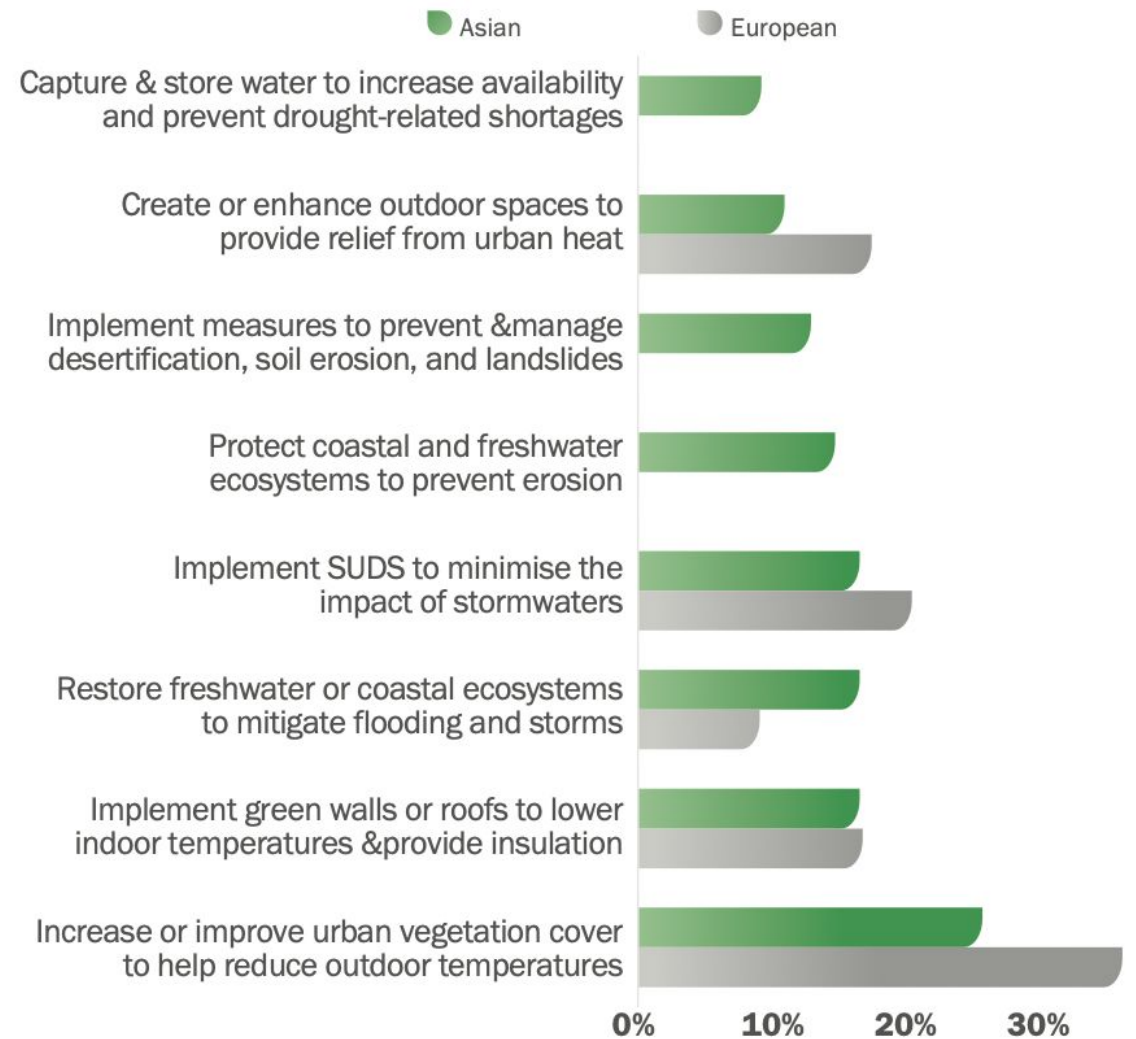
While addressing climate change serves as a prominent driving force for implementing NbS in Asia, project developers should also capitalise on the added value of multiple benefits that NbS projects can deliver.



## Climate adaptation in Asian & European NbS projects

Out of the 54 climate-focused NbS projects in Asia, 78% specifically aimed to address climate adaptation (42 NbS projects).

