

Natural Capital Tools and Approaches for Evaluating Investment Projects in Africa



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13 March 2025



13:00 GMT/14:00 CET/16:00 EAT



Our webinar will begin shortly

Welcome to our webinar



Arnold Gourene

Research Officer, MFW4A










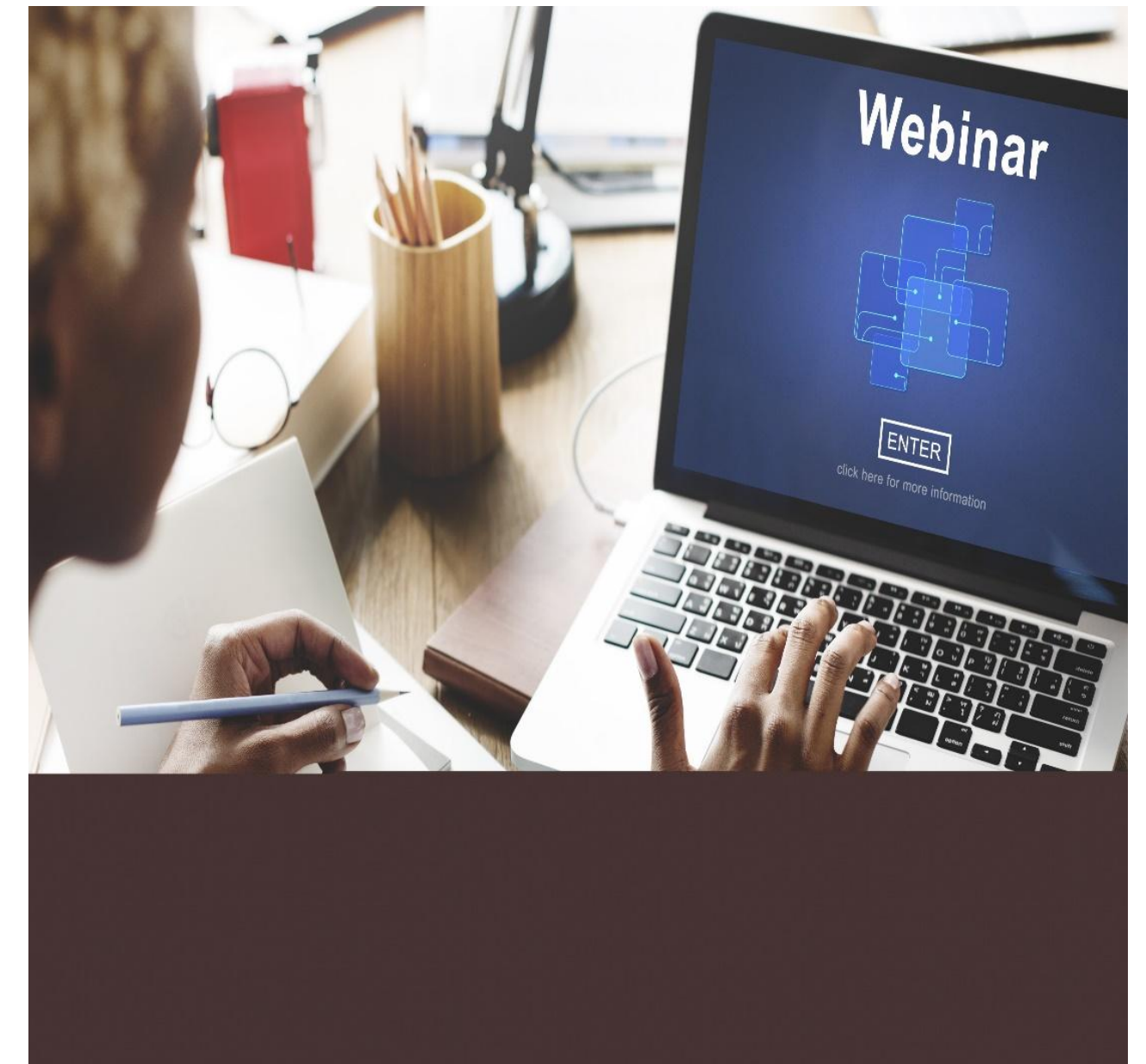
Samantha Meyers— *Moderator*

Senior Manager of Global Communications, Conservation Strategy Fund



Rules for the webinar

-  The duration of today's webinar is 90 minutes, including questions and answers
-  For better listening comfort, all participant microphones will be disabled for the duration of the webinar
-  Questions can be submitted via "Q&A", or by raising a hand
-  The webinar will be conducted in English.
-  Slides and a presentation recording will be circulated to registered participants within 72 hours following the webinar. They will also be available on www.MFW4A.org.
-  Send a message to the organizers if you encounter technical problems
-  Do not forget to complete the questionnaire which will automatically appear on your browser at the end of the session



Session outline:

Times listed are GMT



Topic



Facilitator



Duration

Introduction

Arnold Gourene
Samantha Meyers

13:00 – 13:05

**Why we use Valuation
Overview of Environmental Valuation & Use
cases**

Wadzanai Mafunga

13:05 – 13:15

**Okavango Case Study, examples of ecosystem
services and key insights**

Nuredin Juhar

13:15 – 13:20

**Overview of the N4C-ADF: Main results and
policy briefs and Case Study: Mozambique**

Kiruben Naicker

13:20 – 13:45

Q&A

Samantha Meyers
Moderator)

