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# Protecting East Africa's Natural Capital

## *The cost of inaction*

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August 19, 2021

*This presentation was produced for review by the United States Agency for International Development.  
It was prepared by Environmental Incentives and Anchor Environmental Consulting for the Economics of Natural Capital in East Africa Project*

# AGENDA

- Project overview
- Key findings
- Nature's call to action
- Opportunities for private sector investment



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# PROJECT OVERVIEW



8/20/2021



Elephants, Botswana, credit: Michiel Terellen

# PROJECT GOALS

- Generate evidence on the stocks and flows of natural capital in East Africa
- Engage stakeholders at every level in developing a transboundary strategy and action plan for protecting our natural capital

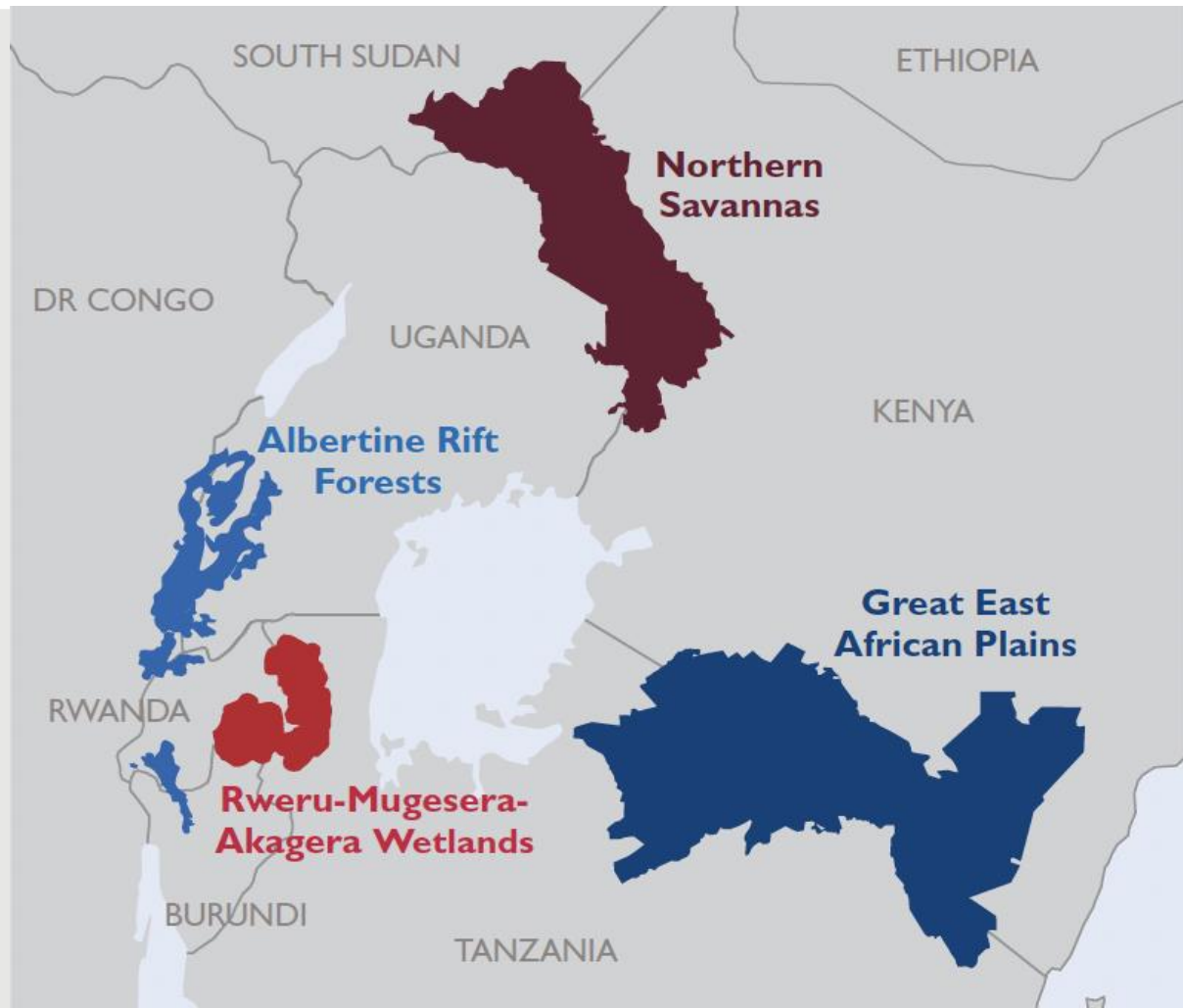


