

http://naturebasedsolutions.org/ NBS Knowledge Repository



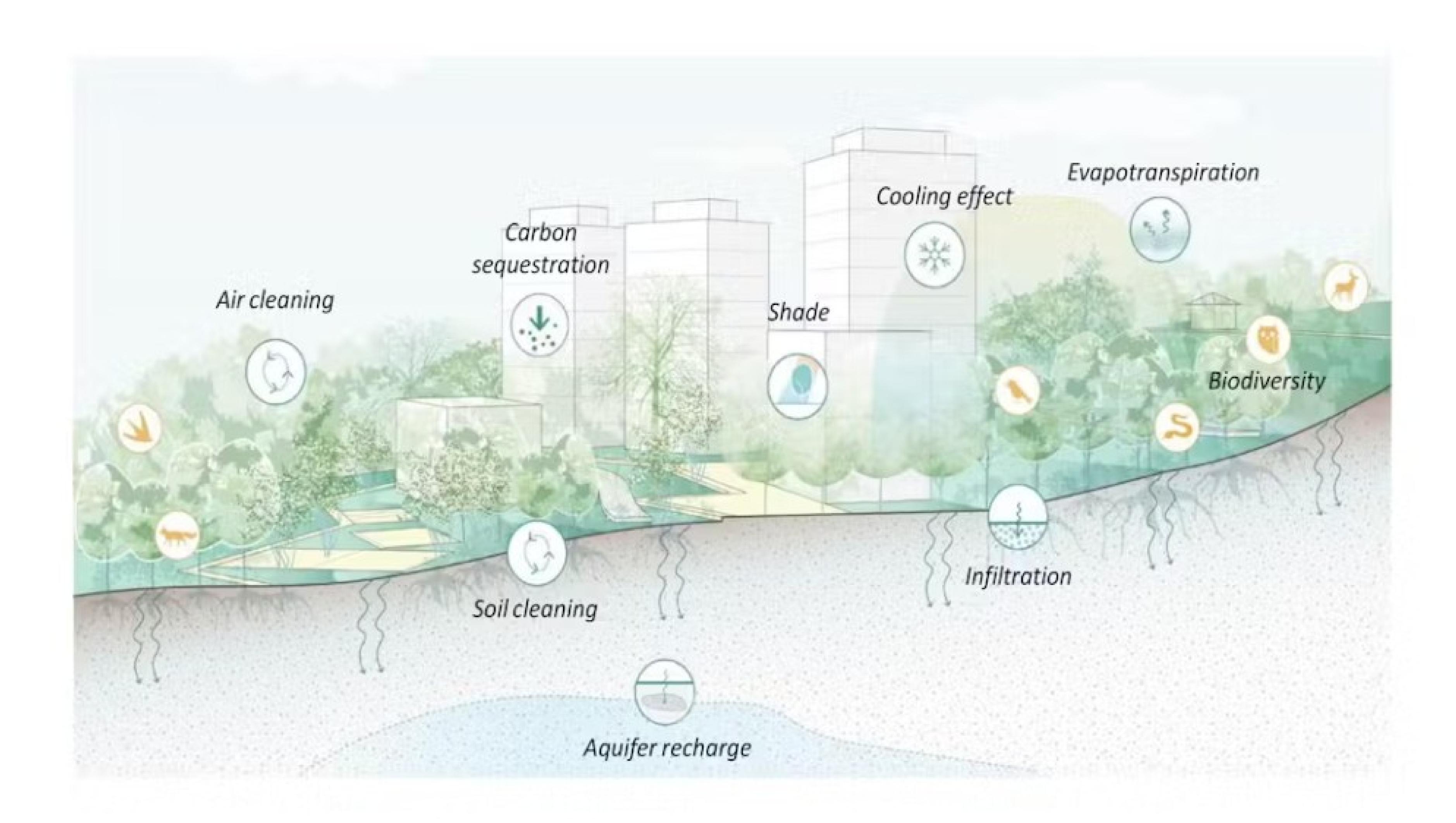
https://wbgvr.org/abcwaters NBS Virtual Tour – Singapore



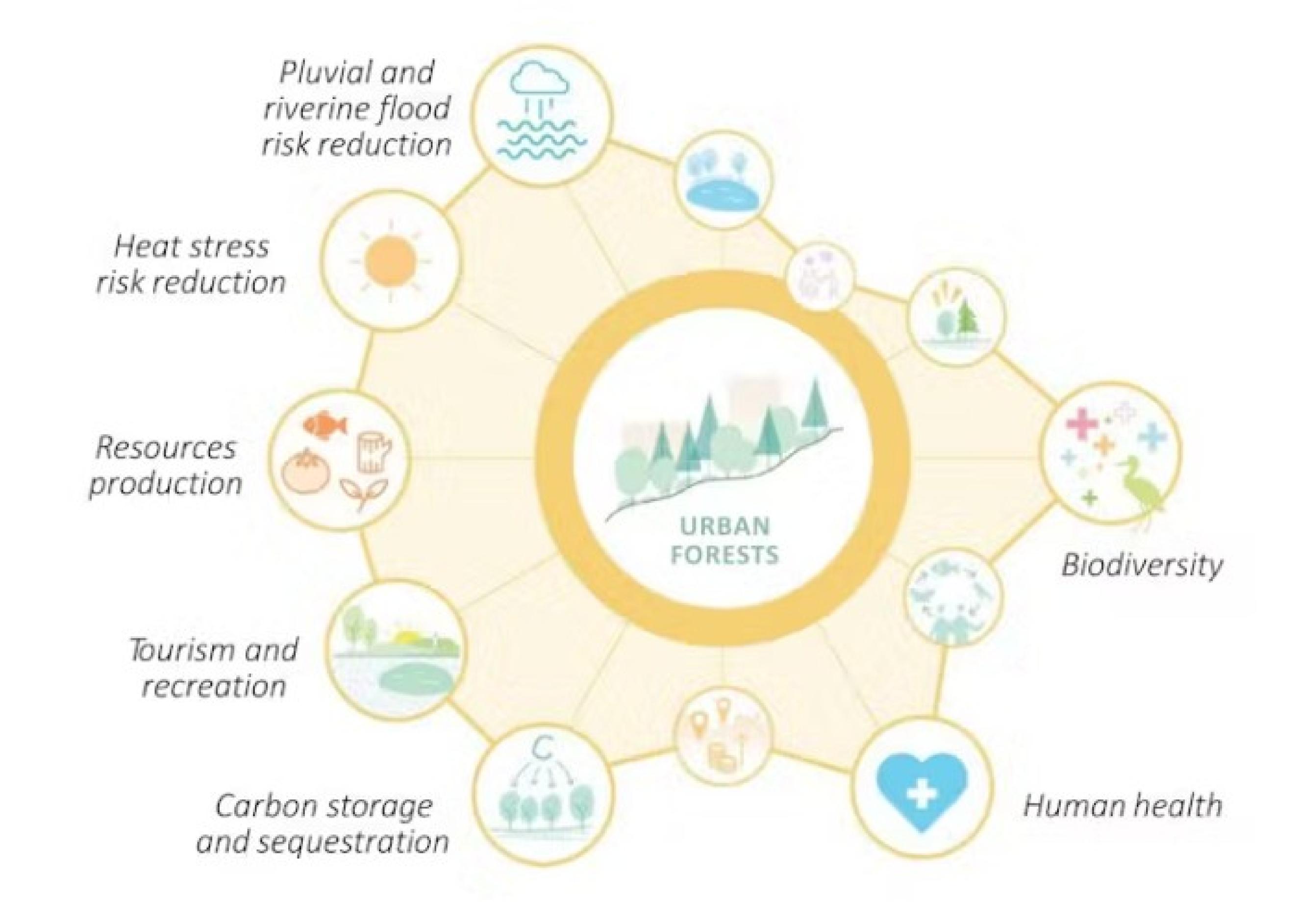
NBS for Disaster & Climate Resilience Reduce Risk

while providing other benefits

Biophysical processes



and Benefits





THUMBS-UP IF YOU HAVE HEARD ANY OF THESE BEFORE:

Nature-based solutions (NBS)

Sustainable Urban Drainage Systems (SUDS)

Water Sensitive Urban Design (WSUD)

Stormwater Quality Improvement Devices (SQID)

Best Management Practices (BMPs)

Low Impact Development (LID)

Engineering With Nature (EWN)

Alternative Techniques (AT)

Blue / Green Infrastructure (B/GI)

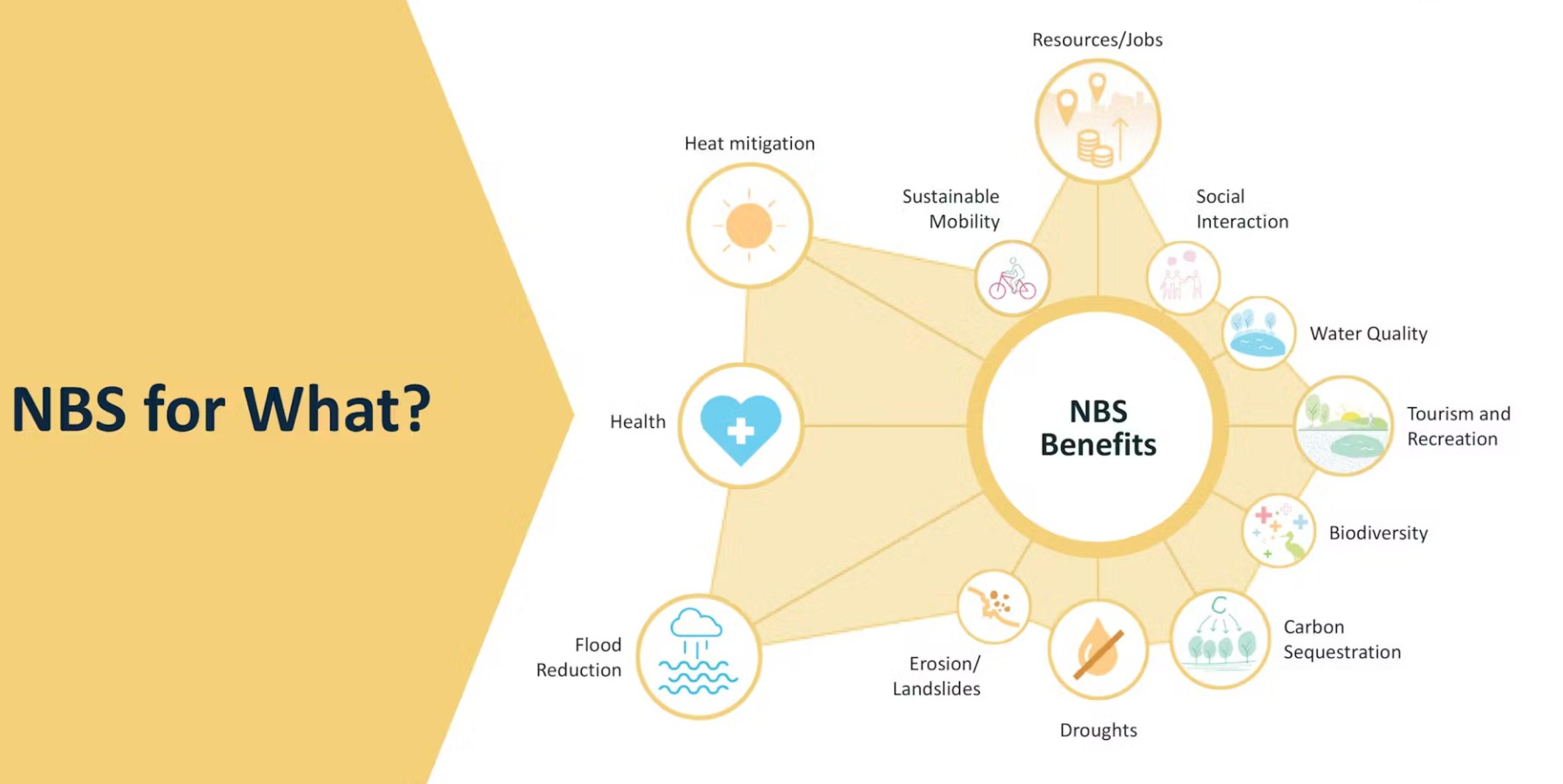
Ecosystem-based adaptation (EbA)

Ecosystem-based disaster risk reduction (eco-DRR), chisan, sabo



NBS for What?





