

UCPM Knowledge Series – Calendar of Events



Date	Title	Venue	Audience
12.09.	Nature-Based Solutions for Europe (with the World Bank)	Crisis Room + online	ECHO/COM
19.09.	Capacity Building Community of Practice Meeting	ECHO	ECHO/COM
26.–27.09.	Evidence for Policy in DRM Summer School	Vienna, Austria	ECHO/COM + MS/PS + external
03.10.	Info Session on DG ECHO's capacity building projects	ERCC Auditorium + online	ECHO/COM
15./16.10. (TBC)	preparEU focus group on risk awareness training curriculum	Online	ECHO/COM + external
22.10.	Technical Workshop on Artificial Intelligence in DRM	Charlemagne + online	ECHO/COM + MS/PS
12.–13.11.	Capacity Building - Investing in DRM Workshop	Borschette	ECHO/COM + external
15.11.	Global Rapid post-disaster Damage Estimation GRADE workshop (with the World Bank)	ERCC Library Room	ECHO/COM + MS/PS + projects (TBC)

NATURE-BASED SOLUTIONS FOR CLIMATE RESILIENCE



GLOBAL PROGRAM ON
NATURE-BASED SOLUTIONS
FOR CLIMATE RESILIENCE



GFDRR
Global Facility for Disaster Reduction and Recovery



Administered by
THE WORLD BANK
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Brussels, 12th September 2024





