



# ENABLING CONDITIONS FOR NATURE-BASED SOLUTIONS: INSIGHTS FROM SOUTH KOREA

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# Outline

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- Water security challenges for Korea
- Benefits of nature based solutions (NBS)
- Barriers to investment in NBS
- Scaling up financing for NBS





# Challenges for Korea

## 1. Water risks

- Water-scarce, with high variability across seasons and regions
- High flood risks
- Diffuse water pollution (predominantly from livestock agriculture)
- Degradation of freshwater ecosystems



## 2. Infrastructure trends

- High reliance on engineered/grey infrastructure to manage water risks
- Poor performance of WSS infrastructure (high leakage)
- Need for adaptation to population, lifestyle and climate changes
- Low WSS tariffs, and abstraction and pollution charges



## 3. Institutional trends

- Centralised and fragmented governance system
- Limited stakeholder engagement
- Lack of trust in water supply





# Water management in Korea at a turning point

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- Ambition to implement a new paradigm
  - Demand management (economic instruments, water allocation regimes)
  - Nature-based solutions
  - Governance arrangements that support these instruments
    - national reform
    - basin-level governance
    - stakeholder engagement



# Advantages of NBS

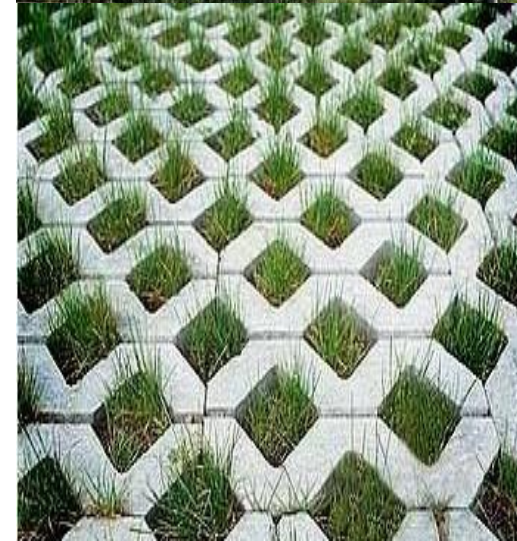
- Less capital intensive
- Lower operation, maintenance and replacement costs
- Avoid lock-in issues associated with grey infrastructure
- Appreciate in value over time
- Improves risk management and resilience, synergies in reducing multiple risks
- Prevent or postpone the cost of building or extending grey infrastructure





# Barriers to diffusion of NBS

- Many benefits not easily monetised; undermining potential revenue flows
- Regulations, funding mechanisms and lock-in failures tend to favour grey infrastructures
- Lack of data (e.g. on river flows), of track record and analytical tools
- Lack of policy coherence
- Silo institutional arrangements
- Retrofitting and space





# Eau de Paris, France

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## Enabling conditions

- Economic valuation; recognition of co-benefits
- Cost avoidance compared to additional investment in conventional treatment infrastructure
- Long-term perspective; time (patience) for benefits to appear
- Political support
- Collaboration with willing local partners (farmers)



# Durham, North Carolina (USA)

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## Enabling conditions

- Dedicated policy instruments (fees, environmentally-related taxes), financial incentives
- Earmarked revenue streams
- Expanded options for capital investments (that include green infrastructure)
- Crowd sourced donations can be used for specific projects





# Summary of enabling conditions

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- Long-term perspective
  - Allow time for benefits to emerge
- Favourable cost-benefit assessment
  - Cost avoidance; cost savings compared to grey alternatives
  - Valuing co-benefits: amenity values, biodiversity, recreation
- Dedicated funding instruments
  - Tapping “green” bond markets
  - Earmarked revenues from beneficiaries
  - Transparency in use of proceeds
- Strong regulatory framework and governance structure
- Supportive local partners and stakeholder engagement



# Thank you

OECD country-specific policy dialogues on water

<http://www.oecd.org/water/country-policy-dialogues.htm>

OECD-WWC-Netherlands Roundtable on Financing Water

<http://www.oecd.org/water/roundtable-on-financing-water.htm>

