

# Africa Climate Projects Review

Overview of 19 focus projects

BCG perspective constrained by limited data. BCG does not endorse any investment outlined in this document

30<sup>TH</sup> JULY 2022



# Final 19 projects for forum

## Theme 1 | Energy and transport

Project	Country	Cost
3 GW Mambilla hydroelectric power project	Nigeria (ECOWAS)	\$6bn
150 MW regional solar power park project in Mali	Mali (ECOWAS)	\$250m
Replacement of thermal power with renewables	Egypt	\$10bn
Egypt electric light rail network	Egypt	\$6bn

## Theme 2 | Agriculture and land

Project	Country	Cost
Restoration of degraded land	32 countries	\$10bn
Angololo multipurpose water resources dev project	Kenya, Uganda	\$62m
Crop adaptation in the Nile Valley and Delta	Egypt	\$800m

## Theme 3 | Digital transformations

Project	Country	Cost
Transborder submarine fiber pops & smart hub	Kenya (EAC)	\$70m
Extension of national ICT broadband backbone	Tanzania, Mozambique	\$60m
Mauritius water Infrastructure SCADA System	Mauritius	\$10m

## Theme 4 | Carbon credit markets

Project	Country	Cost
Blue Carbon Accelerator Fund	W. Indian Ocean <sup>1</sup>	\$50m
Regional restoration hubs	W. Indian Ocean <sup>1</sup>	\$10m
Conservation of forests in the COMIFAC area	Central Africa <sup>1</sup>	\$7m

## Theme 5 | Blue economy

Project	Country	Cost
Blue bond and debt-for-nature swap	W. Indian Ocean <sup>1</sup>	\$5bn <sup>2</sup>
Blue Natural Capital Financing Facility	W. Indian Ocean <sup>1</sup>	\$120m <sup>3</sup>
7 regenerative seascapes	W. Indian Ocean <sup>1</sup>	\$50m

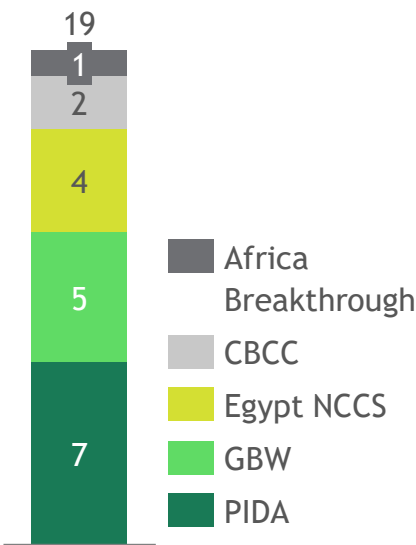
## Theme 6 | Water & cities

Project	Country	Cost
Lesotho-Botswana water transfer	Lesotho, SA, Botswana	\$3bn
Water desalination using solar energy	Egypt	\$600m
Congo Basin solid river waste treatment	Congo	\$41m

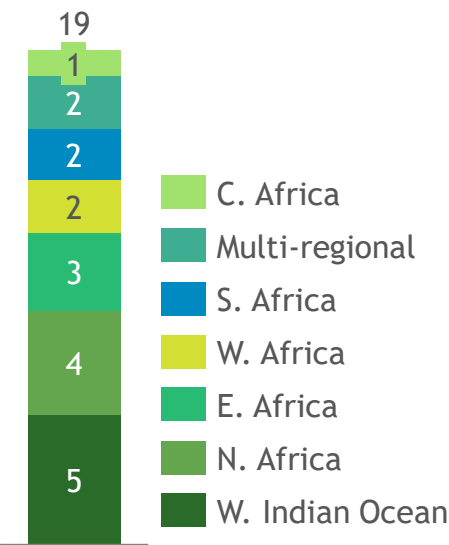
● PIDA
 ● CBCC
 ● GBW
 ● Egypt NCCS
 ● Africa Breakthroughs