Google Earth Timelapse

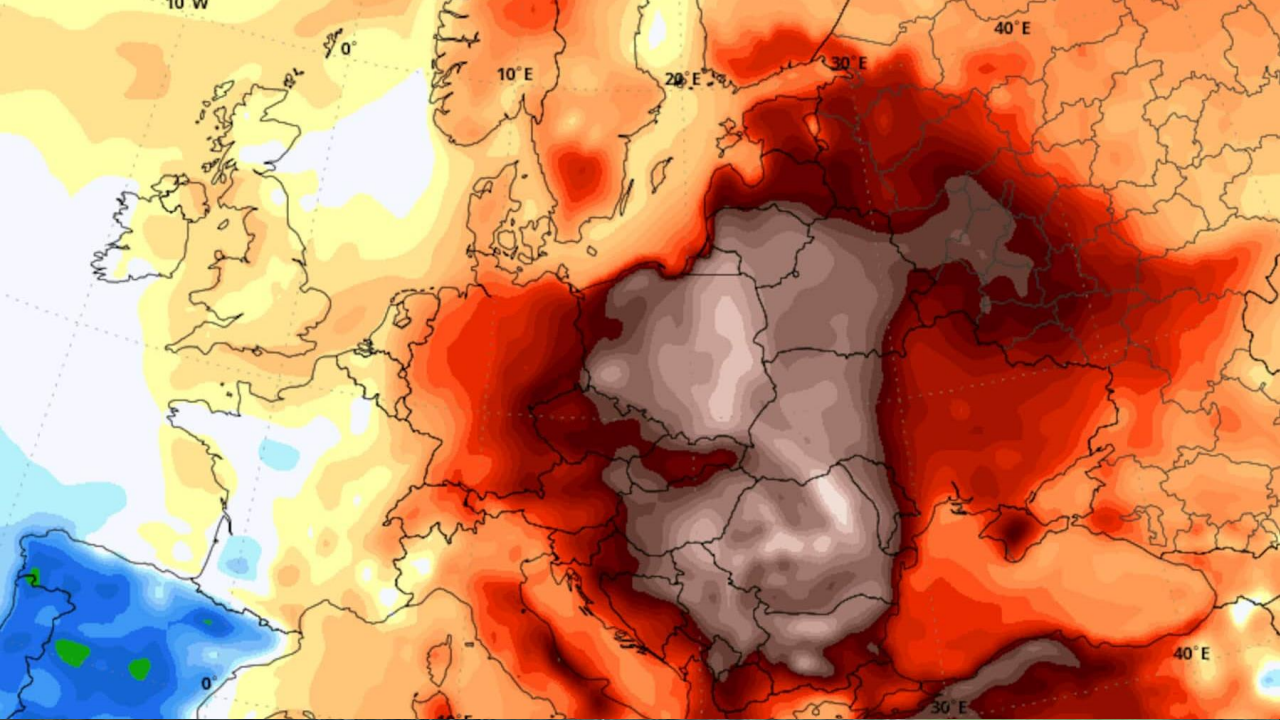
Cairo And New Cairo City, Egypt

1984

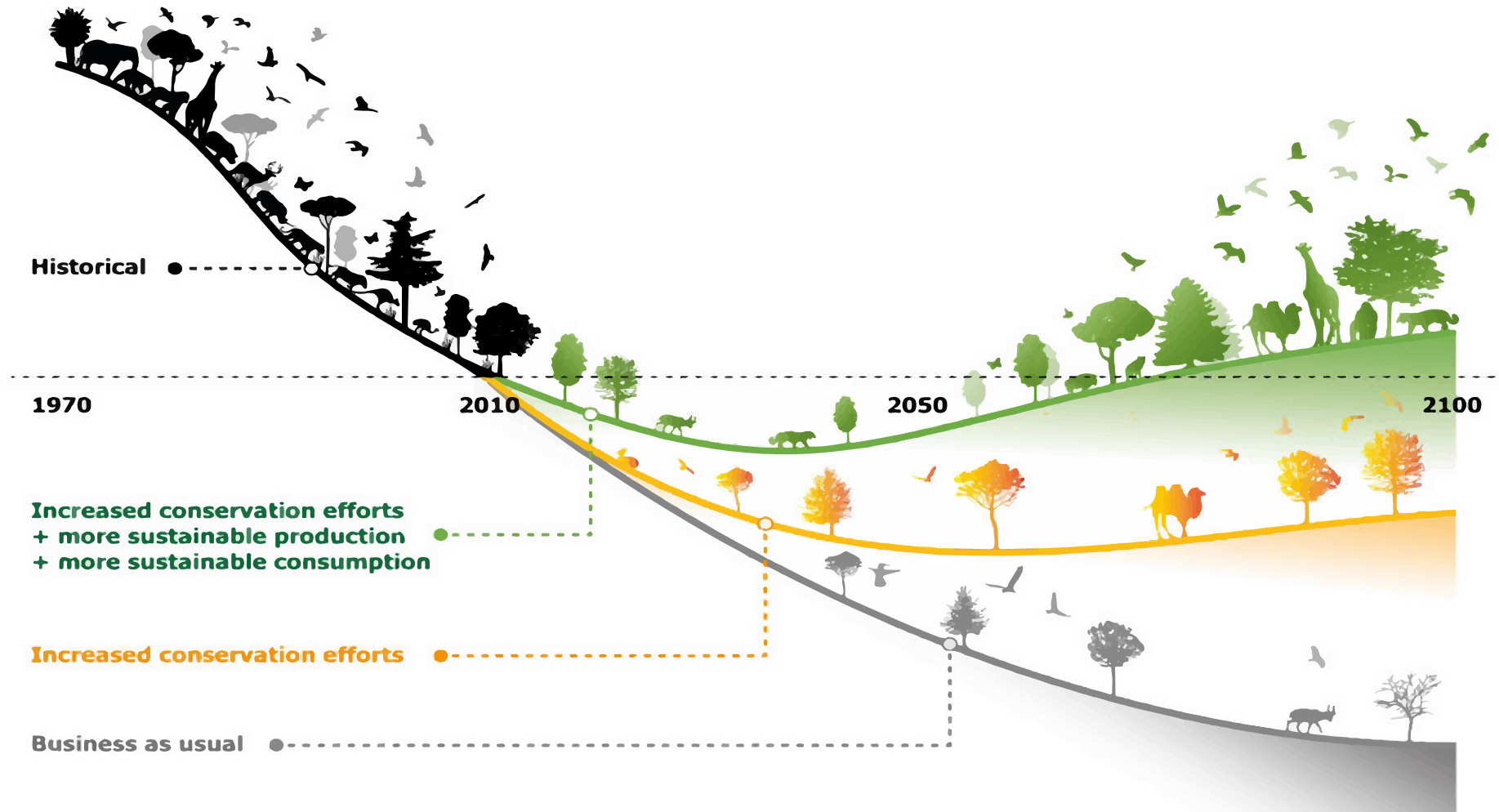




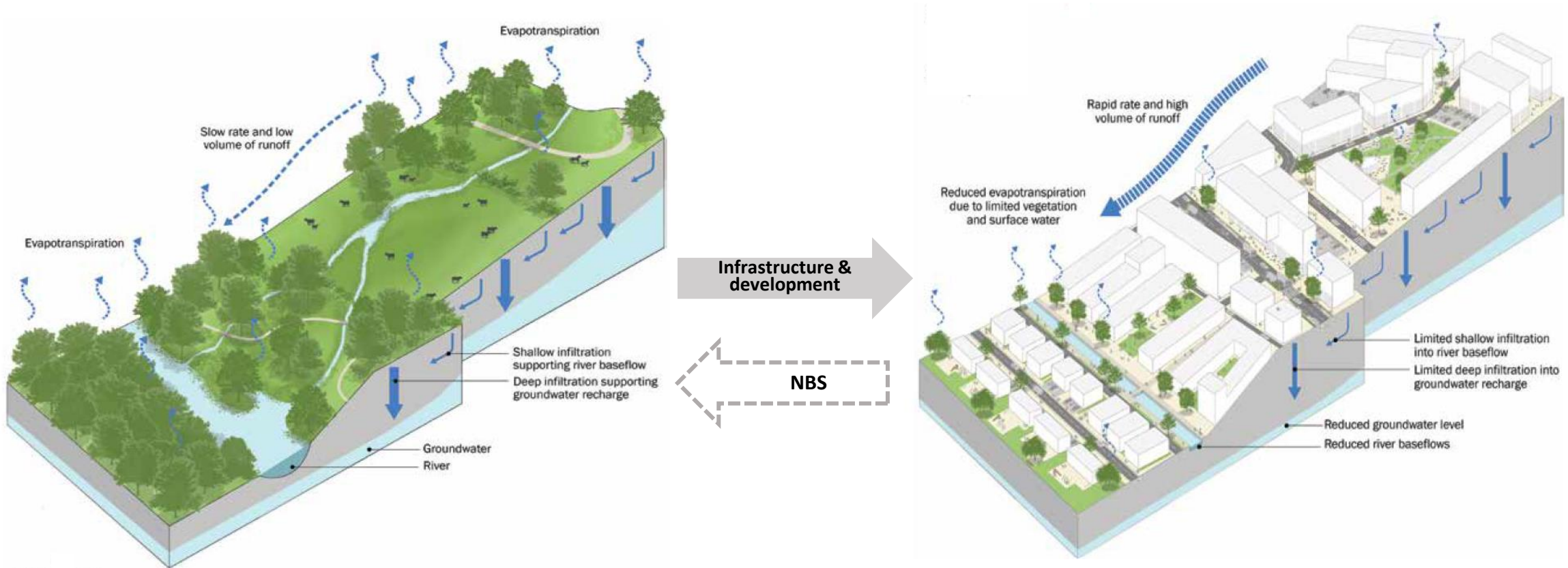
Source: Gallup



BENDING THE CURVE OF BIODIVERSITY LOSS

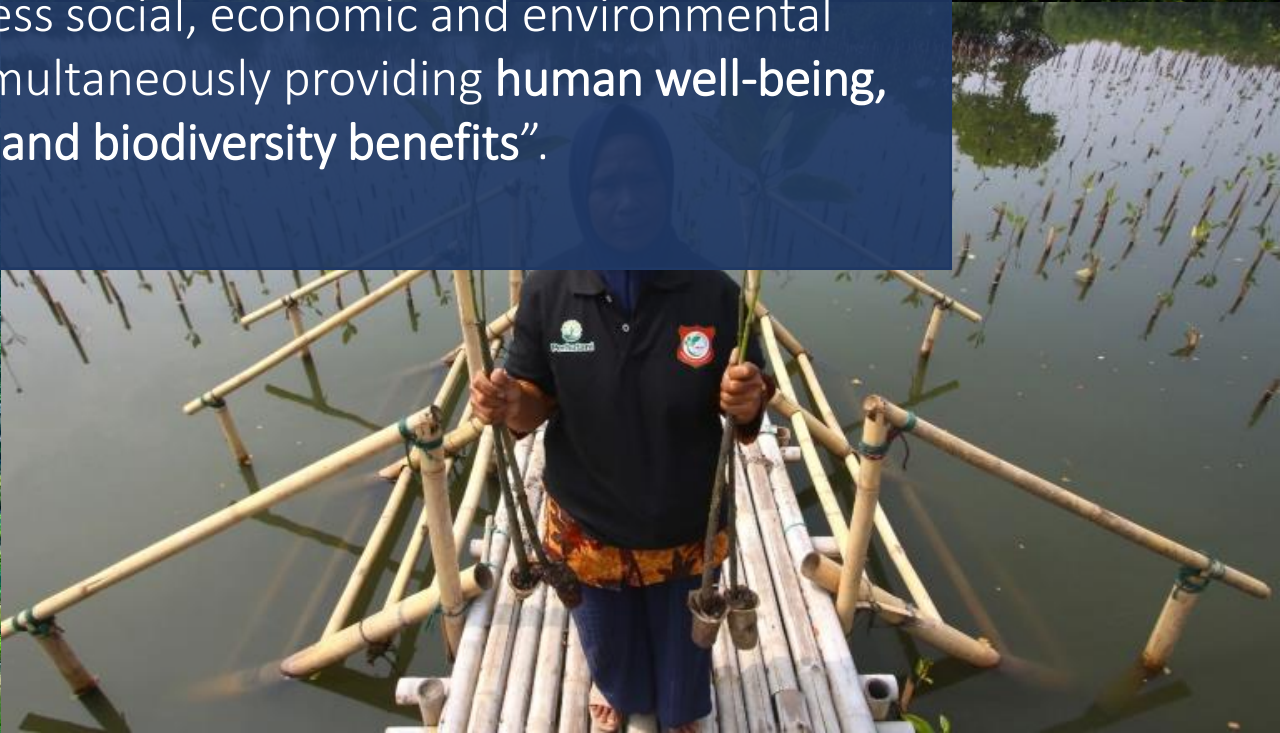


NBS – Bringing Nature back in Infrastructure, Policy and Planning





The UN Environment Assembly has adopted the definition of NBS as “actions to protect, conserve, restore, sustainably use and manage **natural or modified** terrestrial, freshwater, coastal and marine **ecosystems** which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing **human well-being, ecosystem services, resilience and biodiversity benefits**”.

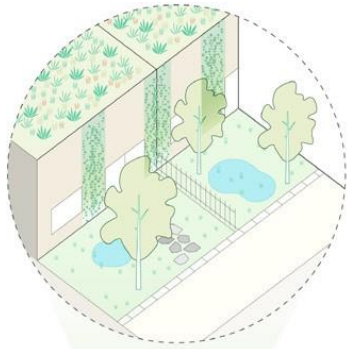


NATURE-BASED SOLUTIONS AT DIFFERENT SCALES

FROM NEIGHBORHOOD SCALE...