13:45 – 14:20

Closing

Arnold Gourene

14:20 – 14:25

Economic Valuation of Natural Capital for Investment Decision- making



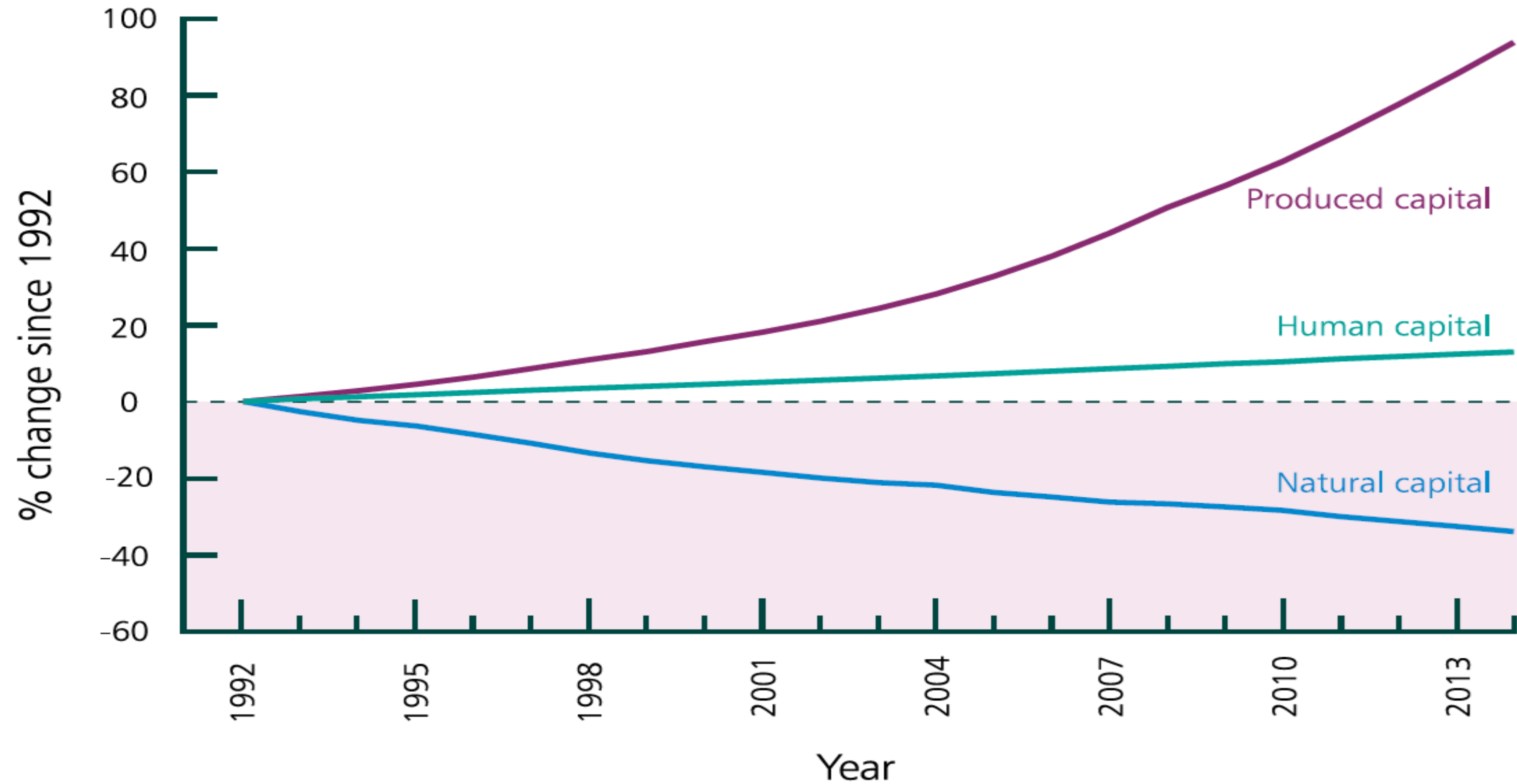
Presentation Outline

- Differentiating between natural capital accounting and economic valuation
- Explaining the linkage between natural capital accounting and valuation
- Why do a valuation study
- Overview of methods of valuation
- Key considerations for valuation
- Case Study: Economic Valuation of the Cubango Okavango River Basin

Natural Capital Accounting vs Economic Valuation

- Natural capital is the world's stock of resources
- Natural capital accounting is about tracking changes in assets, their condition and the flow of services to economic activities.
- Valuation is placing a value or price on environmental goods and services that are often left out of market transactions.

Why account for natural capital?



Source: Managi and Kumar (2018).

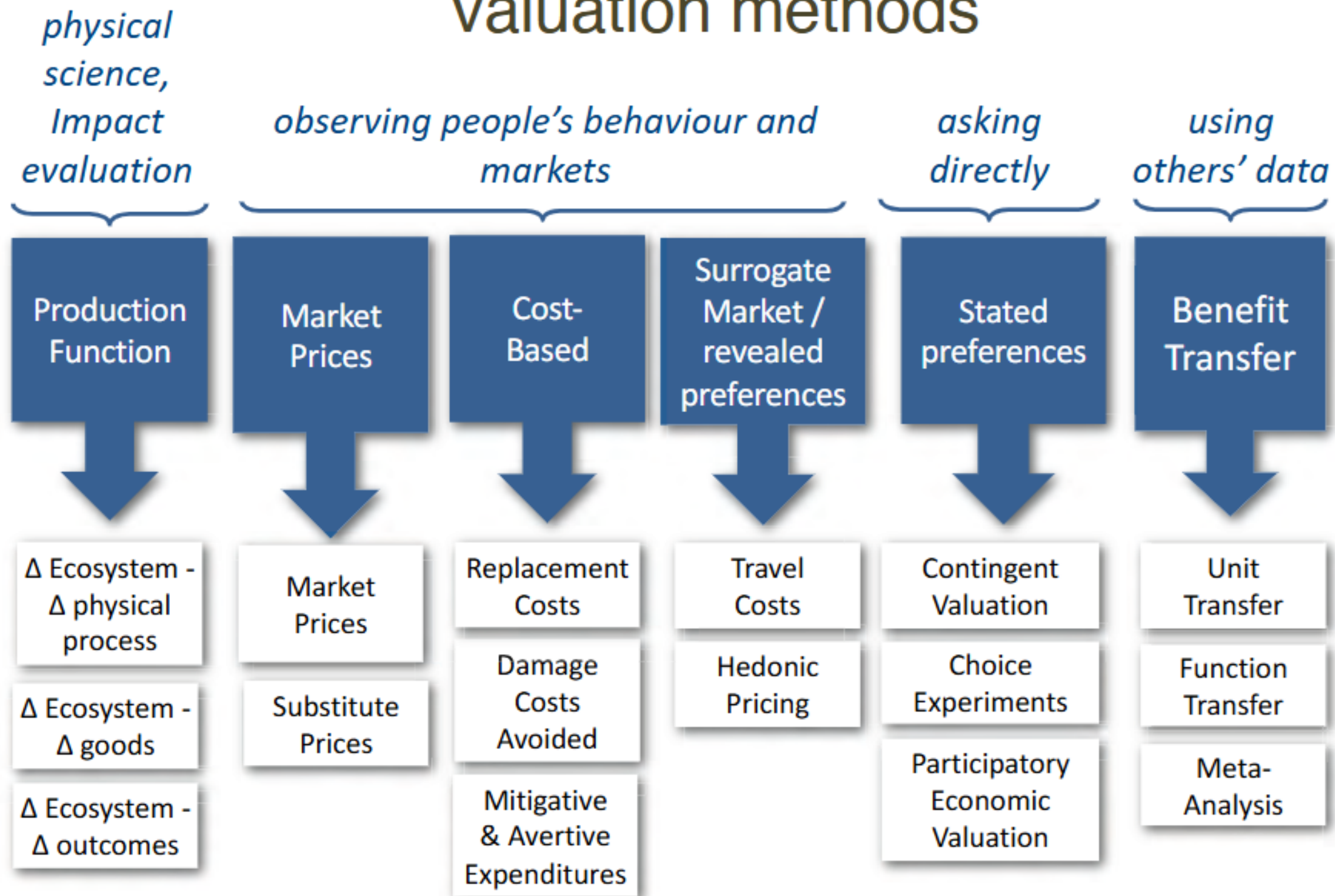
Linking NatCap with Valuation



Why carry out a valuation study?

- To evaluate project options
- Inform spatial planning processes
- Set prices and create incentives for conservation finance programs
- Estimate needed mitigation and compensation
- Natural Resource Accounting
- Environmental education

valuation methods



Key Considerations

- Ecosystem services are spatial
- Large changes may not be linear and marginal changes are important: if the value of 1km loss of mangrove is US\$1, 000, the loss of 60km is not US\$ 60 000
- WTP is determined by the ability to pay and this has significant distributional implications
- Price does not equal value



CASE STUDY

**THE ECONOMIC VALUE OF
THE CUBANGO-OKAVANGO RIVER
BASIN**

...

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Investment Projects in Africa

March, 2025

Strategic Significance: Why carry out this study?

- Home to approximately 1 million people
- The CORB transports roughly 9.5 million cubic meters of water carried by the Cubango and Okavango Rivers through Angola, Botswana and Namibia
- Ecosystem within Botswana is part of a Key Biodiversity Area
- To integrate the CORB's value to society in policy and investment decisions.
- Be able to better assess the costs of its loss and the benefits of its protection.
- Making an "economic case for conservation" that justifies the investment of funds in the protection of the ecosystem.