# Final 19 projects spread across categories

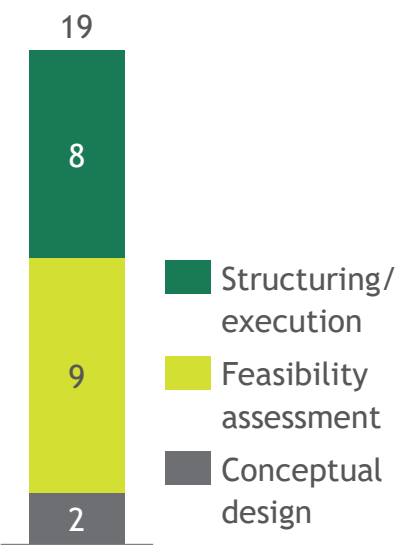
Source



Regions



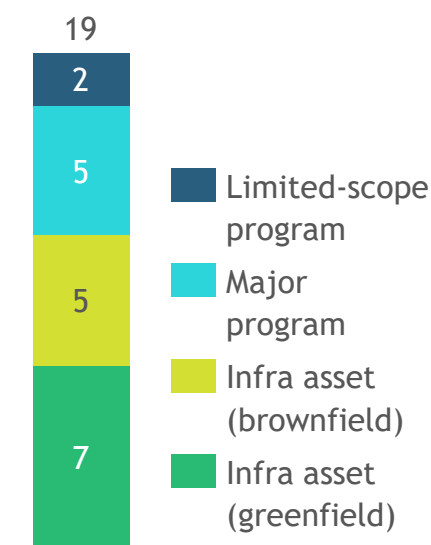
Project stage



Total cost



Project type



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# Theme 1 | Energy and transport

# 3GW Mambilla hydroelectric power project



## Region



## Project overview

Hydroelectric facility being developed on the Dongo River in Nigeria with capacity of 3GW. The project is being undertaken by the Federal Ministry of Power and will be Nigeria's biggest power plant, with energy produced also to be exported to other ECOWAS countries

## Timelines

**Project stage:** S3A-Project Structuring

**Project timelines:** Layout report and final design report completed in 2012. Construction contract signed in Nov 2017 with 3 contractors. Bankability study conducted in 2019. Plant expected to be fully operational by 2030

## Key info



Energy (Hydro)



Infra asset  
(greenfield)

## Owner

Federal Ministry of  
Power, Nigeria

## Financing



Project Cost

**Investment secured:** The Project will be financed in part through a loan from the Exim Bank of China

## Countries

**Country of operation:** Nigeria  
**Countries accessing energy:**  
Niger, Togo, Benin and Chad

## Climate impact



Mitigation  
(avoidance)

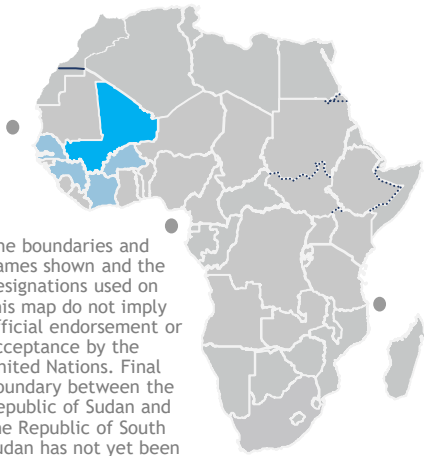
**5,457 GWh/yr**  
Renewable energy

The facility will produce 5,457 GWh of renewable energy per year, helping Nigeria meet its target for 90% electricity access rate and 30% renewable energy use by 2030, and will replace a mix of grid, diesel and petrol generators with 3,170m t CO2e avoided (using Avoided Emissions Calculator of IRENA)

# 150MW regional solar power park project in Mali



## Region



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## Countries

**Country of operation:** Mali  
**Countries accessing energy:** Burkina Faso, Cote d'Ivoire, Guinea, Senegal

## Project overview

The West African Power Pool (WAPP) aims to create a unified ECOWAS power market and exchange among members. To this effect, it is developing a solar PV power plant with storage facility in Mali with a capacity of 150 MW which will help Mali and other ECOWAS countries increase their supply and use of renewable energy

## Key info



Energy (Solar)



Infra asset  
(greenfield)

## Owner

West African  
Power Pool

## Climate impact



Mitigation  
(avoidance)

**498 GWh/yr**  
Renewable energy

The expected production of renewable energy is 498 GWh per year, which will help to decrease the power supply deficit in the region and increase the component of renewable energy in the regional energy mix with 24 t CO<sub>2</sub>e avoided (using Avoided Emissions Calculator of IRENA)

## Timelines

**Project stage:** S2B-Feasibility

**Project timelines:** Project in preparation phase, feasibility study being finalized and environmental and social impact assessment (ESIA) ongoing