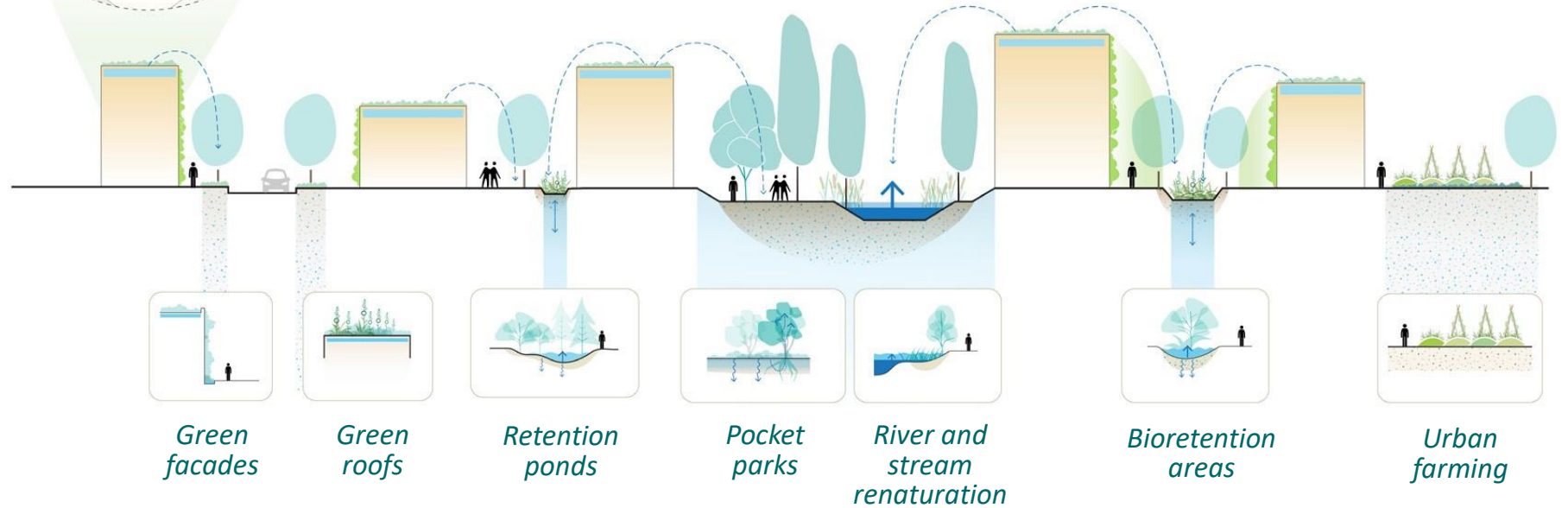
Pocket parks



Bioretention areas

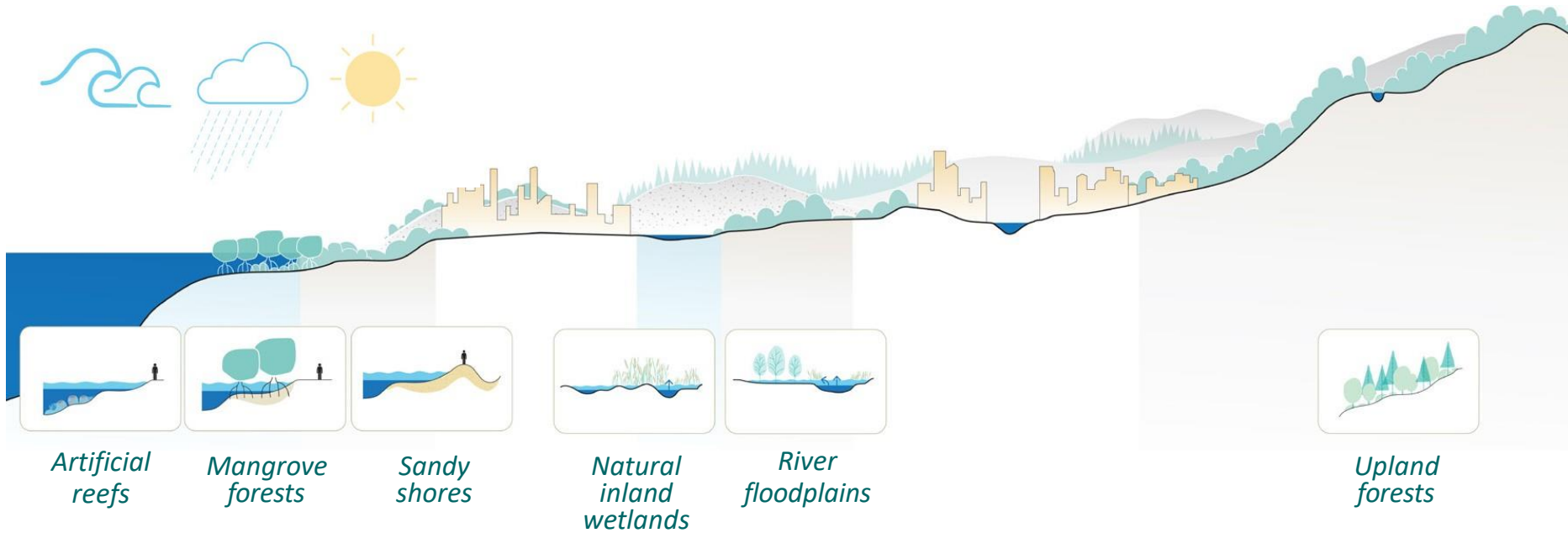


Urban farming



NATURE-BASED SOLUTIONS AT DIFFERENT SCALES

...TO NATURE-BASED SOLUTIONS AT LANDSCAPE SCALE



Upland forests



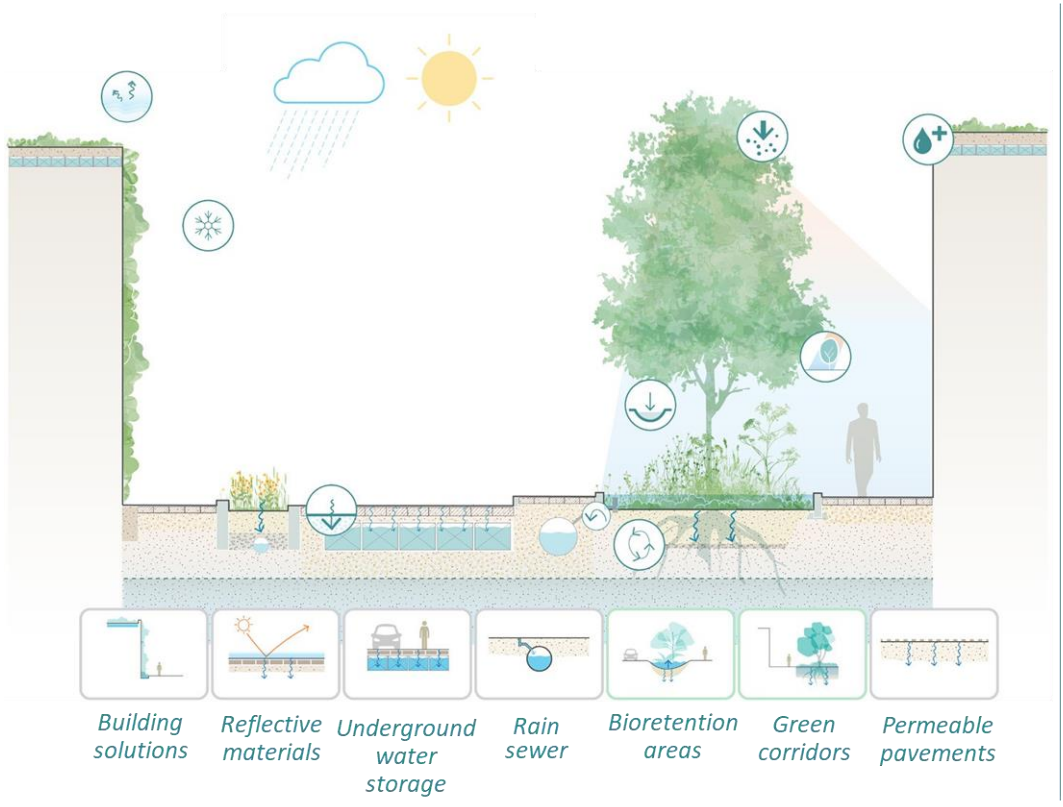
River floodplains



Natural Inland Wetlands

INTEGRATING NBS WITH GRAY INFRASTRUCTURE

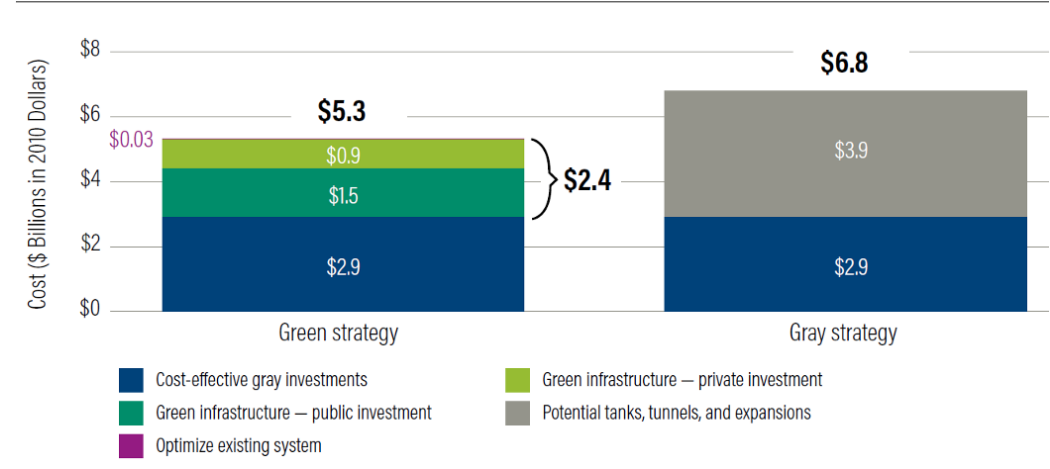
Urban green space with integrated drainage infrastructure to reduce stormwater flooding



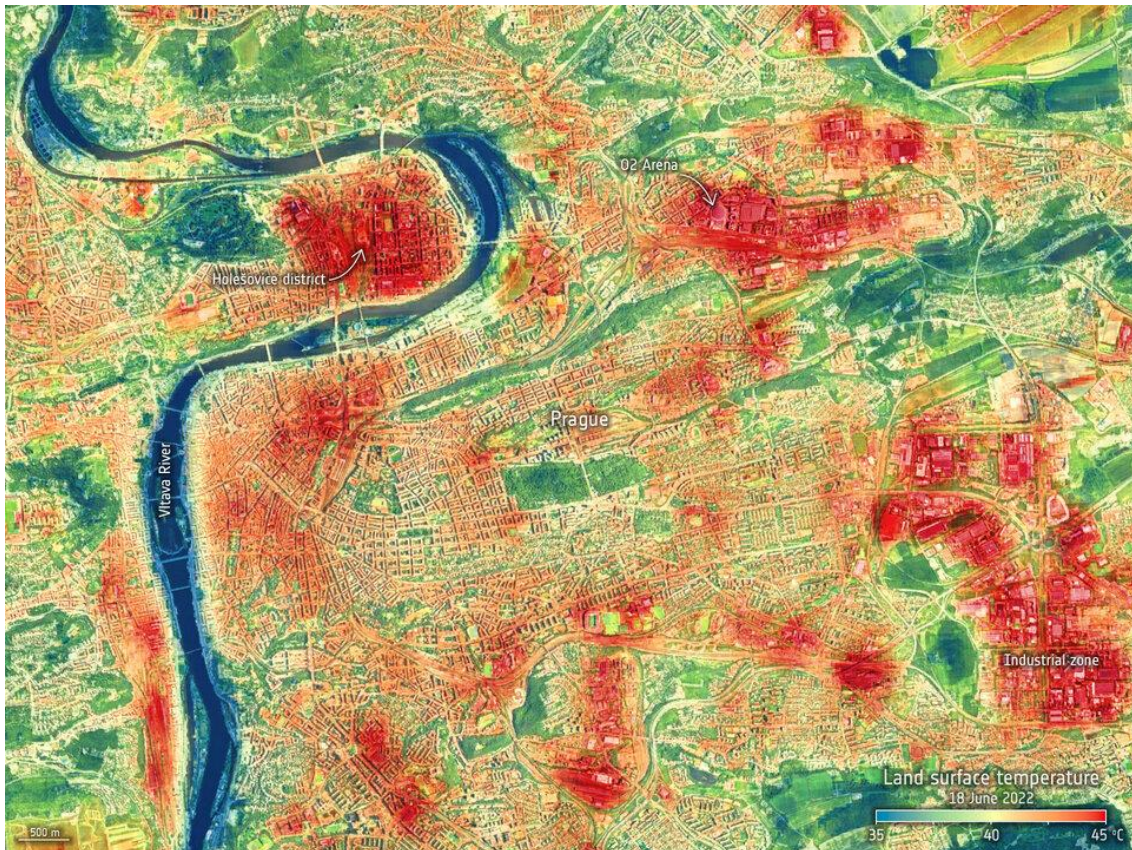
- Carbon sequestration
- Water collection
- Cooling effect
- Evapotranspiration
- Infiltration
- Shade
- Water storage and reuse
- Soil cleaning



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



NBS REDUCE THE URBAN HEAT ISLAND EFFECT



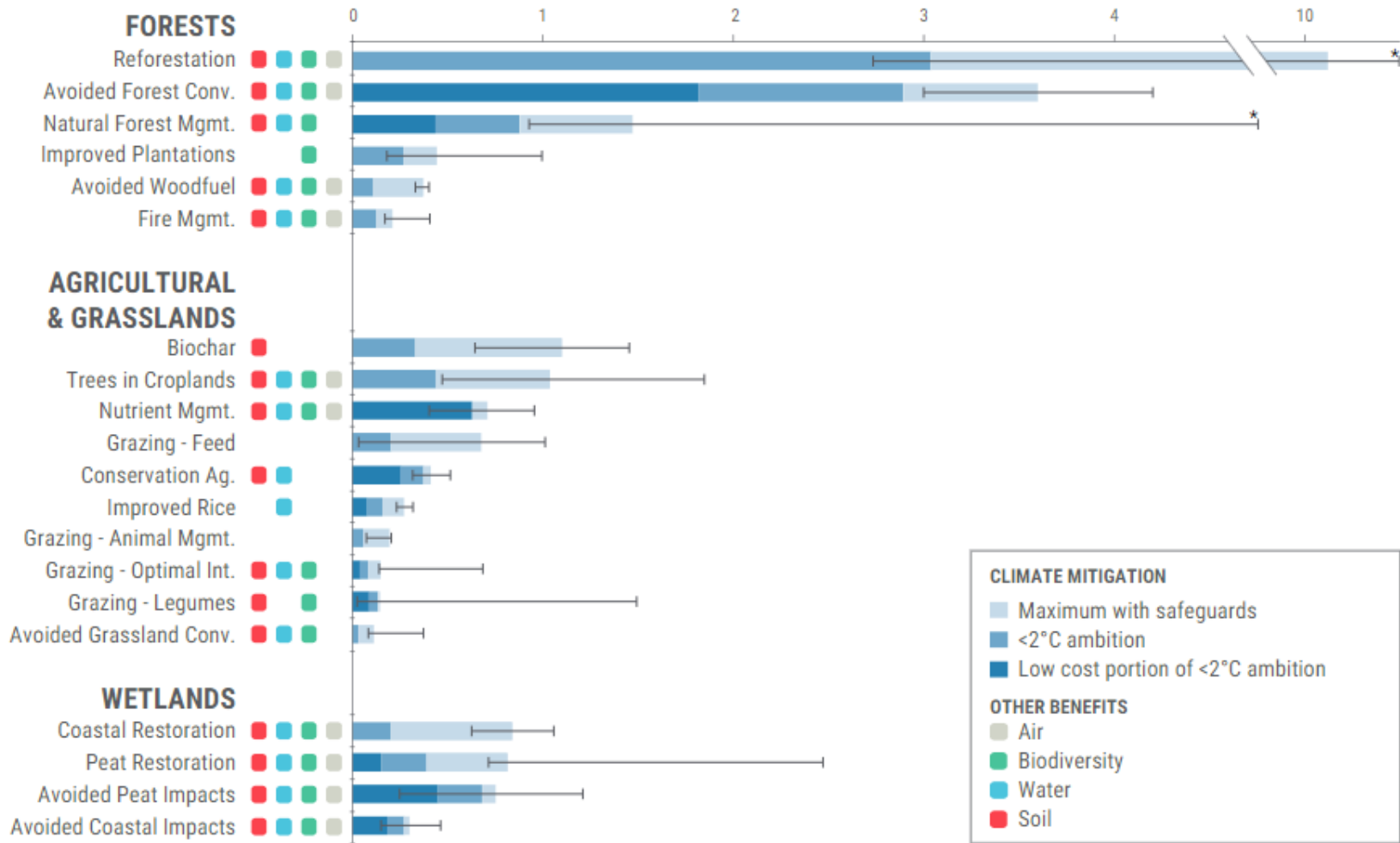
Land-surface temperature in Prague on 18 June 2022