Scope of Study

The study did not consider the full extent of the Cubango-Okavango River Basin, but rather Cubango-Okavango River Basin in Angola and Namibia, along with the Okavango Delta...Ramsar Site in Botswana, encompassing a total area of approximately 226,000 km².

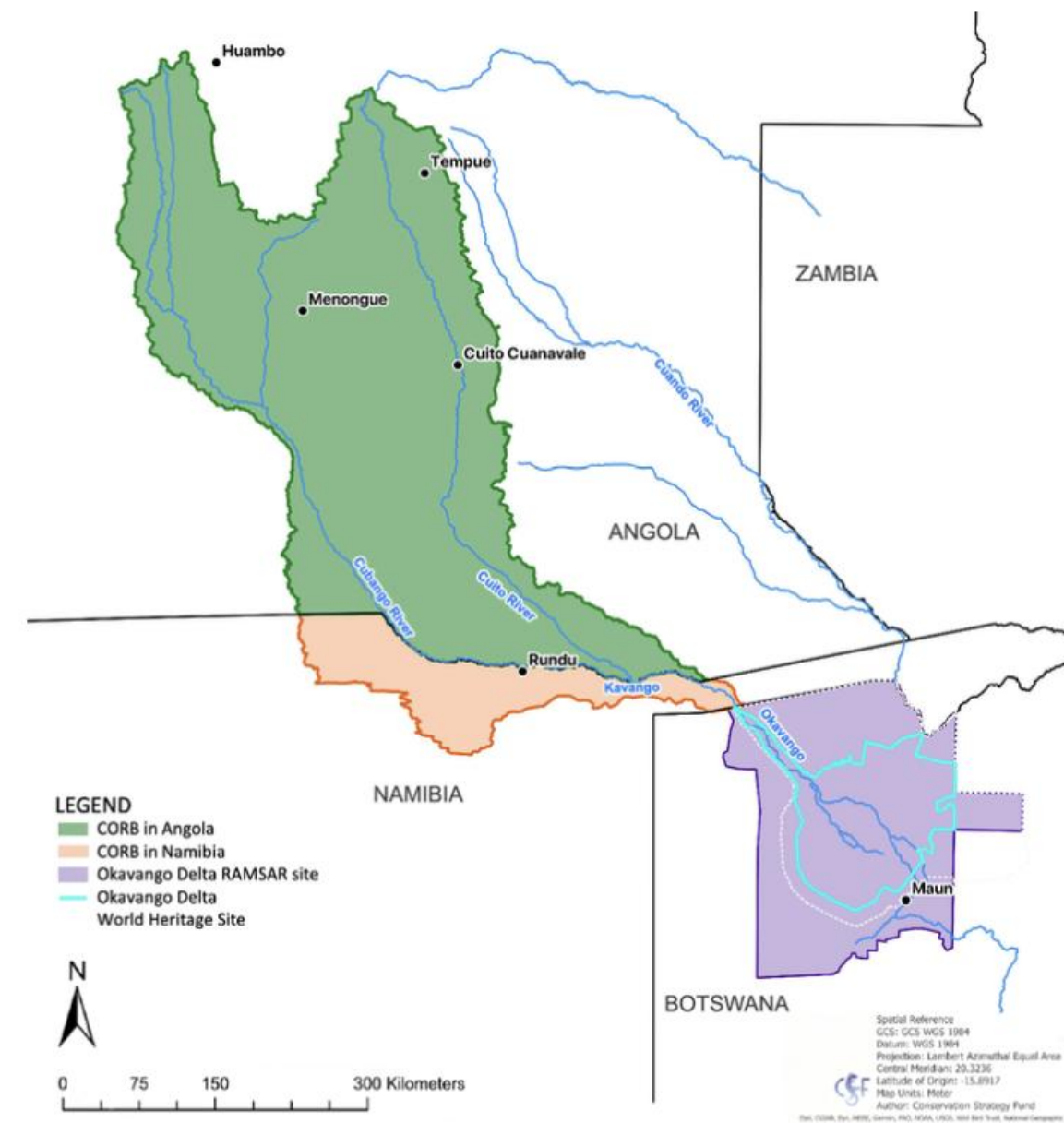


Figure 2. Map showing the Study Area across Angola, Namibia, and Botswana

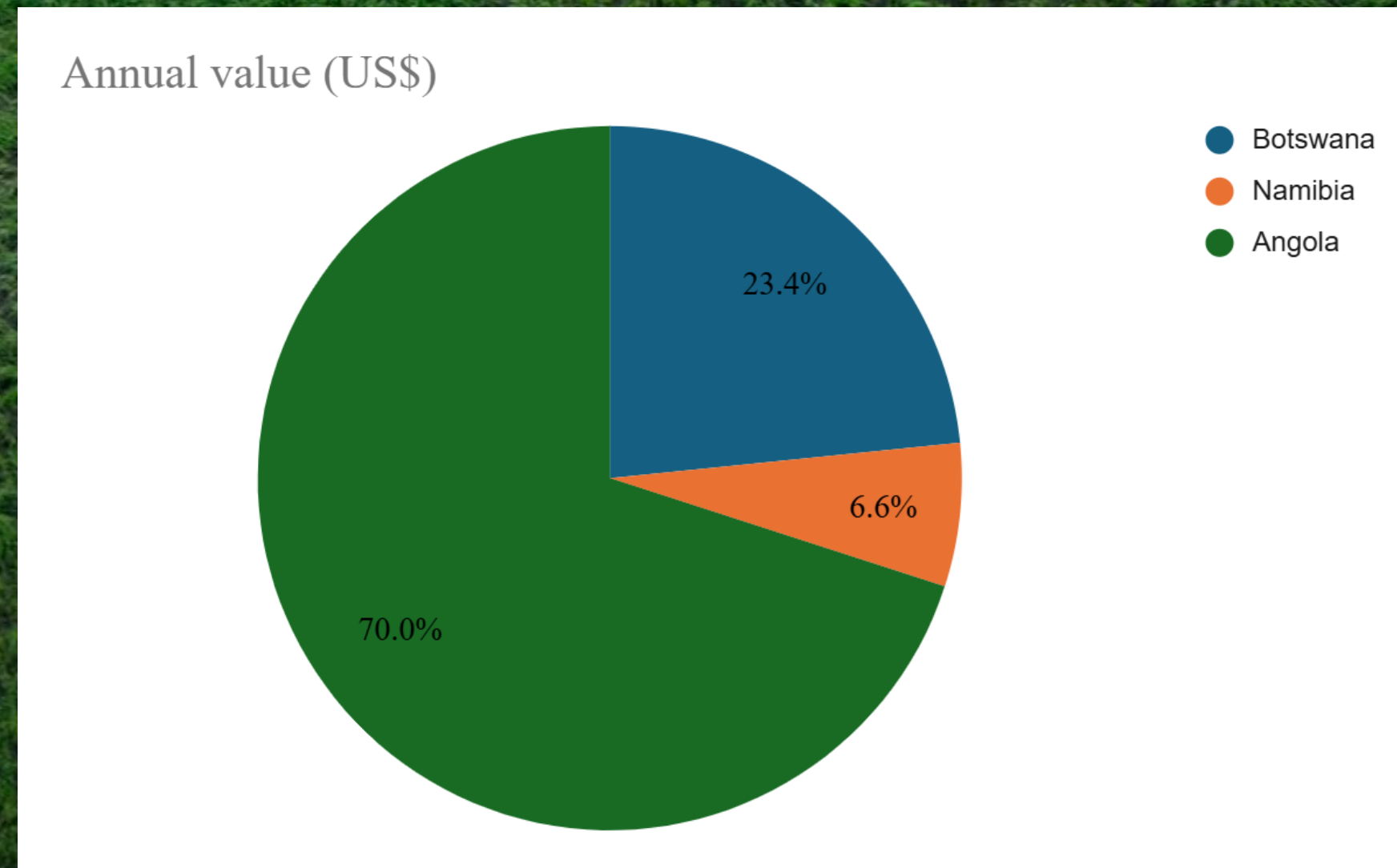
Total Economic Value of each Ecosystem Service