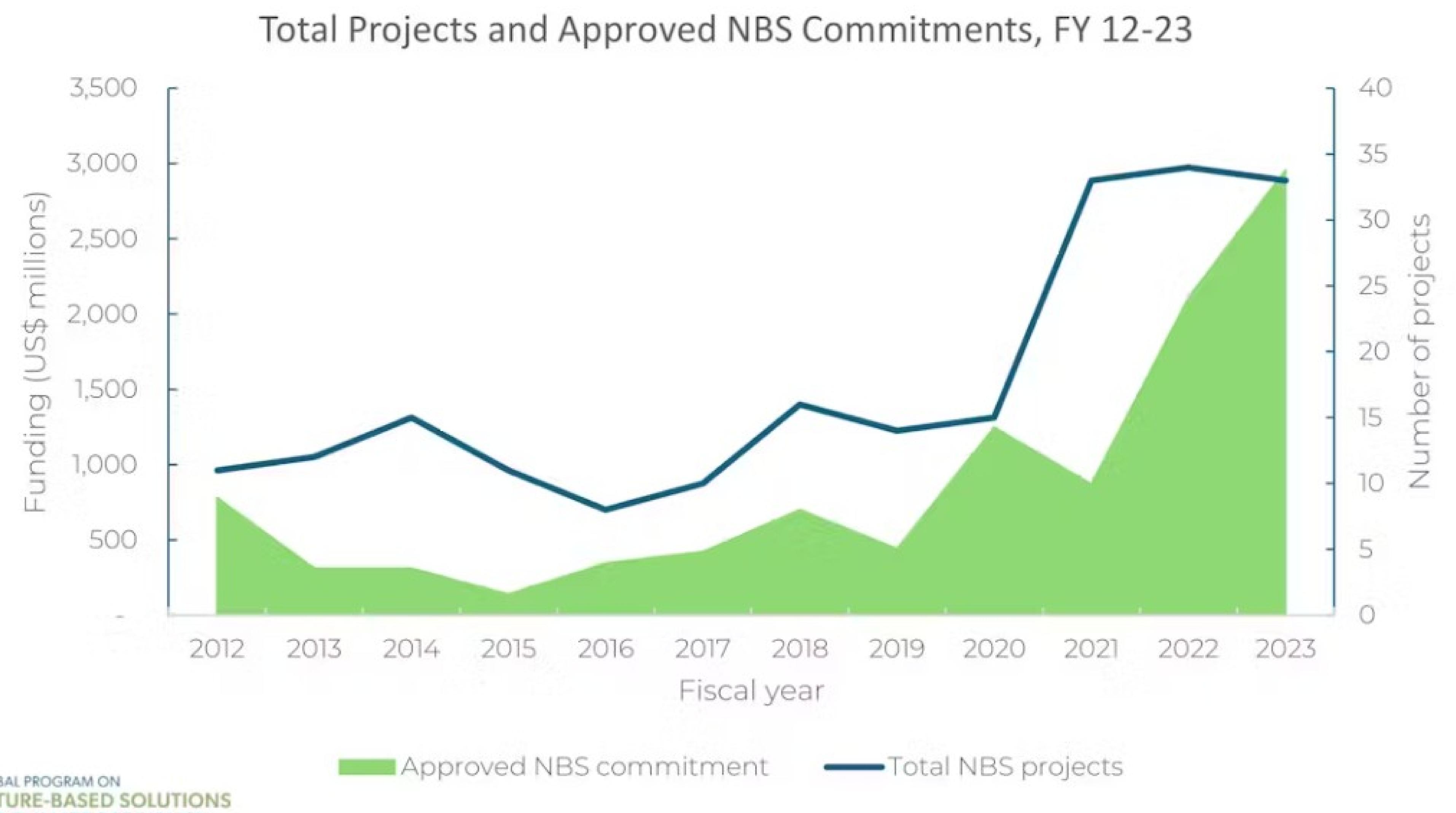






The World Bank's NBS portfolio is growing

A portfolio review identified a total of **211 investment projects** with project components using NBS for Climate Resilience **from FY12 to FY23**, of which **72 (34%) are in urban areas**.





These components are valued at an estimated 10.6 Billion USD



Rehabilitating or restoring 3 million hectares of ecosystems



Protecting 35,000 kilometers of coastline and riverbank







INTEGRATING NBS WITH GRAY INFRASTRUCTURE

Urban green space with integrated drainage infrastructure to reduce stormwater flooding

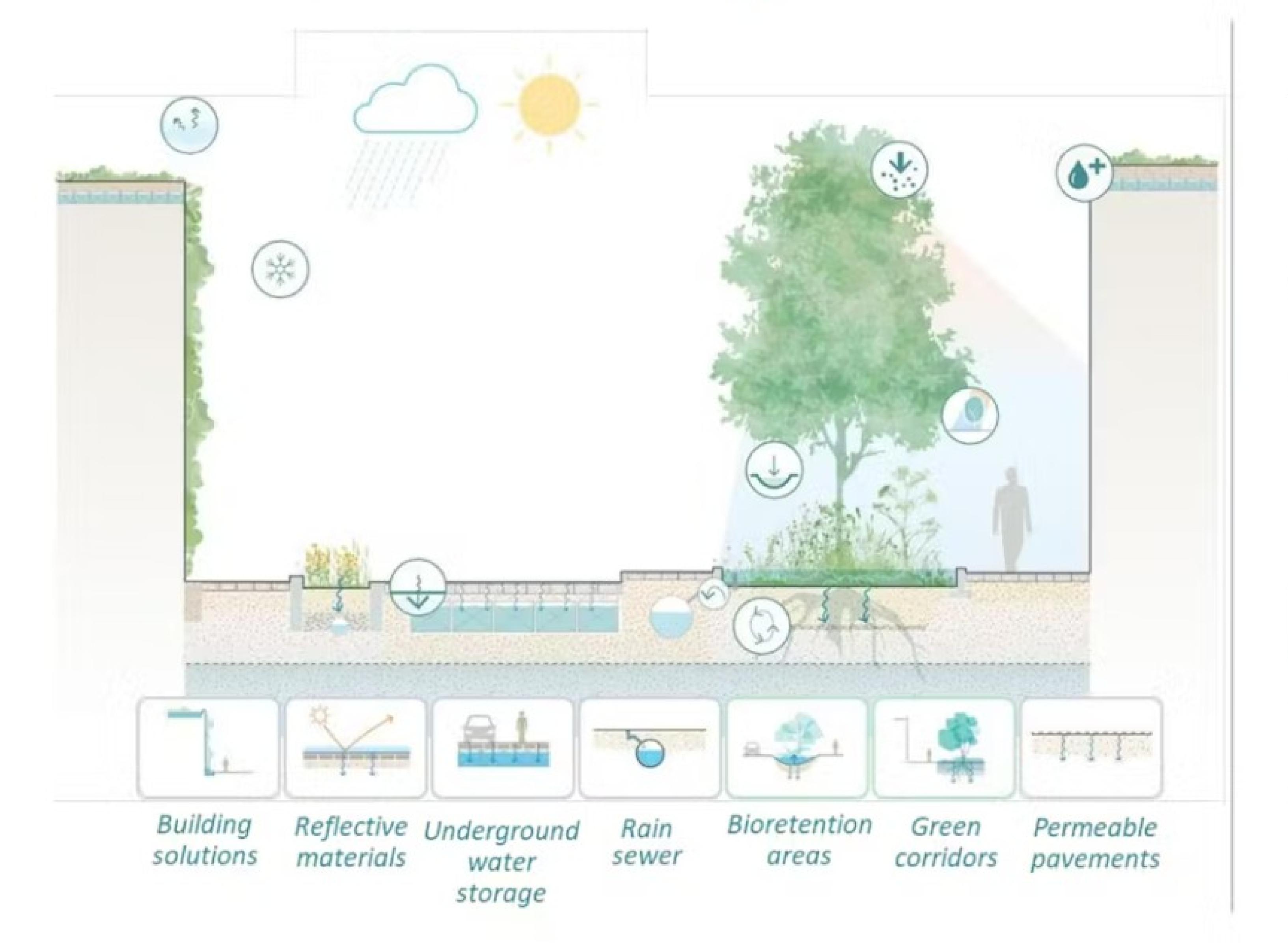
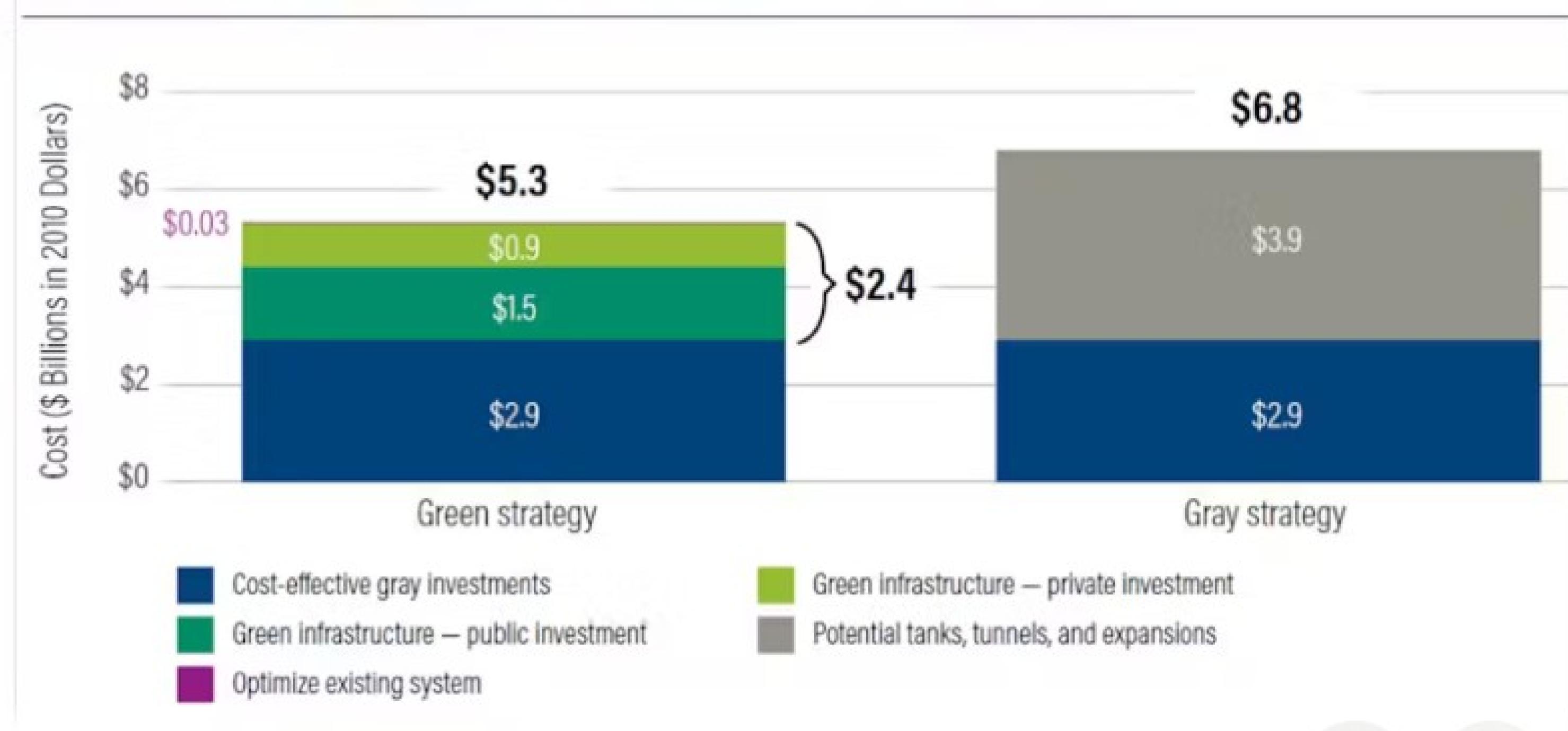






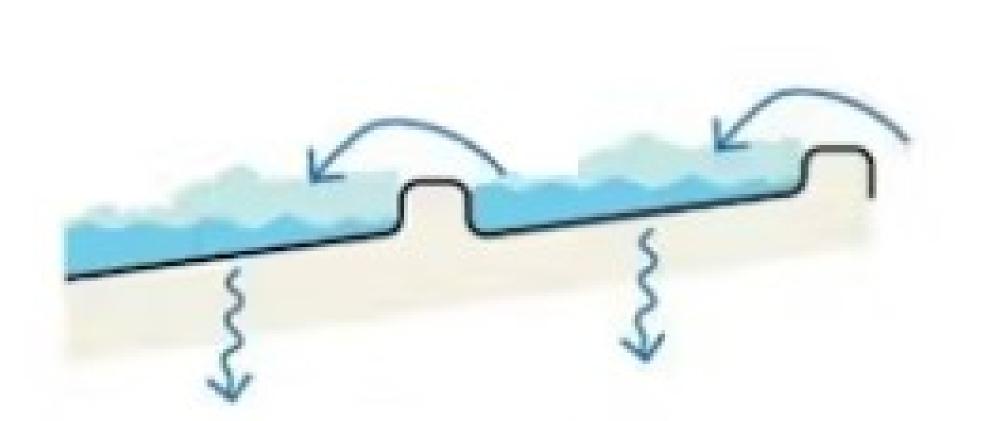


Figure 4.2 | Reducing Cost by Mixing Green and Gray Infrastructure*, New York City



