

Case studies and Lessons Learned in

# Financing Nature-based Solutions

Brussels, 04/04/2025

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# Presenting the Speakers



**Viviane Cavalcanti** works in the the NBS incubator with Team Europe, She's a Climate Adaptation Finance Advisor at Deltares, a Dutch Applied Research Institute with experience in developing strategies for climate-resilient infrastructure and NbS worldwide. She has experience working in Africa, Asia, LATAM and Europe.



**Hein Gietema** is a strategic and finance expert in the Water Facility. He structured multiple innovative funds including Climate Investor Two, Kenya Innovative Finance Facility for Water, Watershed Investment Funds, Water as Leverage (NL) as well as Water Finance Facility/Blue Bonds.



**Walid Fayad** is a Sustainable finance expert in the Biodiversity for Life 2.0 Facility. He's a Biodiversity Finance, Green Finance and Climate Risk expert, with 20+ years of experience in finance and investments, including at EBRD and IFC.

# Wyre Natural Flood Management project

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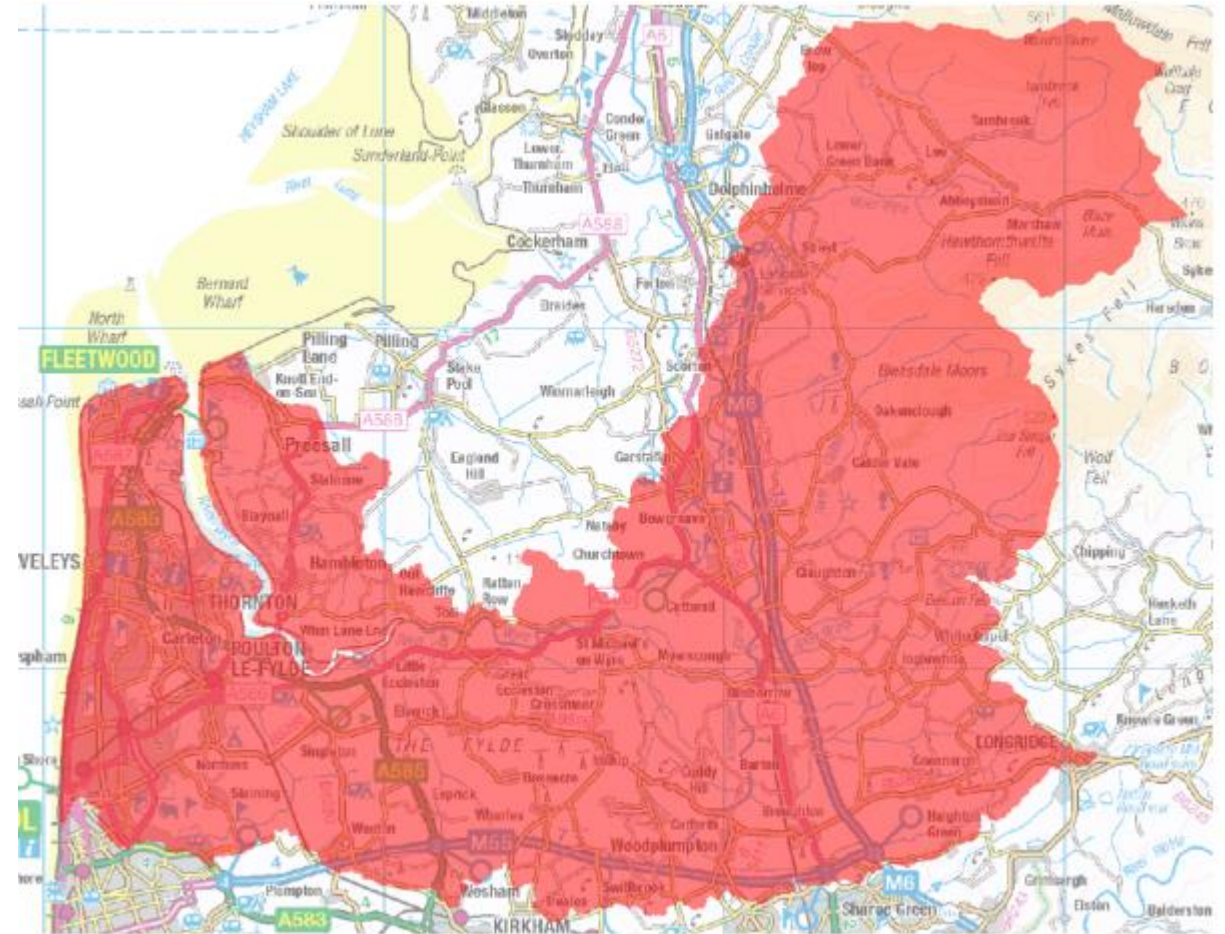


What type of financing models and instruments for NbS can you think of?