Ecosystem services	Annual value (US\$ million) by country		
	Angola	Botswana	Namibia
Crop provisioning services	617.6	25.8	45.4
Livestock provisioning services	14.1	19.1	7.5
Wood provisioning services	89.9	3.8	12.8
Wild animals provisioning services	1.1	0.5	0
Water supply provisioning services	0.1	5.9	0.5
Wild fish provisioning services	2.5	2.1	2.9
Recreation-related services	6	200	3.8
Global climate regulation services (carbon sequestration)	70.8	10.7	2.4

Total

These services contribute **US\$ 1.1 billion** annually.

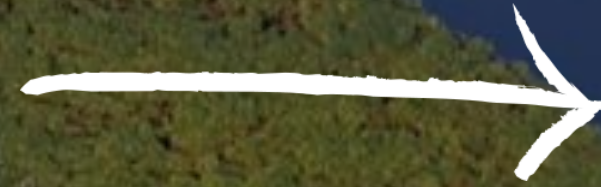
The total economic value of the CORB is estimated at 2022 US\$ 1.1 billion per year.



Key Insights

Short-Term

- Address Data Gaps
- Improve Management and Sustainable Utilisation of Natural Resources
- Explore and Support Alternate Livelihood Initiatives
- Provide Alternative Energy Sources
- Promote and Incentivise Sustainable Tourism
- Explore Financial Mechanisms
 - Explore the Carbon Value Chain
- Support the further implementation of the OKACOM Decision Support System (DSS)



Long-Term

- Policy Integration of Economic Value
- Transboundary Resource Utilisation and Management
- Explore Policy Gaps or Conflicts to Incentivise Sustainable Practices and Discourage Damage-causing Practices



**THANK
YOU**

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#NUMBERSFORNATURE

Natural capital tools and approaches for evaluating investment projects in Africa.

Overview of the Natural Capital for African Development Finance Programme (NC4-ADF): Summary of Key findings-Policy Briefs

Contents:

1. Importance of Natural Capital in Africa & Overview of NC4-ADF
2. Conceptual Clarification & Scope of NbS and Natural Capital
3. Why Natural Capital Matters for Finance Institutions
4. Case Studies: Zambia and South Africa
5. Key Insights on Natural Capital Approaches and NbS
6. Evolving role & Strategic opportunities for DFI's
7. Call to Action
8. Mozambique Pemba-Lichinga Special Agro-industrial Processing Zone (SAPZ) –Case Study

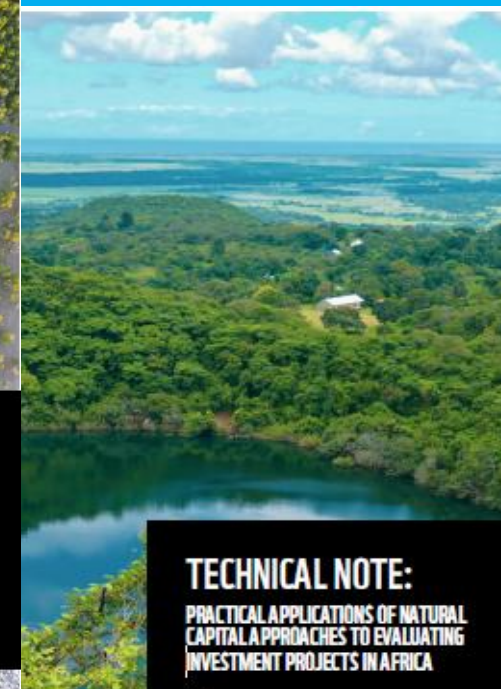
Importance of Natural Capital in Africa

- Africa holds 30-50% of global natural capital
- NC is crucial for agriculture (soil, pollination), water (water regulation), energy (hydropower)
- Economic stability is threatened by resource depletion



Overview of the NC4-ADF

- Provide insights on natural capital tools and approaches to evaluate and enhance investment projects in Africa.
- NC4-ADF supports sustainable finance through natural capital approaches.
- In partnership with AfDB, GGKP, WWF & UNEP-WCMC- developed Policy briefs following a Green Economy Summit
- Entry points & Strategic alignment (Global, Regional & Organizational)



Conceptual Clarification & Scope of NbS and Natural Capital

- Nature Based Solutions are defined 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” UNEA-5, 2022

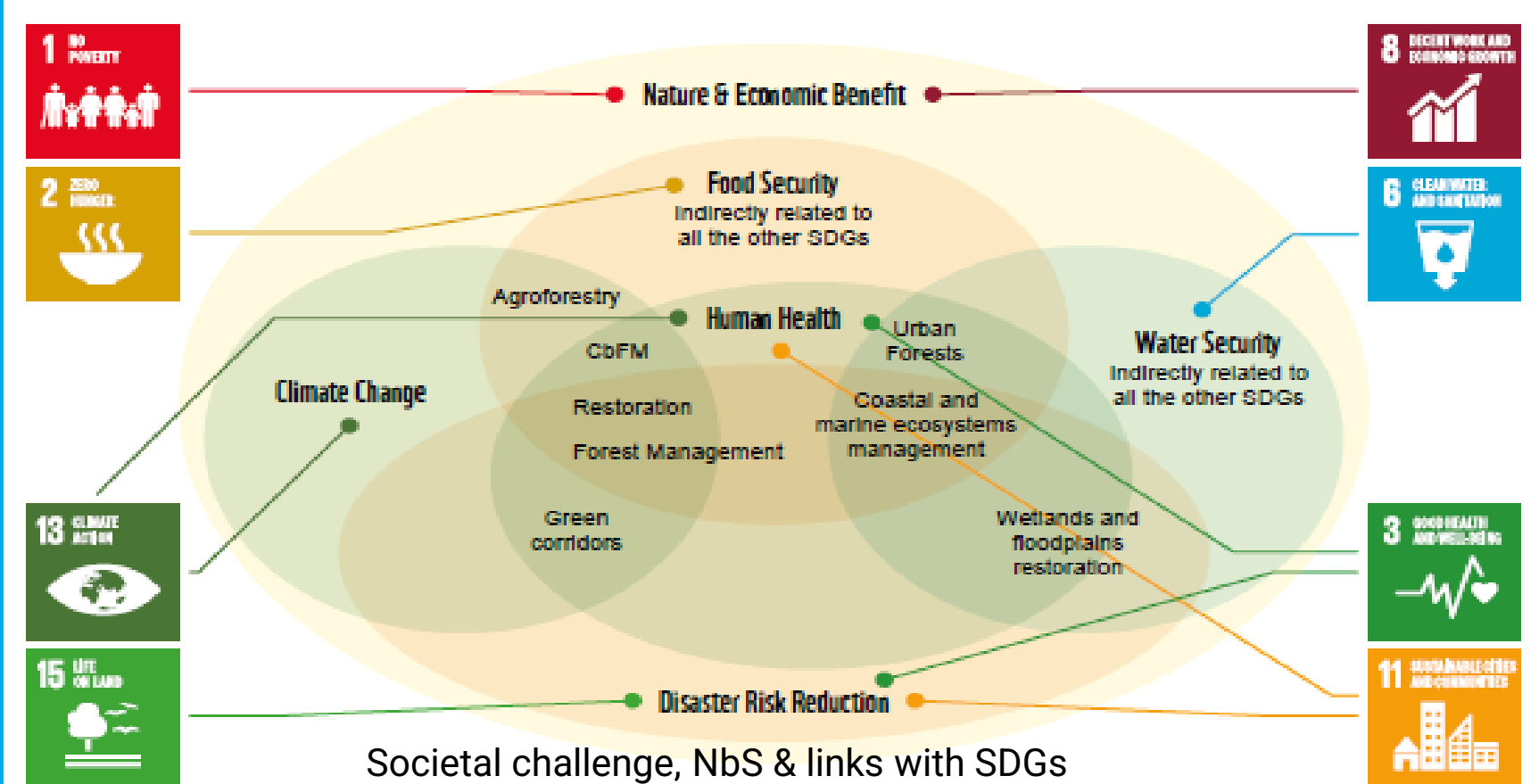
Natural Capital is often referred to as the *“Stocks of natural assets which include geology, soil, air and water”*. *“The natural environment is viewed as a form of capital asset, or natural capital, which includes ecosystems and the important goods and services that it provides to the economy”*