## Financing



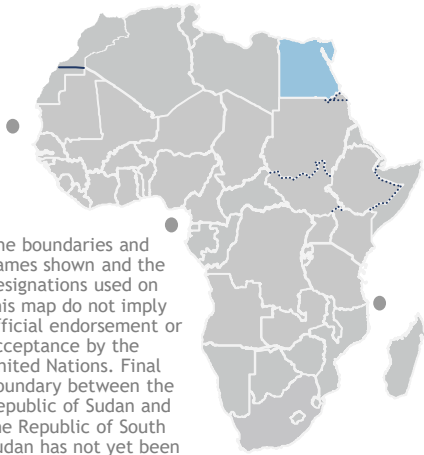
Project Cost

**Investment secured:** World Bank provided funding for completing the feasibility study

# Replacement of thermal power with renewables



## Region



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## Project overview

Egypt will decommission 17 inefficient thermal power plants with combined capacity of 7.5 GW, closing the power gap with 5.1 GW of wind power and 6.2 GW of solar PV, to be delivered mainly by the private sector

## Timelines

**Project stage:** Feasibility

**Project timelines:** 2022-2035 duration of implementation

## Key info



Energy (wind and solar)



Infra asset (greenfield)

## Owner

Ministry of Electricity and Renewable Energy (MoERE), Ministry of Environment (MoE)

## Financing



Project Cost

**Investment secured/required:** N/A

## Countries

Egypt

## Climate impact



Mitigation (avoidance)

**7.7mn t CO2e/yr**

GHG reduction

Replacement of Egypt's inefficient thermal power with renewables will lead to GHG reduction of 7.7mn t CO2e/yr, helping the nation to meet its 2030 emissions reduction targets

Source: Egypt NCCS

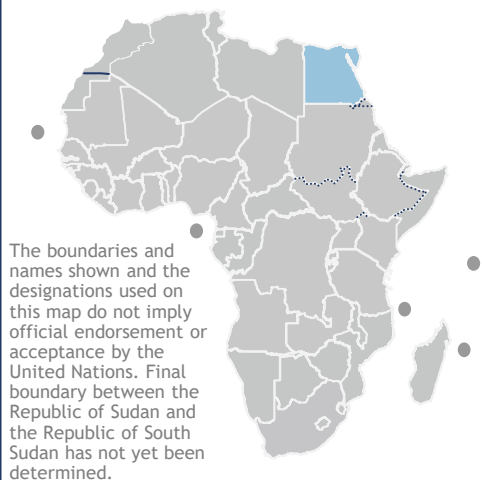
For further information, reach out to Jean-Paul ([jean-paul.adam@un.org](mailto:jean-paul.adam@un.org)) or Deka ([deka.moussaragueh@un.org](mailto:deka.moussaragueh@un.org))



# Egypt electric light rail network



## Region



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## Project overview

Egypt plans to upgrade its transport services by building electric light rail transit (LRT) along 2 routes (Adly Mansour–New Administrative Capital, and Port Saeed West–Abu Qir) to provide efficient, safe, and affordable transportation for passengers and freight across the country while reducing carbon emissions

## Timelines

**Project stage:** Feasibility

**Project timelines:** Expected to be completed by 2025

## Key info



Transport  
(electric)



Infra asset  
(greenfield)

### Owner

Ministry of  
Transport, Egypt

## Countries

Egypt

## Climate impact



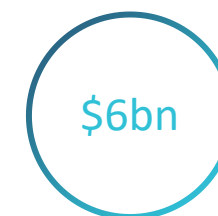
Mitigation  
(avoidance)

**207,500t CO2e/yr**

GHG reduction

Using electric LRT will reduce GHG emissions by 207,500t CO2e/yr and save \$23m/yr in avoided costs of climate change. Reduced use of buses for transport will also reduce particulates (PM25) by 340ton/yr and sulfur oxide (SOx) emissions by 770ton/yr, helping Egypt meet its SDG3 targets of improved air quality