# Wyre Natural Flood Management project explained

- The Wyre catchment is located in Lancashire, UK and covers 447+ km<sup>2</sup>.
- The communities of the Wyre catchment have been subject to serious flooding events for as long as they have been present.
- The project was initiated and led by the Wyre Rivers Trust, in partnership with a coalition of organizations.
- It started in 2018 with delivery of interventions beginning in 2019, with a 9-year implementation schedule.
- The goal is to shift from traditional flood infrastructure to natural flood management



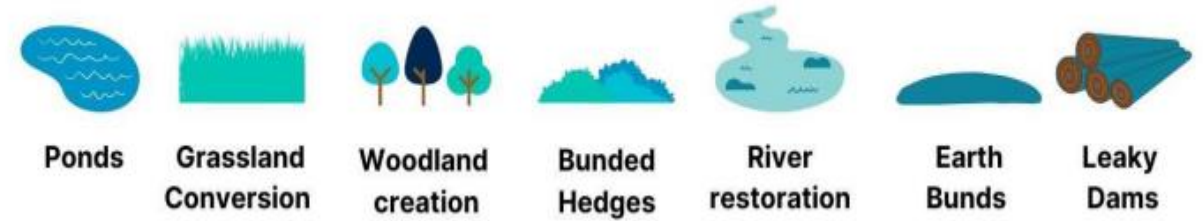
# Wyre Natural Flood Management project explained

It's a flood management project with mixed funds and financing mechanism aiming to:

- Implement NbS to reduce flood risk in the Wyre catchment
- Enhance ecosystem services such as, carbon sequestration, increased biodiversity and water quality.

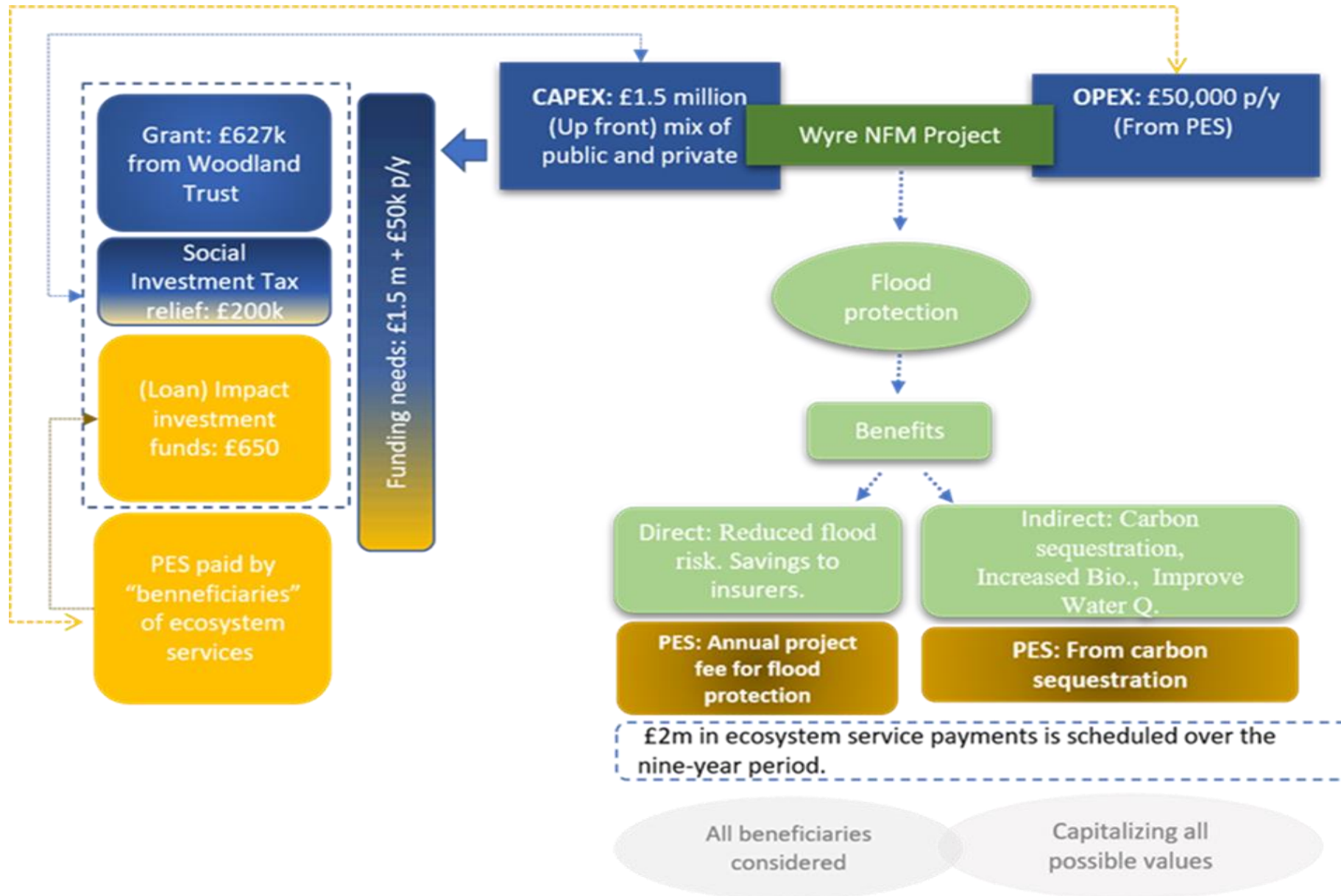
The project also engaged local landowners, farmers, and communities as essential stakeholders in delivery and long-term sustainability.