Barbier (2019)

Natural capital Approaches are increasingly recognized as a suitable way for integrating the value of natural capital into decision-making processes... AU; African Development Bank, Capital Coalitions

Why Natural Capital Matters for Financing Institutions

- Sustainability: Ensures long-term viability of ecosystems supporting economies
- Risk Mitigation: Reduces project failures linked to ecosystem degradation.
- Opportunity: Significant returns and co-benefits from Nature Based Solutions (e.g., job creation).
- Alignment: Supports SDGs (13, 15), AU Agenda 2063, and African Union Green Recovery Plan.



“TRANSITION TO A GREEN ECONOMY WILL BE A MAJOR TREND THAT WILL SHAPE SOCIO-ECONOMIC OUTCOMES IN THE NEXT 50 YEARS ACROSS THE GLOBE”

Salimata Soumare, AfDB

Tools and Methodologies

- Natural Capital Assessments: Models like InVEST, ARIES quantify ecosystem services.
 - Data Integration: Combines spatial, ecological and economic datasets.
 - Scenario Analysis: Evaluate 'business-as-usual' vs. 'nature-positive' development outcomes.
 - Co-Benefits: Tools highlight economic, environmental and social benefits (e.g., job creation).
- Other tools: Principles for Responsible Banking: Target Setting for Banks & KMGBF Resource Mobilization Strategy for Biodiversity (2025-2030)

Case Study: Lukanga Swamp, Zambia

- Critical ecosystem: Stabilizes water flow, essential for agriculture and energy.
- Natural capital assessment: Loss of swamp's capacity costs \$42M annually.
- Impact: Guided policies to mitigate ecosystem degradation and boost resilience.
- Outcome: Demonstrated the value of protecting ecosystems in development planning.



Development Finance Institutions are catalysts for sustainable finance

- Leading efforts to shift investment towards N+- Policies- Sustainable Blue Economy Finance Principles.
- Climate Finance Facility (CFF) of the Development Bank of Southern Africa (DBSA)-Supports low-carbon infrastructure projects
 - Launched a Green Bank Model in 2019
- African Development Bank's Strategic Shift-Natural Resources Management and Investment Strategy (2023-2027)

Case Study: Working for Water, South Africa

- Objective: Remove invasive species to enhance water availability and ecosystem health.
- Results: Boosted streamflow by 46M m³/year, created 50,000 jobs annually.
- Insight: Highlighted potential for aligning projects with NbS principles & natural capital approaches



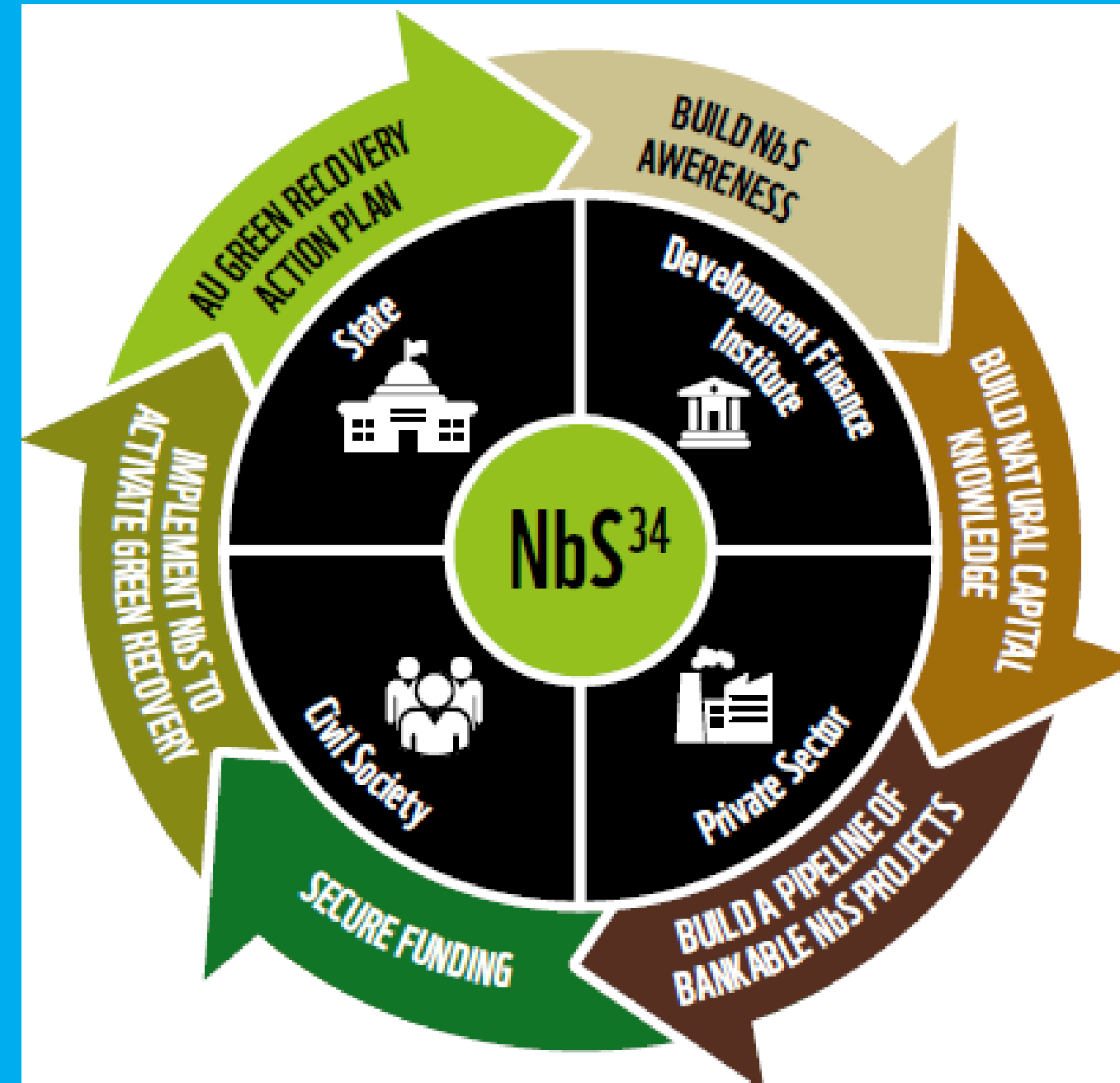
Development banks catalyze public-private partnerships and scalable models:

- Working for Water recognized as one of the most successful integrated land management programs in the world.
- Cape Town Water Fund: Restoring watersheds to enhance water supply and security.