# FIRST-EVER LANDSCAPE LEVEL ASSESSMENT

- Landscape-level study fills key evidence gap
- Nature doesn't conform to political boundaries
- Yet nations' economies and well-being share mutual dependence on keeping transboundary landscapes intact



# THE FOUR LANDSCAPES



# ECOSYSTEM SERVICES ASSESSED

## Provisioning services



Harvested wild resources



Livestock production



Crop pollination

## Regulating services



Water quality amelioration



Water flow regulation



Erosion control



Carbon storage

## Cultural services



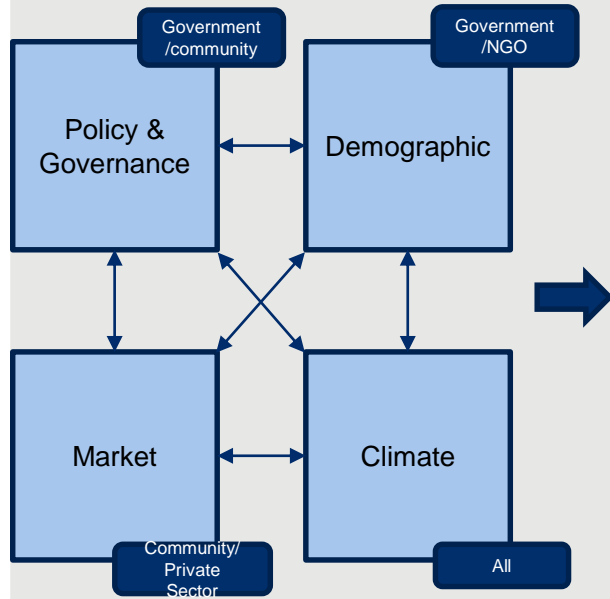
Biodiversity existence



Nature-based tourism

# MODEL USED FOR ANALYSIS, REPORTING, VALIDATION, AND ACTION PLANNING

## DRIVERS



## Threats

EXTRACTION OF NATURAL RESOURCES  
LAND-USE/  
LAND-COVER CHANGE

## Landscape factors

WILDLIFE HABITAT  
WILDLIFE

## ECOSYSTEM SERVICES

Cultural

Provisioning

Regulating  
(non-carbon)

Regulating  
(carbon)

