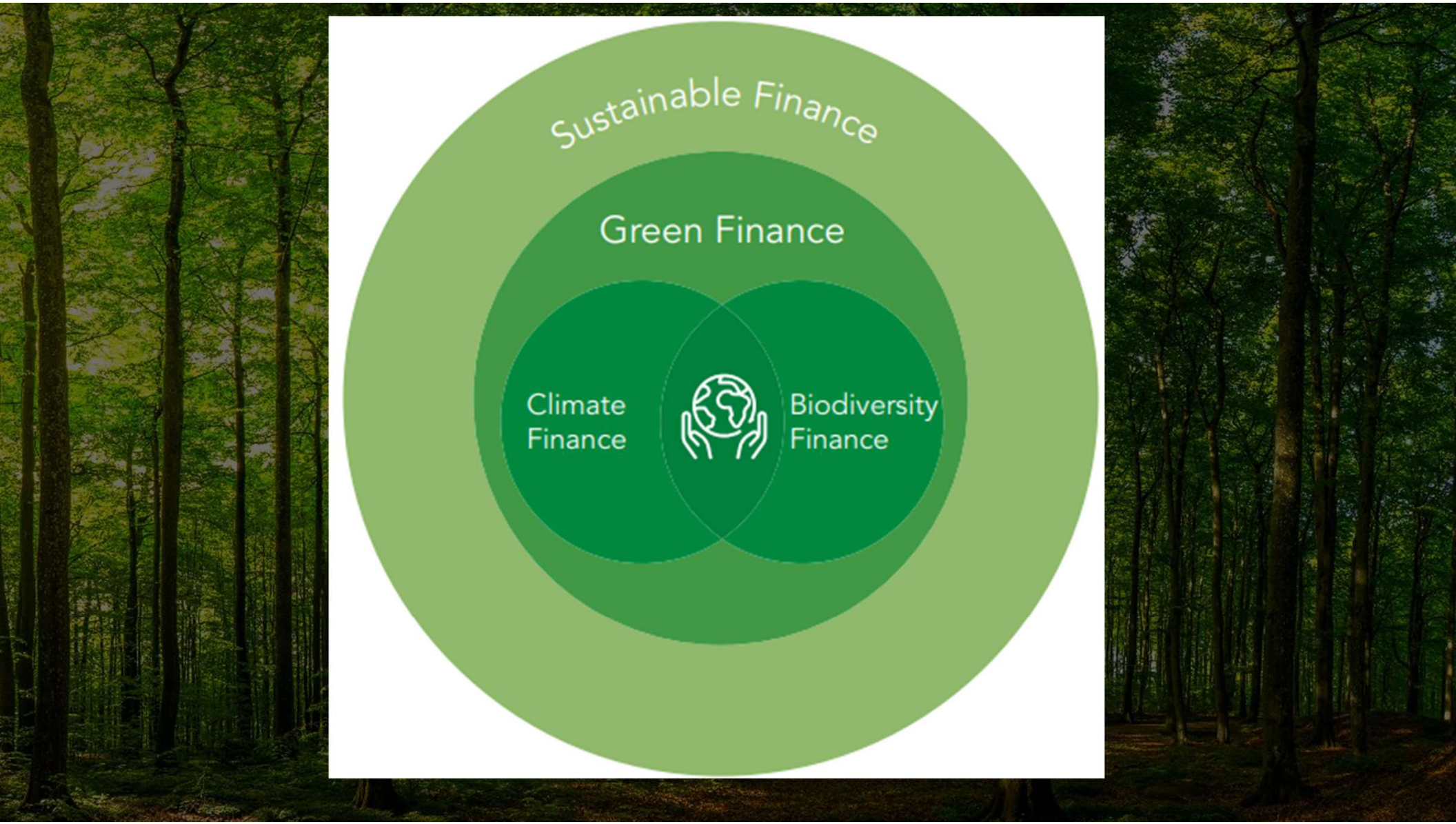
Scaling up Finance for Water and Nature

ANDRIUS SKARNULIS, WORLD BANK, 10 JULY 2024

INTRODUCTION


Which category is the broadest?
1. Nature finance
2. Biodiversity finance
3. Green finance
4. Water finance
5. Climate finance

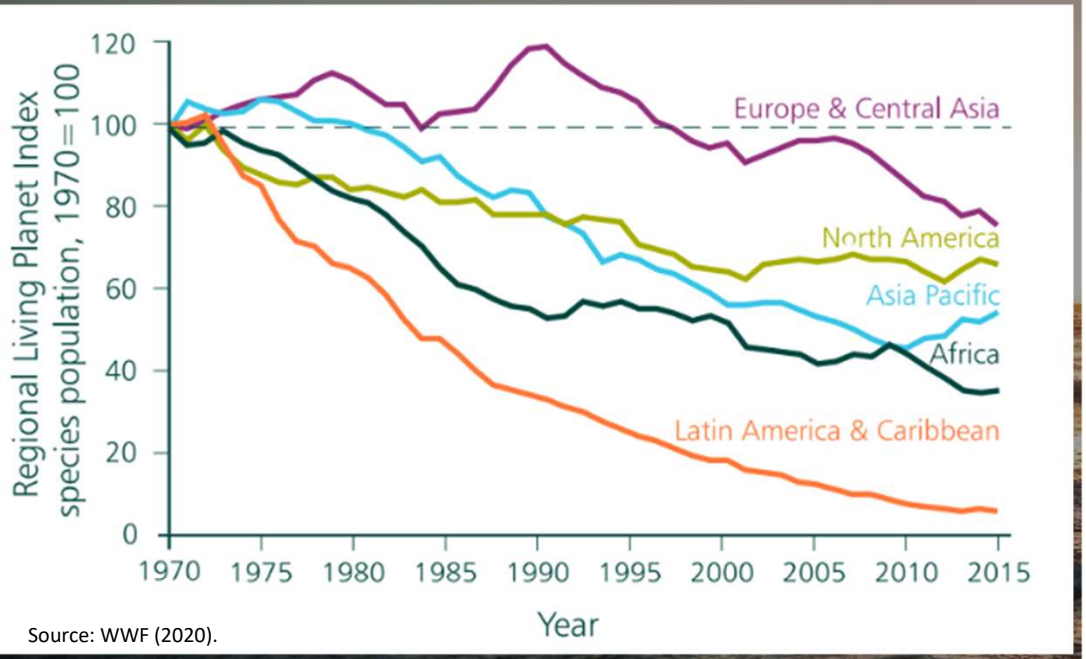

Sustainable Finance
Green Finance
Climate Finance
Biodiversity Finance

100% of the economy is 100% dependent on nature

- **Benefits that people derive** from natural capital (flows of goods and services) are called ***ecosystem services*.**
- **Ecosystem services cover a wide range:** from the provision of food, fresh water, and raw materials, regulation of climate and hazards, removal of pollution, soil formation, to the creation of a basis for personal enjoyment.
- **Nature finance** refers to the financial tools, investments, and economic incentives aimed at promoting the conservation, sustainable management, and restoration of natural ecosystems and resources.
- **Nature finance > Biodiversity finance, Water finance**.