Key Insights on Natural Capital Approaches and NbS:

- Natural Capital Approaches provide economic justification for investing in Nature, guiding better decision-making
- NbS offers practical, sustainable and cost-effective responses to societal challenges:
 - Job creation and economic recovery
 - Improved ecosystem resilience (e.g., increased water availability, climate regulation)
 - Potential for attracting diversified finance sources through public-private partnerships and blended finance.
- Engagement of Stakeholders: Private, Public, Society
- Case studies illustrate tangible financial returns, resilience benefits and scalability



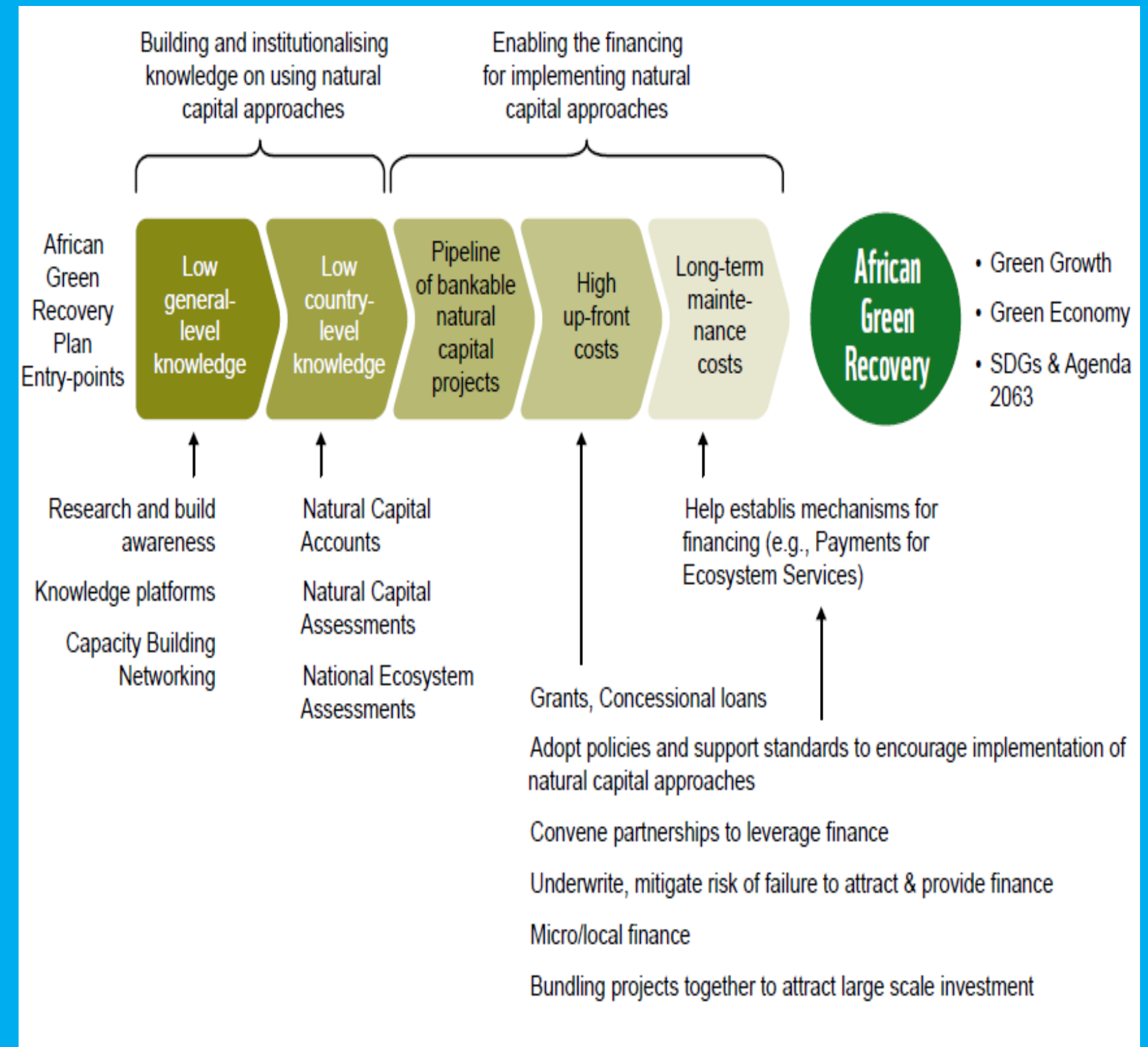
Good Governance: Driving Green Recovery

Evolving role & strategic Opportunities for DFI's:

- Play a catalytic role in mainstreaming natural capital into investment frameworks:
 - Strengthening national capacity for natural capital accounting and data systems at the national level
 - Expand collaboration across DFIs, Private, government leveraging resources for sustainable projects.
 - Build pipelines of bankable & scalable NbS projects with quantified co-benefits & innovative finance models

Future Initiatives:

- AFDB will partner on the GEF 8 Net Zero Nature Positive Project
 - Focus on supporting African countries in achieving net-zero, nature-positive outcomes.
- KMGBF Resource Mobilization Strategy for Biodiversity (2025-2030)



Call to Action

DFIs and financial institutions should embed natural capital and NbS into their strategic decisions to achieve resilient, sustainable and inclusive growth across Africa.

- Actively integrate natural capital considerations into financial risk assessments and investment decisions.
- Champion and facilitate the uptake and scaling of Nature-Based Solutions for sustainable economic recovery.
- Commit to collaboration to unlock the full potential of Africa's natural capital.



The logo for the United Nations World Conservation Monitoring Centre (UNEP WCMC). It features the letters 'UN' in a bold, sans-serif font, followed by the United Nations emblem (a world map surrounded by olive branches), and the letters 'WCMC' in a larger, bold, sans-serif font. Below this, the words 'environment' and 'programme' are stacked in a smaller, bold, sans-serif font.

UN  **WCMC**
**environment
programme**

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[LinkedIn: UNEP-WCMC](#)

Natural capital tools and approaches for evaluating investment projects in Africa.

Mozambique Pemba-Lichinga Special Agro-industrial

Processing Zone (SAPZ) – A Natural Capital Approach Case Study

Why use a Natural Capital Approach?

- Natural capital refers to the stock of renewable and non-renewable resources that provide economic and social benefits.
- Integrating natural capital into investment planning may improve risk management and create long-term value.