DOWNSTREAM EFFECTS

Agriculture

Energy

Pastoralists

Tourism

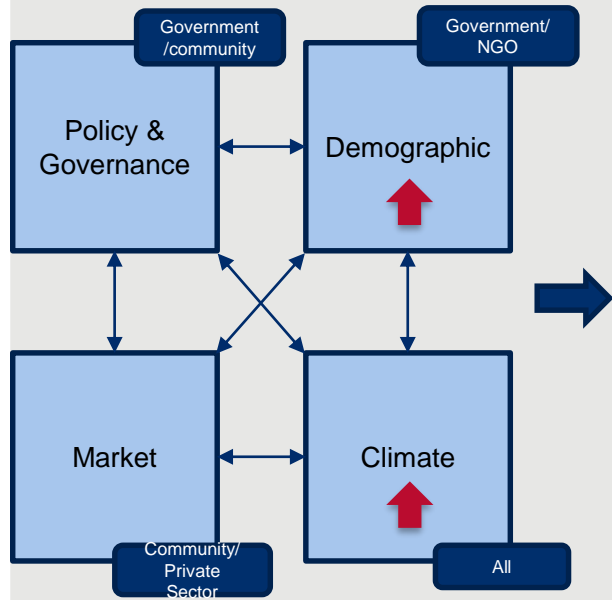
Private Sector

NRM



# MODEL USED FOR 2050 PROJECTIONS UNDER BUSINESS AS USUAL

## Drivers



## Threats

EXTRACTION OF NATURAL RESOURCES  
LAND-USE/  
LAND-COVER  
CHANGE

## Landscape factors

WILDLIFE  
HABITAT  
WILDLIFE

## Ecosystem services

Cultural

Provisioning

Regulating  
(non-carbon)

Regulating  
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DOWNSTREAM  
EFFECTS

Agriculture

Energy

Pastoralist  
s

Tourism

Private  
Sector

NRM

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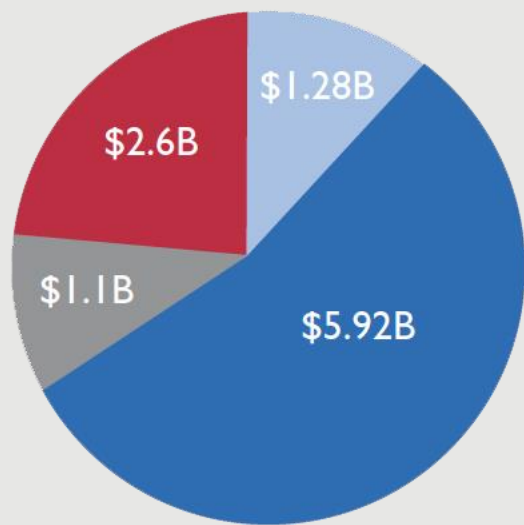
# KEY FINDINGS



8/20/2021



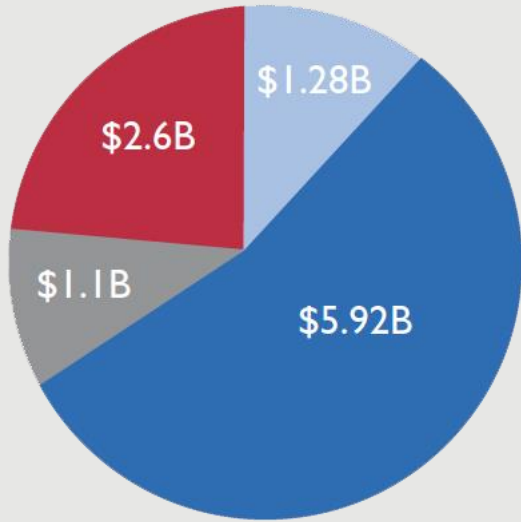
Kilimanjaro-Amboseli, credit: Adam Henson



- Cultural services
- Regulating services
- Carbon storage
- Provisioning services

Nature's contribution to global economy > \$125 trillion/year

Landscapes' contribution to EAC economy ~\$10.9 billion/year



- Cultural services
- Regulating services
- Carbon storage
- Provisioning services

**Tourism only 11% of value (\$1.2 billion)**

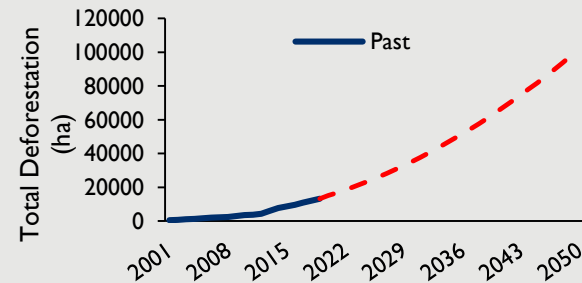
**Regulating services 65% of total value: (\$7.04 billion)**