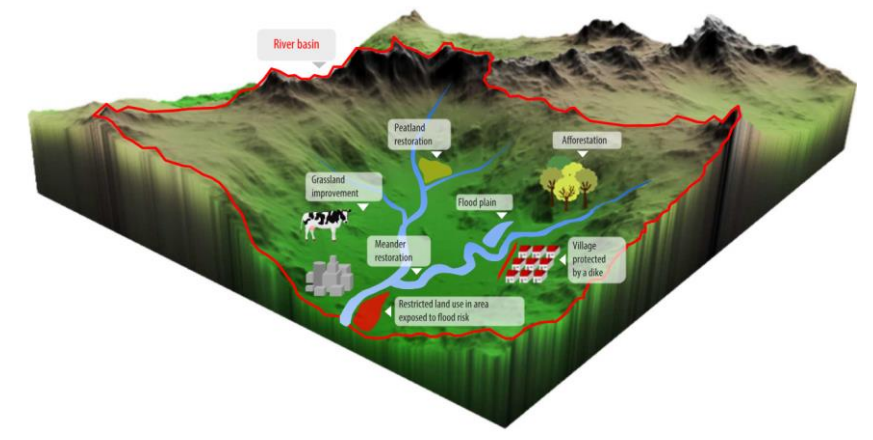
Land-surface temperature in Paris on 18 June 2022

CLIMATE MITIGATION

Climate mitigation potential in 2030 (PgCO₂ e yr-1) adapted from (Griscom et al., 2017).



NBS IN EU POLICIES



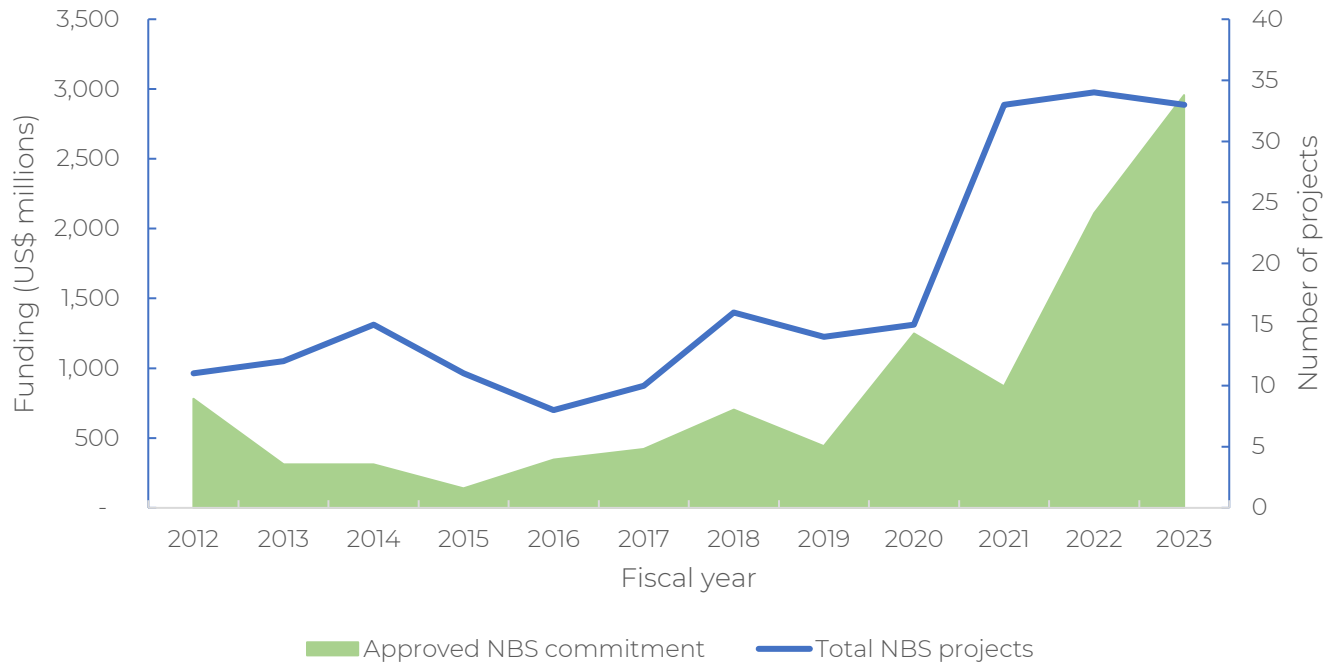
EU Flood Directive



THE WORLD BANK'S NATURE-BASED SOLUTIONS FOR CLIMATE RESILIENCE PORTFOLIO IS GROWING

A portfolio review identified a total of 211 investment project with project components using NBS for Climate Resilience from FY12 to FY23.

Total Projects and Approved NBS Commitments, FY 12-23



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**

POLAND INTEGRATED FLOOD RISK MANAGEMENT

Odra-Vistula Flood Management Project

Odra River Basin Flood Protection Project

A combination of green and green-grey approaches are applied to reduce flood risk and improve the environment

- Room for the River: more space for rivers to flow
- Multipurpose dry polders to use for farming and flood overflow
- Green zones in urban centers
- City by-passes



KYRGYZSTAN GREEN AND GREY INFRASTRUCTURE

Kyrgyzstan Republic Resilient Landscape Restoration Project

- Kyrgyzstan faces landslides, mudflows and floods caused by land degradation and climate extremes
- The project invests in a combination of green and grey infrastructure to address hazards and support communities



Credits: International Land Coalition

BOGOTÁ URBAN RESILIENCE AND WATER MANAGEMENT

Rio Bogotá Environmental Recuperation and Flood Control Project

- The project has supported the construction of a wastewater treatment plants that improves the water quality, has reduce flood risk by rehabilitating the river, and has increased the environmental value by creating multifunctional urban green areas





The World Bank and GFDRR launched a dedicated Effort to Scale Up Nature-Based Solutions globally