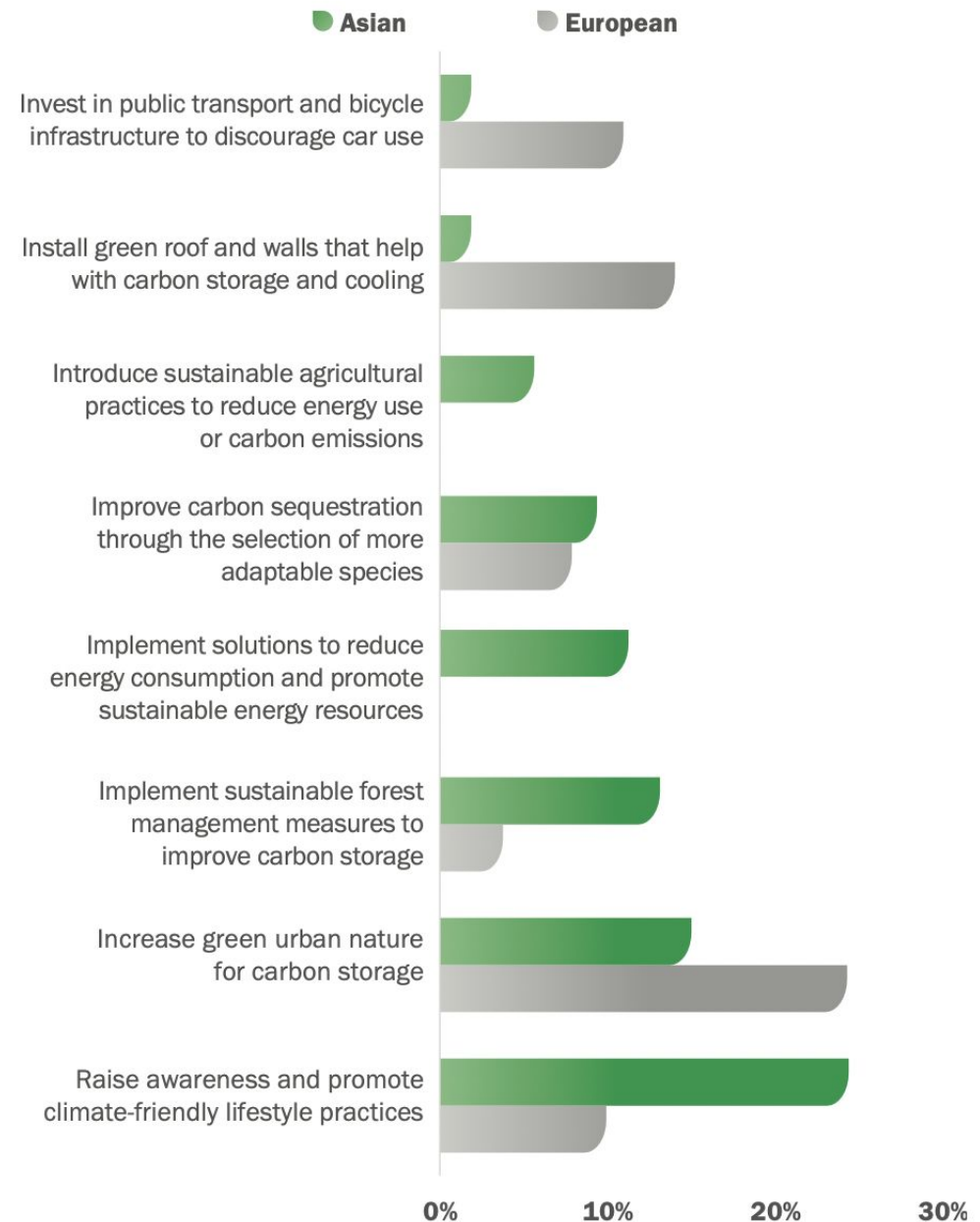
These projects targeted to improve urban resilience (27 NbS), reduce the impacts of climate risk events on urban places and communities (25 NbS) and reduce exposure to climate-change-related disasters (20 NbS).