Nature-based Solutions Catalogue



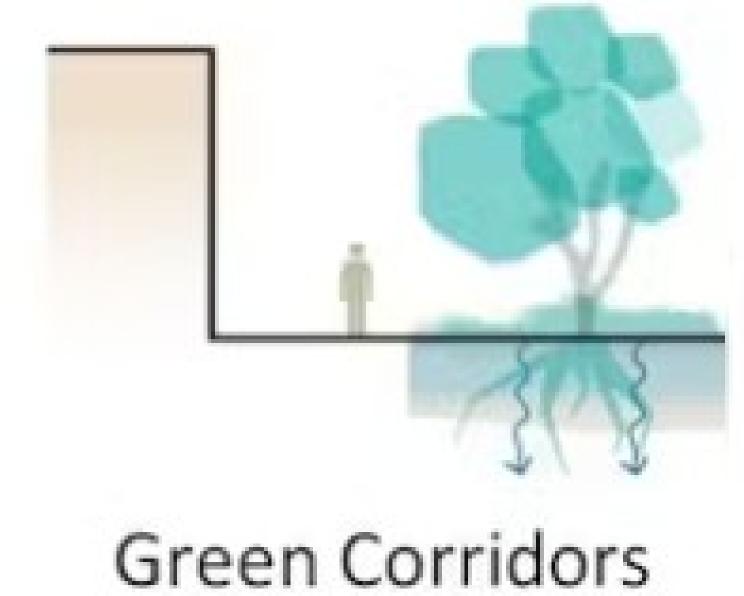


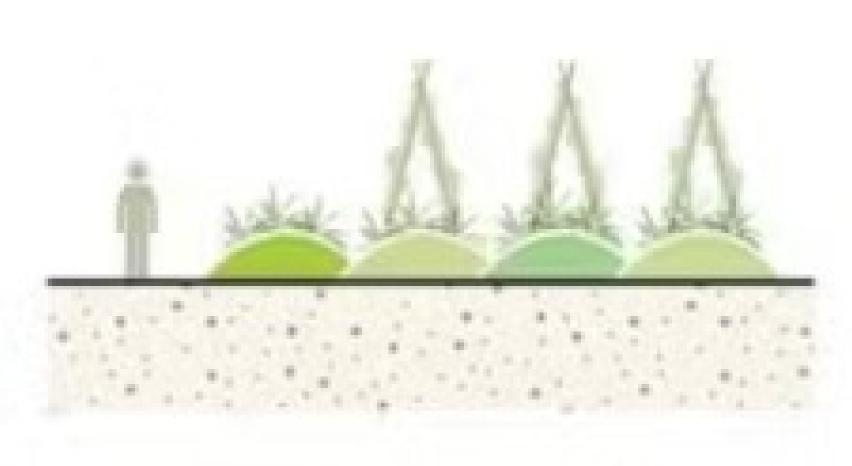
Terraces and Slopes

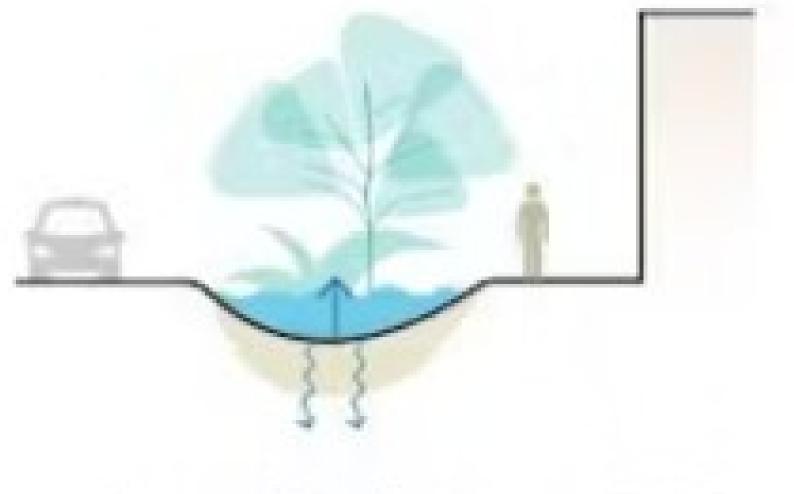
River and Stream Renaturation

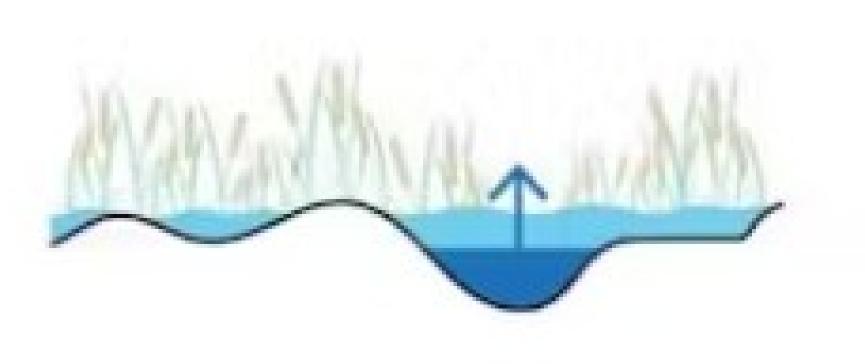


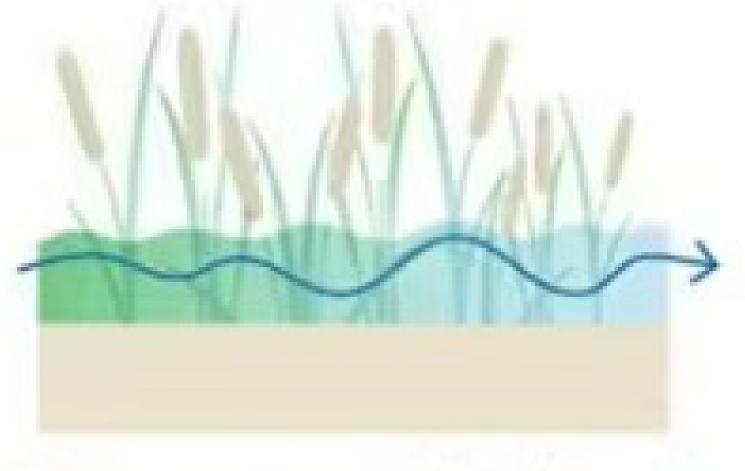


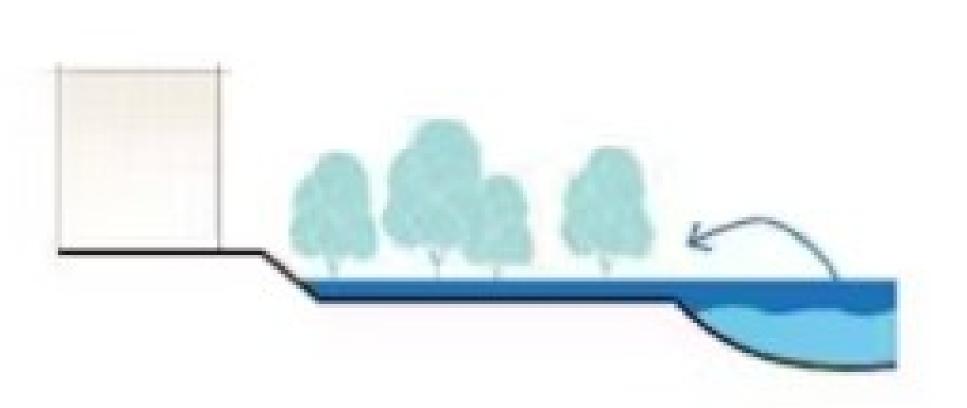


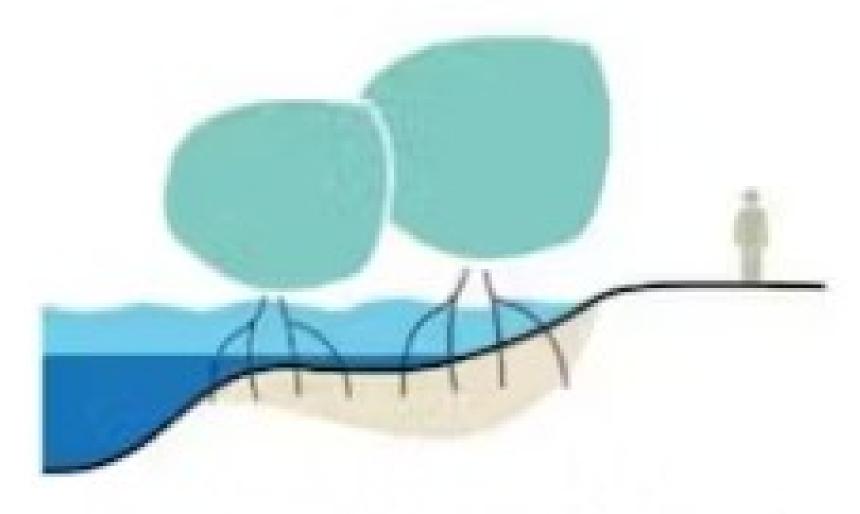












Urban Farming



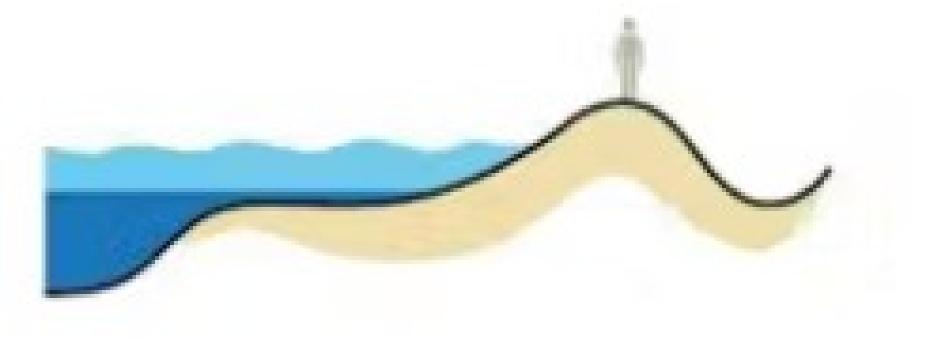
Natural Inland Wetlands

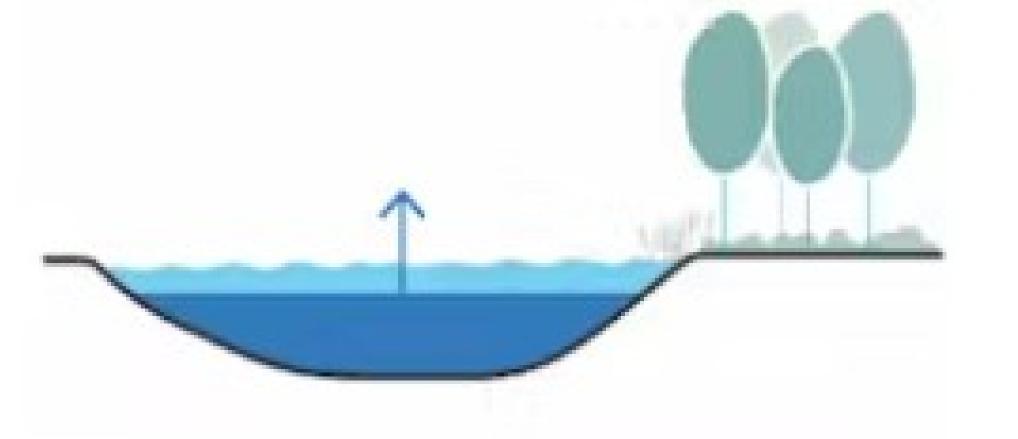
Constructed Inland Wetlands

River Floodplains

Mangrove Forests













Salt Marshes Sandy Shores

Ponds, Lakes, and Small Water Bodies

Reef ecosystems

Submerged Aquatic Vegetation