PILLAR 1: KNOWLEDGE



PILLAR 2: OPERATIONS

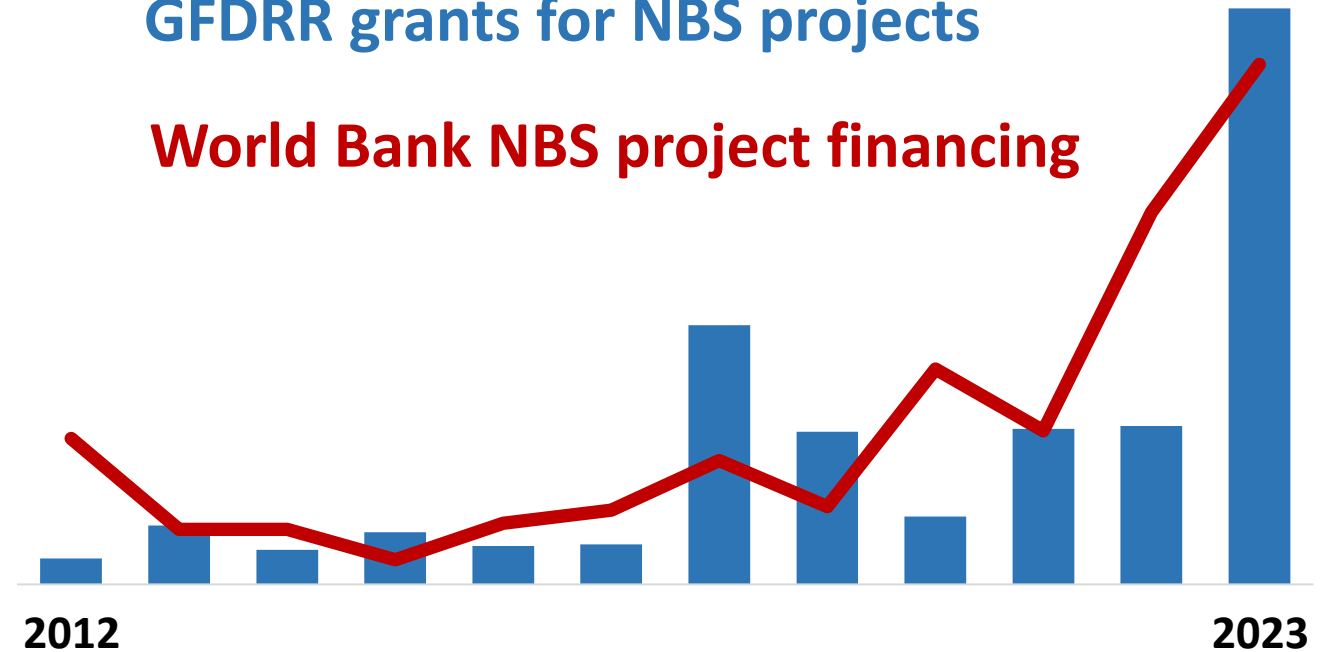


PILLAR 3: PARTNERSHIPS

GFDRR DRIVES INVESTMENTS

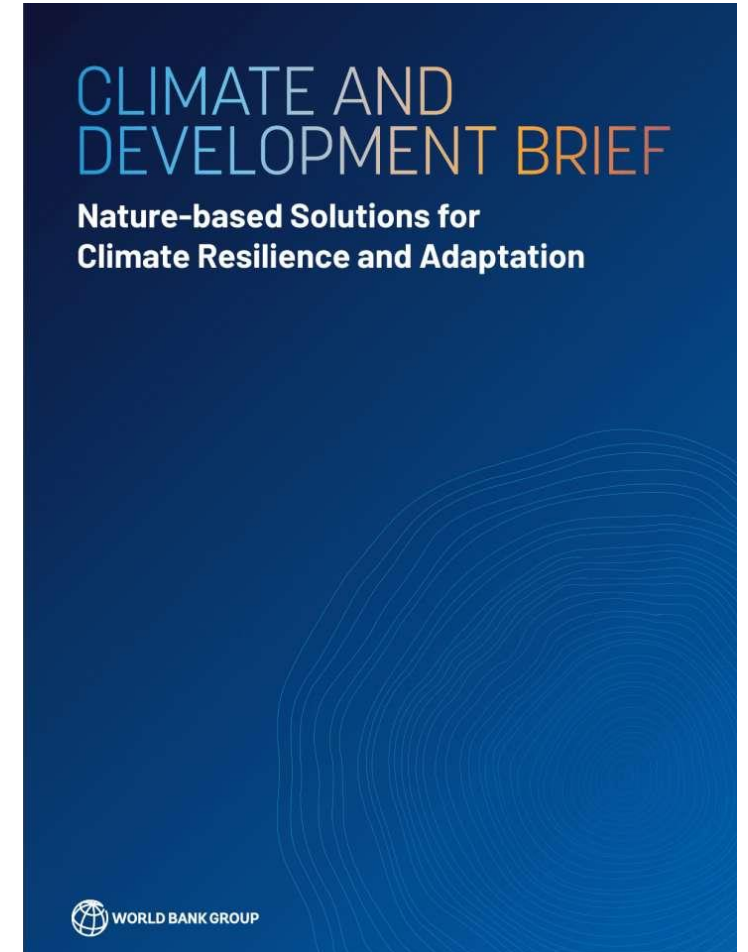
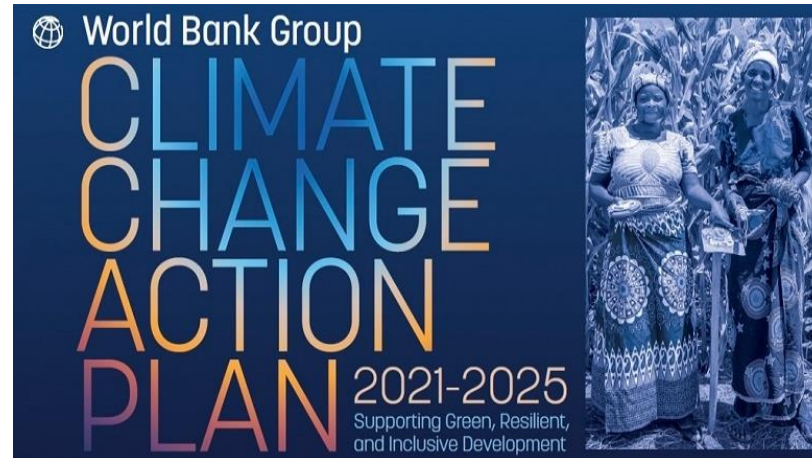
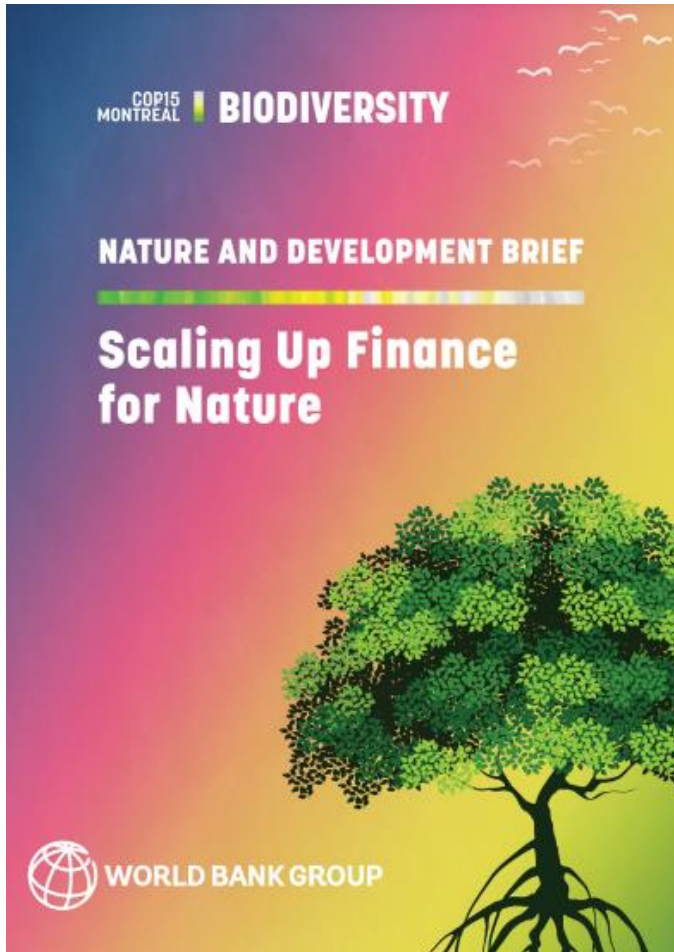
GFDRR grants for NBS projects

World Bank NBS project financing

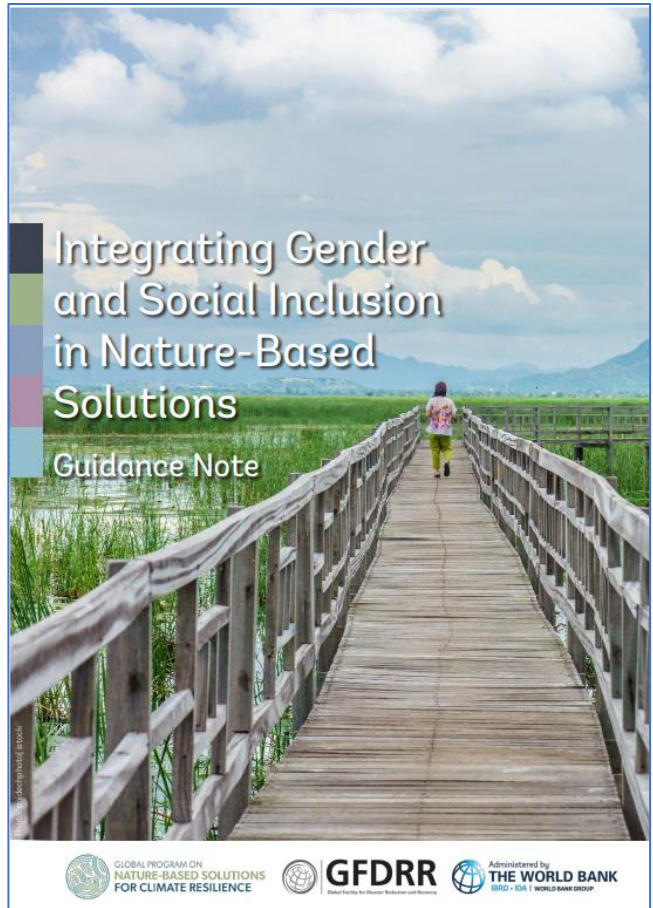
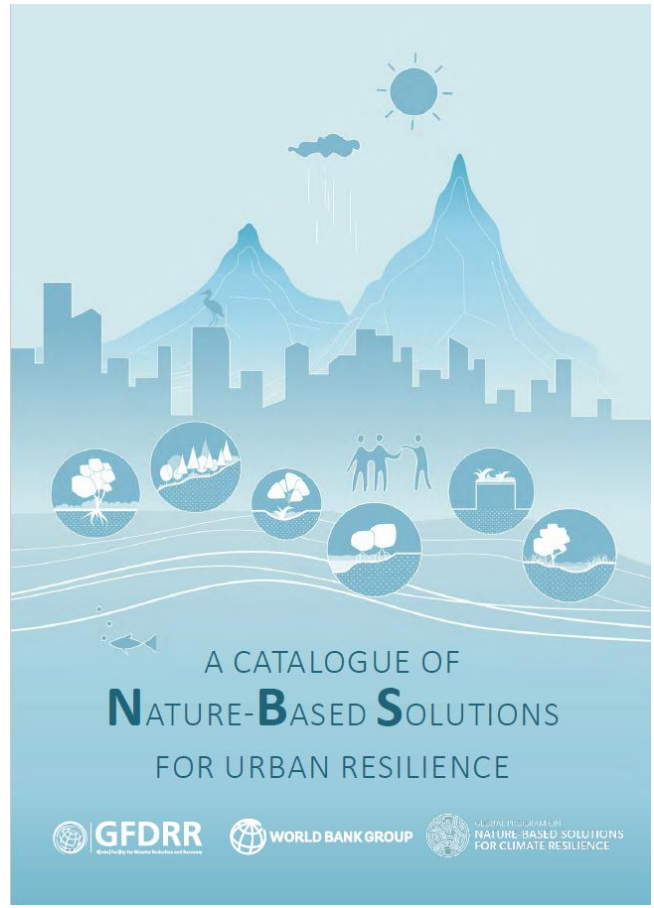
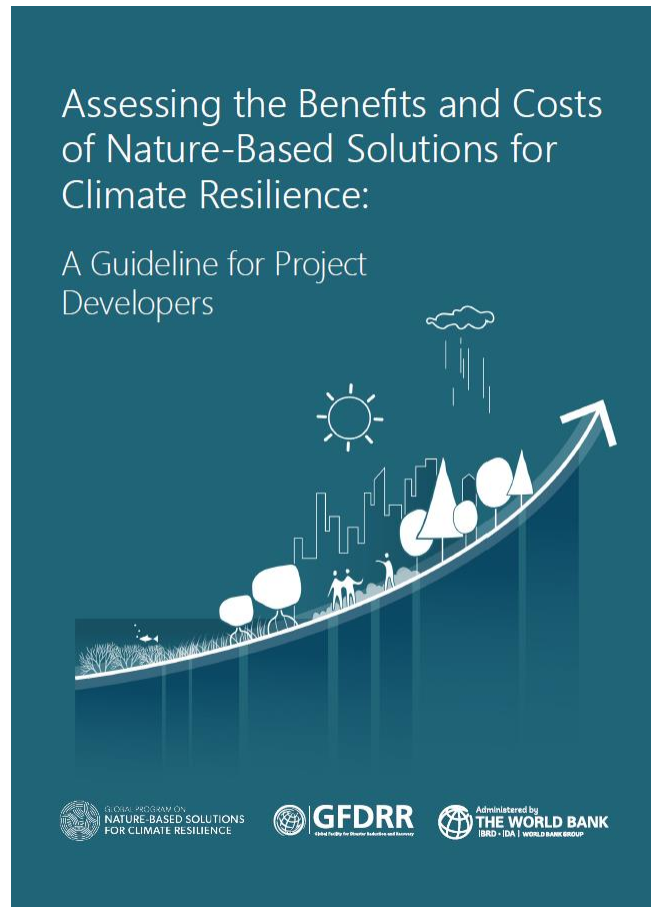