## Climate mitigation in Asian & European NbS projects

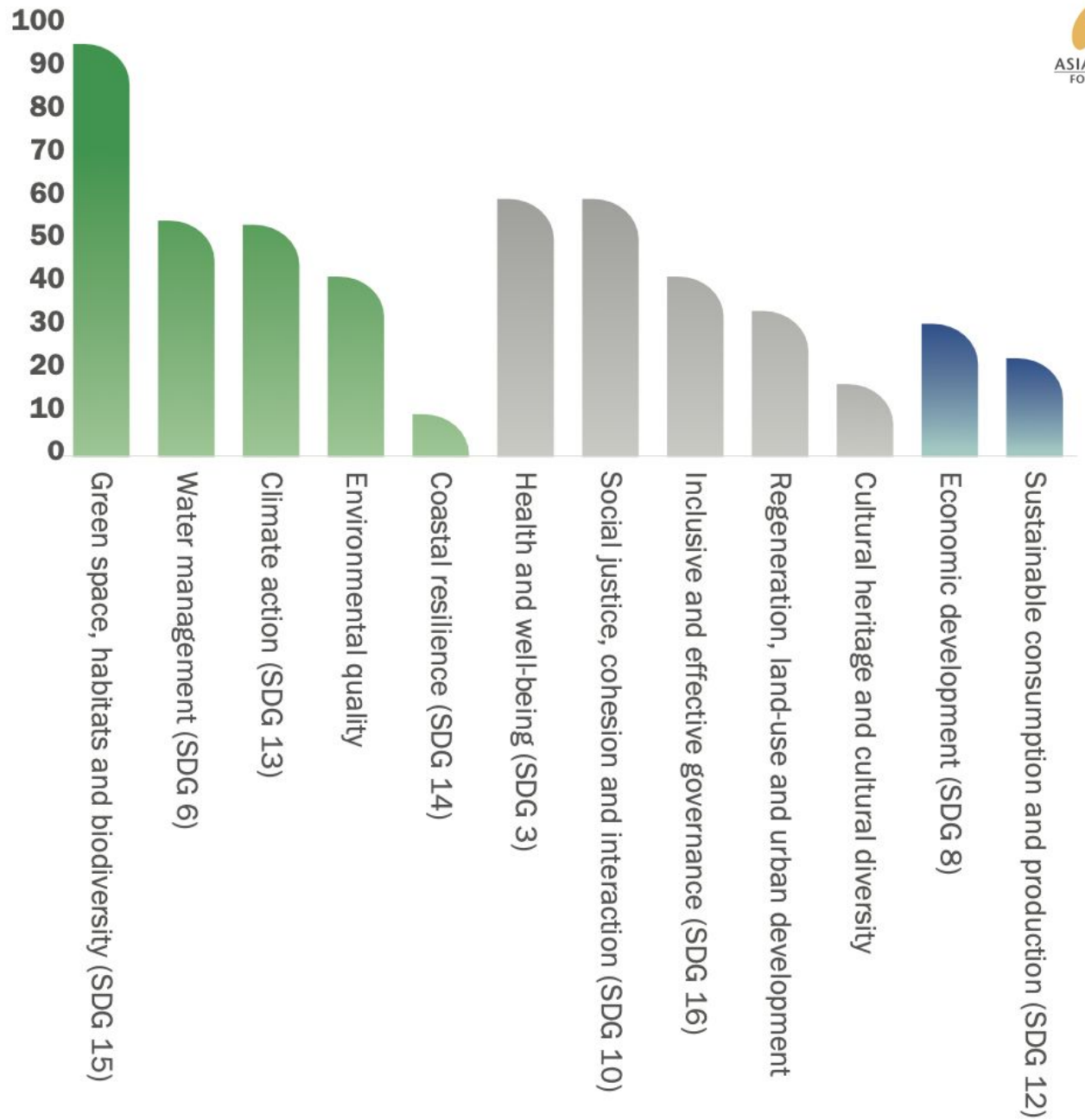
Out of the 54 climate-focused NbS projects, 48% specifically aimed to address climate mitigation (26 NbS projects).

The objectives of these mitigation projects included sequestration and storage (12 NbS), reduction of carbon footprints or emissions (10 NbS) and lowering energy demand (6 NbS).





# Multiple benefits provided by NbS in the cases covered by the report



# Key messages

1. Asian cities are embracing Nature-based Solutions (NbS) as means to address various sustainability challenges.
2. Integration of NbS into city planning will allow for harnessing the transformative potential of nature in addressing sustainability challenges.
3. The role of local governments is essential in scaling up the implementation of NbS and promote community-based approaches to urban planning and development.
4. To enhance decision-making and planning processes, it is crucial to advance monitoring systems to measure NbS impacts, ensuring they are equipped with reliable, evidence-based data.
5. While addressing climate change serves as a prominent driving force for implementing NbS in Asia, project developers should also capitalise on the added value of multiple benefits that NbS projects can deliver.



# Advancing Urban Sustainability In Cities Through Nature-based Solutions: **Lessons From Asia**



## Acknowledgements

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[www.ASEF.org](http://www.ASEF.org)

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# EXERCISE!