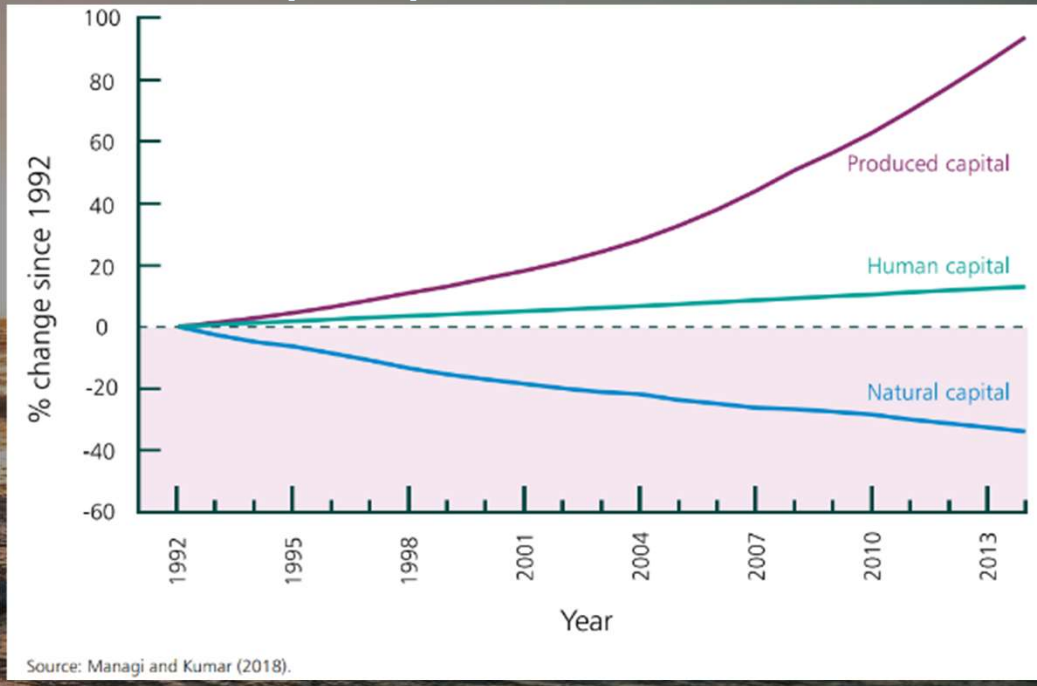
Nature loss carries material risks for governments, economic sectors, and local communities

Living Planet Index by Region, 1970 to 2016



Source: WWF (2020).

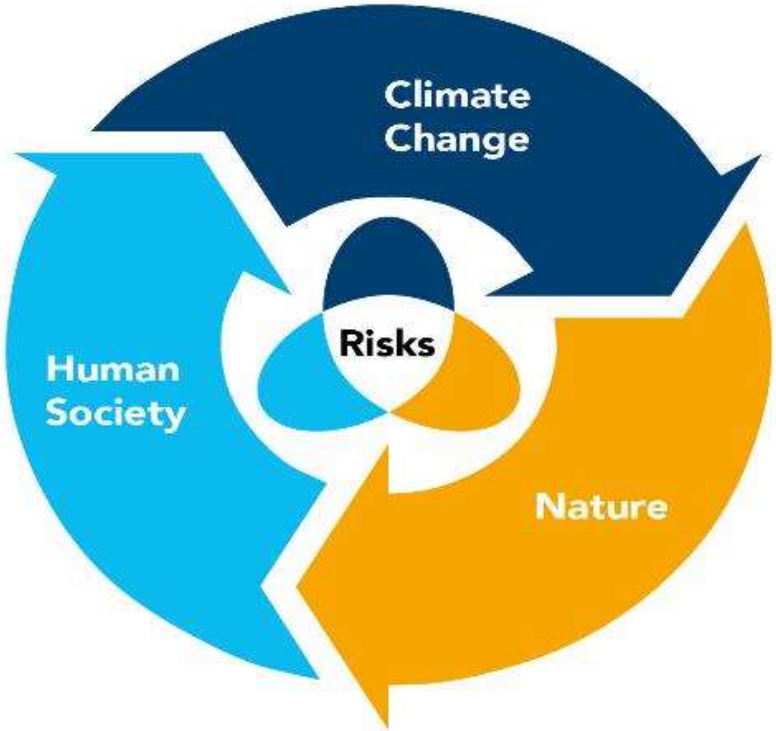
Global wealth per capita, 1992 - 2014



Source: Managi and Kumar (2018).

Nature and climate are closely interconnected

Nature loss reduces resilience to climate change



Climate change is a driver of nature loss

Source: IPCC, IPBES

Water is in Crisis: Too Much, Too Polluted, Too Little

- **9 out of 10** natural disasters are water related.
- Extreme rainfall projected to increase, with **1.8 billion people exposed to floods** and 800 million people across 600 cities facing rising seas and storm surge by 2050.