Key challenges lie in measuring the indirect benefits of NbS and carbon markets uncertainty.





# The Wyre NFM Financing Diagram



## Funding needs:

- \* 1,5 million pounds upfront investments
- \* 50 thousand pounds annually (recurring)

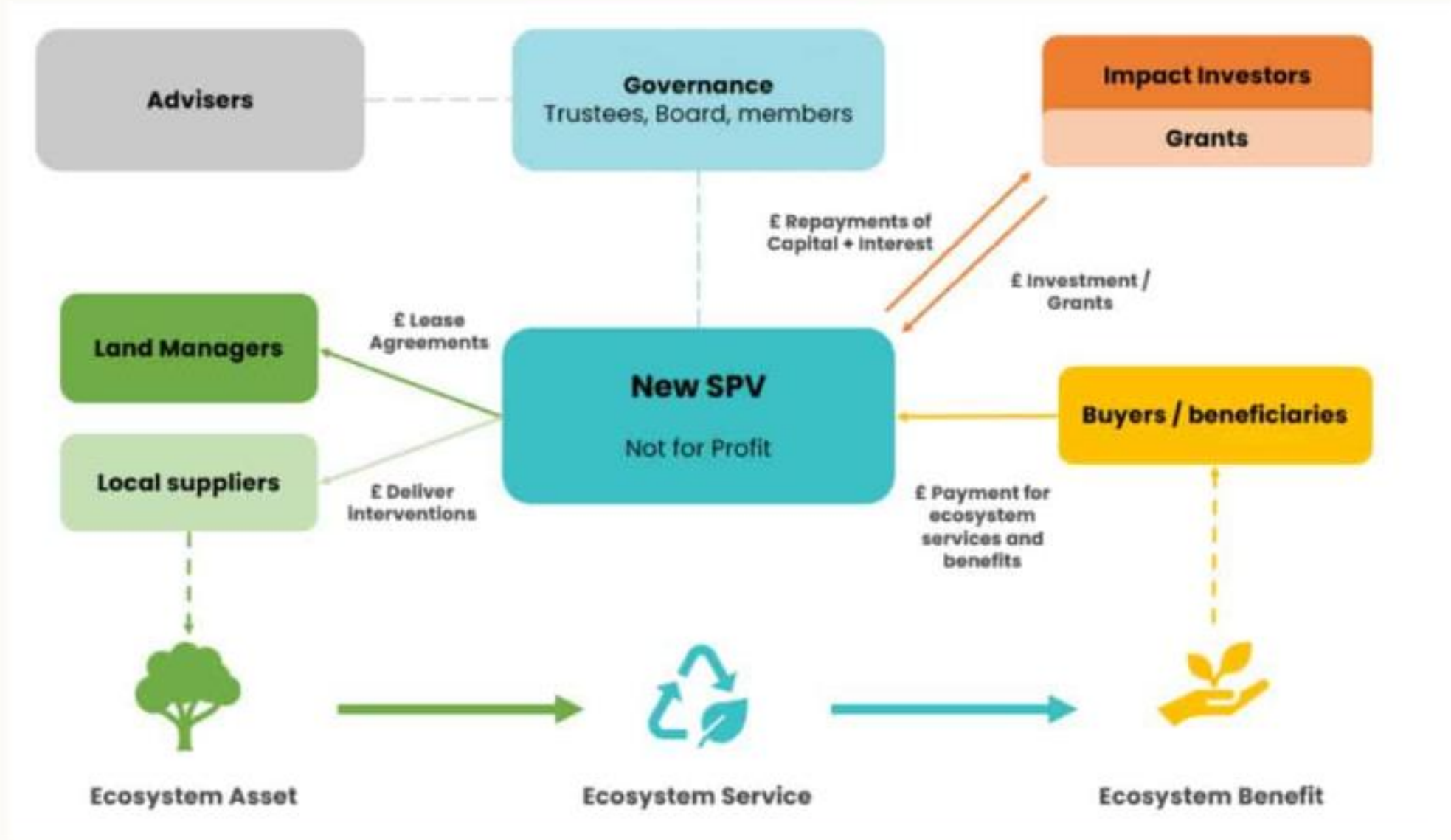
## Funding sources:

