Cities 4 Forests

A City-Led Movement to Protect Forests and Nature for Human Well-Being

Presentation to 2021-22 International Mayors Forum

Cities4Forests: A City-led Movement to Protect Forests across Three Scales

81 member cities…and growing

Cities4Forests is also endorsed by the **Association of County Governments of Kenya**, the **Brazilian National Front of Mayors**, and the **Mexican States of Guanajuato** and **Jalisco**.

Political Action & Engagement

- Building political support (untapped voices of Mayors)
- Resident engagement
- Sparking a global movement of cities

Technical Assistance & Capacity Building

- Policy and planning
- Mapping, measuring, and monitoring
- Leveraging new technologies

Economics, Finance, & Investment

- Economic analysis
- Enhancing project bankability and pipeline buildout
- Facilitating access to all forms of capital

Cities4Forests


Cities 4 Forests
CALL TO ACTION ON FORESTS & CLIMATE
“We call on governments, companies, and financial institutions to urgently ramp up policies and investments to support forest conservation, restoration, and sustainable forest management.”
wri.org/cities4forests/call-to-action
Photo by Joel Danielson/Unsplash

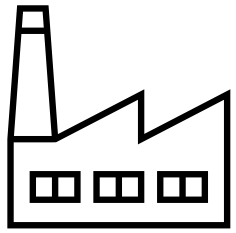
A City-Led Call to Action on Forests & Climate

We—signatories to the Cities4Forests Declaration and allied cities—are the leaders of more than 50 major cities on six continents. The COVID-19 pandemic has reminded us of our interdependence with nature, that what happens in one place affects other places, the importance of adaptation and resilience, and the value of long-term planning. These reminders apply to our relationship to forests, as well.

Therefore, we respectfully call on governments, companies, and financial institutions to urgently ramp up policies and investments to support forest conservation, restoration, and sustainable forest management.

Governments

Policies to better protect, restore, and manage forests



Companies

Prioritize investment in forests and avoid financing deforestation

Financial Institutions

Support forests and ensure supply chains are deforestation-free

Call to Action on Forests & Climate Signatories

1. **Rosario**, Argentina
2. **Campinas**, Brazil
3. **Extrema**, Brazil
4. **Palmas**, Brazil
5. **Salvador**, Brazil
6. **São Paulo**, Brazil
7. **Montréal**, Canada
8. **Victoria**, Canada
9. **Bogotá**, Colombia
10. **Barranquilla**, Colombia
11. **Cali**, Colombia
12. **Cartagena**, Colombia
13. **Medellin**, Colombia
14. **Yopal**, Colombia
15. **Quito**, Ecuador
16. **Hawassa**, Ethiopia
17. **Paris**, France
18. **Accra**, Ghana
19. **Effia-Kwesimintsim District**, Ghana
20. **Kumasi**, Ghana
21. **Sekondi-Takoradi**, Ghana
22. **Kaloum / Conakry**, Guinea
23. **Georgetown**, Guyana
24. **Kochi**, India
25. **Mumbai**, India
26. **Jakarta**, Indonesia
27. **Jayapura**, Indonesia
28. **Semarang**, Indonesia
29. **Fianarantsoa**, Madagascar
30. **Guadalajara**, Mexico
31. **Hermosillo**, Mexico
32. **Mérida**, Mexico
33. **Mexico City**, Mexico
34. **Nogales**, Mexico
35. **Xalapa**, Mexico
36. **Oslo**, Norway
37. **Port Moresby**, Papua New Guinea
38. **Brazzaville**, Republic of Congo
39. **Musanze District**, Rwanda
40. **Glasgow**, Scotland
41. **Freetown**, Sierra Leone
42. **Antalya**, Turkey
43. **Mersin**, Turkey
44. **Ann Arbor**, USA
45. **Brooklyn** (New York City), USA
46. **Eugene**, USA
47. **Houston**, USA
48. **King County**, USA
49. **Little Rock**, USA
50. **North Little Rock**, USA
51. **Miami-Dade County**, USA
52. **Pittsburgh**, USA
53. **Philadelphia**, USA
54. **Salem** (OR), USA
55. **Salt Lake City**, USA
56. **San Francisco**, USA
57. **San Jose**, USA
58. **Seattle**, USA


wri.org/cities4forests/call-to-action

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GFDRR
Global Facility for Disaster Reduction and Recovery