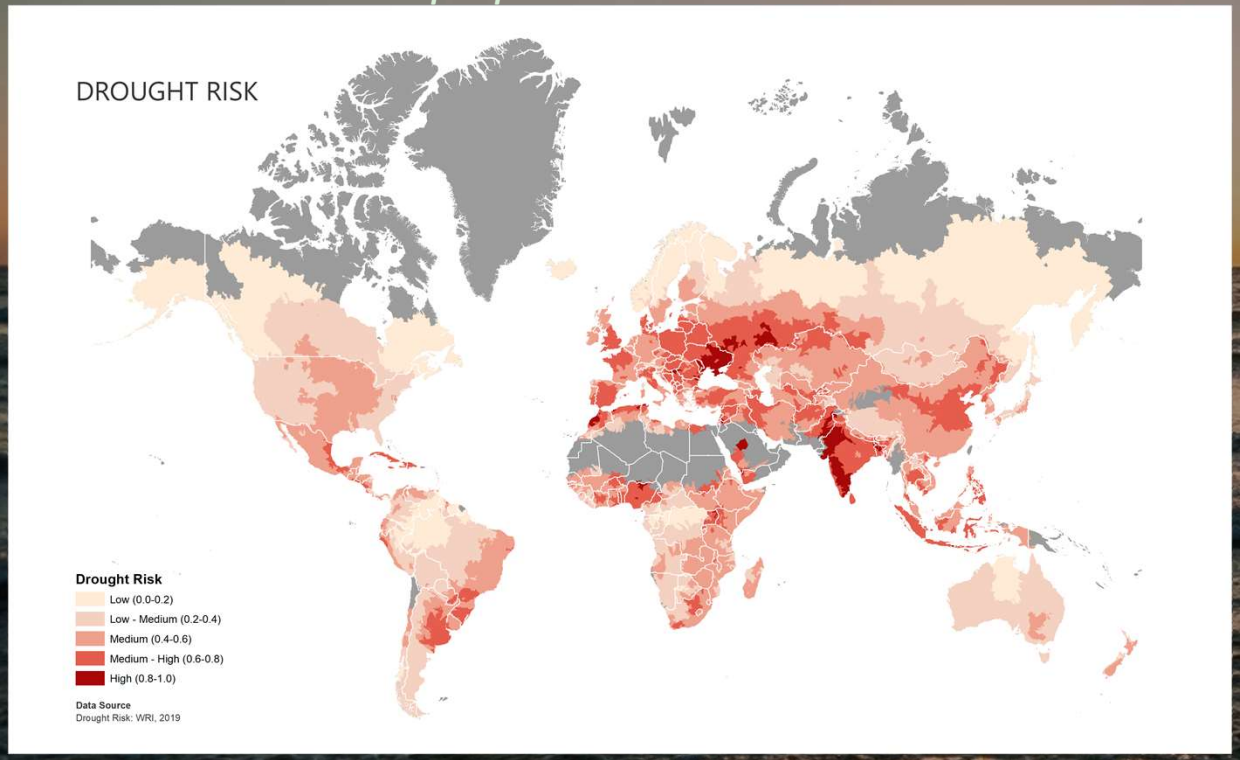
- **90% of sewerage** in developing countries discharged untreated.
- Poor water quality is eliminating **one-third of potential economic growth** in heavily polluted areas.

- **3 in 5 people globally** live in water stressed basins.
- **Droughts affect 55 million people** each year on average.
- **Over 2.2 billion people lack safe drinking water**; 3.5 billion lack sanitation.

...and the pressures are increasing

By 2030, demand for water is expected to exceed supply by 40%

The 2030 Water Resources Group Report



Climate change

Population growth and urbanization

Consumption patterns and pollution

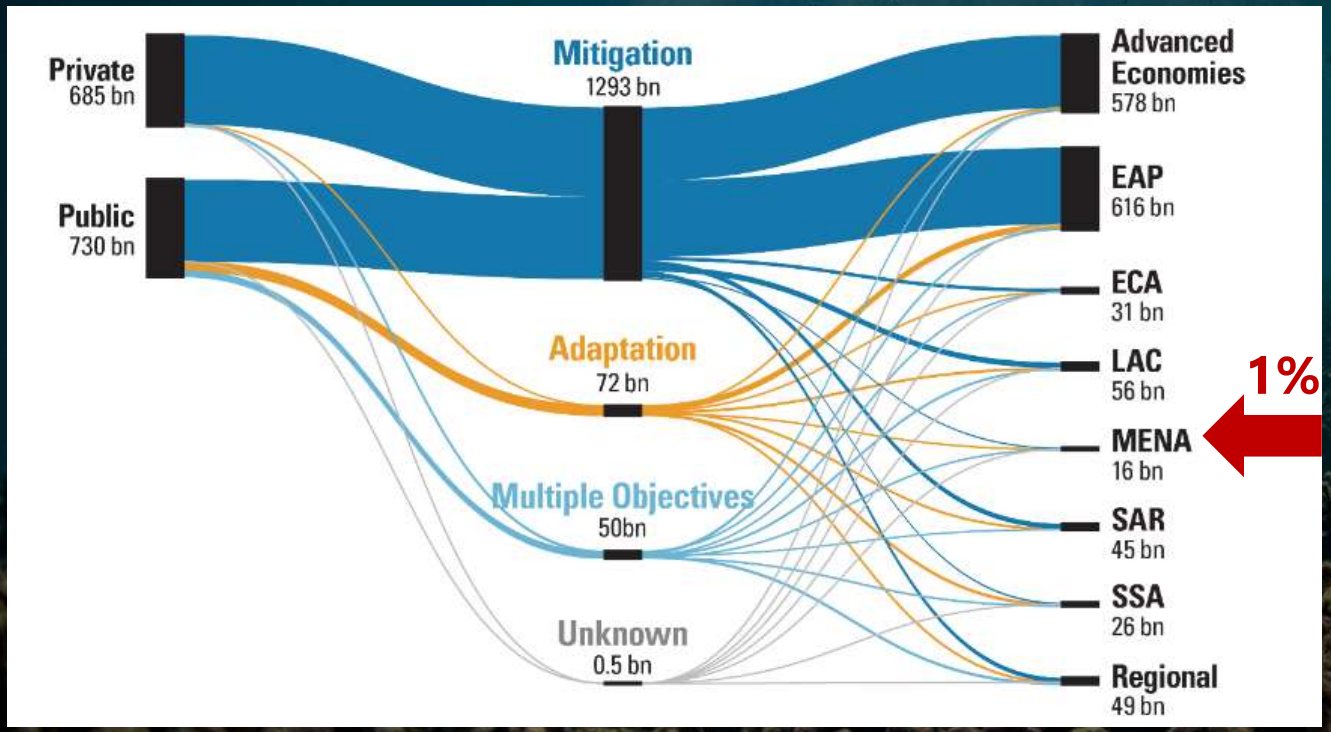
NATURE AND WATER FINANCING

While investors are increasingly cognizant of nature-related risks, a major financing gap remains

- **Nature finance is an estimated 10% of** funds available for sustainable finance.
- One estimate suggests a **US$700+ billion annual investment 'gap' for** nature (Finance Earth 2021).
- **An estimated $6.7 trillion in water-related infrastructure will be needed by 2030**, and this figure is expected to rise to $22.6 trillion by 2050.
- **Public finance** provides majority of nature finance but is **insufficient.**

Only 5% of global climate finance goes to adaptation ($72 billion), 98% of which is public sector funded

Climate finance flows by source type, use case and region of destination in 2022 (USD bn)