The World Bank's investments on **Nature-based Solutions for Climate Resilience** are growing and **GFDRR is a driving force** behind this growth

SETTING HIGH-LEVEL NATURE AND CLIMATE GOALS AND HOW NBS CONTRIBUTES



NBS PUBLICATIONS



AVAILABLE AT NATUREBASEDSOLUTIONS.ORG

Break and Q&A



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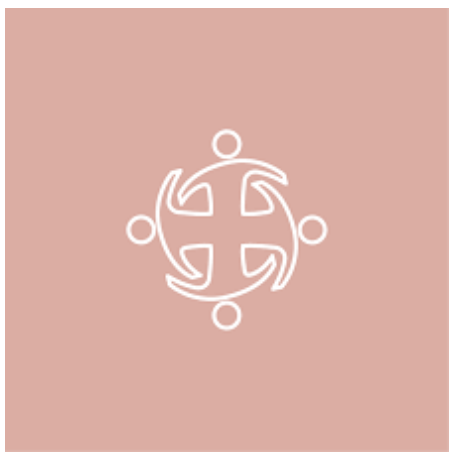
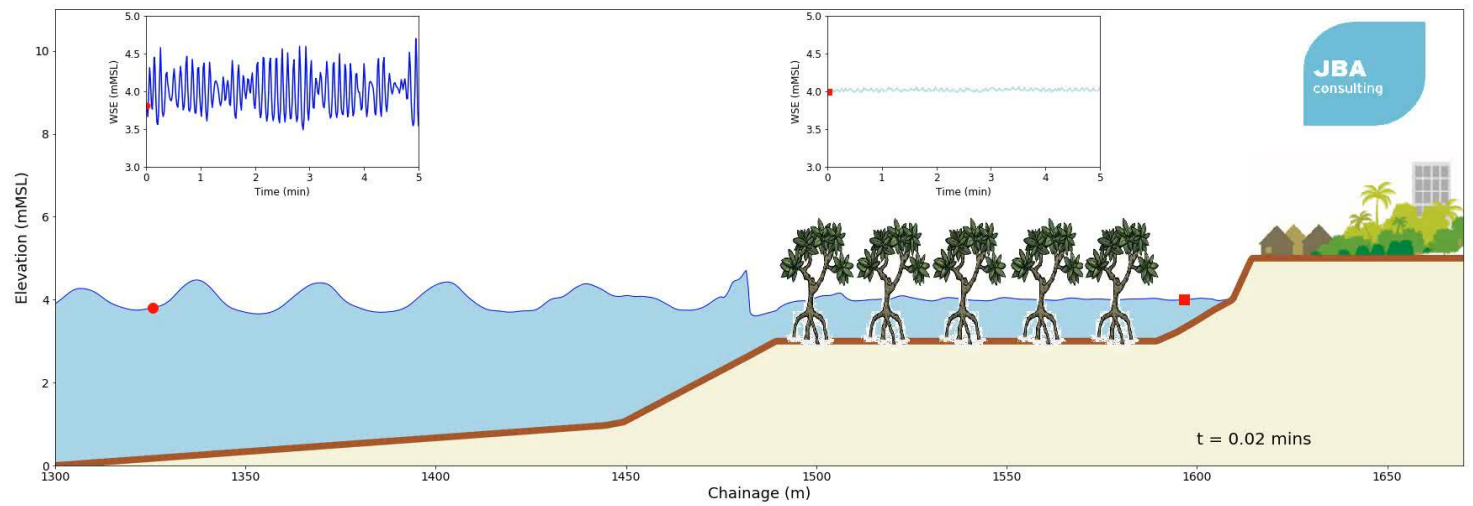


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NATURE-BASED SOLUTIONS FOR CLIMATE RESILIENCE IMPLEMENTATION CHALLENGES REMAIN



SUPPORTING IDENTIFICATION OF NBS INVESTMENTS



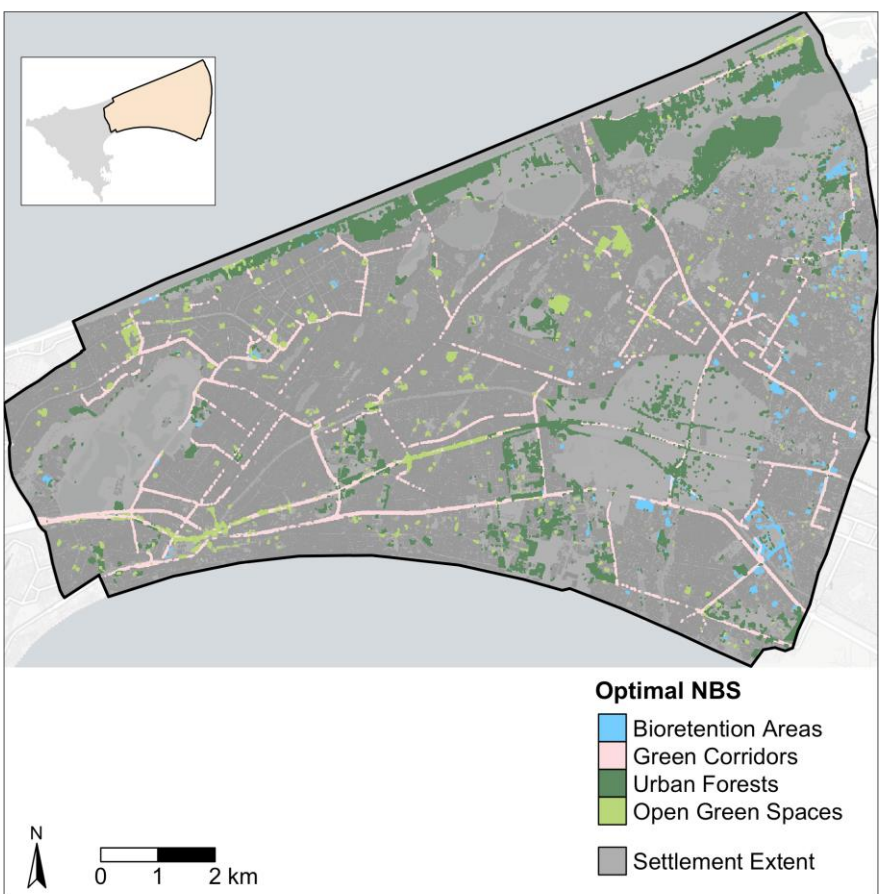
- Spatial identification of NBS investment opportunity areas
- Applicable in any city or coastal landscape, based on globally available geospatial (earth observation) data
- Designed as on-demand service 4–6-week turnaround to serve as conversation starter in projects investing in NBS

Impact

- Implemented in 20 countries (2022-2024), including 10 coastal landscapes and 70 cities. Informing an estimated \$2.5 billion in development financing as well as key strategic assessments
- In most projects, the NBSOS is a starting point, additional support provided
- Applied in across sectors, such as disaster risk management, water, environment and transport

<https://naturebasedsolutions.org/opportunity-scan>

URBAN NBS INVESTMENT OPPORTUNITY AREAS IN DAKAR, SENEGAL



MCA to prioritize solutions and locations

GREEN CORRIDORS	TECHNIQUES	TECHNICAL CONSIDERATIONS
<p>SUITABLE LAND USES Infrastructure networks, residential streets, and major infrastructure including rail tracks and highways are suitable land uses for linear green corridors.</p> <p>KEY CHALLENGES</p> <p>Key Challenges Addressed:</p> <ul style="list-style-type: none"> Maintaining buffers along drainage lines improves water quality and provides critical habitat linkages for wildlife Stepping stones for biodiversity are provided when the design of parks and gardens seek to complement existing corridors. Maintaining green verges and establishing trees alongside roadways enhance aesthetics, reduces heat, and provides shade for pedestrians. 	<p>Street trees canopies</p> <p>Green avenues</p> <p>Urban green corridors</p>	<ul style="list-style-type: none"> Plants for green corridors should be selected according to the hardiness zone, soil type, sunlight and rain data, and other factors that affect the success of trees and vegetation. Soils in urban areas are frequently compacted, nutrient deficient, or polluted by industrial or other human activity. Local soil tests are therefore typically required. When developing green corridors, plant species should be selected that support and enhance important benefits. This may range from tree selection to optimize heat reduction benefits to the selection of plant species that provide habitat or food for important wildlife. Maintenance requirements vary considerably across habitats and should be carefully considered when planning new green corridors. Irrigation requirements vary considerably depending on plant types, the soils, and prevailing climatic conditions.