NATURE-BASED SOLUTIONS FOR FLOOD & STORMWATER MITIGATION

Photo credit: Flickr/ Cesar Garza

MANY TERMS FOR “NATURE-BASED SOLUTIONS”

Source: Cohen-Shacham et al. 2016; UNEP et al. 2014; EC 2015; Lo 2016; WWF 2017; USACE n.d.; EcoShape 2018; WBCSD 2017

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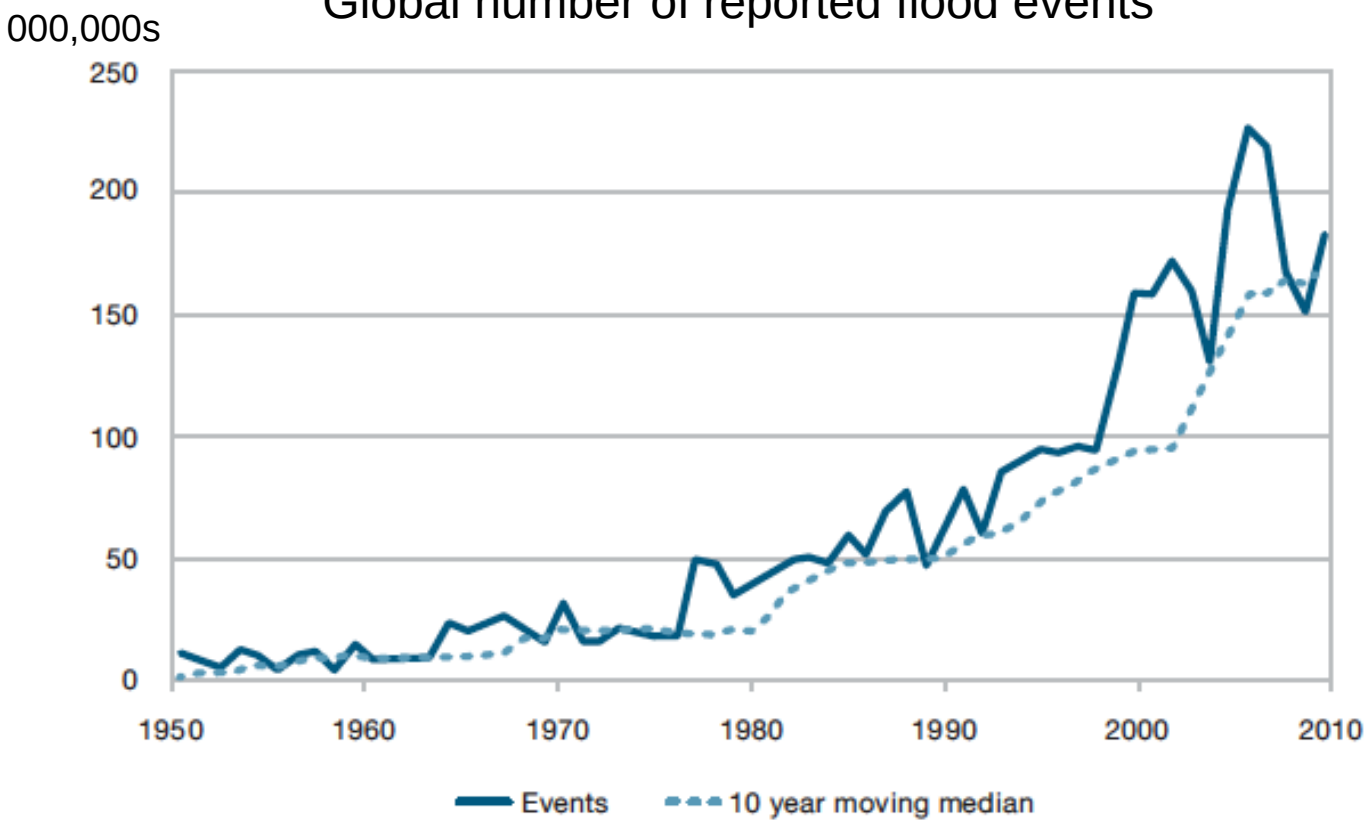
INCREASING URBAN FLOOD RISK