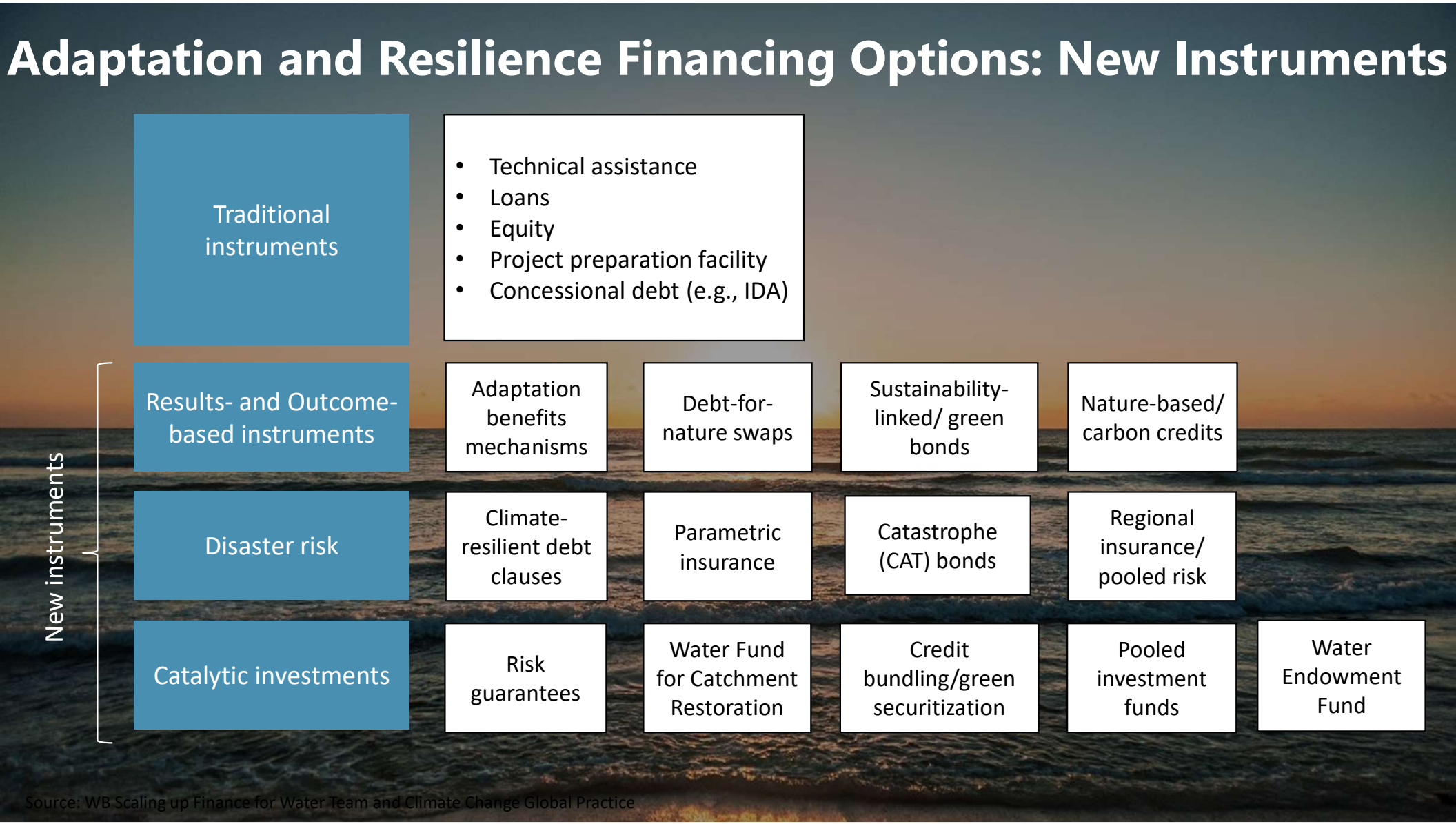
Source: Climate Policy Initiative

- Moreover, while the overall pot of climate and adaptation finance increased, the **share of total climate finance** directed to **adaptation halved** from 2019-20 to 2021-22.
- The **water and wastewater sector received half of adaptation finance** (USD 31 billion).
- **Most adaptation finance** continues to be **provided through loans.**

Nature financing instruments

Type	Instrument
Policy	Fiscal and financial reform, taxes, fees, fines, penalties
Debt	MDB Concessional and Non-Concessional loans
	MDB Guarantees/ risk transfers
	Social, Green/SDG Bonds: “Use of Proceeds” Bonds
	Sustainability-linked Bonds and loans (KPIs linked bond/ loan)
	Debt for Climate and Nature Swap/ Programmatic Swap
	Asset-backed securities (green securitization)
Non-Debt	Grants
	Insurance products, Catastrophe bonds
	Biodiversity offsets, Carbon offsets
	Green commodity private equity fund
	Natural Asset Companies (NACs, publicly traded equity)
	Private Sector Green Value-chain Initiatives

Adaptation and Resilience Financing Options: New Instruments



Source: WB Scaling up Finance for Water Team and Climate Change Global Practice

Nature-positive performance-based debt issuances

South Africa Wildlife Conservation Bond

Uruguay Sovereign Sustainability-linked Bonds

Belize Debt for Nature Swap

These all use blended finance to improve risk-return profiles

South Africa's "Rhino Bond"

- The World Bank's **$150 million** Wildlife Conservation Bond
- **First-of-its-kind outcome-based bond** that supports the financing of conservation activities, and together with financing from the Global Environment Facility transfers project risk from donors to investors
- The transaction mobilizes private capital to facilitate financing of black rhino conservation activities at two protected areas in South Africa

Rhino bond videos: https://www.youtube.com/watch?v=_8d7z1ViZ6c | https://www.worldbank.org/en/news/video/2022/03/23/saving-rhinos-and-livelihoods-in-south-africa

Beyond bonds: financing nature with insurance, credit guarantees, and investments in value chains

Mesoamerican Reef Insurance Program

- 2019: **Reef insurance policy** specifically around **hurricane damage** in Mexico
- Proceeds used to repair damage from Hurricane Delta
- 2021: **Mesoamerican insurance fund** provides **parametric** insurance from southern Mexico to Belize, Guatemala and Honduras

Mexico: DFI Credit Guarantee Schemes for Climate and Nature

- **Mexican** Development Bank (DFI) FIRA has **credit guarantee** schemes with National Forest Fund, Fund for the Efficient Use of Water
- FIRA offers **higher guarantee coverage for climate and conservation projects** at no additional cost

Ghana: Koa Cocoa and Landscape Resilience Fund

- Dedicated funds using **blended capital** to catalyze private sector
- E.g., Fund invests in factory with **decentralized value chain reusing** previously unused cocoa pulp
- Reduces food waste by 40%: **minimizing impact on land** and reducing carbon footprint.