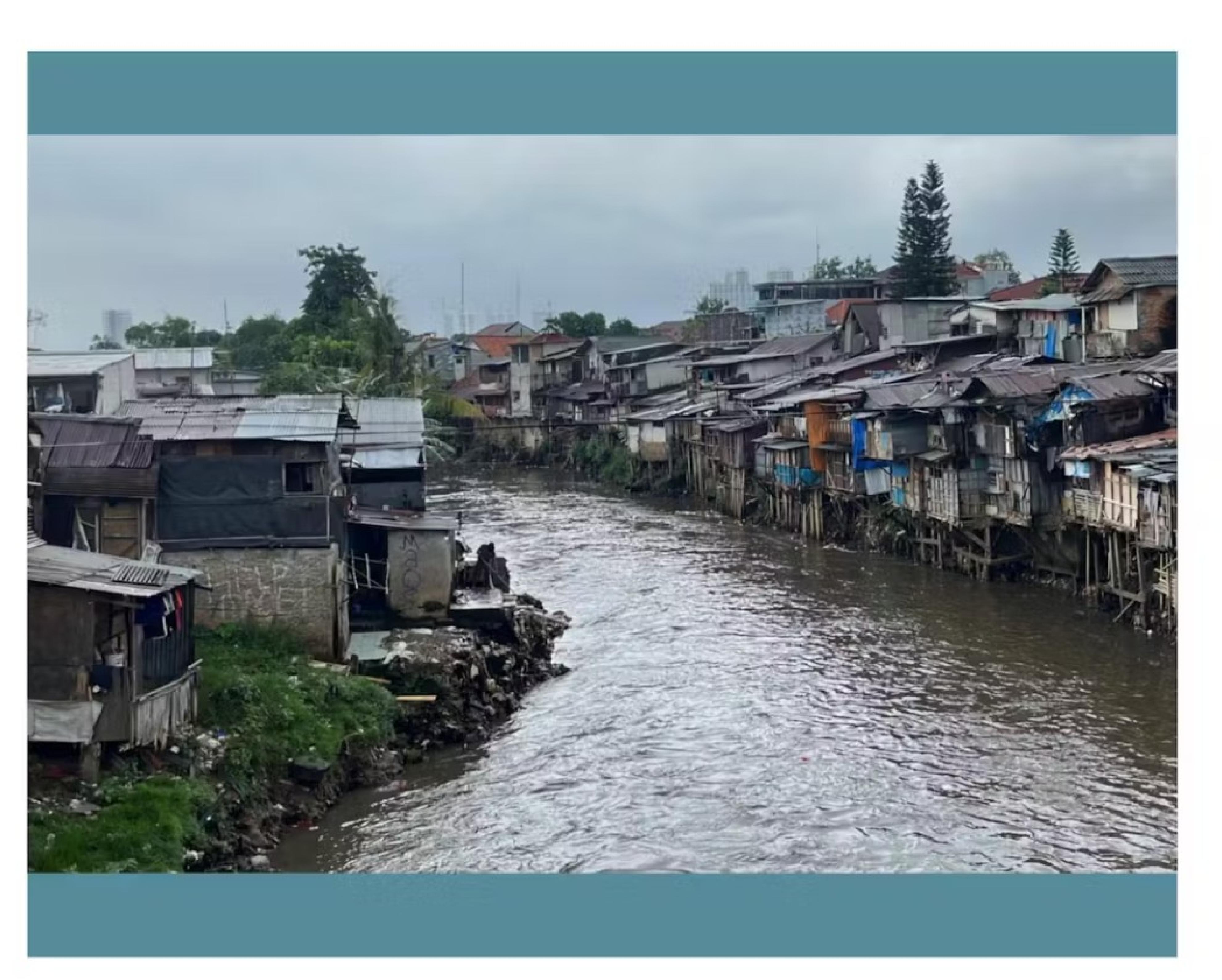
Other Coastal Wetlands

Instructions





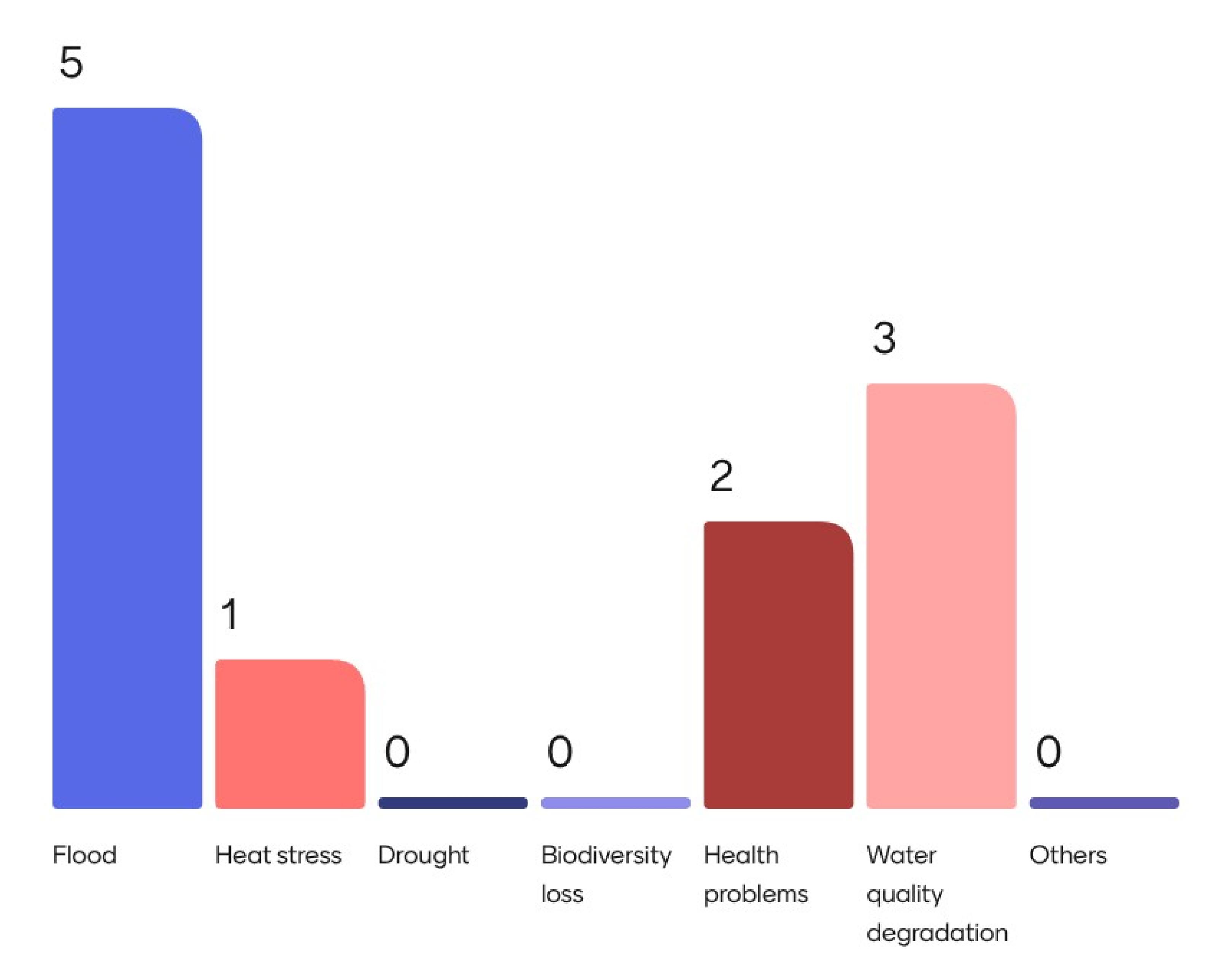
What are the main climate change-induced hazards in this city? (multiple answers possible)



- 1. Flood
- 2. Heat stress
- 3. Drought
- 4. Biodiversity loss
- 5. Health problems
- Water quality degradation
- 7. Others

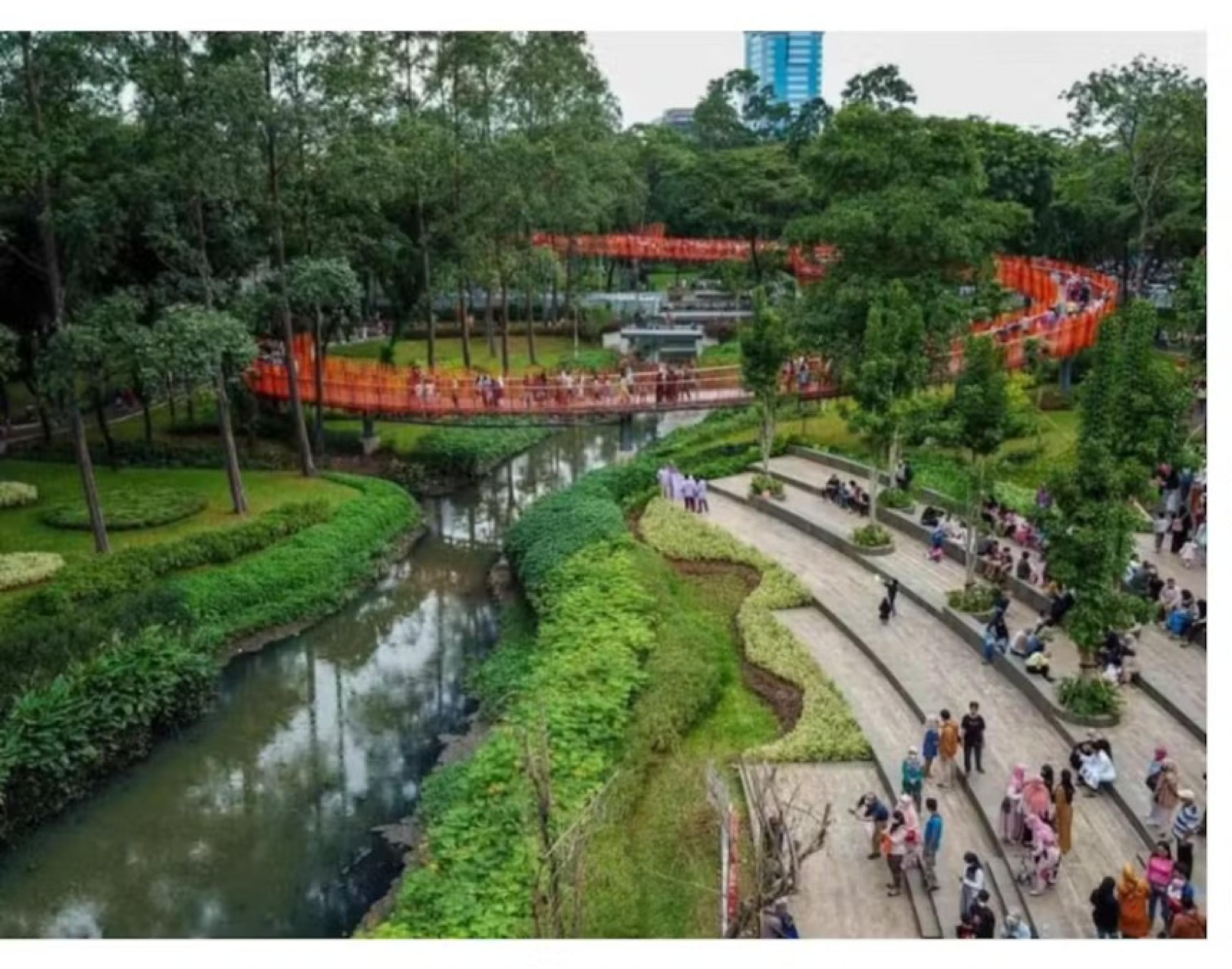


What are the main climate change-induced hazards in this city? (multiple answers possible)





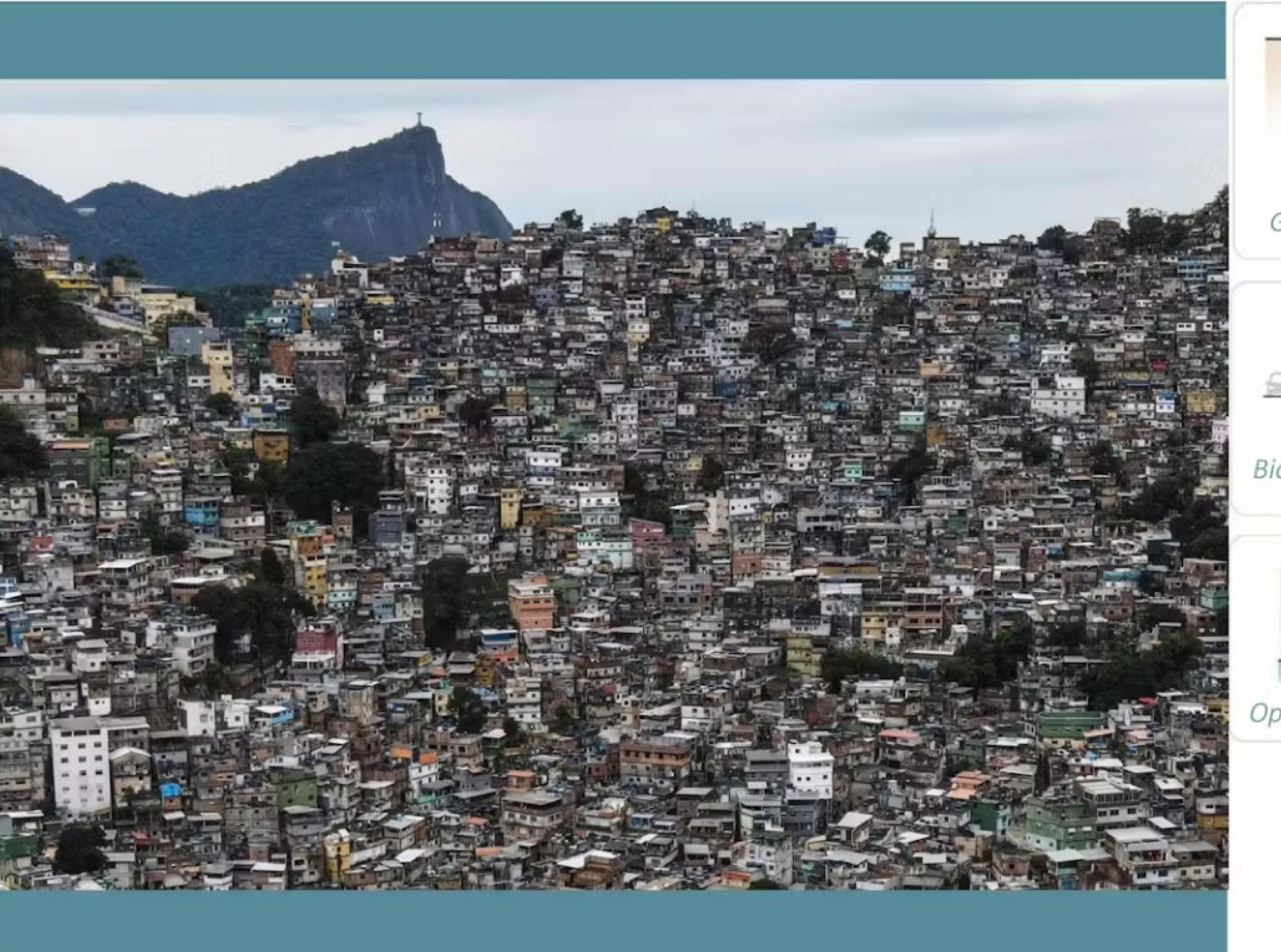






Tebet Eco Park - Jakarta, Indonesia

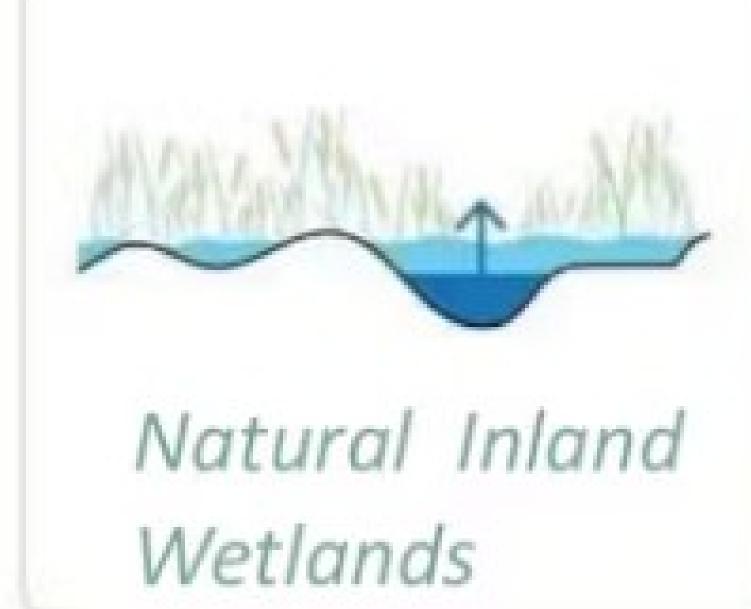
What types of NBS would you use to reduce flood risk in this city? (multiple answers possible)