## Financing



Project Cost

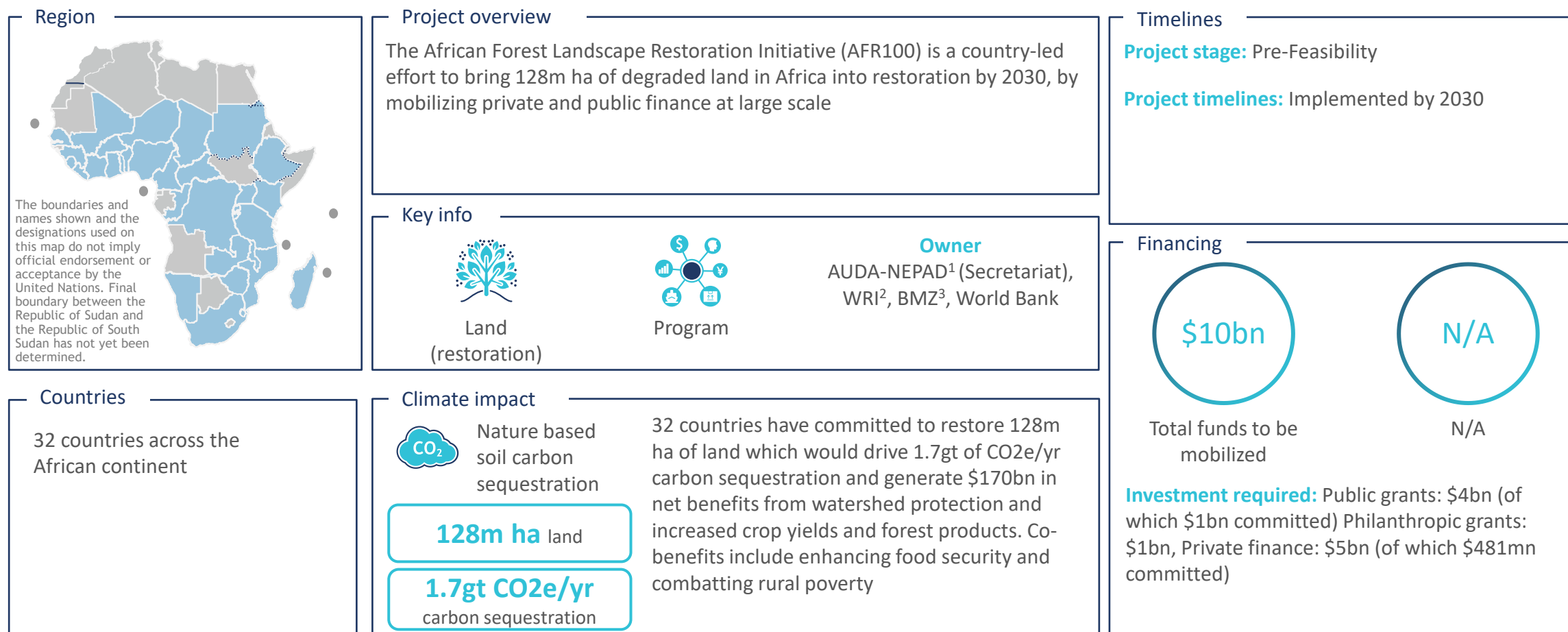
**Investment secured:** Govt. commitments (\$2.2bn), foreign funds (\$3.6bn) and development partners (\$240mn)



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## Theme 2 | Agriculture and land

# Restoration of degraded land



1. The African Union Development Agency (AUDA-NEPAD); 2. World Resources Institute (WRI); 3. Germany's Federal Ministry for Economic Cooperation and Development (BMZ)

Source: Africa Breakthrough

For further information, reach out to Jean-Paul ([jean-paul.adam@un.org](mailto:jean-paul.adam@un.org)) or Deka ([deka.moussaragueh@un.org](mailto:deka.moussaragueh@un.org))

# Angololo multipurpose water resources development project

Agriculture & land



## Region



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## Project overview

The Angololo multipurpose water resources development project is a regional transboundary water initiative being developed between Kenya and Uganda on the trans-boundary Malaba River, involving developing a dam, water storage reservoir, irrigated agriculture water supply, and a flow regulation to control floods and manage droughts

## Timelines

**Project stage:** S2B-Feasibility

**Project timelines:** Pre-feasibility study conducted in 2010. Feasibility study, design, environmental and social impact assessment (ESIA) finalized by Sept. 2021. Expected completion by July 2023

## Key info



Agriculture  
(water)



Program

## Owner

Governments of Kenya  
and Uganda

## Financing

\$62m

Project Cost

N/A

N/A

**Investment secured:** NELSAP undertaking studies for the project viability with a budget of \$1.7m (\$1.5m from AfDB NEPAD-IPPF grant; \$75k contribution from each Government of Kenya and Uganda)