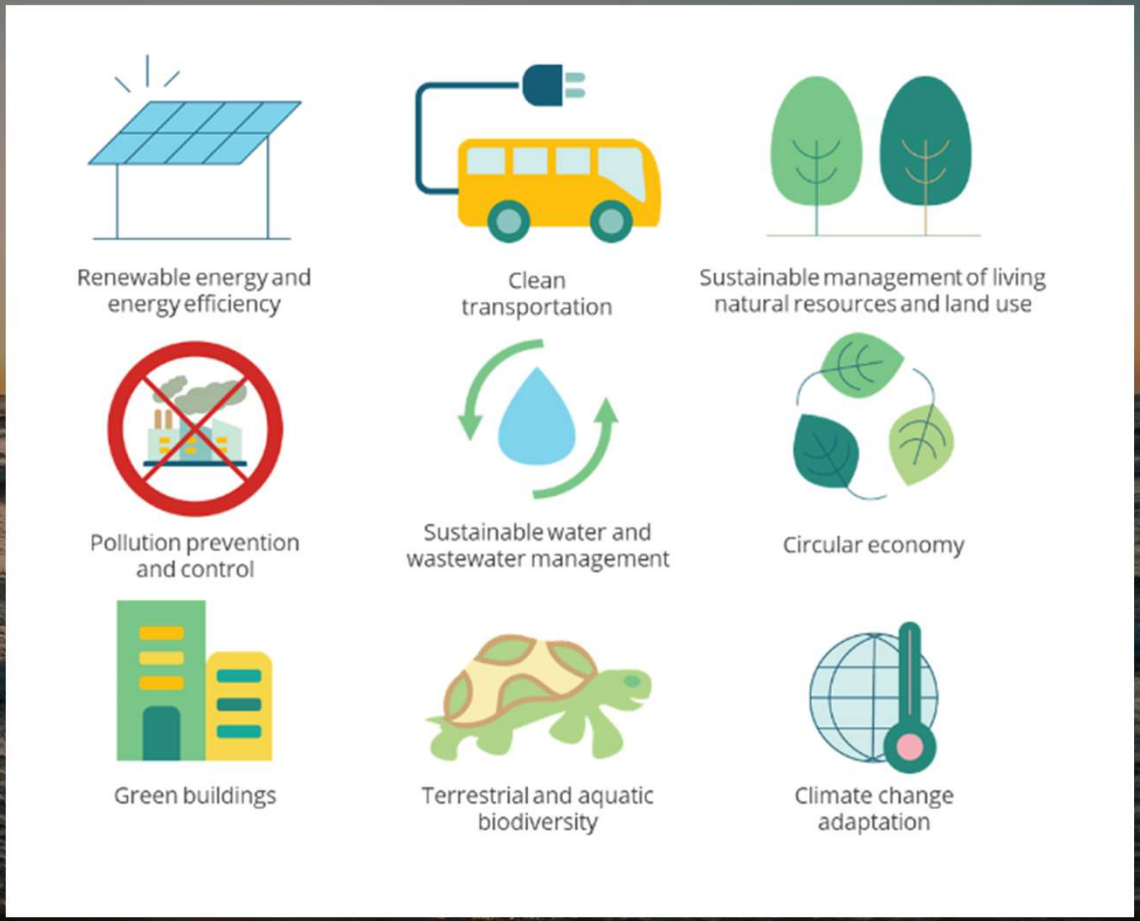
Thematic bonds can help mobilize capital for nature and water investments

Green bonds support projects and activities with positive environmental impact.

Blue bonds are a subset of green bonds and support projects aimed at ocean and marine conservation.

Eligible Use-of-Proceeds (water sector):
Capital and operating expenditure related to sustainable water and wastewater management:

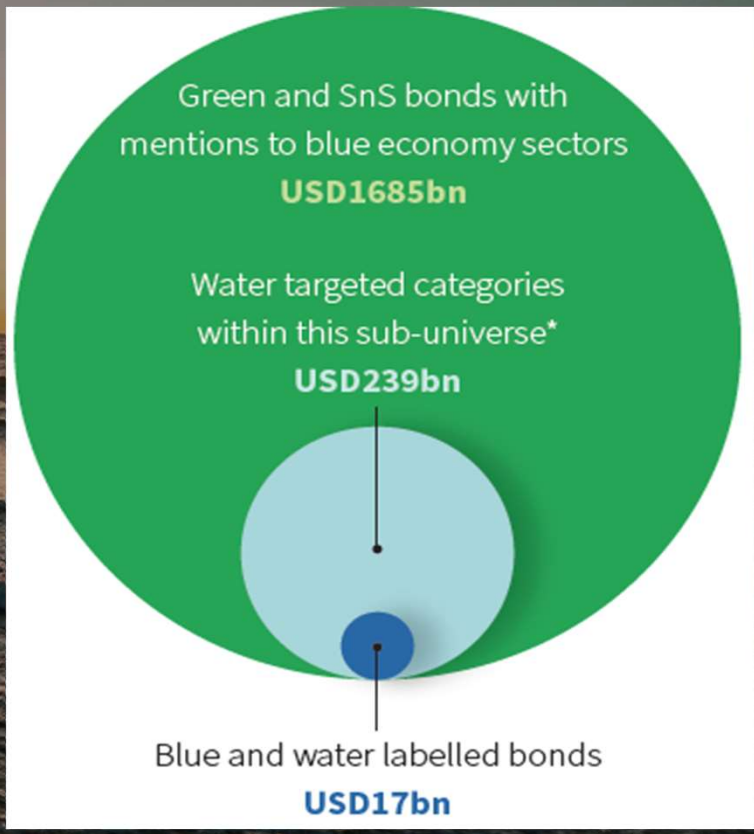
- **Sustainable infrastructure** for clean and/or drinking water
- **Wastewater treatment**
- **Sustainable urban drainage systems** and river draining and other forms of **flood mitigation**
- **Climate change adaptation**