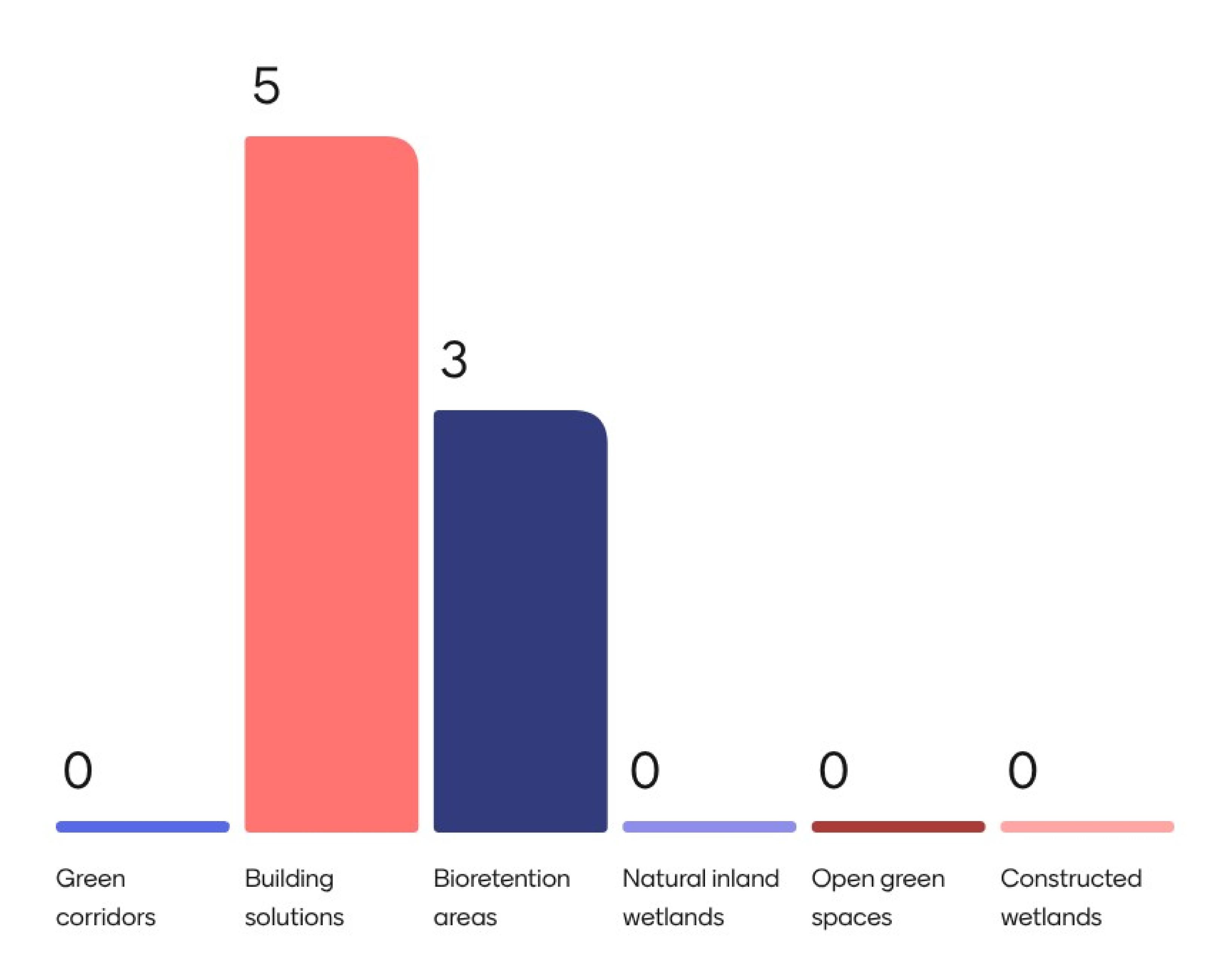






Rio de Janeiro, Brazil

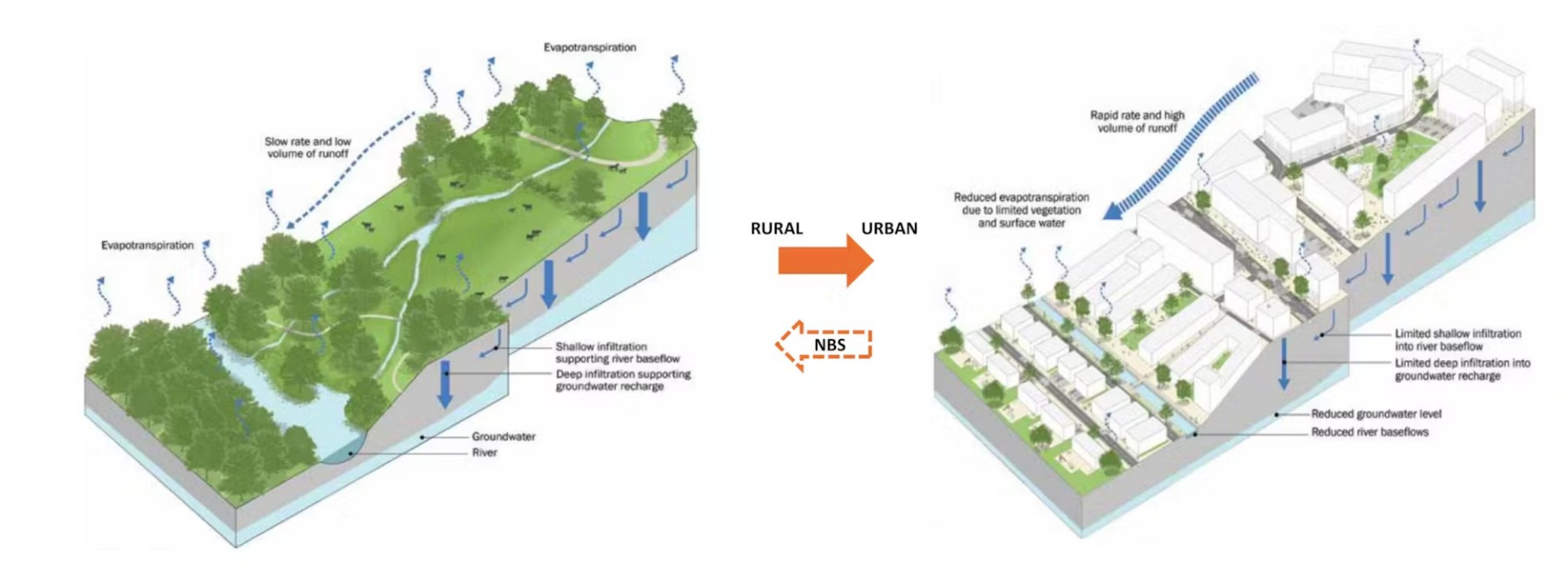
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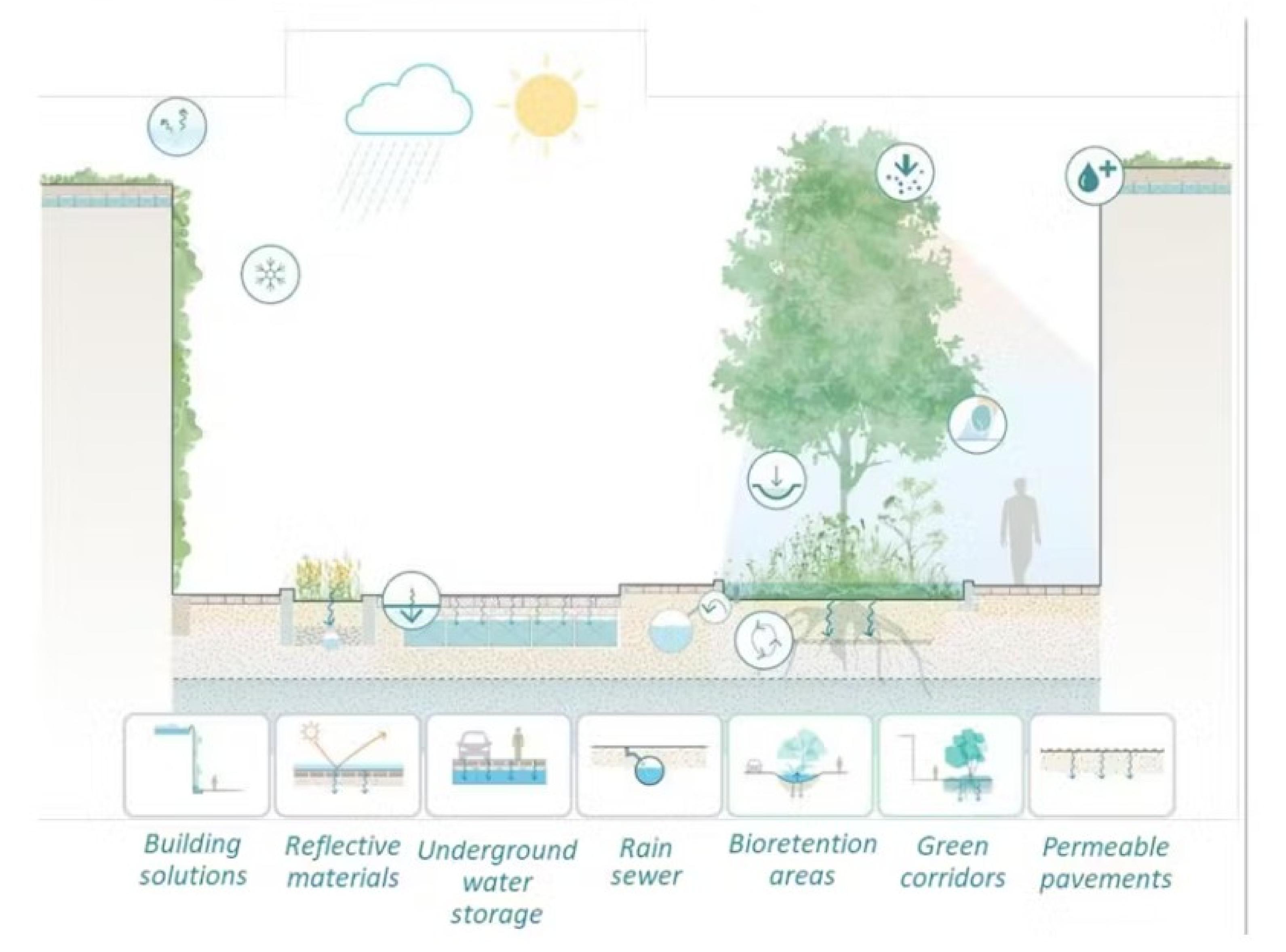


Principle | restore natural elements and ecosystem functions



Nature-based solutions are often cost-effective when combined with gray infrastructure

Urban green space with integrated drainage infrastructure to reduce stormwater flooding