## Countries

Kenya, Uganda

## Climate impact



Adaptation &  
resilience

**3.3k ha** Irrigated land

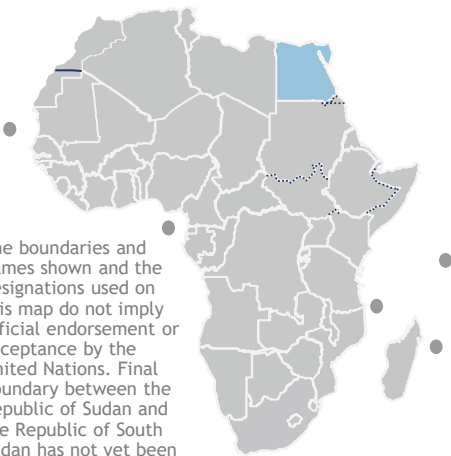





The dam will have a capacity of 2 MW hydro power, supplying potable water to 20,000 people and irrigating 3.3k ha of land (1.2k ha in Kenya and 2.1k ha in Uganda) in line with Kenya's Vision 2030 and Uganda's Vision 2040 to modernize and commercialize agriculture

Source: PIDA

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# Crop adaptation in the Nile Valley and Delta



<div>Region</div> <div><p>The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.</p></div>	<div>Project overview</div> <div>Egypt is planning to carry out several activities to encourage farmers to adapt new genotypes and technologies and build resilience to unusual weather events in the delta and to address the effects of climate change on agricultural productivity, livelihoods and food security</div>	<div>Timelines</div> <div><b>Project stage:</b> Feasibility</div> <div><b>Project timelines:</b> 2023-2030 duration of implementation</div>	
<div>Countries</div> <div>Egypt</div>	<div>Key info</div> <div><div><p>Agriculture (crops)</p></div><div><p>Program</p></div><div><b>Owner</b> Ministry of Agriculture and Land Reclamation, Egypt</div></div>	<div>Financing</div> <div><div><p>\$800m</p><p>Project Cost</p></div><div><p>N/A</p><p>N/A</p></div><div><b>Investment secured/required:</b> N/A</div></div>	
	<div>Climate impact</div> <div><div><p>Adaptation &amp; resilience</p><div>1.5mn ha land</div></div><div>The project will target 1.5m ha of land and 30m people in rural areas, aiming to ensure 20% of Nile Delta and Valley communities are resilient and aware of adaptation options. The program will also aim to increase annual production of wheat, barley, maize and sorghum to 12.2m, 0.45m, 10.6m, and 1.5m tones, respectively, with a total value of more than \$54bn by 2030</div></div>		

Source: Egypt NCCS

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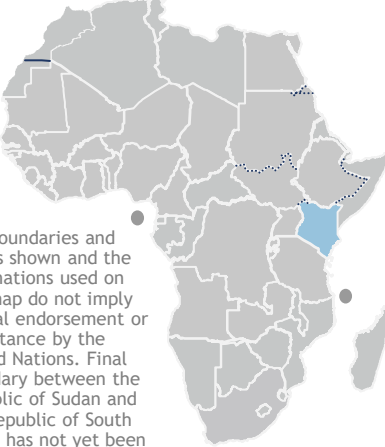



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## Theme 3 | Digital transformations

# Transborder submarine fiber PoPs and regional smart hub

Digital transformation



<b>Region</b>  <p>The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.</p>	<b>Project overview</b> Kenya plans to develop a digital inter-connectivity infrastructure at its border points comprising 400 Gbps point-of-presences (PoPs) and Smart Hub data centres, aiming to provide connectivity between submarine fibre from the Indian Ocean and borders with other EAC countries	<b>Timelines</b> <b>Project stage:</b> S3A-Project Structuring <b>Project timelines:</b> N/A
<b>Countries</b> Kenya	<b>Key info</b> <div>Fibre</div> <div>Infra asset (greenfield)</div> <div><b>Owner</b> Intergovernmental Authority on Development (IGAD)</div> <b>Climate impact</b> <div>Adaptation &amp; resilience</div> <div>The fibre PoPs and regional smart hub data centres will help connect the country and region, increasing resilience and ability to adapt to the effects of climate change, will additional significant developmental co-benefits</div> <div>N/A</div>	<b>Financing</b> <div>\$70m</div> <div>Required funding</div> <b>Investment secured:</b> N/A