Nature-based solutions for accelerating the SDGs and enhancing resilience

- Purpose of exercise: to explore and understand the potential of NBS in addressing specific urban (un)sustainability challenges in context





## Steps in the exercise

1. Working with others around your table, select one of the following three priority urban (un)sustainability challenges
  - Climate action for adaptation, resilience and mitigation
  - Green space, habitats and biodiversity
  - Water management
2. Discuss how the problem is manifested in 1-2 cases in a city you are familiar with and its connection with the SDGs
3. Go to the Urban Nature Atlas on your phone or laptop ([www.una.city](http://www.una.city)) and using the UNA's search function look up 2-3 NBS examples that you find both interesting and relevant for the challenge you identified
4. What would it take (governance, economy/finance, individual & collective action, science&technology, capacity building) to implement the NbS in your example
5. Share your observations in plenary



**JPT EDISCAPE LEVEL-UP 2021**  
**CHAMPION**

**Gulayan sa Nabitanan**  
Brgy. Nabitanan La Paz,  
Iloilo City  
Best in Artistry  
Best in Community Participation  
Best in Project Documentation

*L. Pinte*

A collage of photos showing the garden project and the award ceremony. The photos include a group of people in green shirts standing in front of a banner, a person working in the garden, and various plants and flowers. The collage is set against a green background with a white border.



## Iloilo city, Philippines

**City population:** 447992

**Duration:** 2020 – ongoing

**Implementation status:** Ongoing

### Scale:

Meso-scale: Regional, metropolitan and urban level

**Project area:** 3000000 m<sup>2</sup>

### Type of area:

Residential



<https://www.iloilotoday.com/iloilo-city-edible-landscaping/>



**Overview**



**Governance**



**Financing**



**Impacts and Monitoring**



**References**



Information about this nature-based solution was collected as part of the "NBS 2022" UNA Asian extension project funded by the Asia-Europe Foundation.



## Nature-based solution

- **Community gardens and allotments**
  - Community gardens

## Key challenges

- **Green space, habitats and biodiversity (SDG 15)**
  - Green space creation and/or management
- **Regeneration, land-use and urban development**
  - Regulation of built environment
- **Social justice, cohesion and equity (SDG 10)**
  - Social cohesion
  - Environmental education
- **Economic development and employment (SDG 8)**
  - Economic development: agriculture
  - Employment/job creation
- **Sustainable consumption and production (SDG 12)**
  - Sustainable production

## Focus

Creation of new green areas, Knowledge creation and awareness raising

## Project objectives

The initiative was launched as a communal vegetable gardening project to augment the food supply in the middle of a public health crisis. Specifically, the project aimed to: 1. Establish urban farms in the 180 districts in the city; 2. Ensure household food security amid the COVID-19 pandemic; 3. Provide jobs and nutritious food; 4. Increase public awareness about food production and security; 5. Fostering unity for socio-economic recovery after the pandemic and empowering residents through barangay-based cultivation [1,2,3,5,6]

## Implementation activities

Through the Department of Agriculture Western Visayas (DA-WV), in partnership with the Iloilo City Government, the initiative was initially piloted in three villages in the city. The DA-WV, through its High-Value Crops Development Program (HVCDP), distributed vegetable seeds, plastic pots, and drums for the establishment of communal gardens for the three recipient villages [2]. The initiative was then expanded to more than 50 districts in several consecutive stages [1, 4]. Finally, the city has institutionalized urban farming, requiring all 180 districts to identify urban farming areas. If there are no suitable areas for farming, the districts can enter into a memorandum of agreement with public schools where the garden will be established. The ordinance will also mandate the provision of PHP1.5 million yearly as seed capital to be used for the procurement of seeds, vermicast and other inputs [3]. Promoting integrated farming, the city established a 4,000 square meter lot in Barangay Tacas, Jaro, that has been equipped with hydroponics, a greenhouse, and drip irrigation by the Department of Agriculture [1]. In addition, the city also held trainings that taught people how to prepare compost, start a plant nursery, and transfer seedlings, and conducted seminars about urban farming to empower representatives of the districts and orienting stakeholders about the new urban farming ordinance. There will also be a competition for the most productive urban garden. [4]

# Iloilo (Philippines) Ediscape objectives

- The initiative was launched as a communal vegetable gardening project to augment the food supply in the middle of a public health crisis.
- Specifically, the project aimed to:
  - 1. Establish urban farms in the 180 districts in the city;
  - 2. Ensure household food security amid the COVID-19 pandemic;
  - 3. Provide jobs and nutritious food;
  - 4. Increase public awareness about food production and security;
  - 5. Fostering unity for socio-economic recovery after the pandemic and empowering residents through barangay-based cultivation [1,2,3,5,6]



# Enabling and implementation

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- Iloilo City Government and Department of Agriculture Western Visayas launch three communal garden pilots during COVID
- Distribute seeds, pots, vermicast etc.
- Expand to 50 districts
- Require all 180 districts to identify areas suitable for communal gardens
- MoU with schools
- Seed capital of PHP1.5M/year
- Integrated farming pilot
- Training on composting, starting tree nursery, seedling exchange, new urban farming ordinance
- Competition for most productive urban garden



Start the exercise