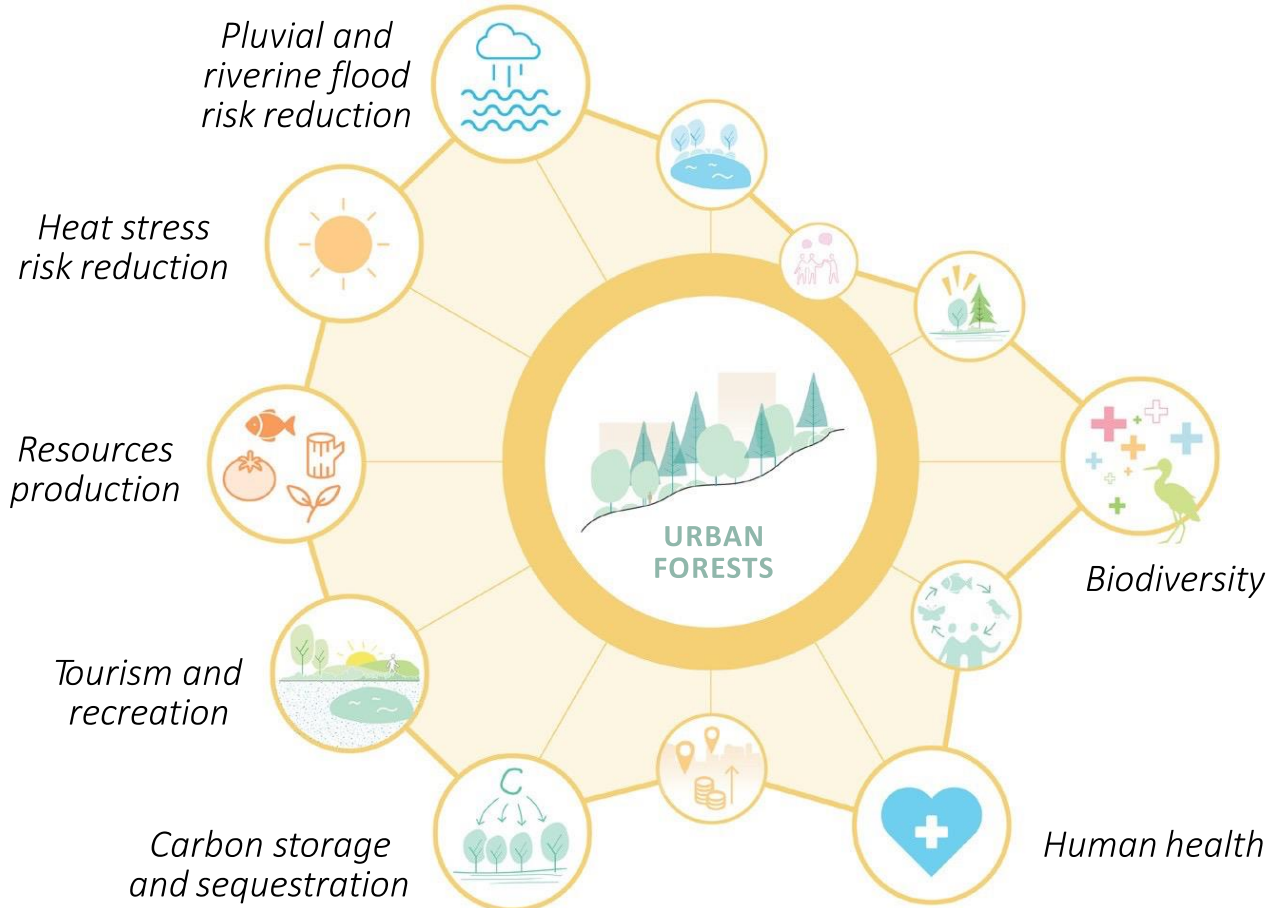
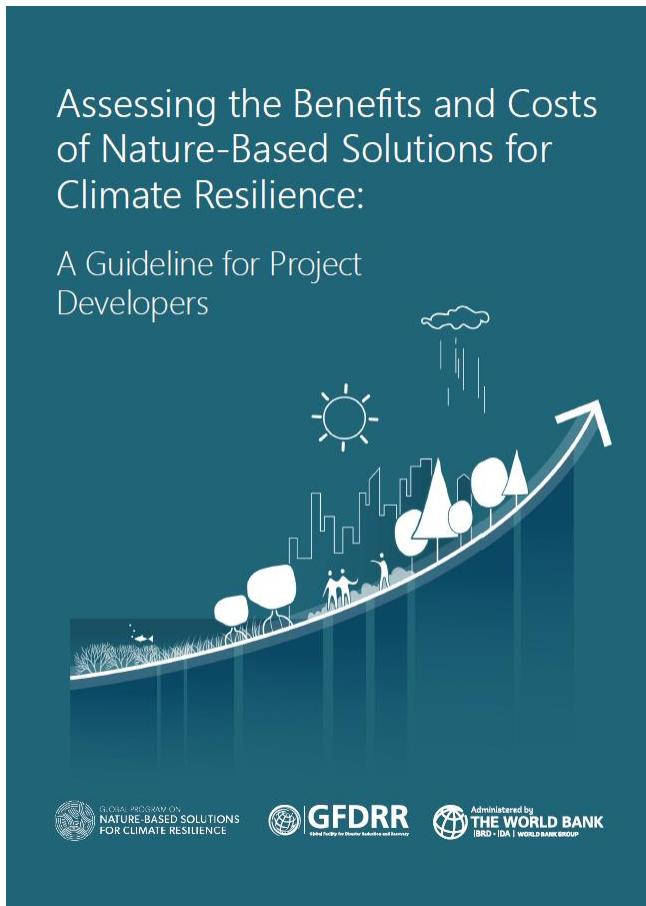


GREEN CORRIDORS EXAMPLE

Green Corridors Project, Medellin, Colombia
 Created 36 green corridors with 8,800 trees planted

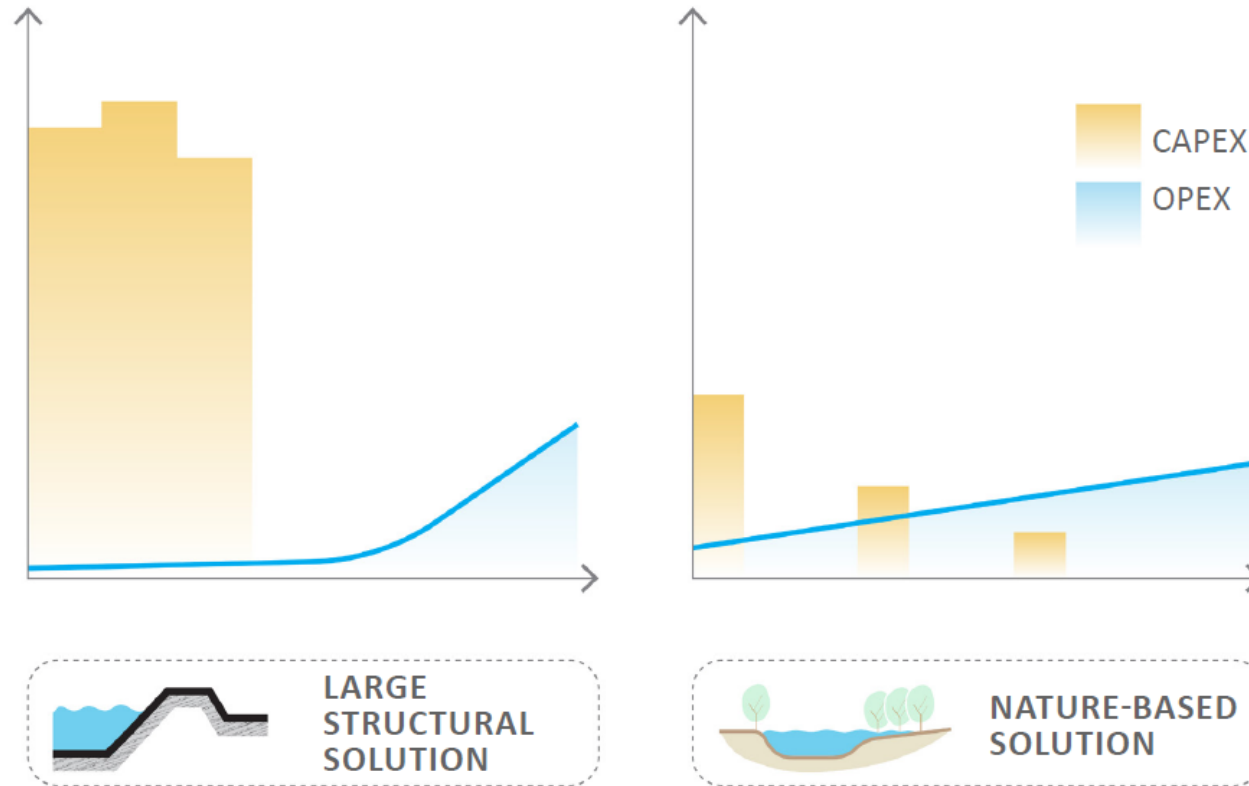
- Hazards mitigated:
 - Runoff reduction
 - 2 °C cooler on average
- Co-benefits
 - Better health outcomes
 - More recreation
 - 75 locals hired
- \$16 million investment
- Projected 10-year benefits: \$136 million

THE ECONOMIC CASE OF NBS FOR CLIMATE RESILIENCE



<https://bit.ly/abcnbs>

COST OF NBS AND GRAY INFRASTRUCTURE OVER TIME



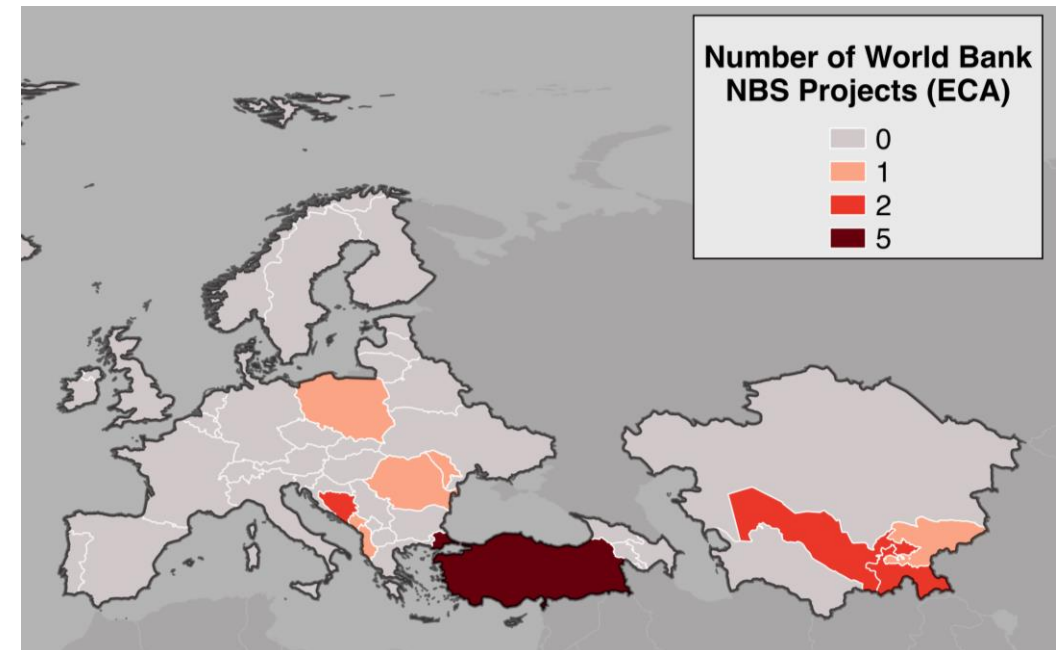
INFORMING NBS INVESTMENT THROUGH **GRANTS AND OPERATIONAL SUPPORT**

From FY 12-23, the **World Bank approved 16 projects in Europe and Central Asia (ECA)**. These projects have a net commitment for projects components containing NBS of US\$655 million.