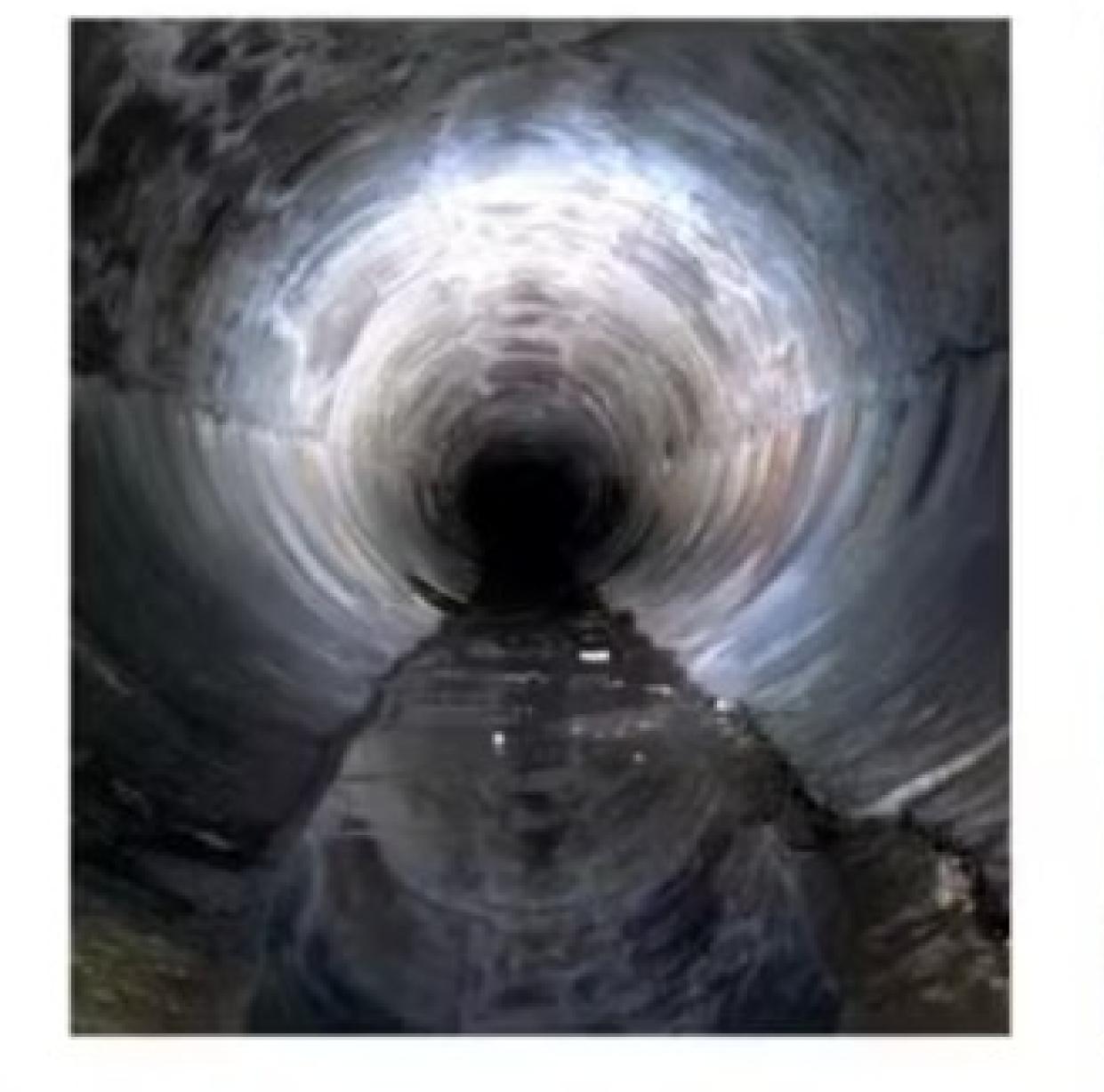
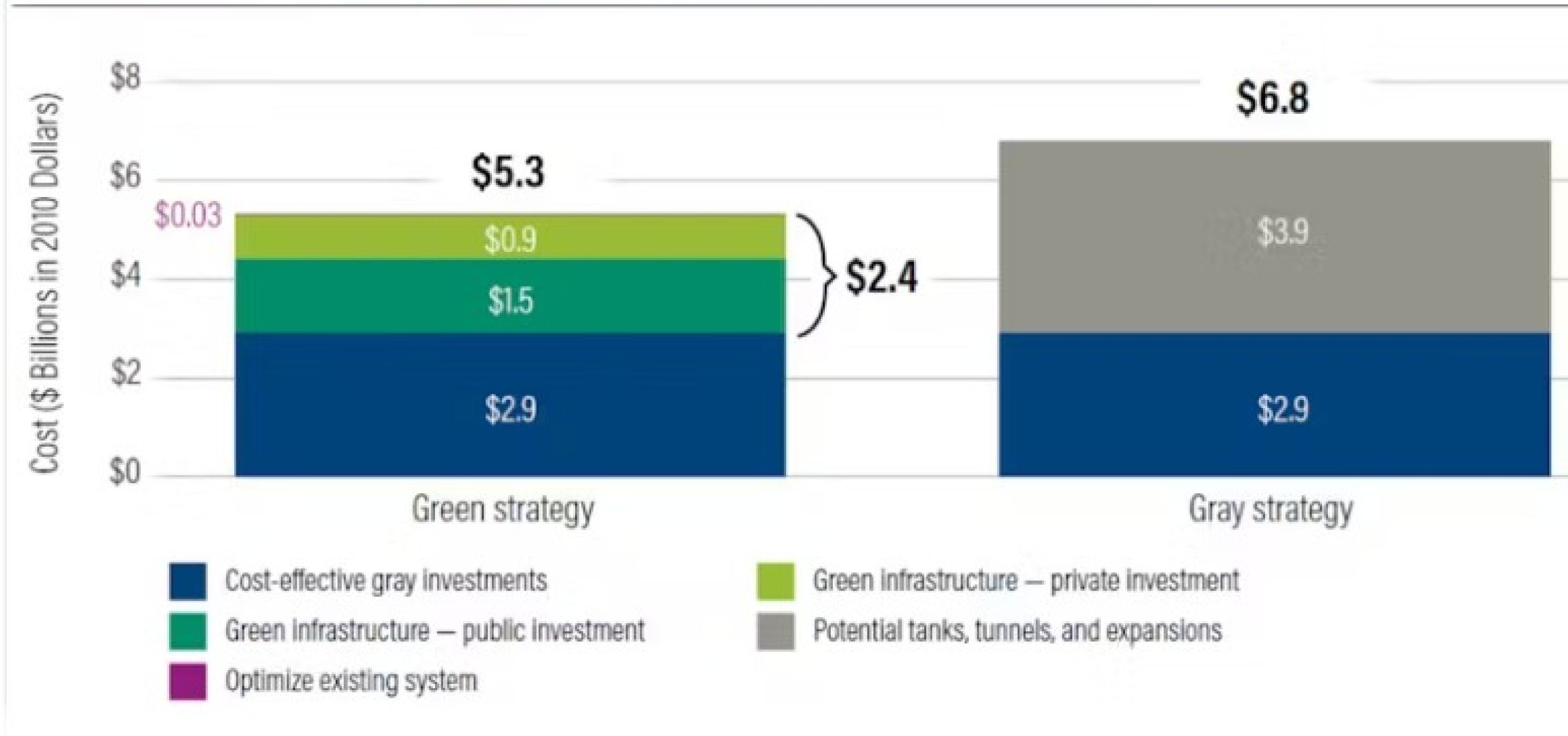




Figure 4.2 | Reducing Cost by Mixing Green and Gray Infrastructure*, New York City



World Bank, 2019. Integrating Green and Grey: Creating Next Generation Infrastructure.











What types of NBS would you use to reduce flood risk in this city? (multiple answers

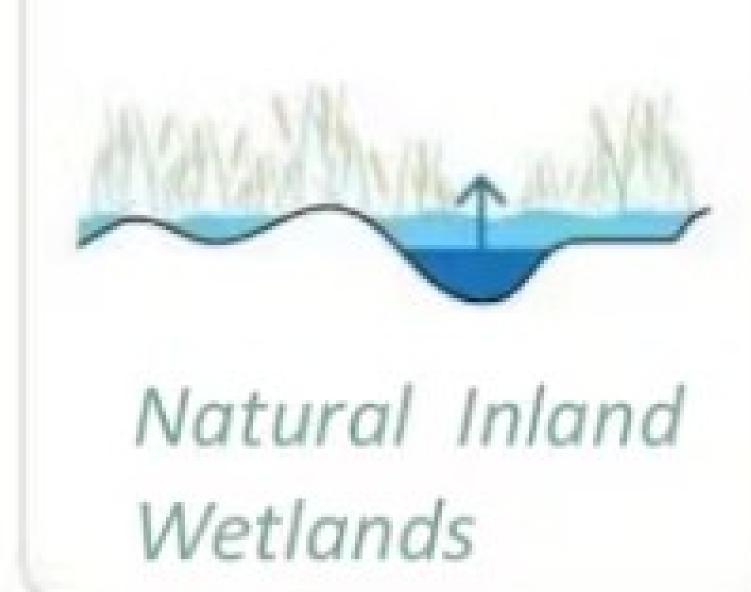
possible)























İzmir, Türkiye

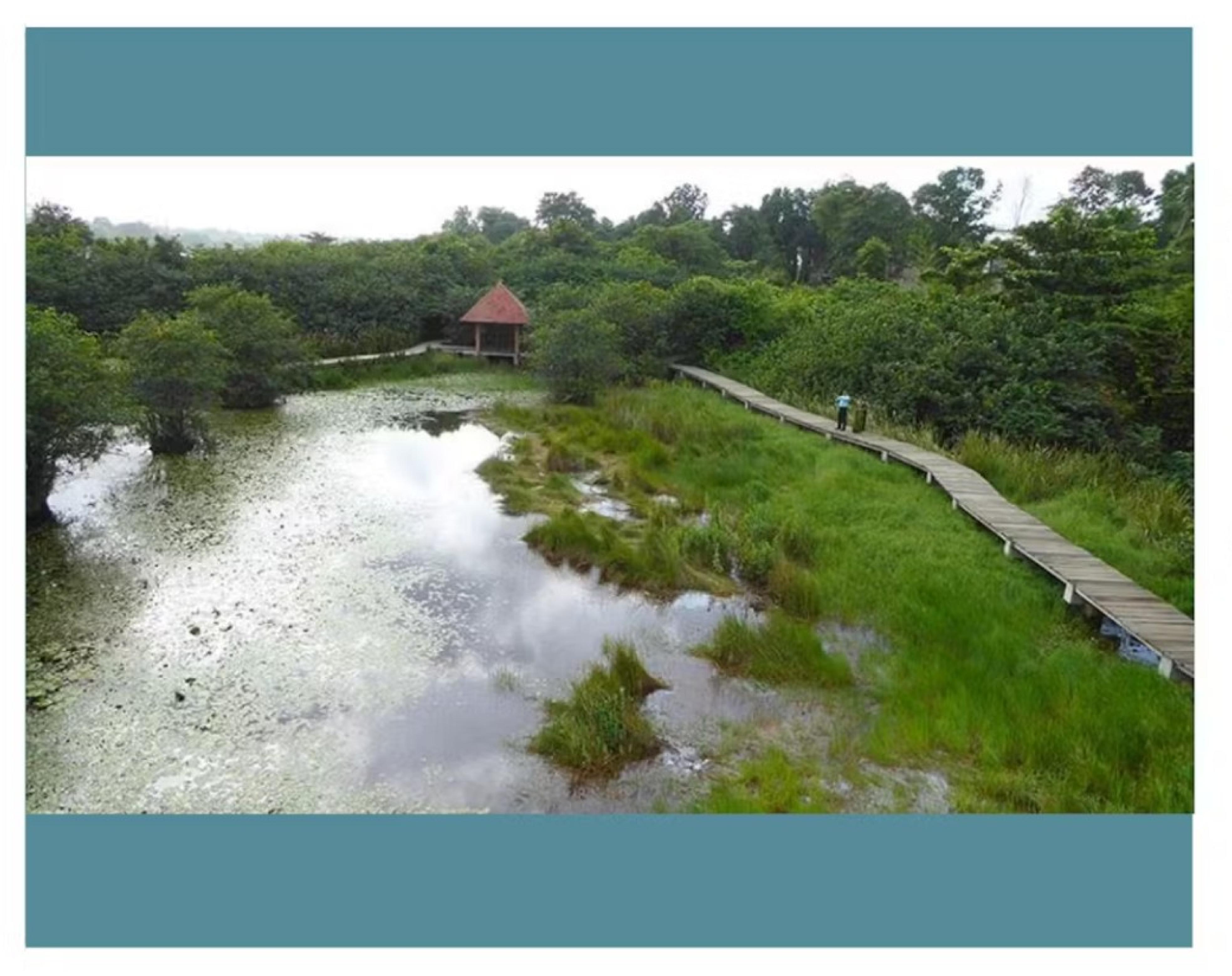
What types of NBS would you use to reduce flood risk in this city? (multiple answers possible)







What environmental and social benefits does this project bring?



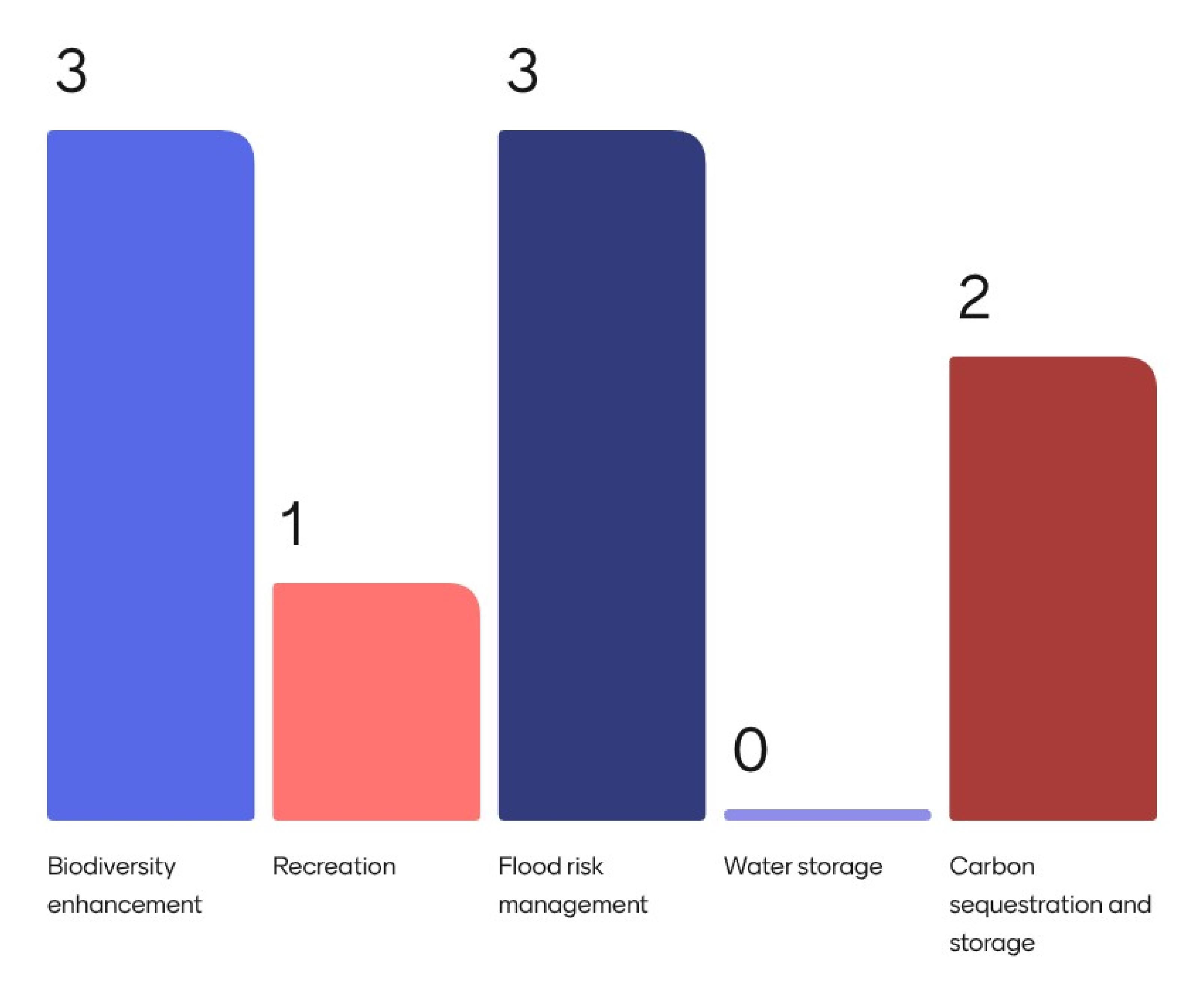
- Biodiversity enhancement
- 2. Recreation
- Flood risk management
- 4. Water storage
- Carbon sequestration and storage





Sri Lanka Metro Colombo Urban Development Project Beddagana Wetland Park (!8ha)

What environmental and social benefits does this project bring? (multiple answers possible)