- Water flow regulation: \$1.52 billion
- Water quality amelioration: \$2.1 million
- Preventing soil erosion: \$4.40 billion
- Carbon storage: \$1.1 billion (*avoided costs of damage from climate change*)

# THE ALBERTINE RIFT FORESTS: A BUSINESS AS USUAL SCENARIO

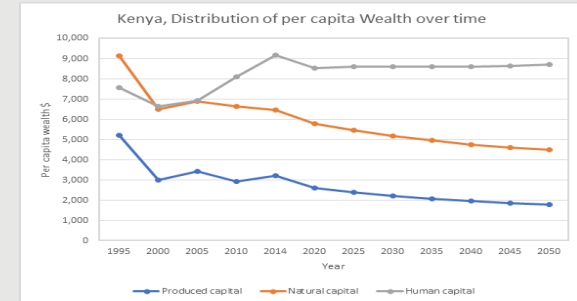
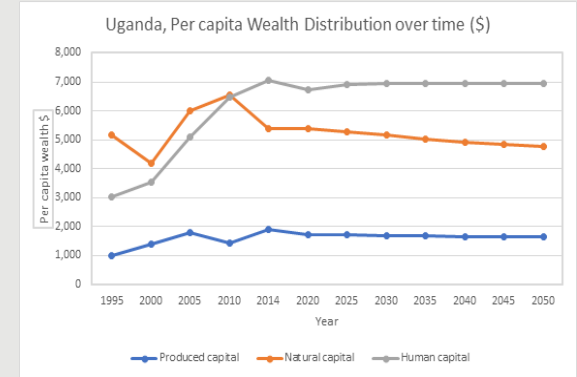
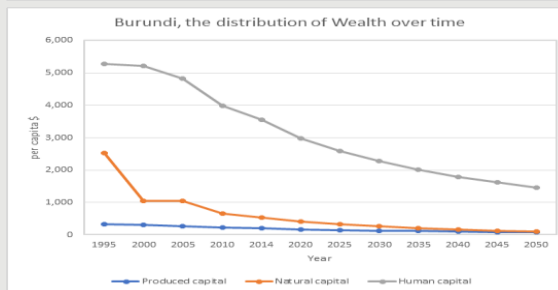
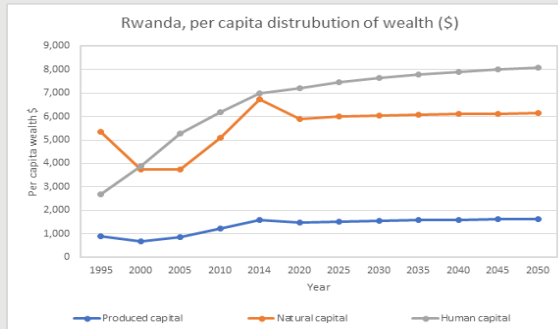
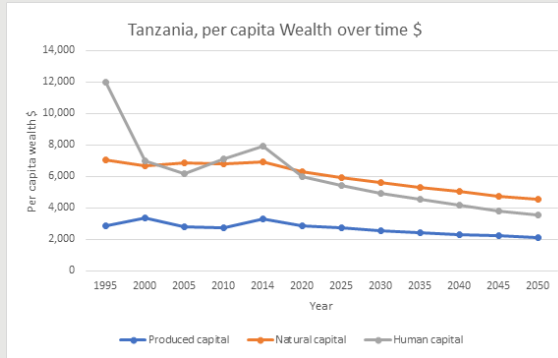
- **More resilient tourism model** (high-end, low impact).
- Up to **89,000 ha of forest (15%)** could be lost by 2050. (Deforestation prevalent even within protected areas)
- 1.3% decline in sediment retention, worth \$8 million in annual storage/restoration costs
- 3.1% decline in baseflow, with an annual replacement cost of \$13 million
- 390% increase in phosphorus export, potentially impacting the Albertine Rift Valley Lakes and Lake Victoria, with annual treatment cost of \$338,000.

Credit: WWF (independent.co.ug)



No future with business as usual for the EAC region.