Source: PIDA

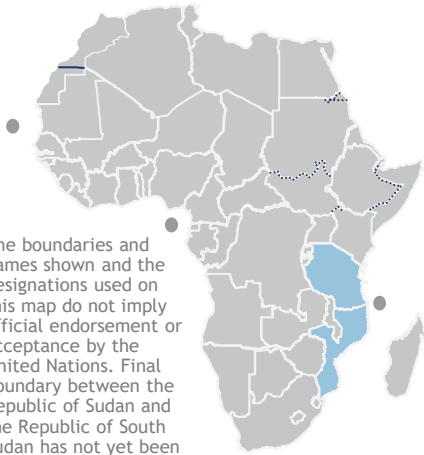
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# Extension of National ICT Broadband Backbone (NICTBB)

Digital transformation



## Region



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## Project overview

Tanzania launched the NICTBB to connect all its neighboring countries to submarine cables and increase connectivity between countries and between the SADC/EAC regions. As part of this, Tanzania is planning to construct optical fibre cables and point of presences (PoPs) for providing connectivity with Mozambique

## Timelines

**Project stage:** S2A-Feasibility

**Project timelines:** N/A

## Key info



Fibre



Infra asset  
(greenfield)

## Owner

Ministry of Works,  
Transport and  
Communication, Tanzania

## Financing



Required funding

**Investment secured:** N/A

## Countries

Tanzania, Mozambique

## Climate impact



Adaptation &  
resilience

N/A

Extension of the National ICT Broadband Backbone will help connect the country and region, increasing resilience and ability to adapt to the effects of climate change, will additional significant developmental co-benefits

Source: PIDA

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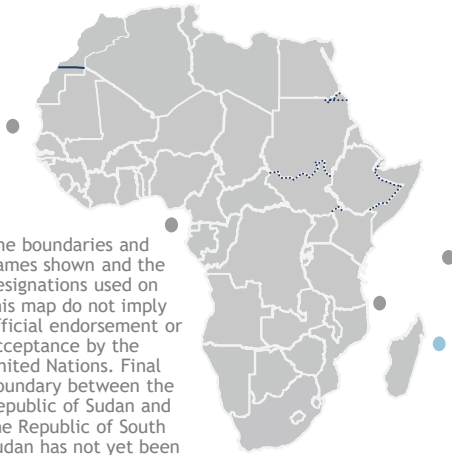


# Mauritius water infrastructure SCADA system

Digital transformation



## Region



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## Project overview

Mauritius plans to implement digital solutions to remotely monitor and control equipment and accessories (pumps, gensets, meters, water levels, etc.) at various pumping stations, service reservoirs, water treatment plants and on its water distribution network to become more efficient in servicing water needs across sectors

## Timelines

**Project stage:** S2A-Feasibility

**Project timelines:** Feasibility study, design and bid documents to be completed by April 2022. Implementation planned over 2 years from July 2022

## Key info



Digital solutions



Program

### Owner

Central Water Authority,  
Mauritius

## Financing



Required funding

**Investment secured:** N/A

## Countries

Mauritius

## Climate impact



Adaptation &  
resilience

N/A

The program will help transform existing water storage and distribution systems to become more efficient in servicing water needs across Mauritius and enhance the resilience of water distribution systems to adverse impacts of climate change

Source: PIDA

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## Theme 4 | Carbon credits

# Blue Carbon Accelerator Fund (BCAF)

Carbon credits



## Region



## Project overview

Part of the International Union for Conservation of Nature and Natural Resources' (IUCN) Great Blue Wall (GBW) initiative, BCAF is a funding scheme supporting entrepreneurs and developers of blue carbon restoration and conservation projects, through readiness, implementation, and technical support

## Timelines

**Project stage:** Initiative is fully operational

**Project timelines:** First Call for Proposal issued in 2022 with four initial projects selected for support

## Key info



Carbon credits  
(oceans)



Program

## Owner

Great Blue Wall initiative

## Financing

\$50m

Program set-up cost for scaling the formulation of a solid and robust pipeline of bankable blue carbon projects

\$500m

Direct investment required for operationalizing priority pipeline initiatives

**Investment secured:** Initial funding by the Australian Government and delivery in partnership with IUCN

## Countries

Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa, Tanzania

## Climate impact



Mitigation  
(removal)

40k ha Mangroves

10k ha Seagrass

BCAF will increase the supply of investment-ready blue carbon restoration projects, supporting key carbon sinks such as mangroves, tidal marshes and seagrasses, while also protecting biodiversity and supporting livelihoods by 2030