- Urban flooding is **a serious and growing development challenge**.
- **Urbanization** and **climate change** pose significant threats for urban flooding and water quality.

Global number of reported flood events



Source: Jha, et al. 2012

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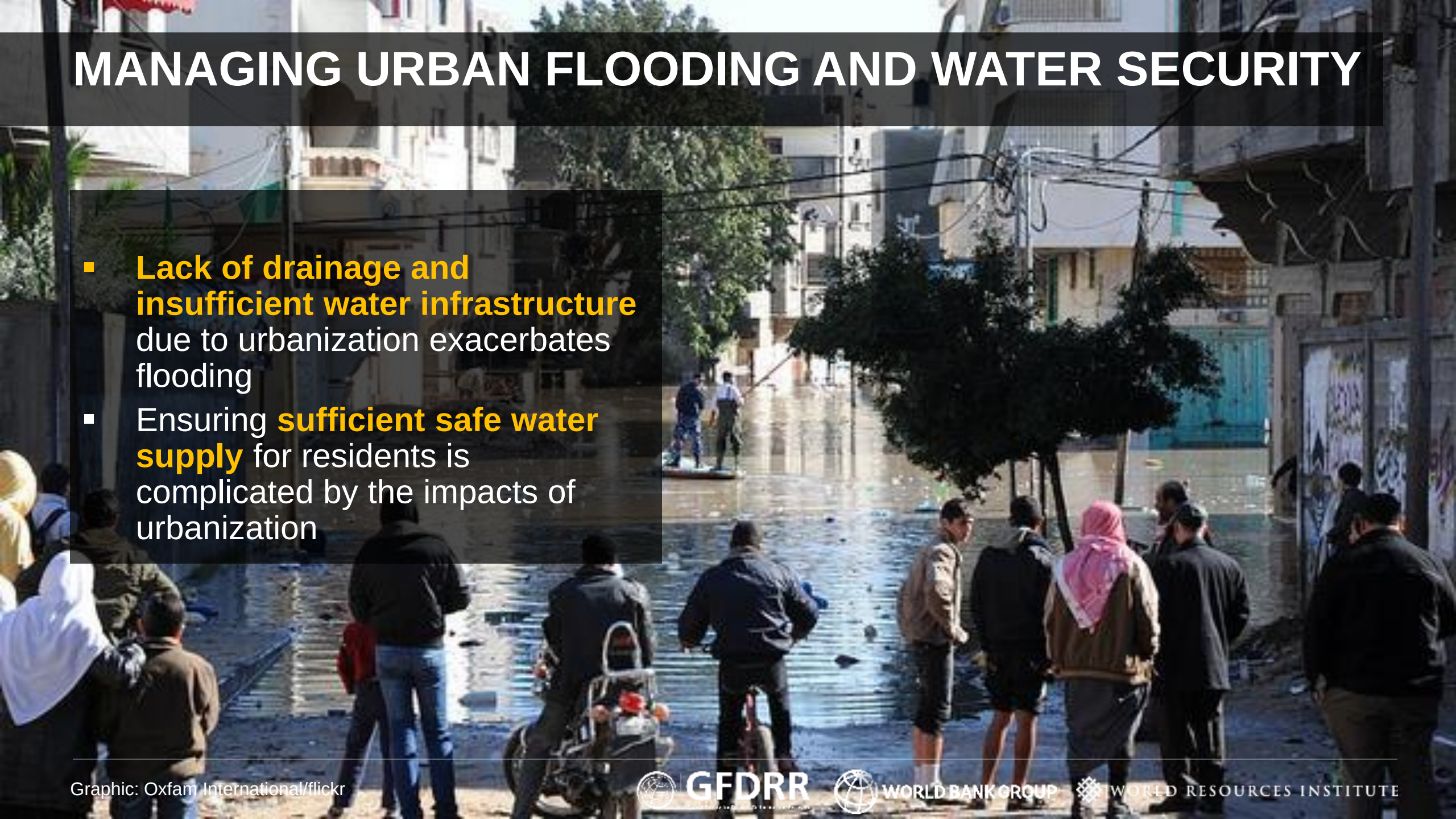
MANAGING URBAN FLOODING AND WATER SECURITY