- Natural capital declining as % of overall wealth in region, threatening sustainability.

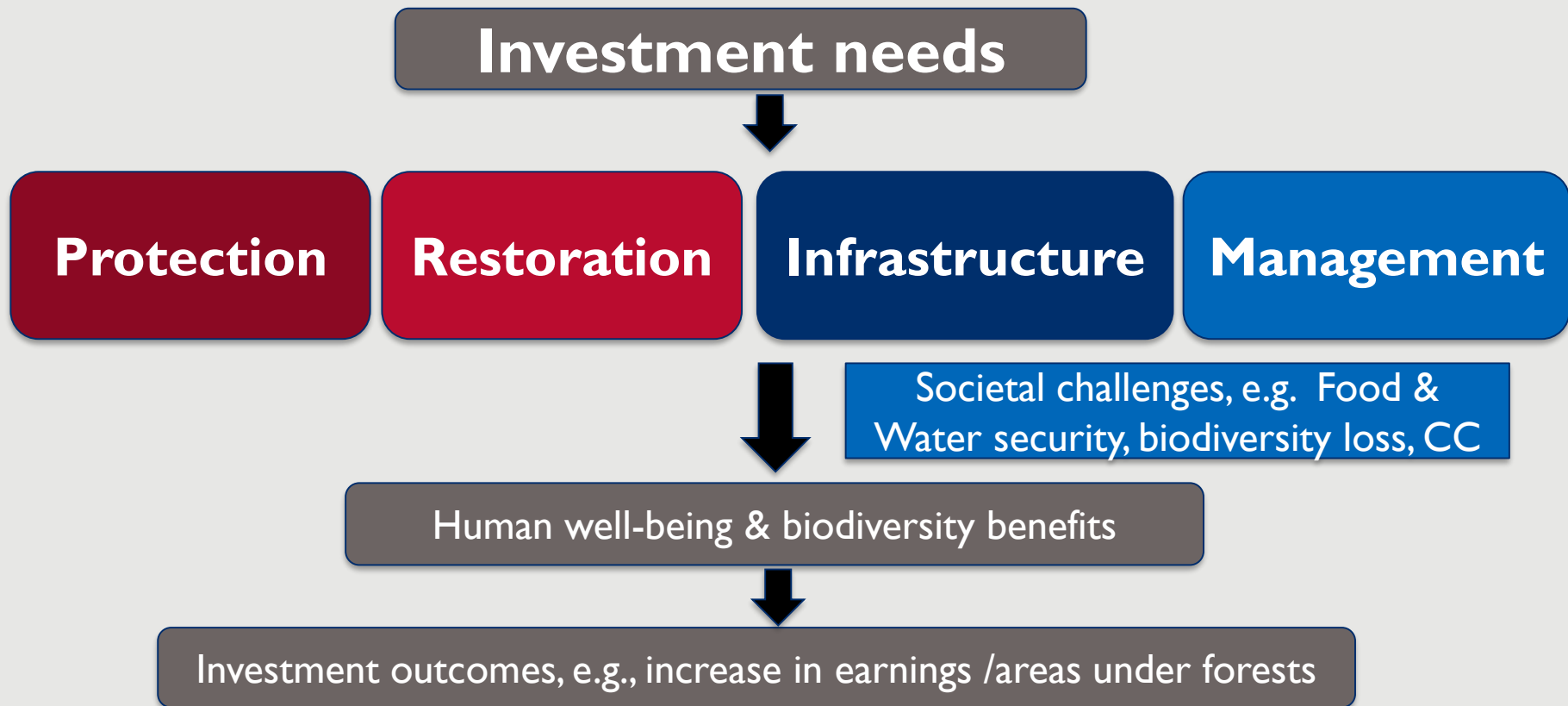


# INVESTMENT IN PROTECTED AREAS: 1000% DEFICIENT IN AFRICA

- Wildlife habitats under pressure from governments, corporations, and communities pursuing development, business and livelihoods.
- Inadequately protected parks suffer ecological degradation, losing valuable habitats and charismatic species – reducing ecosystem services (including potential to supply adequate water or generate tourism revenue).
- Adequate management of protected areas in Africa, will require investment up to **\$2,000/Km<sup>2</sup>** annually.
- Only **\$200/Km<sup>2</sup>** is availed.
- Private sector contribution only 14%.