- \* Grants and social investment tax
- \* Loan from impact investment funds

## Revenue streams that generate financing

- \* PES from carbon sequestration
- \* PES from fee for flood protection

# The Wyre NFM Model explained



# Mangroves and Insurance in Vietnam



What are the benefits of mangroves?



# Mangroves as NbS for Coastal Protection

- Effective for coastal protection: reduction of exposure to hydro-meteorological hazards and coastal erosion (tropical cyclones, storm surges, wind-wave impacts).
- Prevention of more than €60 billion worth of flood-related damages/year worldwide
  - They lessen the damage to coastal communities, infrastructure, and agriculture (protection, improved rice tolerance to salinization)
- Restoration and conservation recommended to decrease future climate risks- CO<sub>2</sub> absorption (up to 10x more than mature tropical forests)
- **Vietnam:** Planting and rehabilitating mangroves along the Mekong Delta and Red River Delta coastline is a large project costing ~ €230 million
- IUCN: >50% of all mangrove ecosystems at risk of collapse by 2050



# Mangroves, Risk reduction & Insurance costs



## Reduced Physical Risk

Wind and storm surge causes ~€500bn and ~€2.75bn resp. in damages to agriculture and houses in **Vietnam**/year

Mangroves lead to lower Average Annual Loss (AAL)

Makes insurance coverage more feasible and affordable, as the residual risk is much lower

Mangrove = adaptation measure

**In Vietnam, \$1 spent on mangroves = \$9 saved in surge damage**



## Role of Insurance

Provides financing to communities post natural disaster

Most efficient for residual risk (losses remaining after adaptation)



## Impact of Lack of Adaptation

Insuring larger original risk would be prohibitive

Estimation of AAL reduction thanks to mangroves for **Vietnam**: 1.6x for wind and 58x (!) for storm surge

Mangroves + dikes + gabions eliminate surge damage to agriculture and homes from the most severe typhoons

# Funding the OPEX of Mangroves

- Positive Feedback Loop Thanks to Lower Risk and Reduced Insurance Costs
- Lower Insurance Premiums due to Lower Risks
  - Reduced risk leads to savings for insured entities like governments, businesses, and communities
- Reinvestment into Mangroves Ecosystems as OPEX
  - **Cost savings can be redirected to finance OPEX of maintaining and expanding mangrove ecosystems**
- Incentive for Financing Public-Private projects of conservation and restoration of mangroves.





# Restoration Insurance Service Company (RISCO)

- Problem of Underinsurance
  - Coastal communities are highly susceptible to weather-related disasters
  - Many communities lack adequate insurance coverage
  - Policies often do not cover climate risk
  - Communities struggle to recover after disaster
- Challenges Faced by Mangrove-Positive Businesses
  - Examples : Eco-tourism; Sustainable shrimp farming; seaweed; Beekeeping
  - Difficulty accessing commercial capital
  - Lack of technical knowledge