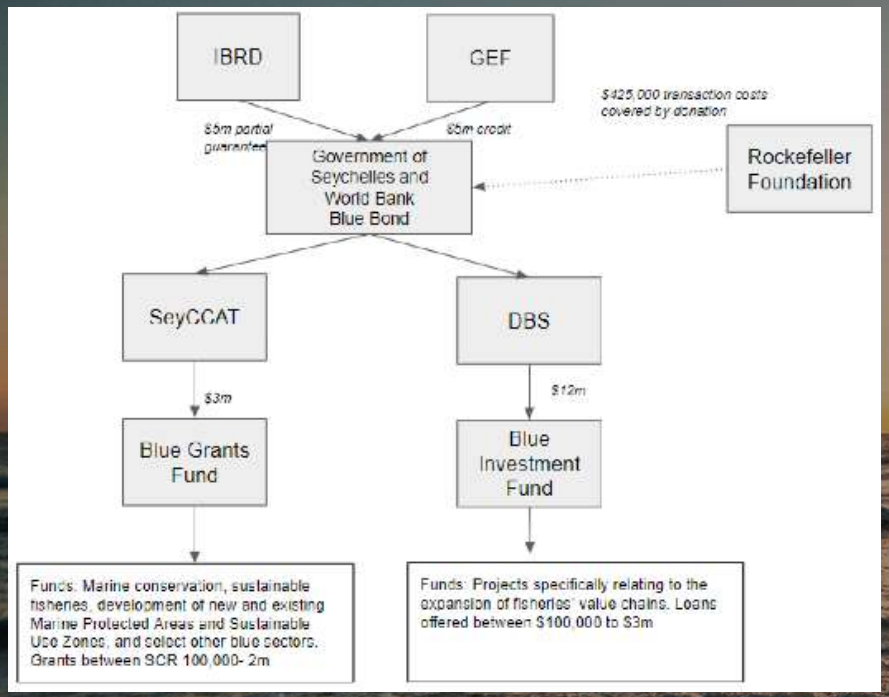
Green bonds dominate the space of thematic bonds globally

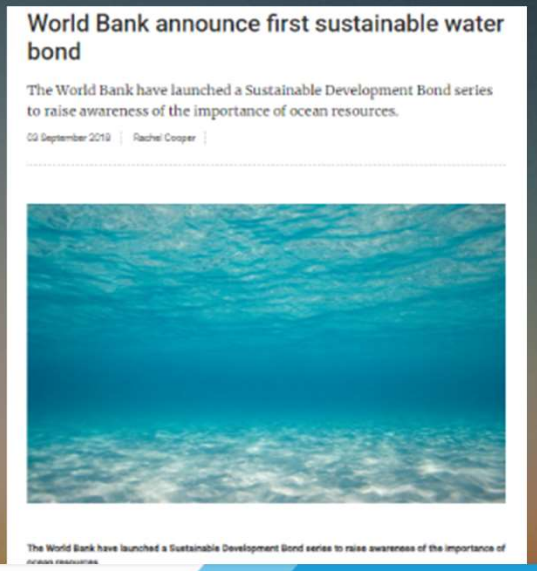
Emerging Market GSSS Bonds
Annual issuance 2012-2023
USD Billion

Source: World Bank based on data from Bloomberg and Bloomberg NEF



World Bank Blue Bond Innovations





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CASE STUDY

Emission Reduction-Linked Notes Mobilize Private Capital for Climate Friendly Project

In February 2023, the World Bank issued $50 million Emission Reduction-Linked Notes that mobilized private capital to finance a water purifier project in Vietnam and provides bond investors with a return linked to carbon credits generated by the project.

The innovative outcome bond provides financing to a project that will make clean water available to two million school children in Vietnam and reduce greenhouse gas emissions by almost three million tons of carbon dioxide over the 5 years of the bond.

Background

Strategic Framework (Water sector)

Lessons Learned

What has/ has not worked?

Binding constraints to PSP and PCM, based on past/ ongoing initiatives

- **Undervaluation of water**
- **Lack of financially viable service providers**
- Absence of enabling conditions
- **Social reluctance** to PPPs
- **Multiple risks** and high transaction costs for PPPs

Strategic Directions

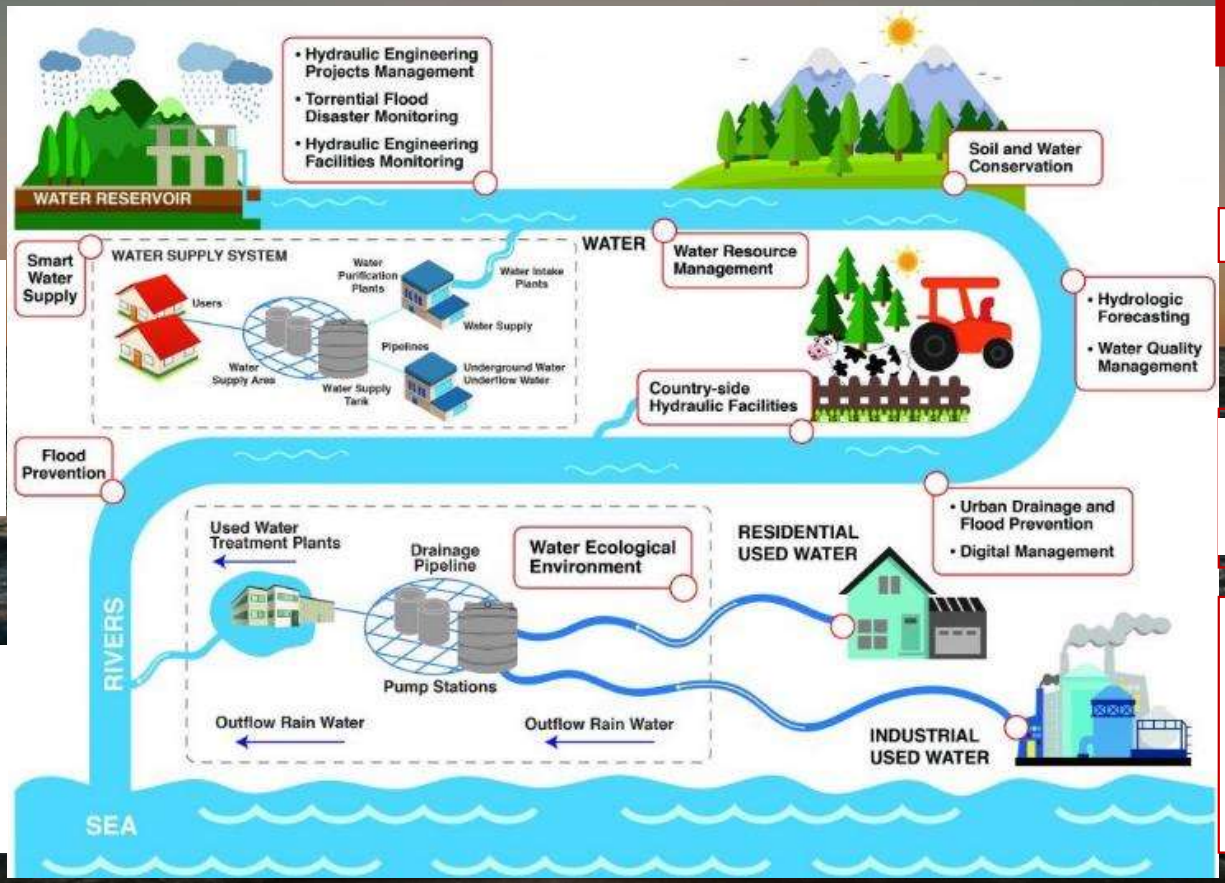
Based on lessons learnt, which approaches can be scaled?