# A CASE FOR NATURE-BASED SOLUTIONS



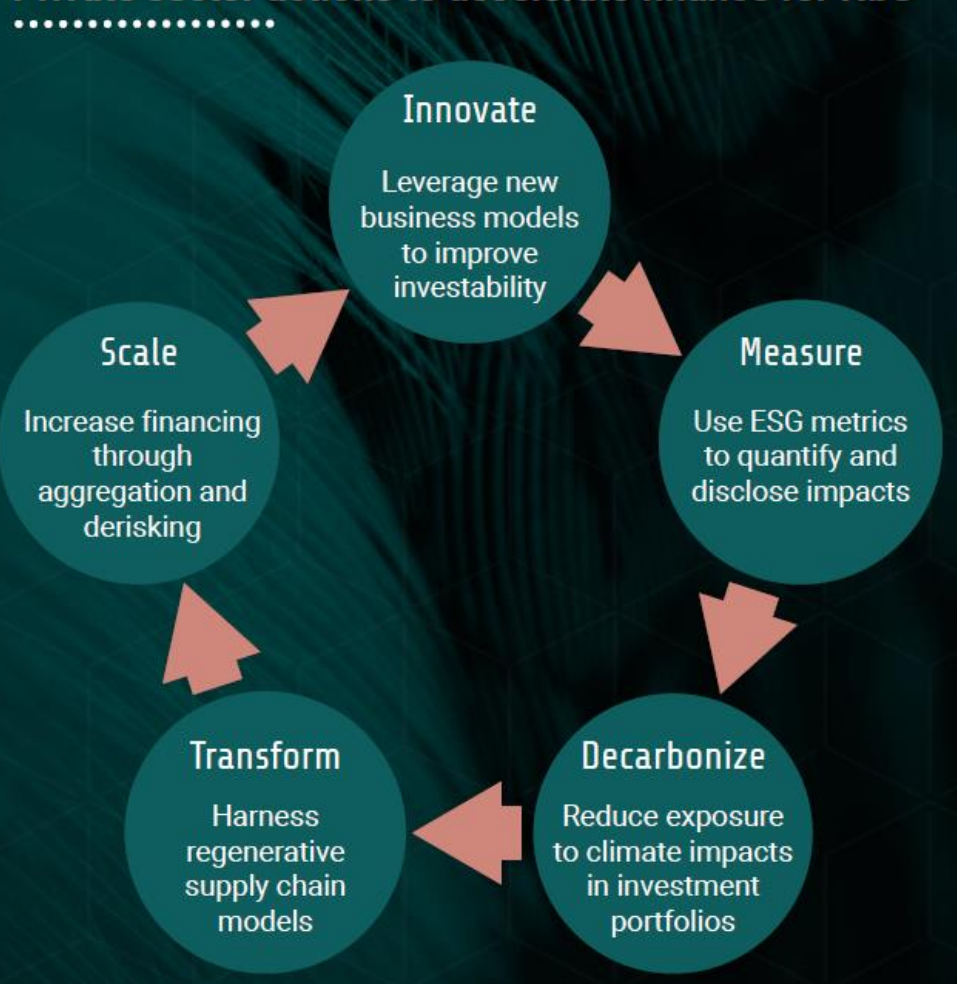


# INVESTMENT INNOVATIONS

**To support nature-based solutions, investments in natural capital will need:**

- Commercial viability to complement philanthropy and grants
- Nature as an opportunity (not constraint) in the investment rationale
- Demonstrate impacts to society and environment aside financial returns