Source: GBW

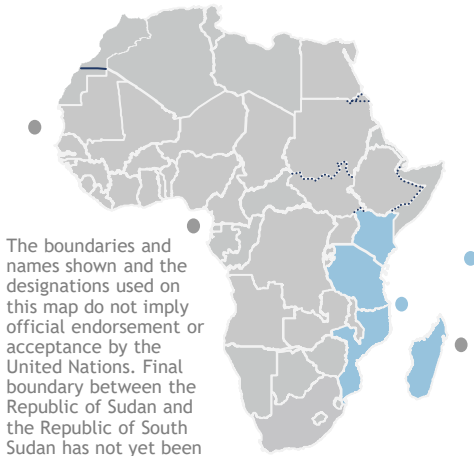
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# Regional Restoration Hubs

Carbon credits



## Region



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## Countries

Comoros, Kenya,  
Madagascar, Mozambique,  
Tanzania, Seychelles

## Project overview

Program to establish restoration hubs and demonstration sites in coastal and marine environments in the Western Indian Ocean, as part of the International Union for Conservation of Nature and Natural Resource' (IUCN) Great Blue Wall (GBW) initiative. Potential scope for implementation of a carbon credits scheme

## Key info



Carbon credits  
(oceans)



Program

**Owner:**

Great Blue Wall initiative

## Climate impact



**Mitigation  
(removal)**

**40k ha** Mangroves

**10k ha** Seagrass

The GBW Regional Restoration Hubs program will lead to the conservation of 40k ha of mangroves and 10k ha of seagrass in the Western Indian Ocean by 2030 and will unlock great private investment opportunities through supported projects, with rough estimates at around \$50-100m

## Timelines

**Project stage:** Design phase

**Project timelines:** Initiative completed by 2030

## Financing



Grant

**Investment secured:** No funding has been raised yet

Source: GBW

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# Conservation of Forests in the COMIFAC Area

Carbon credits



## Region



## Project overview

Forest conservation program in the forests in the COMIFAC area (Commission des Forêts d'Afrique Centrale) in Central Africa, through governance and local management, land rights, and sustainability policies. Potential scope for implementation of a carbon credits scheme

## Timelines

**Project stage:** Feasibility assessment

**Project timelines:** N/A

## Key info



Carbon credits  
(forests)



Program

**Owner**  
REPALEAC

## Financing



Grant funding  
required

**Investment secured:** N/A

## Countries

Gabon, Rwanda, Congo  
Brazzaville, Burundi,  
Cameroon, Central African  
Republic, Chad, DRC

## Climate impact



**Mitigation**  
(REDD+)

The COMIFAC forest conservation project will lead to the conservation of forests in Central Africa, resulting in CO2e of sequestration

N/A

Source: CBCC

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# Theme 5 | Blue economy

# Blue Bond and Debt-for-Nature Swap



## Region



## Countries

Comoros, Kenya,  
Madagascar, Mozambique,  
Tanzania, Seychelles

## Project overview

Structuring, pipeline building, and private investor coalition building for the blue bond and debt-for-nature swap program of the Great Blue Wall (GBW) initiative. An innovative financing mechanism in which the debt of developing countries is purchased in exchange for commitments to preserve blue natural environments

## Key info



Blue economy  
(financing)



Program

## Owner

Great Blue Wall initiative

## Climate impact



Mitigation  
(nature-based  
sequestration)

**2m km<sup>2</sup>** critical blue  
ecosystems restored,  
rehabilitated and effectively  
protected and conserved

The blue bond and debt-for-nature swap program will lead to the conservation of c.2 million km<sup>2</sup> of the Western Indian Ocean, leading to increased additional capacity of restored and rehabilitated blue ecosystems to sequester up to 100m t CO<sub>2</sub> by 2030

## Timelines

**Project stage:** Design phase

**Project timelines:** Implementation by 2030

## Financing

\$5m

Required  
funding

\$5bn

Capitalisation of  
regional bond and  
debt restructuring

**Investment secured:** The Nature Conservancy (TNC) involved in Seychelles Blue Bond

Source: GBW

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# Blue Natural Capital Financing Facility (BNCFF)