GFDRR provides grants to support clients and World Bank teams with NBS investment identification and project preparation.

Since 2020, **\$3.6M has been allocated in ECA GFDRR grants that include NBS**

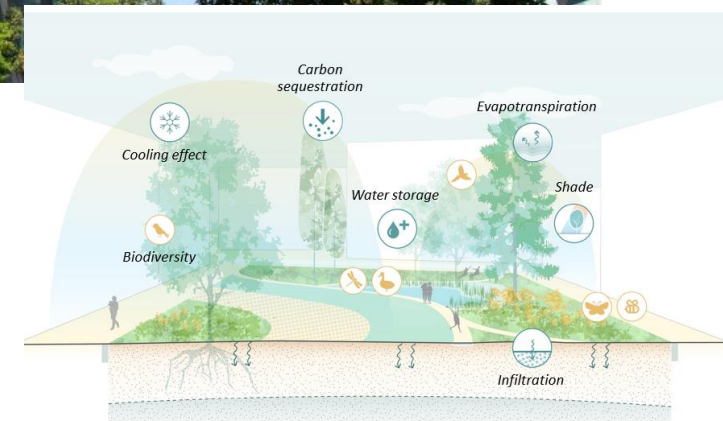
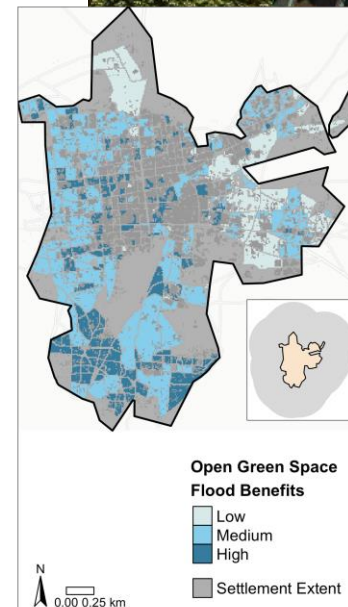
NBS support could also be leveraged through TAFF - <https://www.gfdr.org/en/taff>



IMPACT THROUGH INVESTMENT OPPORTUNITY MAPPING

The NBS Opportunity Scan has attracted interest from **several European partners** to find opportunity areas for investing in NBS for climate resilience and adaptation.

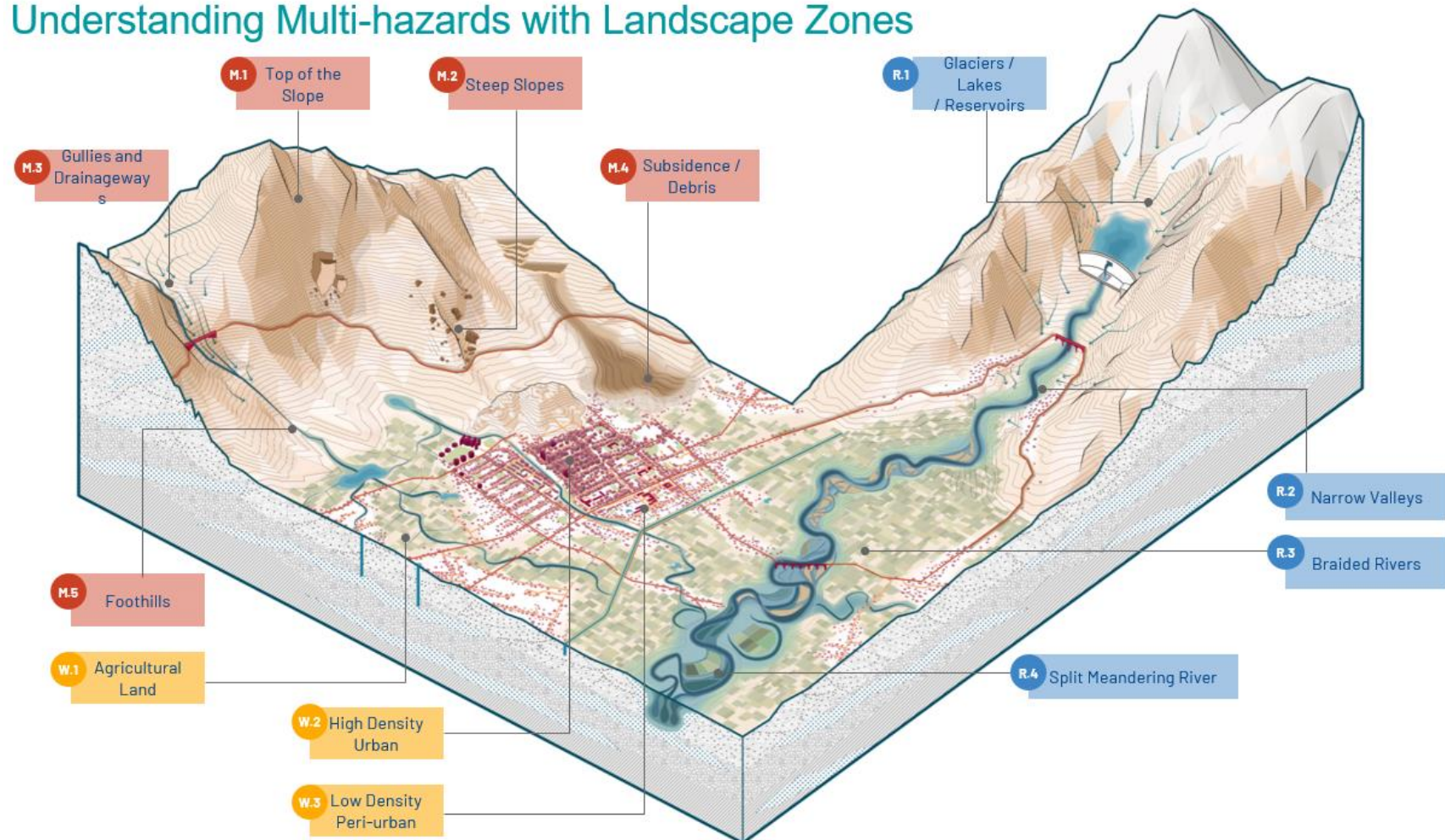
GFDRR, ESA and the Covenant of Mayors are exploring application of the NBSOS methodology in a group of EU cities.



IMPACT THROUGH ANALYTICS AND KNOWLEDGE

Supported by the government of Austria, **GFDRR is conducting a Regional study on NBS investment priorities** in Central Asia and the Caucasus

Understanding Multi-hazards with Landscape Zones



IMPACT THROUGH **CAPACITY BUILDING**

Capacity in government and implementation agencies is critical for effective NBS policy and investment

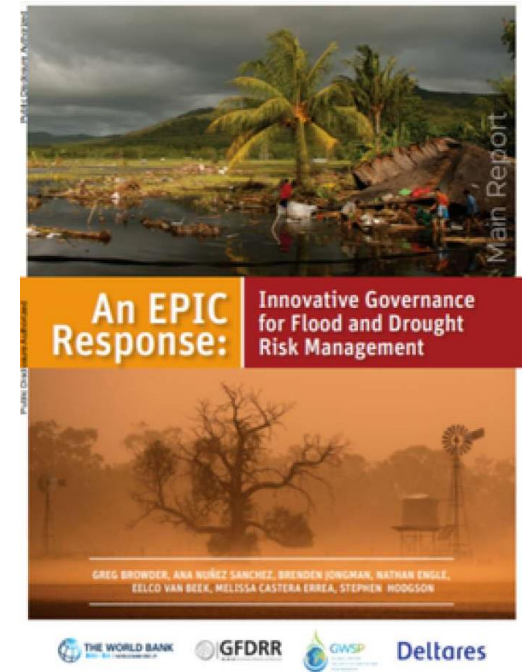
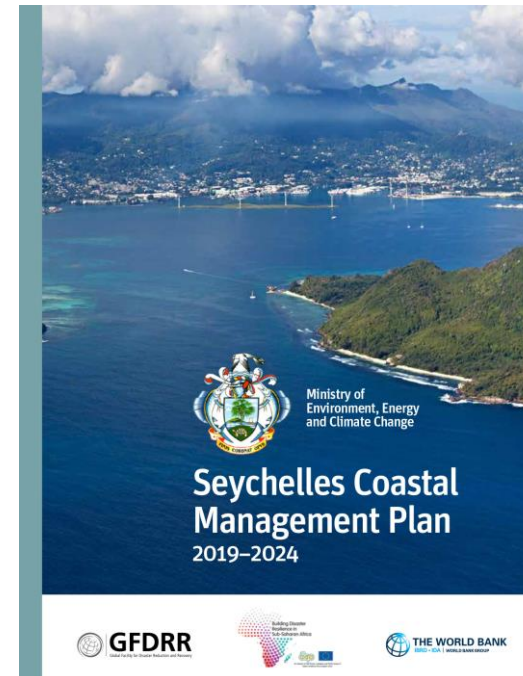
In September, **GFDRR and the World Bank** convened 35 government representatives from 6 countries in Innsbruck to learn from European experience with NBS in mountainous areas.



IMPACT THROUGH INTEGRATING **NBS IN CLIMATE AND NATURE POLICIES**

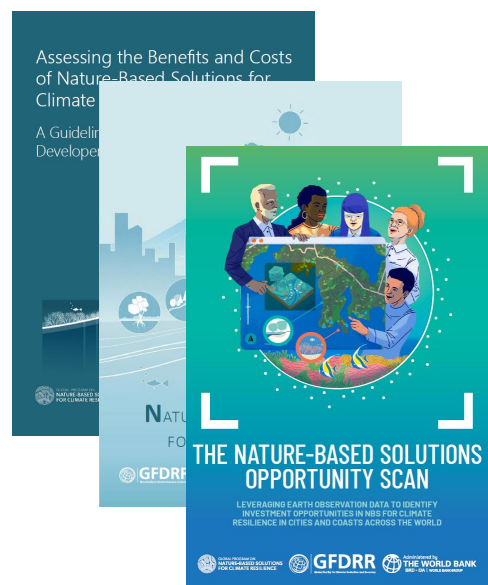
GFDRR helps integrate NBS into climate, nature, and sectoral policies.

Strong policies are key for the systematic linkage of nature and climate resilience.



HARNESSING EUROPEAN KNOWLEDGE AND EXPERTISE

Knowledge



Operational support



Horizon 2020
European Union funding
for Research & Innovation



RESALLIANCE



Deltares



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