- **Lack of drainage and insufficient water infrastructure** due to urbanization exacerbates flooding
- Ensuring **sufficient safe water supply** for residents is complicated by the impacts of urbanization



Graphic: Oxfam International/flickr

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COSTLY CONSEQUENCES

- Urban flooding challenges **development, lives, and livelihoods**
- Poor populations suffer **disproportionately**

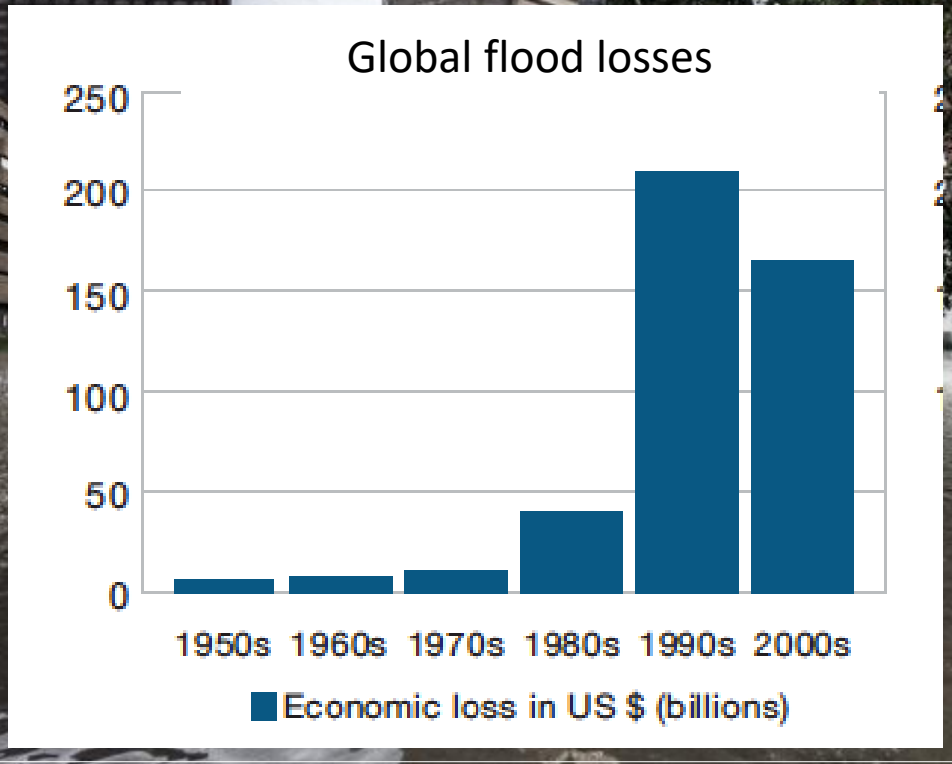

Photo credit: Wikipedia Commons; Graphic: Jha et al. 2012

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STRUCTURAL STRATEGIES

	Nature-based Solutions (NBS)	
Built	**Hybrid**	**Natural**
Hard, gray, engineered structures built to address development objectives	Combination of ecosystem elements and hard engineering interventions for addressing development objectives	Creation, protection or restoration of only ecosystem elements for addressing development objectives

Source: World Bank 2017

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CONVENTIONAL: 'BUILT' INFRASTRUCTURE

Examples: Pipes, combined sewers, treatment plants, curbs, gutters, channeled rivers, etc.