## Private sector actions to accelerate finance for NbS



# CASE STUDY: MT ELGON LIVELIHOOD FUND

- Developed in 2016 to combat deforestation and unsustainable agricultural practices, while boosting local economy.
- Focus: agricultural productivity, dairy value chain development, and conservation:
  - training 30,000 farmers on 35,000 ha of land with sustainable land management practices,
  - supporting 15 cooperatives with various tasks on the ground.
- **Overarching goal: create sustainable supply chain that will be linked to East Africa's primary dairy company, Brookside Dairy.**



# FINANCING MECHANISMS

## 3. Catalogue of Biodiversity Finance Solutions

### 1. Biodiversity offsets

### 2. Bioprospecting

### 3. Biosafety fee

### 4. Carbon markets

### 5. Conservation easement (external-analysis)

### 6. Conservation or wildlife themed items

### 7. Corporate and corporate foundations' donations

### 8. Corporate social responsibility tax

### 9. Corporate sustainability

### 10. Crowd funding

### 11. Debt-for-Nature Swaps

### 12. Disaster risk insurance

### 13. Earmarking and retention of biodiversity revenues (self income)

### 14. Ecological fiscal transfers

### 15. Effective procurement

### 16. Enterprise challenge and innovation funds

### 17. Environmental risk insurance

### 18. Financial and operational mergers

### 19. Green banks

### 20. Green bonds

### 21. Green lending

### 22. Green procurement

### 23. Cost effectiveness measures

### 24. Human resources management

### 25. Impact investment

### 26. Enhance public budget execution

### 27. Incentives for sustainable business

### 28. Enhanced Land or Marine Stewardship

### 29. Islamic finance

### 30. Lobbying for public budget allocations

### 31. Lotteries

### 32. Lower cost of capital for conservation investments

### 33. Mobile banking

### 34. Mobilization of private donations

### 35. Increasing Official Development Assistance (ODA)

### 36. Promoting Natural capital accounting

### 37. Outsourcing strategies

### 38. Payment for Ecosystem Services

### 39. Compensation for planned environmental damage

### 40. Penalties and other compensation for unplanned environmental damage

### 41. Promotion of sustainable tourism

### 42. Non-State Protected Areas

### 43. Financial guarantees

### 44. Remittances

### 45. Result based budgeting

### 46. Social and development impact bonds

### 47. Sovereign Wealth Funds

### 48. Change subsidies harmful to biodiversity

### 49. Sustainability standards and certification (voluntary)

### 50. Biodiversity friendly subsidies

### 51. Earmarking of taxes on financial transactions

### 52. Taxes, fees and quotas in the fishery sector

### 53. Taxes on natural resources (non-renewables)

### 54. Taxes on renewable natural capital

### 55. Taxes, Fees and Royalties in the Forestry Sector

### 56. Tariffs, fees and taxes in the water sector

### 57. Taxes on pesticides and fertilizers

### 58. Taxes and fees in the tourism sector

### 59. Taxes and fees in the wildlife sector

### 60. Technology upgrade and maintenance

### 61. Trade finance

### 62. Trust funds

### 63. Venture capital

### 64. Water markets

### 65. Fees, penalties, and management expenditures for Environmental (and Social) Impact Assessment

### 66. Finance for Permanence

### 67. Pasture (and grazing) Fees



- **Blended finance** for nature where public finance institutions (including government donors, DFIs and sovereign Funds) provide de-risking (change risk/return profile) capital on a bigger scale.
- **Fresh water availability**
  - **Project finance** – for water infrastructure like treatments plants/bottling
  - **Green Bonds** – to raise capital for water infrastructure to supply urban areas
  - **Asset finance** – for water efficient equipment in irrigation agriculture
- **Agrifood**
  - The economics of FoodCuisine: AfDB's digital platform with linkages to finance streams.

**Forest Resilience Bond (FRB):** finance instrument that enables the US Forest Service to restore forests.

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