1. **Establishing the enabling conditions** for financial sustainability, creditworthiness, and access to financing
2. **Mobilizing private sector expertise** to improve operational efficiency and address climate impacts
3. **Diversifying and expanding the spectrum of finance solutions**

with a cross-cutting theme on ***Advancing Climate Outcomes***

There is potential for private sector participation and capital mobilization across the water value chain

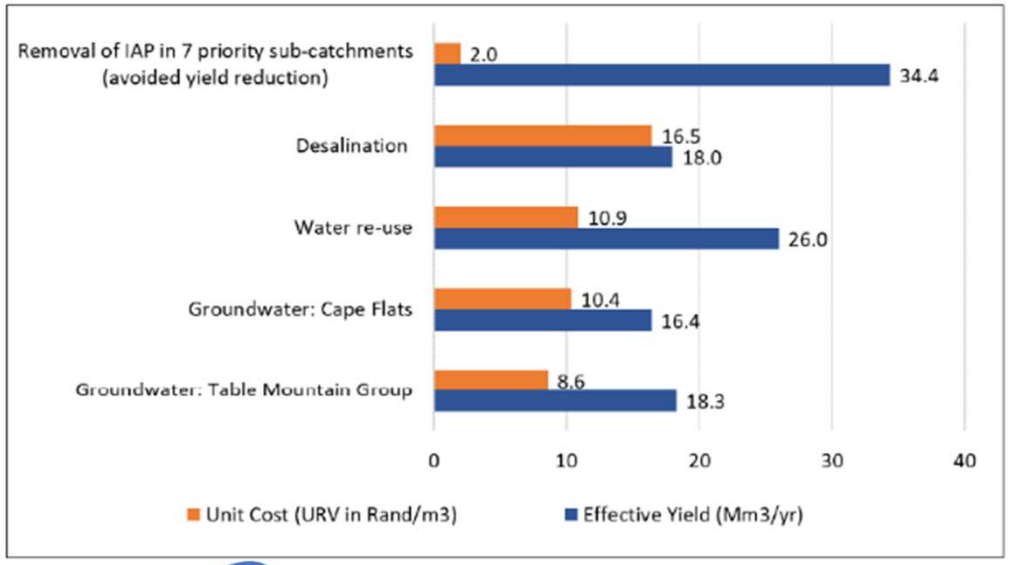
Private sector expertise mobilization	Private capital mobilization
Extreme weather forecasting Flood modelling	Payment for ecosystem services Catchment management services Forest management Green bonds
	Finance for CAPEX **City-level** Municipal loans & bonds Climate bonds? **Utility-level** Commercial banks Blended finance Output based aid PPP: Concession, BOT
PPP for operations (lease, service, mgt, performance-based contracts)	Finance for OPEX: tariffs
PPP for urban river restoration	**Utility-level** Climate/sustainability bonds and loans Energy gen @ WWTP/ septage TP **Project level** NBS/ sponge cities Property development



Private capital mobilization	Private sector expertise mobilization
	Water quality monitoring and management
PPP for irrigation Rural WSS	PPP for irrigation
Disaster risk finance Insurance Cat bonds Individuals/sovereign /sub-sovereign	
Green/ Sustainability-linked loans/ bonds (sovereign, sub-sov, corporate) **Infra finance** e.g,. River basin endowment fund Limited recourse finance	Private W/WWT for new residential/ mixed-use developments, industrial zones, large users "contract ops"