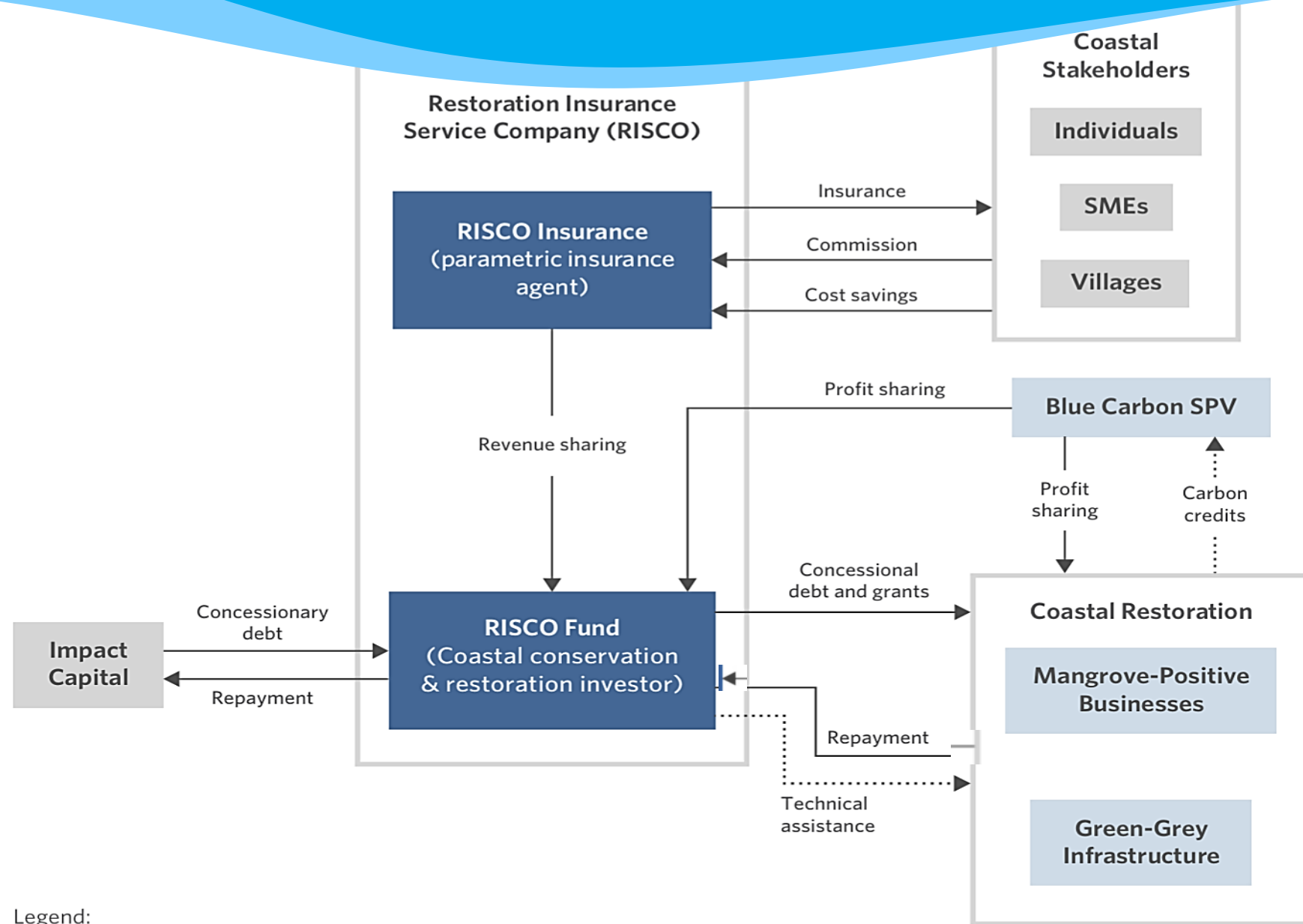




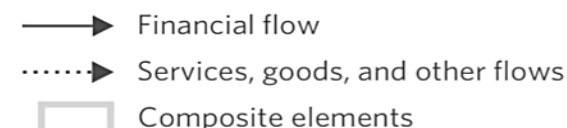
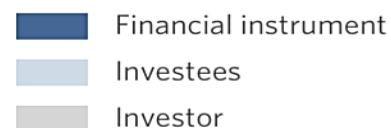
# Restoration Insurance Service Company (RISCO)

- RISCO
  - A social enterprise founded in 2024 with support from Conservation International
  - Pilot launched Philippines in 2021; plans to expand to India and Thailand
  - Aims to increase resilience of vulnerable coastal communities in Africa, Asia, and Latin America
- RISCO's Solutions
  - Provides insurance to Mangrove-Positive Businesses and Coastal Communities
  - Conservation efforts of mangrove
  - Loans to mangrove-positive businesses funded by impact investors
  - Support green-grey infrastructure
  - Issuance of blue carbon credits

# Multiple Revenue streams for funding the OPEX of Mangrove conservation



Legend:





# Watershed Investment Funds



Are you familiar with  
Water Investment  
Funds?





Can you name some  
examples of where Water  
Funds have been put to  
work?