GPNBS provides technical support to integrate NBS at scale



PILLAR 1 KNOWLEDGE

Key knowledge adopted by Governments and Industry Leaders (more than 75,000 downloads)



PILLAR 2 OPERATIONS

Supported 80 projects, 40 active engagements per fiscal year



PILLAR 3 PARTNERSHIPS

30 active technical partnerships







Supporting Identification of NBS Investments

- Spatial identification of NBS investment opportunities
- Applicable in any city or coastal landscape
 - Based on globally available geospatial (earth observation) data
- Designed as on-demand service with rapid 4–6-week turnaround
- Conversation starter with governments in projects investing in NBS



OPPORTUNITY SCAN

RESILIENCE IN CITIES AND COASTS ACROSS THE WORLD







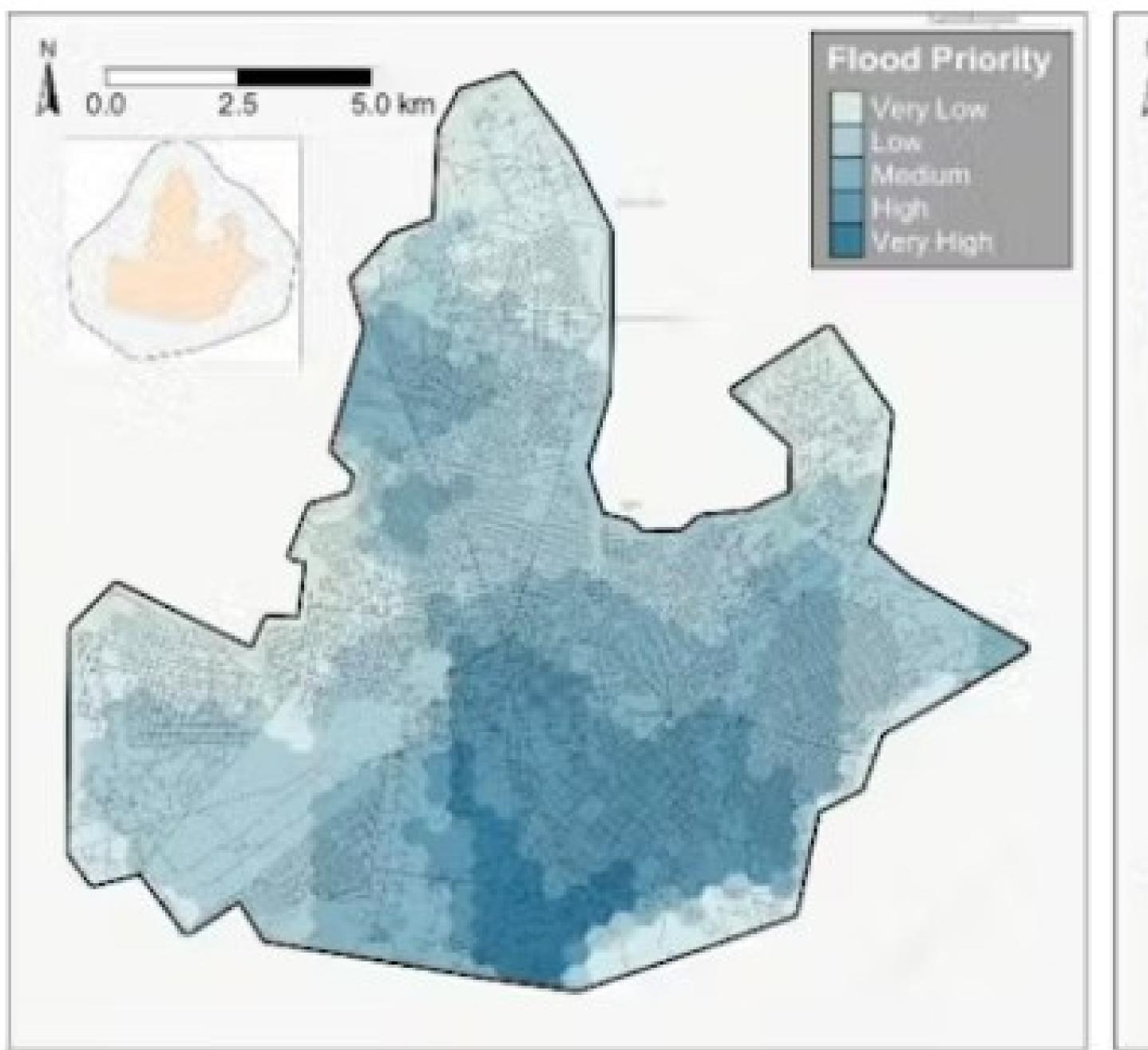


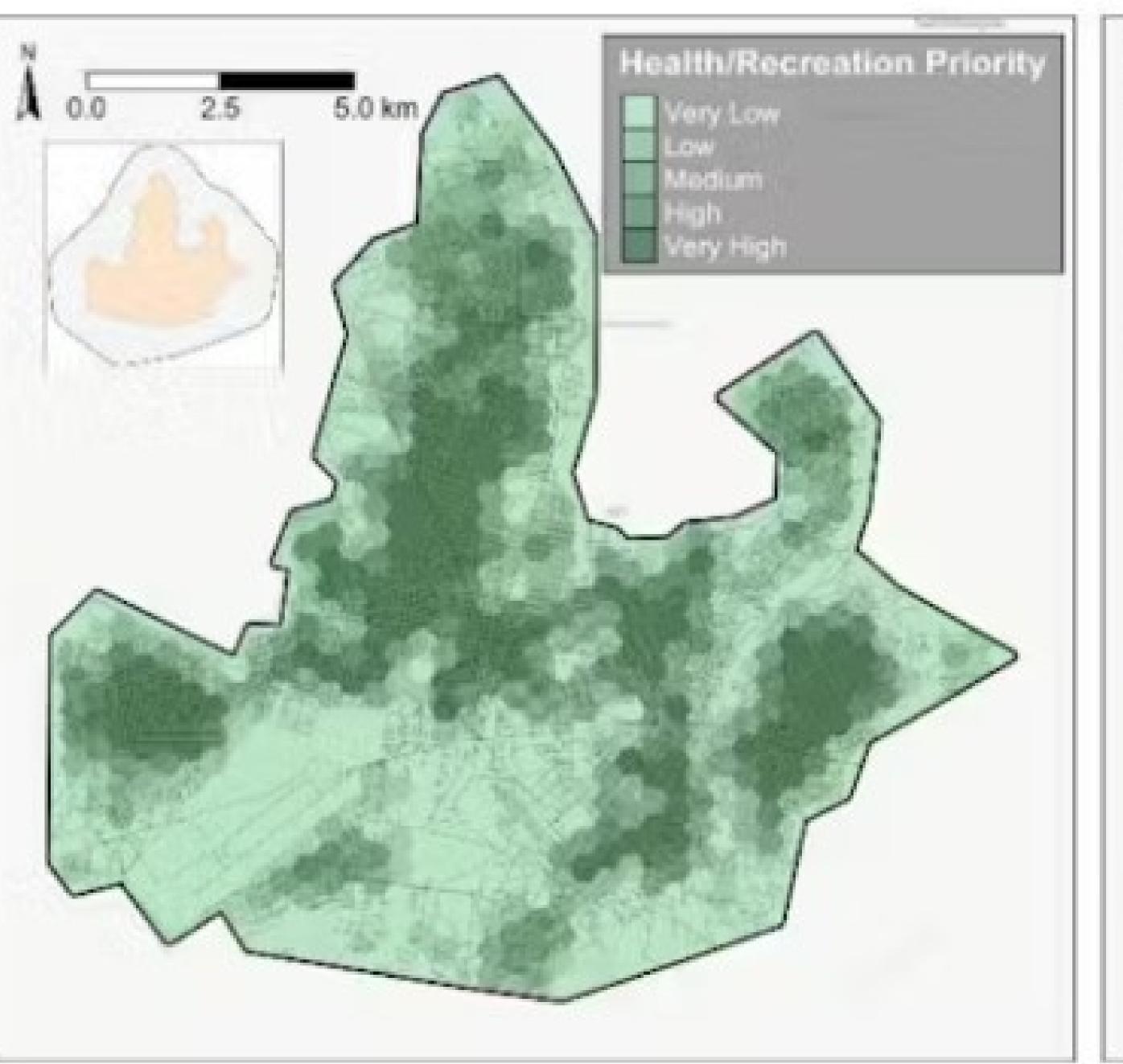


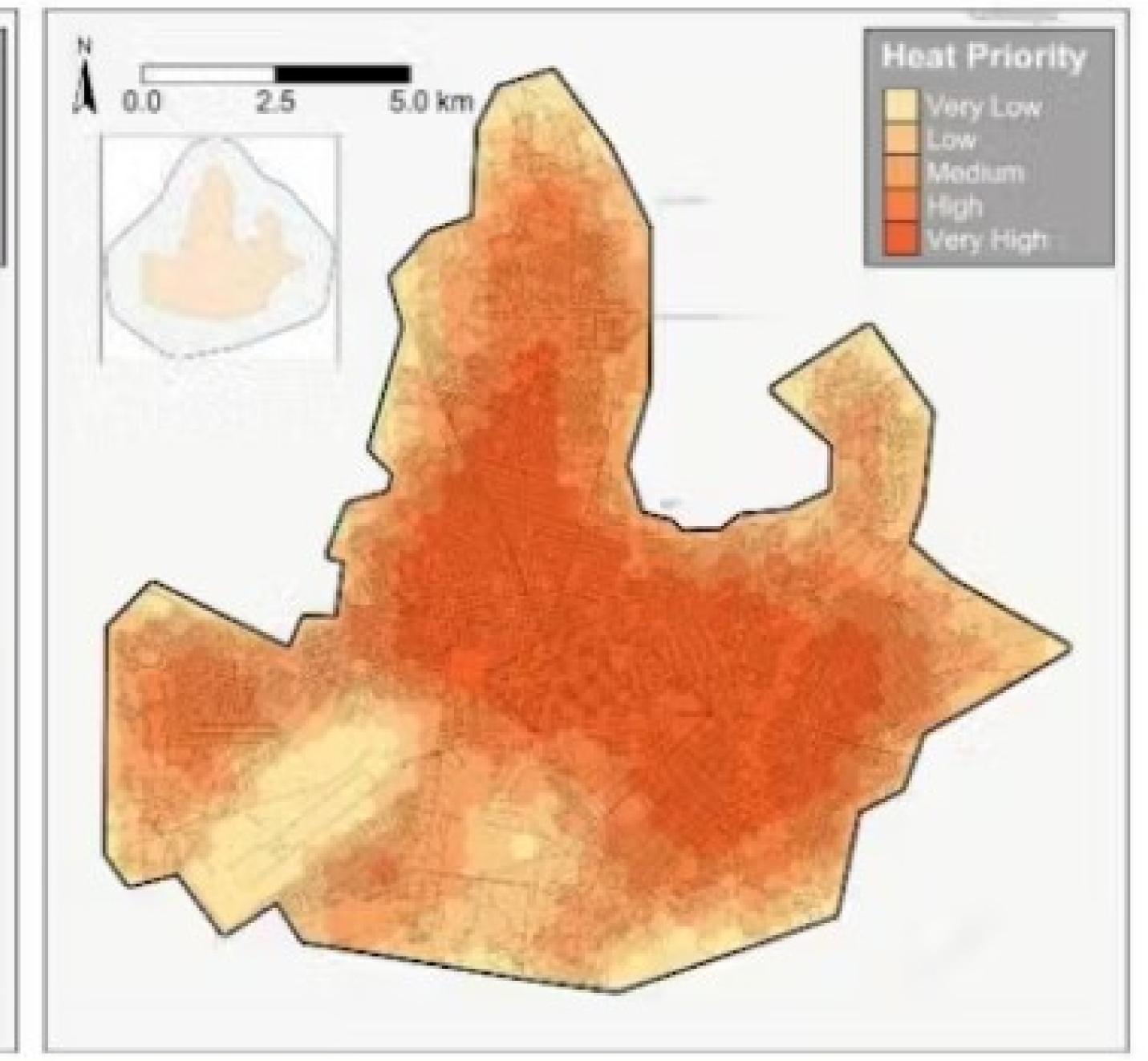
NBS opportunity scan (NbSOS) - SECONDARY CITIES URBAN MOBILITY AND DEVELOPMENT