- Designed to **quickly move stormwater away** from urban centers and **treat polluted water**
- Massive need for global investment in flood infrastructure - even more than in **energy and transport.**

Photo credit: Flickr/darkday

NATURE BASED SOLUTIONS (NBS)

- Established to **slow and attenuate runoff** and **filter pollutants**
- Includes both **natural and hybrid solutions**

Examples: Greenspaces, constructed wetlands, bioswales, green roofs, and permeable pavements

Photo credit: Flickr/Center for Neighborhood Technology

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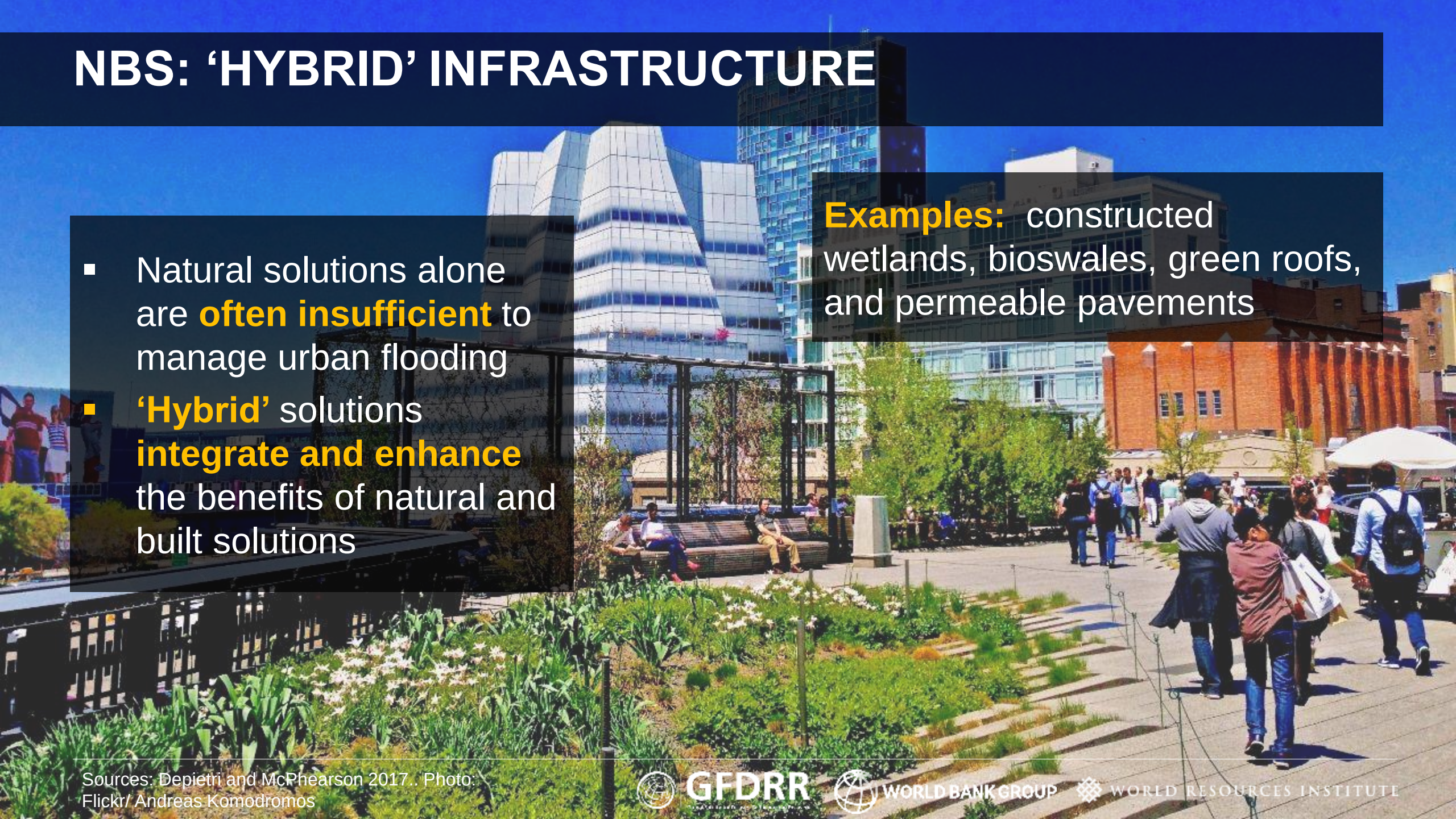
NBS: ‘HYBRID’ INFRASTRUCTURE