# Watershed Investment Fund (1)

Independent watershed governance and funding model - no longer 'build/finance to neglect'

- Water funds are founded on the principle that it is cheaper to prevent water problems at the source than it is to address them further downstream.
- Investments in green infrastructure to trap sediment and regulate water using natural systems - water and land management, removing invasive species, replanting trees etc

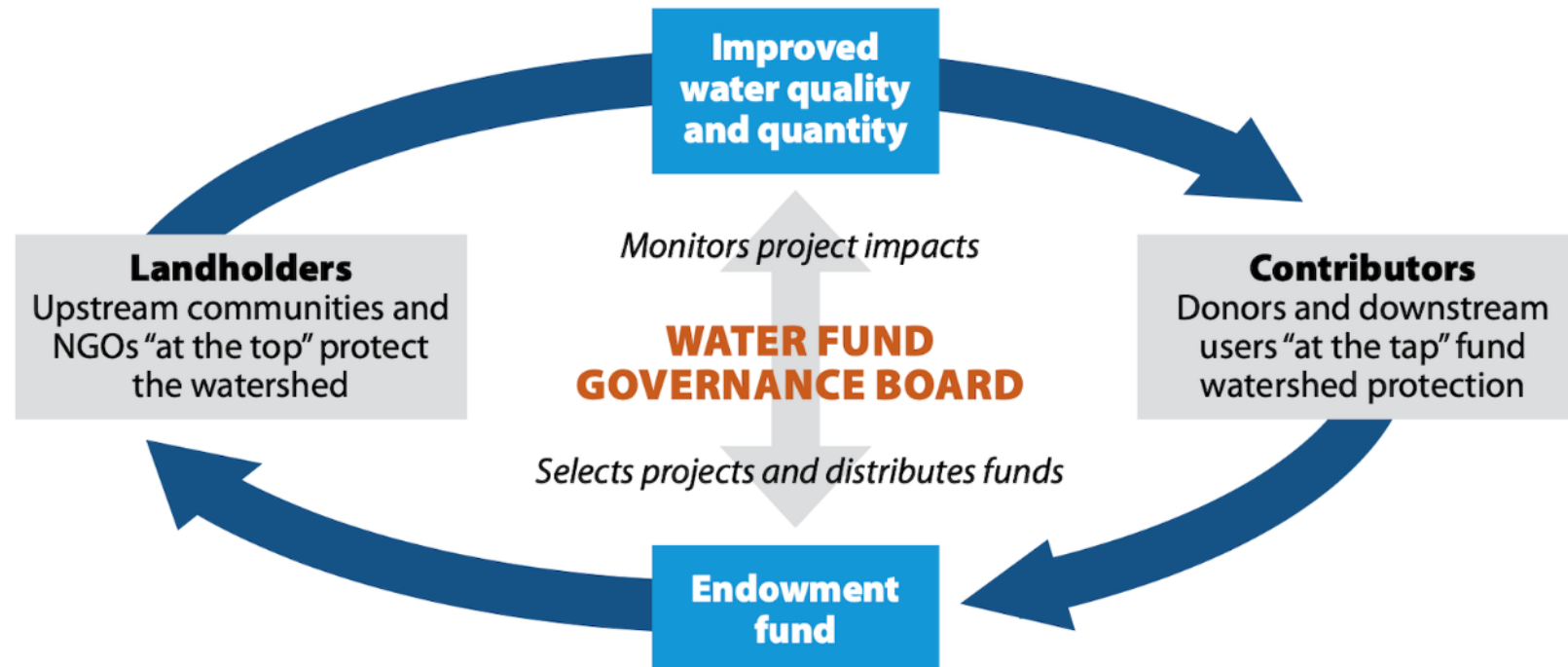
Watershed funds have **great track record**:

- **Major cities** including **Quito** (Ecuador), Rio de Janeiro (Brazil), New York (USA) and recently in **Africa**; Nairobi and **Cape Town**.
- **River basin**, e.g. the EU is now looking at the first **TWM** watershed investment fund, the **Cubango Okavango River Basin fund (CORB)**