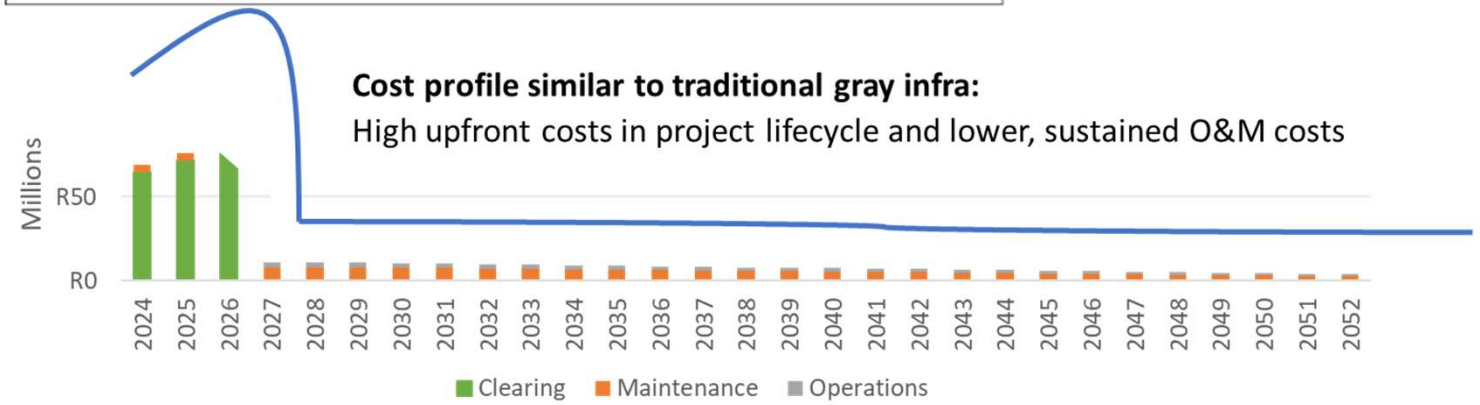
Source: MFD Strategy Team

Water Funds for Catchment Restoration



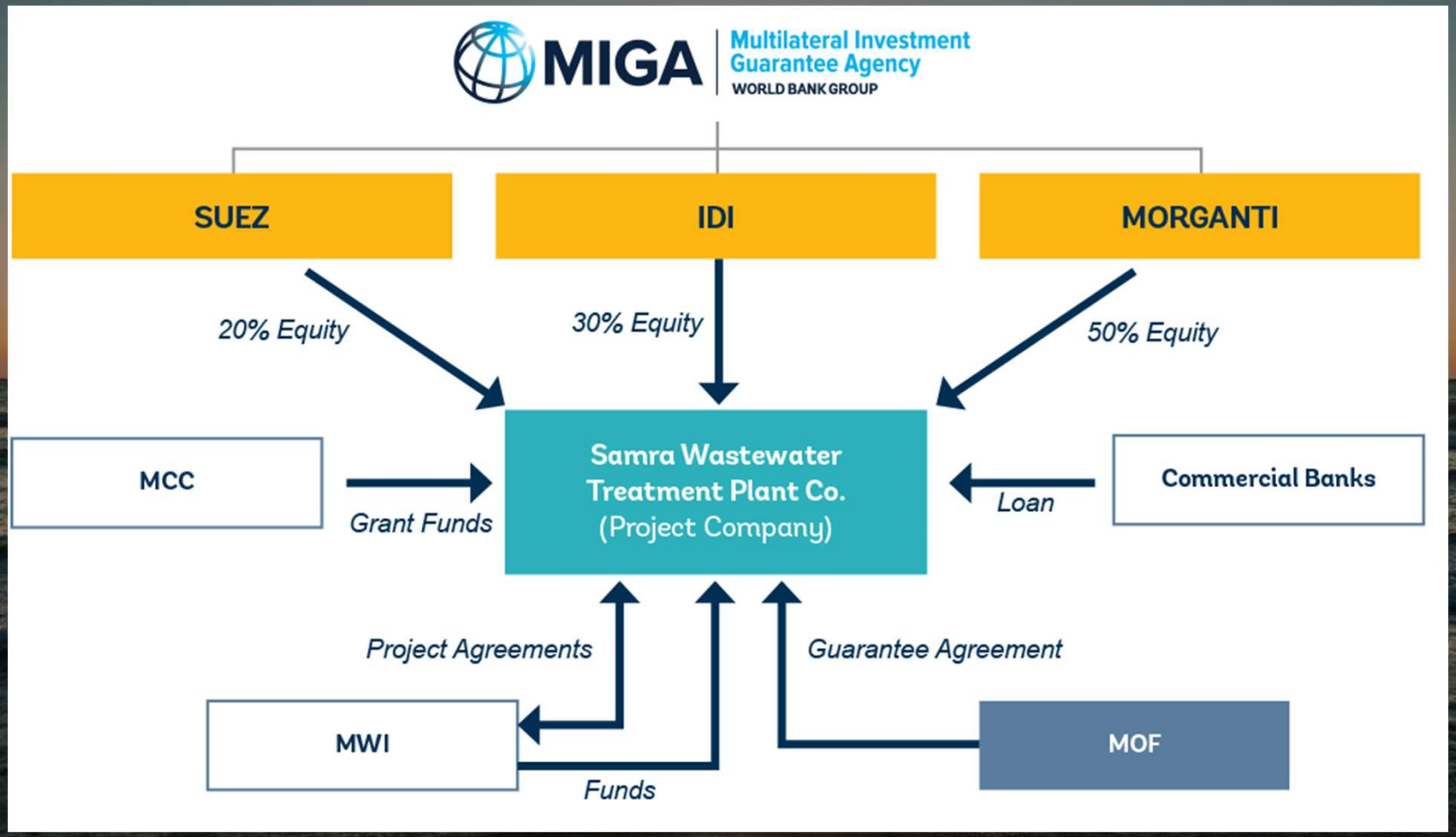
Establishment of Greater Cape Town Water Fund

- Catchment restoration estimated at 1/8th the unit cost of other options
- Removal of alien species to yield ~55 billion liters per year within 6 years: equivalent to 2 months water supply

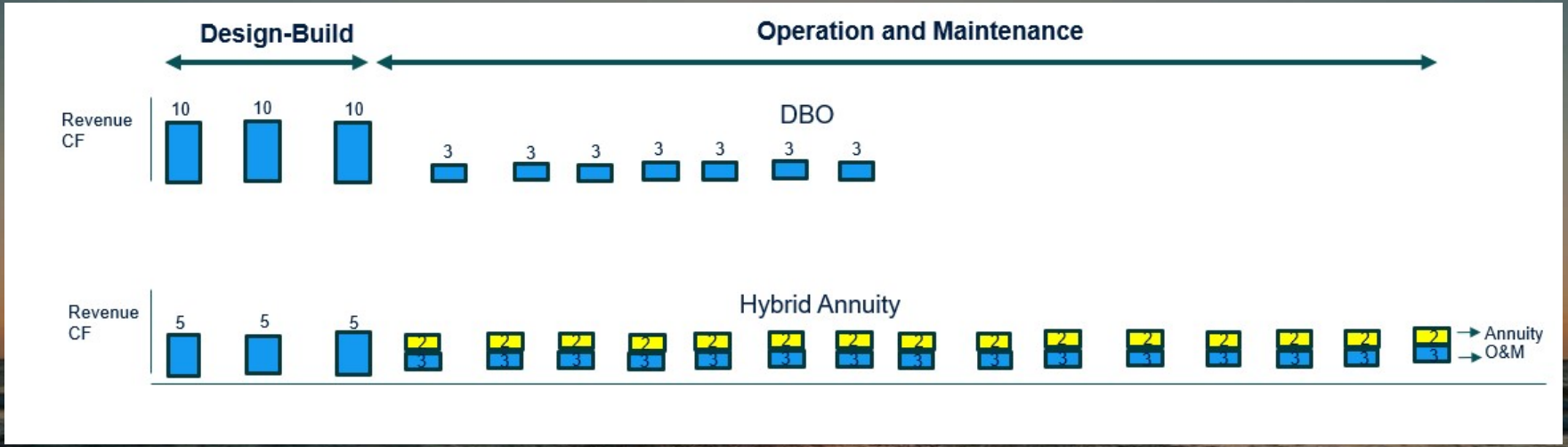


Source: TNC and 2030 WRG Analysis

AS Samra Wastewater Treatment Project, Jordan



PPP Hybrid Annuity Model for Ganga Rejuvenation



Design of **First PPPs for Wastewater Treatment** in the Ganga Basin

Unique Hybrid Annuity Model: Concessionaire mobilizes 100% investment

- 40% reimbursed during construction and upon commissioning
- 60% of remaining capex paid as annuities during the concession period, along with O&M expenditure

Model **replicated across Ganga basin**

$650 million private capital mobilized


Thank you!