- Natural solutions alone are **often insufficient** to manage urban flooding
- **‘Hybrid’** solutions **integrate and enhance** the benefits of natural and built solutions

Examples: constructed wetlands, bioswales, green roofs, and permeable pavements



Sources: Depietri and McPhearson 2017.. Photo: Flickr/ Andreas Komodromos

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NBS FOR URBAN AREAS

1. Green Roofs
2. Permeable Pavement
3. Open spaces and waterbodies
4. Restored or constructed wetlands
5. Bioretention areas

Image source: Flickr / Joan

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ADVANTAGES OF NATURE-BASED SOLUTIONS

- **Improves** water management
- Can be more **cost-effective**
- Provide **wide range of additional co-benefits** to cities, beyond flood risk reduction
- Can be designed as **resilient, flexible, climate adaptation measures**
- Contributes to a **green recovery**

Photo credit: Flickr/Payton Chung

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IMPLEMENTING NBS

Key steps:

- Identify suitable options during planning
- Analyze the feasibility during design
- Engage communities
- Integrate NBS with traditional measures
- Construct and operate
- Monitor and evaluate

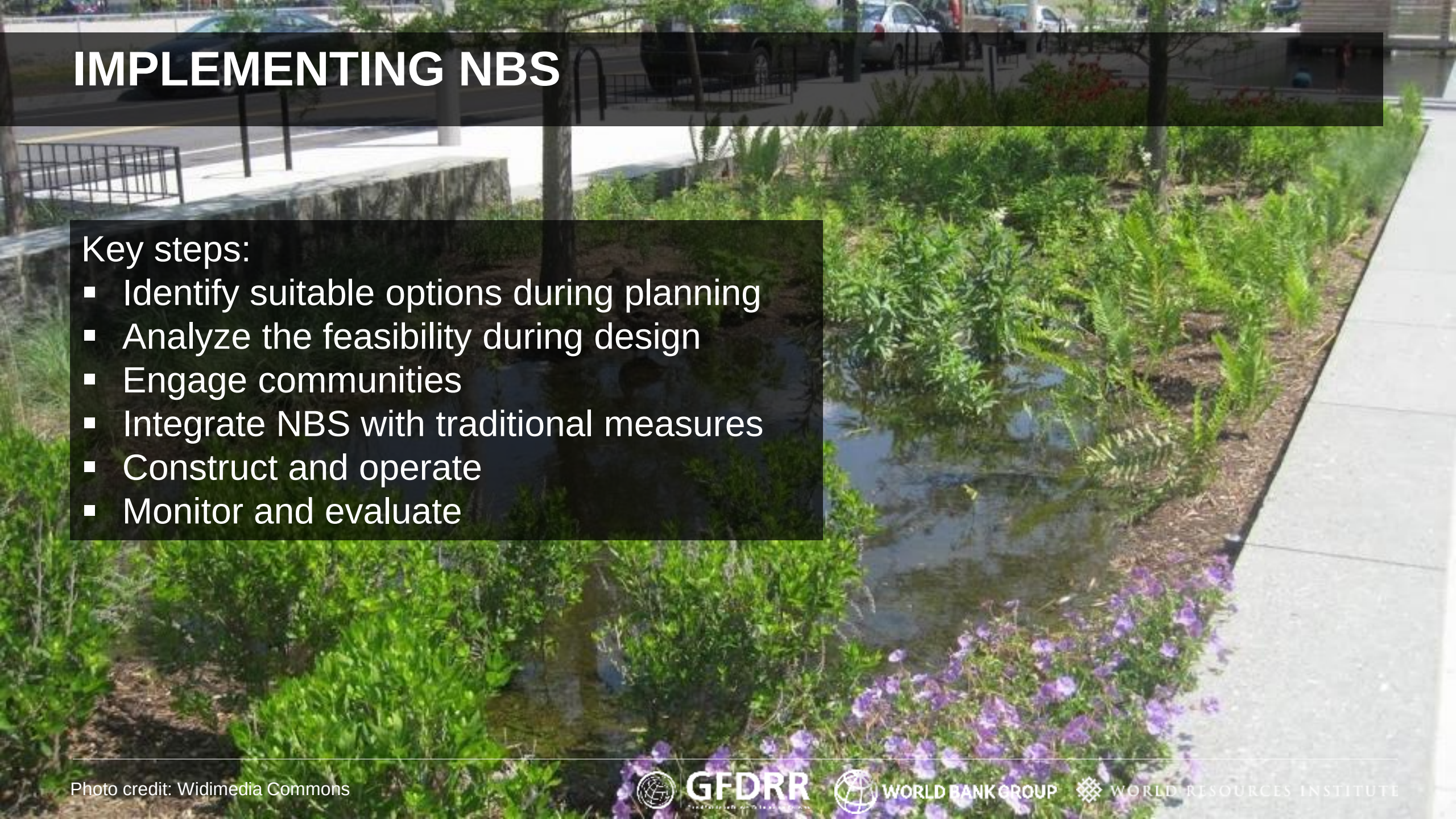

Photo credit: Widimedia Commons

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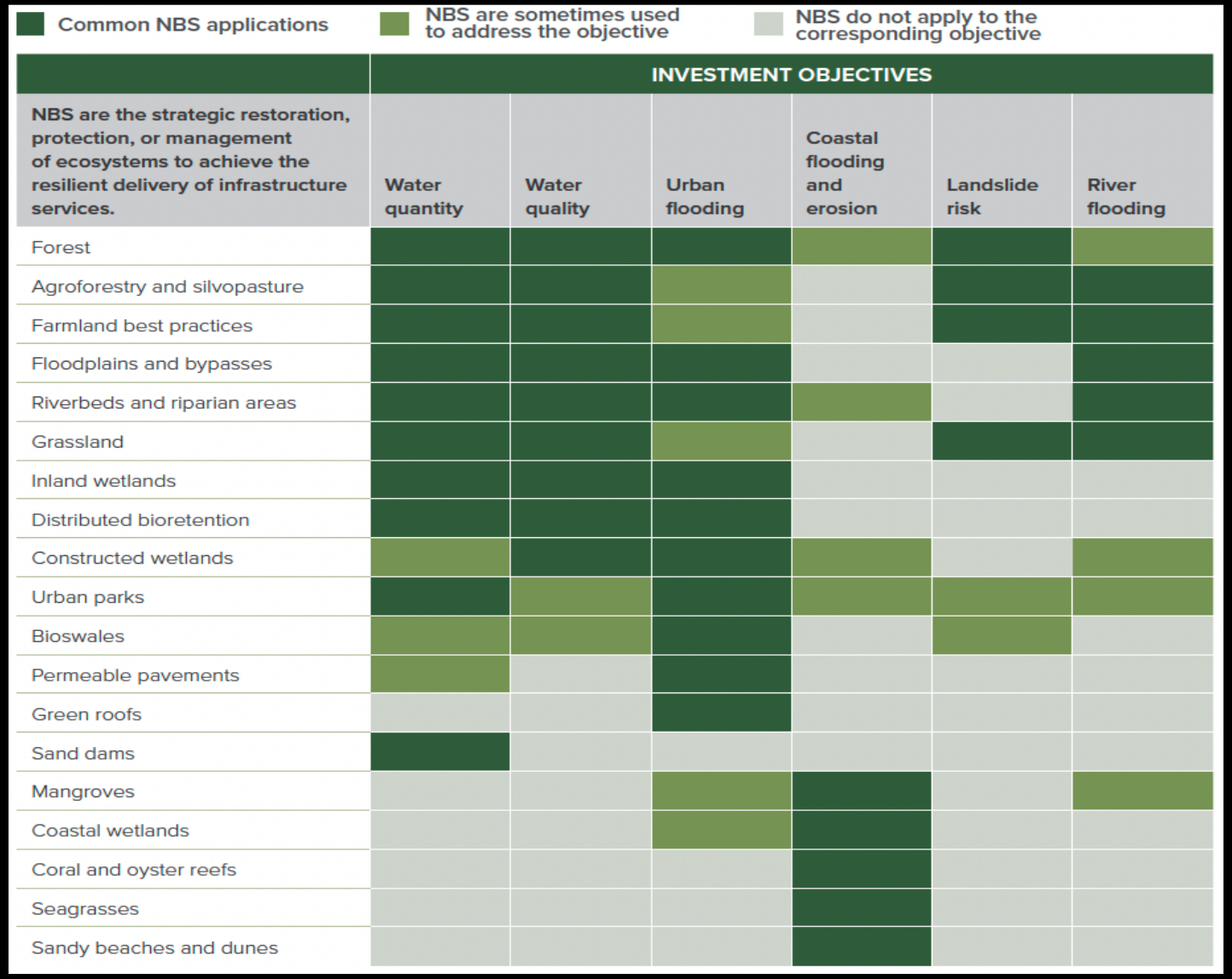
SELECTING AMONG NBS OPTIONS