# Watershed Investment Fund (2)

## Our goal

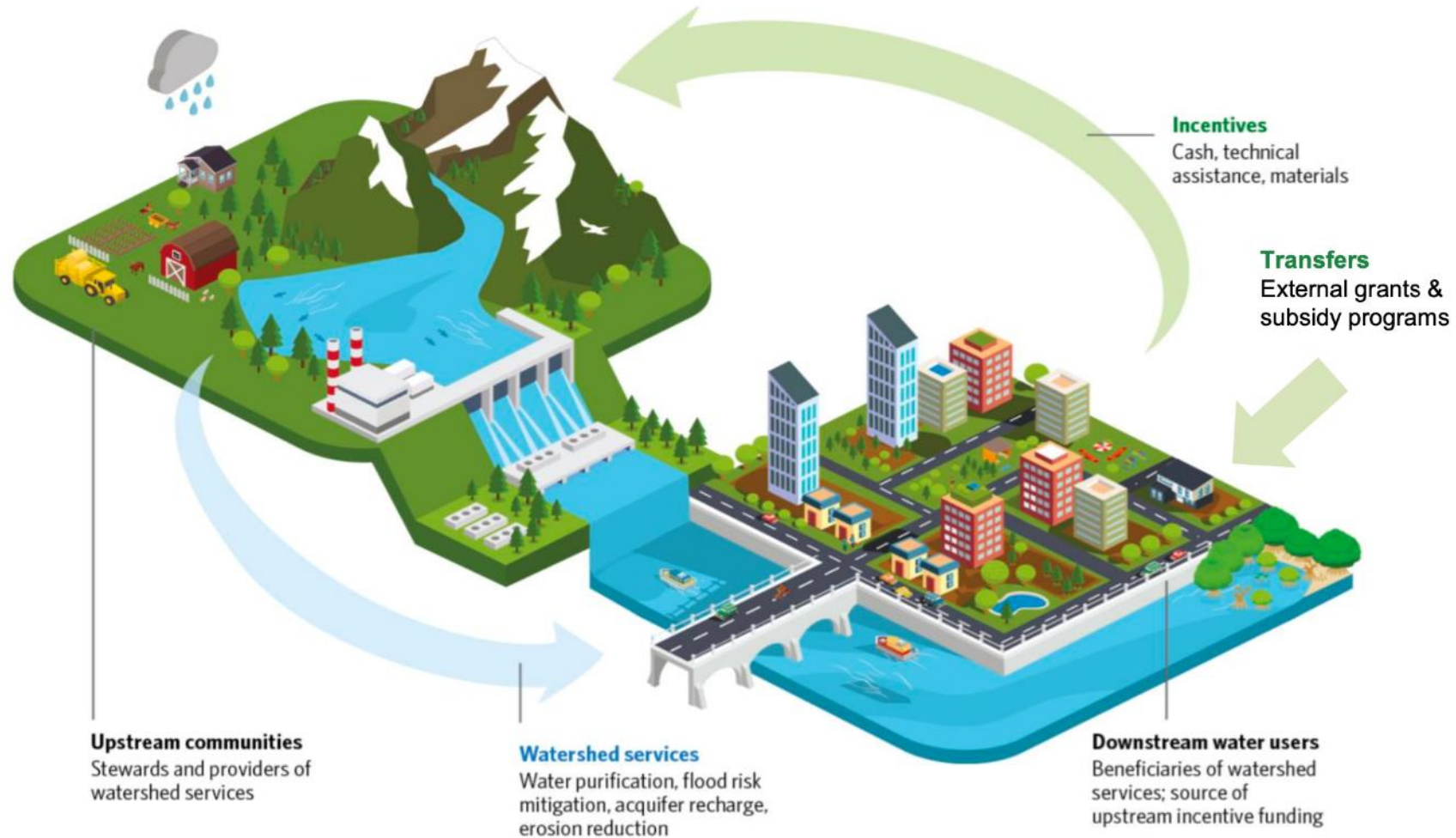
Harness nature's ability to capture, filter, store and deliver clean and reliable water