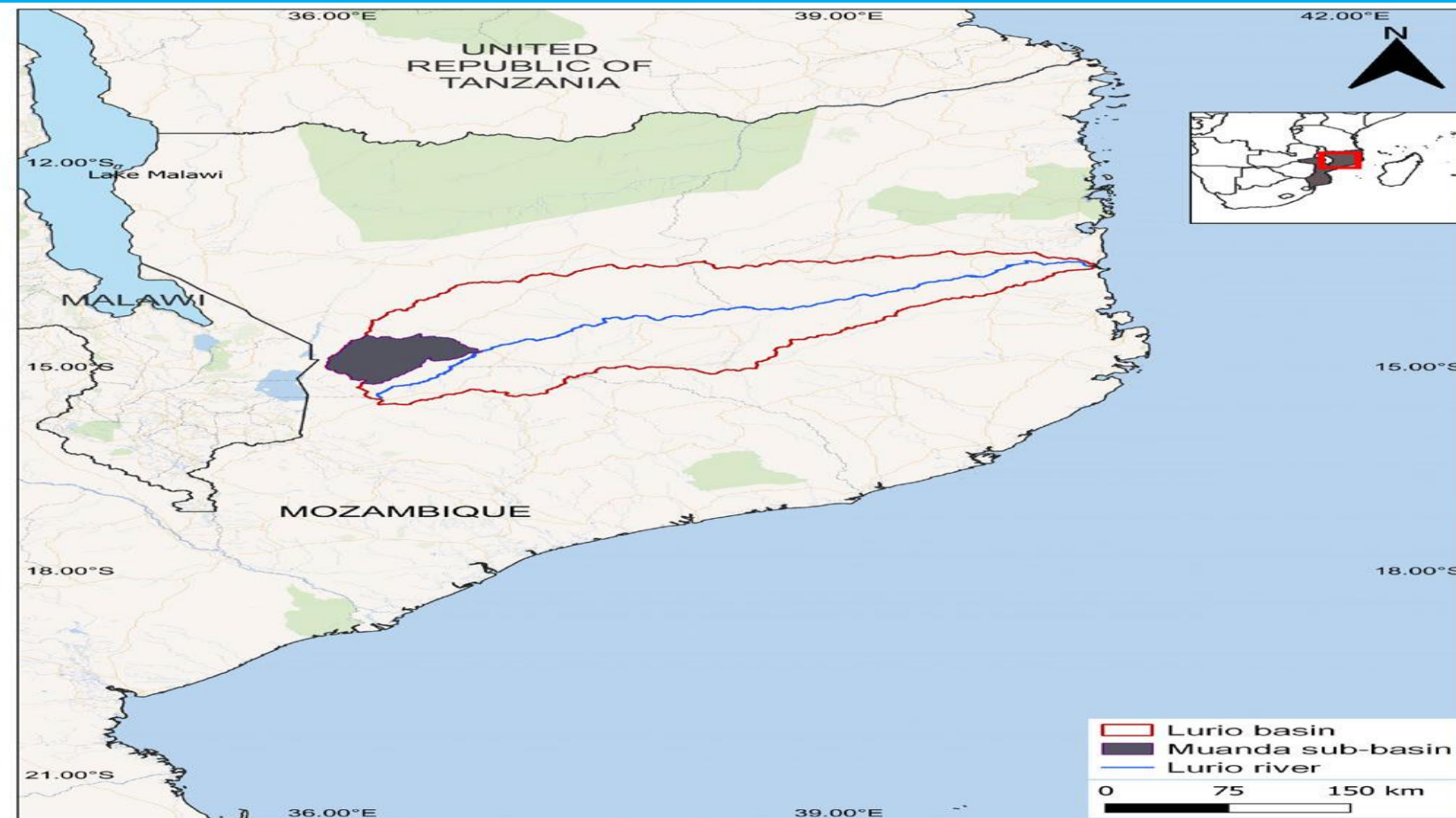
This case study examines how Mozambique's Special Agro-Industrial Processing Zone (SAPZ) incorporated a natural capital approach.

Entry Point

- The inter-ministerial steering group for Mozambique's Green Economy Action Plan (GEAP) have identified mapping, valuation and integration of natural capital in national planning as a priority.
- In response the NC4 ADF initiative commissioned a natural capital assessment of the SAPZ.

Mozambique SAPZ: Background

- Agriculture contributes 26% of GDP, employing 71% of the workforce
- However, agricultural productivity –lowest in the region
- The Pemba-Lichinga SAPZ project aimed to boost agricultural productivity and create sustainable agribusiness value chains.
- SAPZ was an opportunity to enhance water resources, soil quality and carbon sequestration



Projection: EPSG 4326 Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

2 Forward-Looking Scenarios

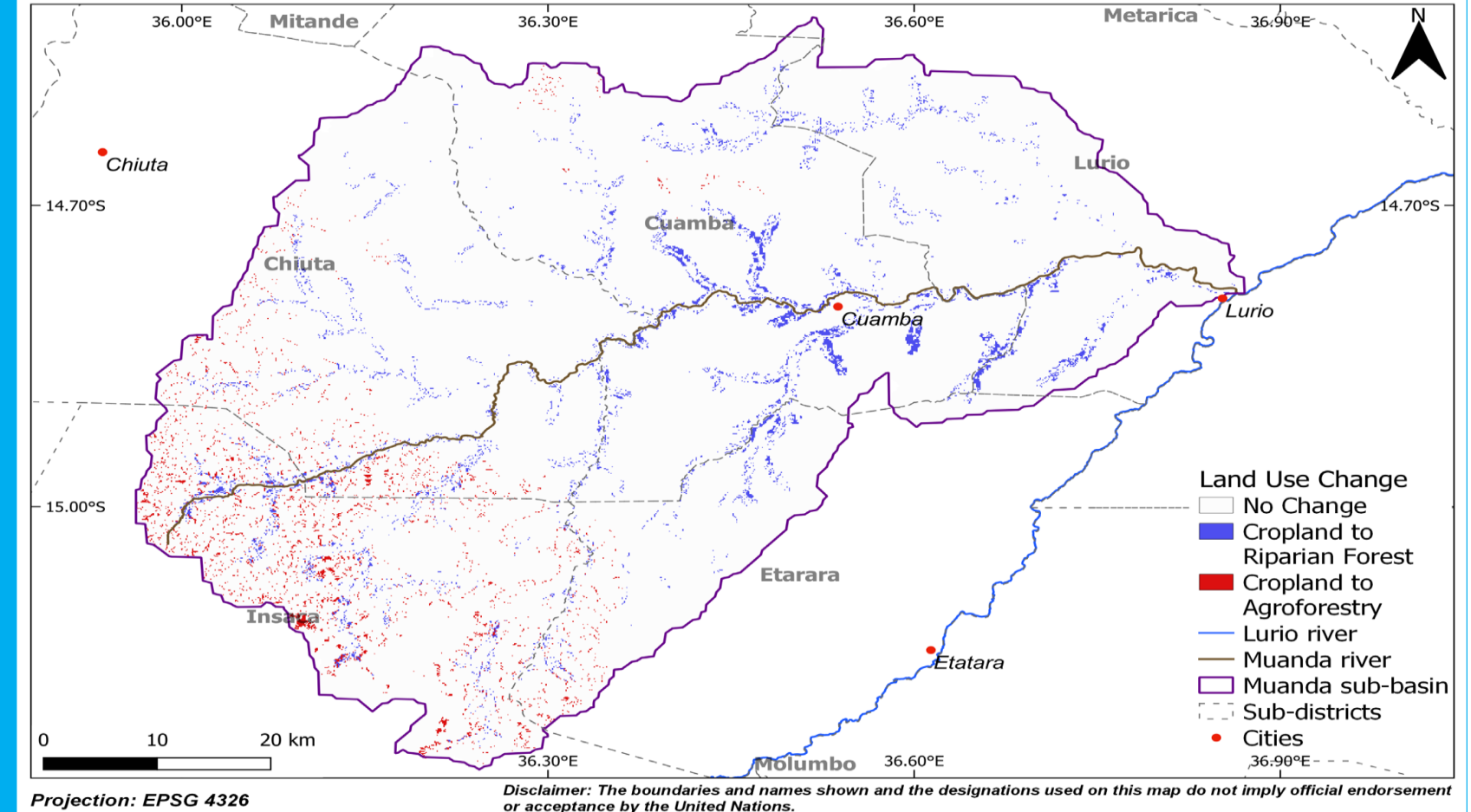
- Business-as-Usual: Focused on maximizing crop yield within cropland boundaries
- Natural Capital Approach: Combines crop production with targeted agroforestry and afforestation to improve ecosystem services.
- The assessment modelled ecosystem service flows to compare these approaches.