	INVESTMENT OBJECTIVES					
NBS are the strategic restoration, protection, or management of ecosystems to achieve the resilient delivery of infrastructure services.	**Water quantity**	**Water quality**	**Urban flooding**	**Coastal flooding and erosion**	**Landslide risk**	**River flooding**
Forest	■	■	■	▒	■	▒
Agroforestry and silvopasture	■	■	▒		■	■
Farmland best practices	■	■	▒		■	■
Floodplains and bypasses	■	■	■			■
Riverbeds and riparian areas	■	■	■	▒		■
Grassland	■	■	▒		■	■
Inland wetlands	■	■	■			
Distributed bioretention	■	■	■			
Constructed wetlands	▒	■	■	▒		▒
Urban parks	■	▒	■	▒	▒	▒
Bioswales	▒	▒	■		▒	
Permeable pavements	▒		■			
Green roofs			■			
Sand dams	■					
Mangroves			▒	■		▒
Coastal wetlands			▒	■		
Coral and oyster reefs				■		
Seagrasses				■		
Sandy beaches and dunes				■		

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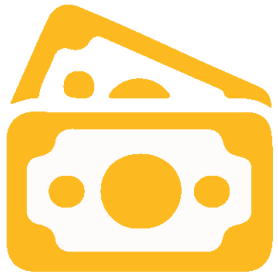
FEASIBILITY FACTORS

Technical

Social

Financial



Institutional

Legal

WORDS OF CAUTION

- **Appropriate use of NBS is highly context specific**, requiring careful evaluation, planning and design of project components
- **There are limits to how NBS can perform** in urban settings

Photo credit: WRI/James Anderson

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CHINA'S SPONGE CITIES – SHANGHAI GREEN ROOFS

- Utilizes many NBS, **including green roofs**
- By 2030, **80% of built area** in pilot cities will serve as a "sponge"
- **70% of stormwater runoff**
- Cost effective with **significant energy saving**
- Incentives and education

Photo credit: Flickr/kafka4prez

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Cities4Forests

Co-Founded by

PILOTPROJECTS
co-create a better world

REVOLVE

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