## Impact

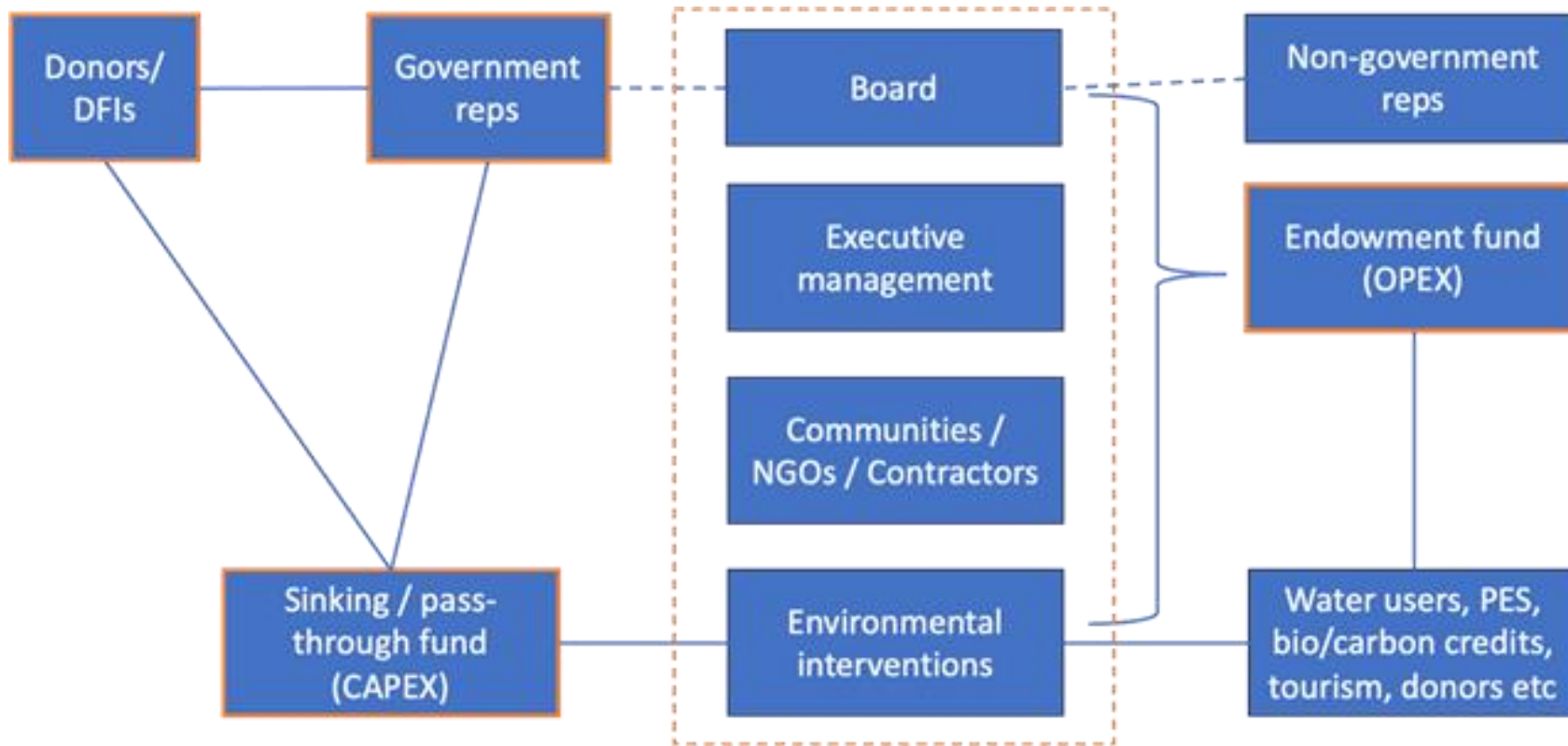
A cost-effective solution where the water supply is naturally replenished and filtered, and rural livelihoods are improved

# Watershed Investment Fund (3)





# Watershed Investment Fund (4)



*Please note that different models are feasible.*

*Core requirements:*

- *Transparent governance*
- *Sustainable funding*
- *Be investable*

# Lessons Learned

# Financing of NbS

Engage with financial institutions **before** investments



**Setting up dedicated funds or facilities** with diversified funding sources, mixing both conventional and innovative financial mechanism, and derisking solutions



NbS projects need 1) **TA**, 2) **funding** (concessional unless cost-savings thanks to NbS > grey alternatives), and 3) possibly even **equity** into projects.

**Cover OPEX in a sustainable manner thanks to:**

- **Revenue generation:** sustainable resource use and product revenues (timber, agriculture, fisheries), entry fees; ratepayers; ecotourism; selling insurance, collecting part of cost-savings (ESCO-like):
- **Innovative finance** (carbon and biodiversity markets, PES).
- **Dedicated endowment fund or Conservation Trust Fund.**
- **Concessional loans** (if needed - longer term and more sustainable than grants, thanks to lower repayments)
- **Taxes:** local levies; land-based financing; tax incentives; tax subsidies.
- ~~**Grants; philanthropy.**~~



But financing structures **do not need** to be complex!



# Involving the Private Sector

- Build cross-sectoral partnerships to reduce risks and maximise benefits.
- Direct corporate investment
- Participating in NbS can support a company's reputation, revenue and resilience.
- Data collection and disclosure reduce uncertainties for financial institutions and incentivise other investors.
- Monitoring and Evaluation; and Integrity.







# Role of the Public Sector

- Support mechanisms through technical assistance and blended finance.
  - Technical capacity: pre-feasibility studies; develop a project pipeline; improve NbS project preparation; concessional loans, and de-risking tools.
  - Blended finance: concessional loans, guarantee, first-loss cover, risk sharing, junior equity in funds, grants.
- Promote nature-related disclosures (TNFD) and the Natural Capital Protocol.
- Lead by example: prioritization NbS in budget planning and procurement tenders; as well as issue relevant policies and regulations.
- Knowledge dissemination
- The carrot and the stick.



Q & A