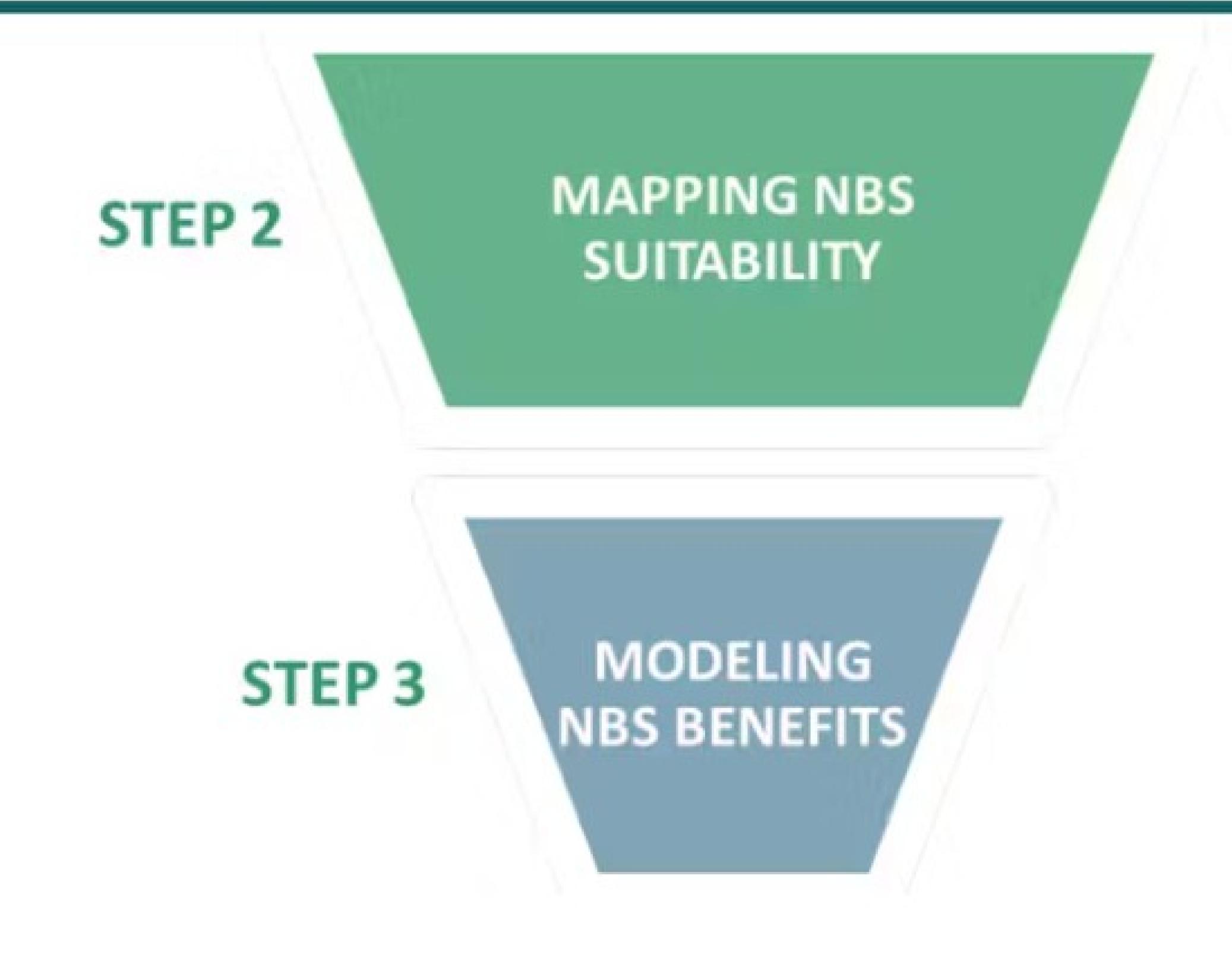
PROJECT (P177918) in Burkina Faso

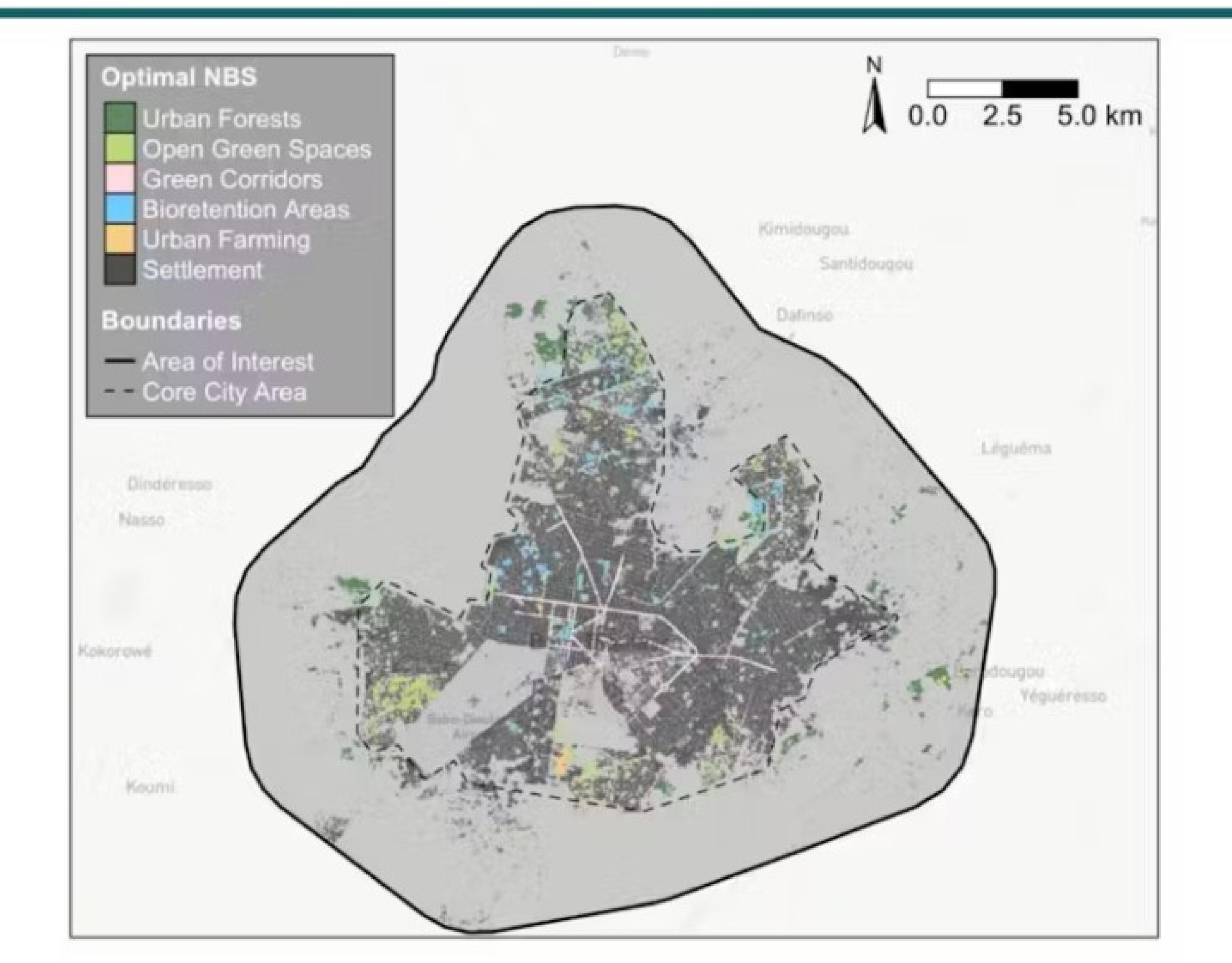






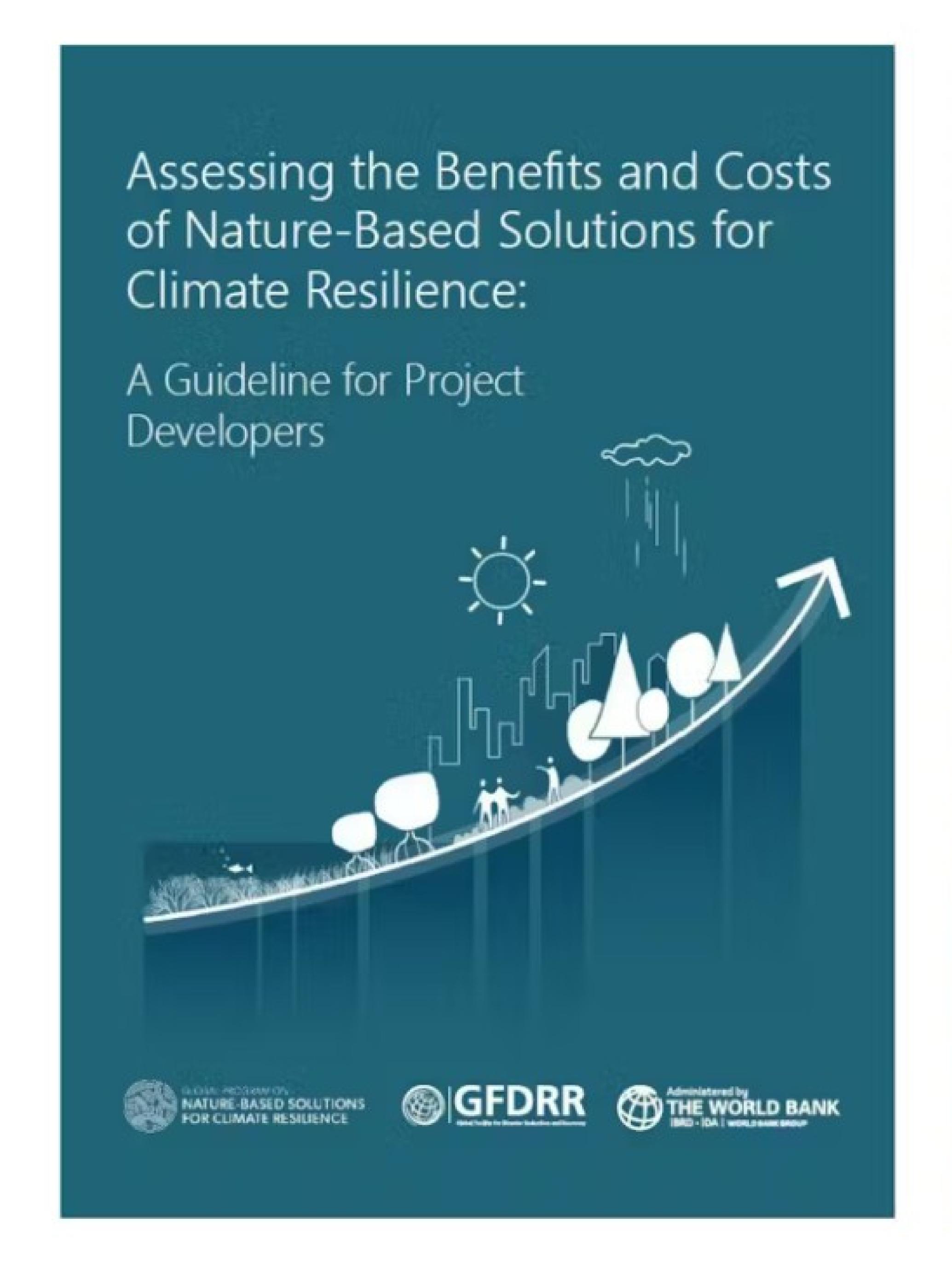


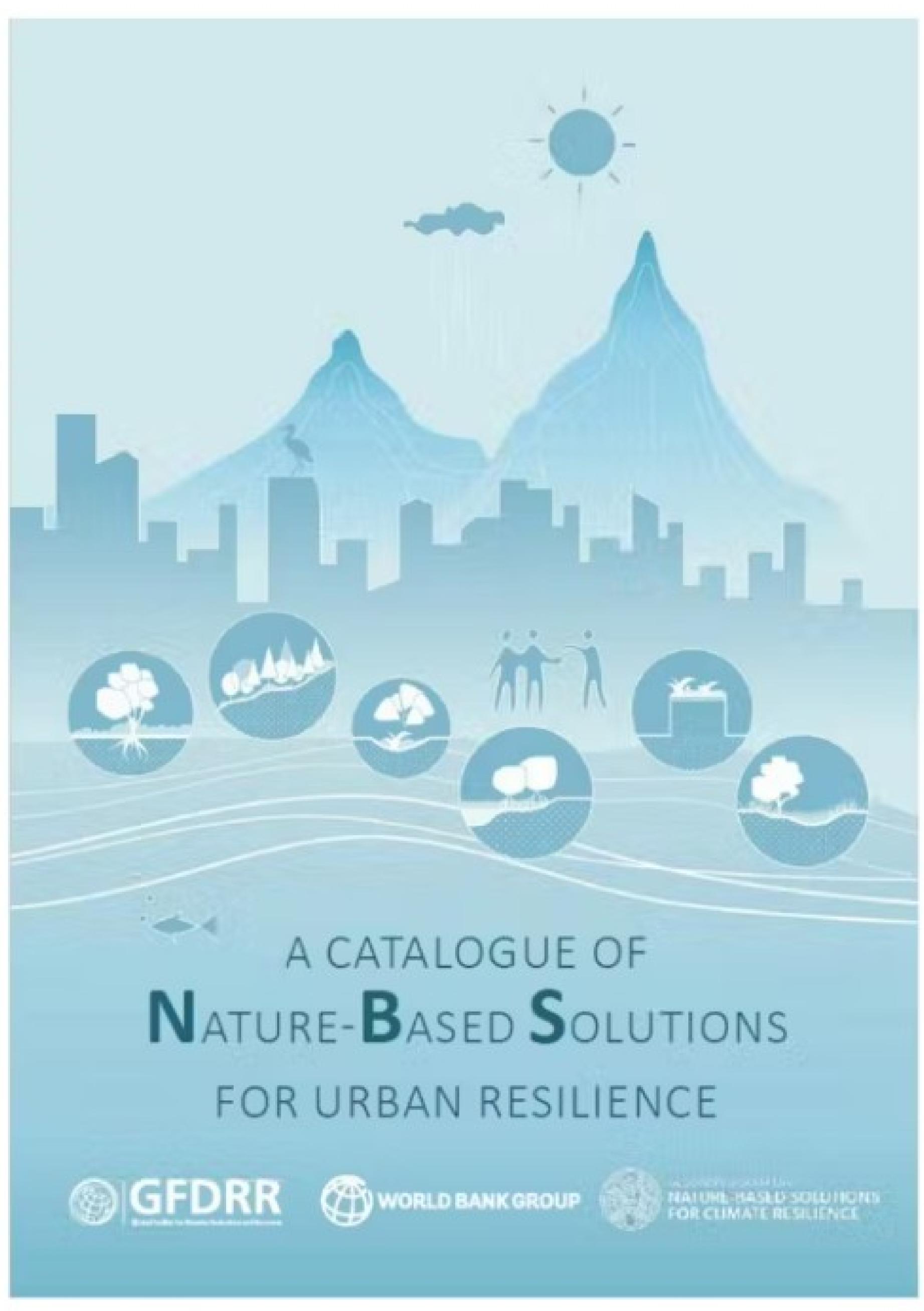






NBS guidance & tools









GET IN TOUCH

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