Natural Capital Approach

- The extent of existing cropland targeted for agroforestry was 4,460 ha and for afforestation of existing riparian cropland was 10,513 ha.

Ecosystem services assessed include:

- Water flow regulation (dry season supply).
- Sediment retention (or erosion control) services for water courses and irrigation protection.
- Carbon sequestration and storage for climate change mitigation.
- Wood fuel provisioning services for local energy security.



Key Findings from the Natural Capital Assessment

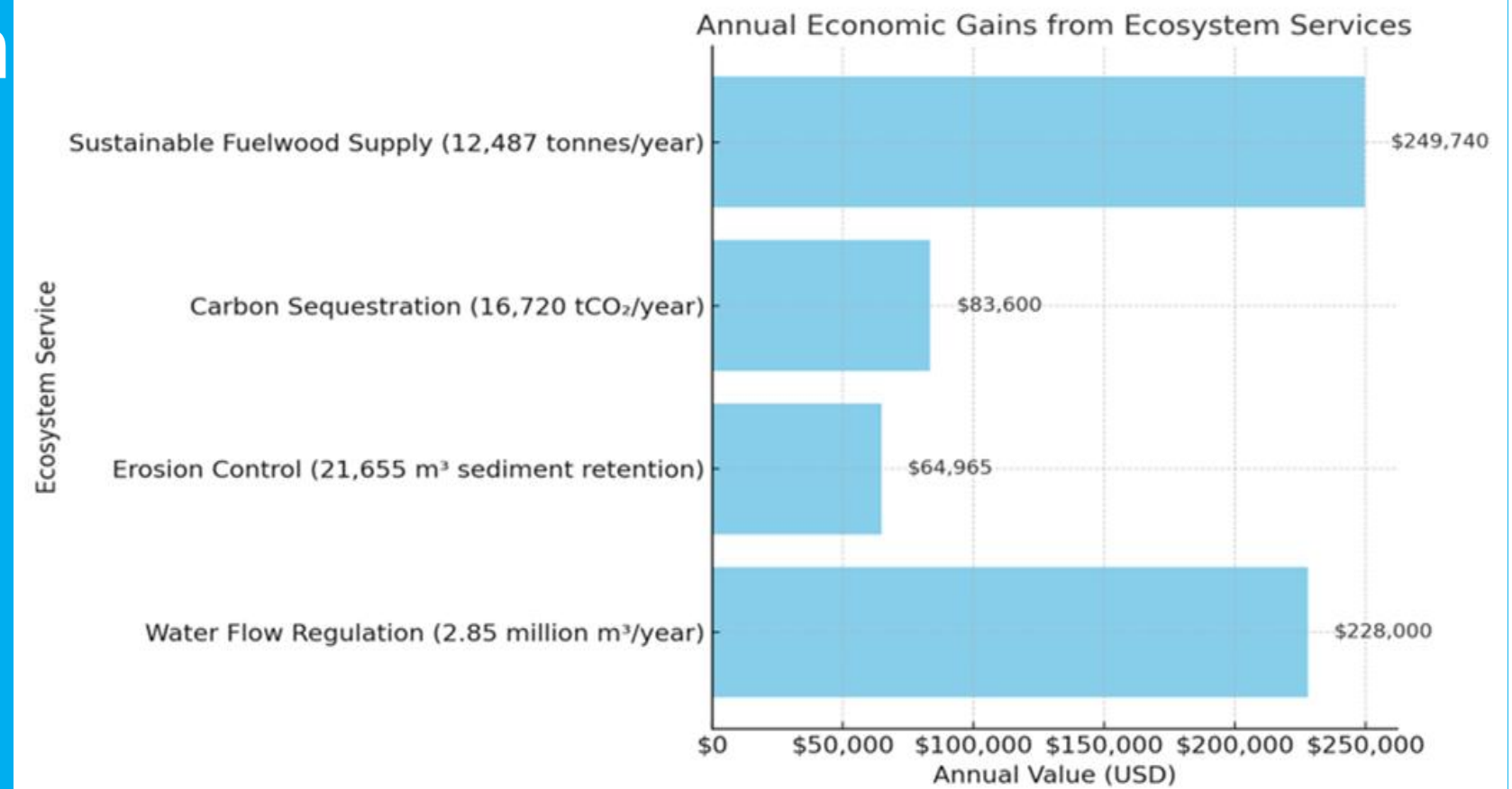
- Water Flow Regulation: Increased dry-season water supply by 2.85 million m³.
- Sediment Retention: Reduced river sedimentation by 21,655 m³ per year.
- Carbon Sequestration: 16,720 tCO₂e per year in additional carbon storage.
- Fuelwood Supply: Increased by 12,487 tonnes annually, improving local energy security.



ECOSYSTEM SERVICE	UNITS / YEAR	DIFFERENCE IN DELIVERY	MARGINAL VALUE (USD / UNIT)	TOTAL VALUE (USD / YEAR)
Water flow regulation (dry season supply)	m ³	2,850,000	0.08	228,000
Sediment retention services	m ³	21,655	3	64,965
Carbon sequestration ¹³	tCO ₂ e	16,720	5	83,600
Fuelwood supply	tonnes	12,487	20	249,740
Total				626,305

Economic Benefits of the NC Approach

- Increased ecosystem services valued at USD 626,305 per year.
- Equivalent to USD 42 per hectare in benefits, increasing to USD 90 per hectare when climate mitigation benefits are factored.



NC assessments support integrated landscape development

- Informing nature-based solutions to support the SAPZ-supporting irrigation potential.
- Delivering wider social benefits-improves energy security in the Muanda River basin
- Delivering climate change mitigation- Support Nationally determined contributions (NDCs)
- Delivering better biodiversity outcomes- 10,000 hectares of natural forests in riparian areas



AFDB Impact on Local Development

- The natural capital approach enhances energy security and biodiversity.
- Supported Mozambique's Green Economy Action Plan (GEAP).
- Built technical and institutional capacity for investment decision-making and project appraisal
- Encourages climate and conservation co-financing.



Recommendations

Natural capital approaches can enhance agricultural and economic development while protecting ecosystems.

- Policymakers and financial institutions should integrate ecosystem service valuations into investment planning.
- Leveraging co-financing opportunities (climate and conservation funds) can drive sustainability-focused investments.
- Continued research and data collection on ecosystem services will improve future natural capital assessments.





WCMC

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THANK YOU!