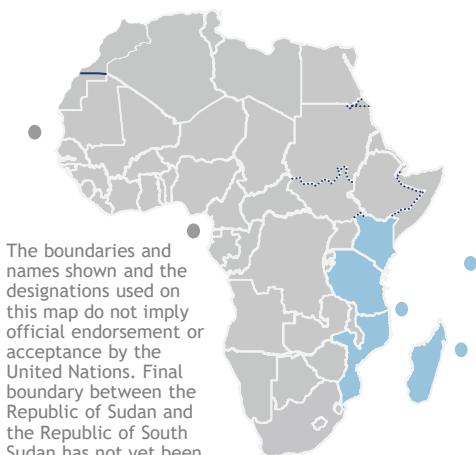
Blue economy



# BNCFF

Blue Natural Capital Financing Facility

## Region



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## Countries

Comoros, Kenya,  
Madagascar, Mozambique,  
Tanzania, Seychelles

## Project overview

Part of the International Union for Conservation of Nature and Natural Resources' (IUCN) Great Blue Wall (GBW) initiative, BNCFF supports the development of investable blue natural capital projects, by helping developers build business cases, prepare for investment, and showcase their projects to potential private investors

## Key info



Blue economy  
(financing)



Program

## Owner

Great Blue Wall initiative

## Timelines

**Project stage:** Fully operational and already supporting projects in Africa and beyond

**Project timelines:** 12 projects already supported, aim to support additional projects going forward

## Financing

\$20m

Grant

\$100m

Debt via MFIs or local  
development banks

**Investment secured:** Ocean Hub Africa providing direct funding to projects, and incubation support for supported initiatives, however no funding has been raised for the GBW. Additional commercial funding will be invested into incubated/accelerated ventures

## Climate impact



Mitigation  
(nature-based  
sequestration)



Adaptation &  
resilience

500

Ocean ventures by 2030

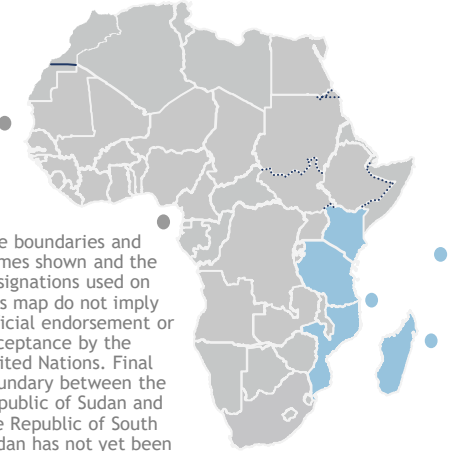





BNCFF will increase the supply of investment-ready blue natural capital projects, driving climate adaptation and nature-based sequestration in coastal and marine environments, as well as preserving functioning ecosystems and create conservative estimated 5,000 blue jobs, at a proxy 10 jobs per ocean venture

Source: GBW

For further information, reach out to Jean-Paul ([jean-paul.adam@un.org](mailto:jean-paul.adam@un.org)) or Deka ([deka.moussaragueh@un.org](mailto:deka.moussaragueh@un.org))

# 7 Regenerative Seascapes



<p><b>Region</b></p>  <p>The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.</p>	<p><b>Project overview</b></p> <p>Program for the creation and management of regenerative seascapes and marine conserved areas in the Western Indian Ocean. Canada keen to initiate establishment this Seascope areas, WIOMSA provides scientific backstopping, and NC the regional policy coordination mechanism</p>	<p><b>Timelines</b></p> <p><b>Project stage:</b> Ready for execution</p> <p><b>Project timelines:</b> Facilitate formal consensus building and negotiations for their establishment</p>
<p><b>Countries</b></p> <p>Comoros, Kenya, Madagascar, Mozambique, Tanzania, Seychelles</p>	<p><b>Key info</b></p> <div><p>Blue economy (N/A)</p><p>Program</p><p><b>Owner</b></p><p>Great Blue Wall initiative</p></div> <p><b>Climate impact</b></p> <div><p><b>Mitigation (nature-based sequestration)</b></p><p><b>1m km<sup>2</sup></b> marine and coastal area</p></div> <p>The 7 regenerative seascapes program will lead to the preservation of 1 million km<sup>2</sup> of marine and coastal area, driving 100m t CO<sub>2</sub>e of carbon sequestration, with co-benefits of developing of local blue livelihoods</p>	<p><b>Financing</b></p> <div><p>\$50m</p><p>Grant funding required</p></div> <div><p>N/A</p><p>N/A</p></div> <p><b>Investment required:</b> for establishment and management of these seascapes as well as restoration and blue economy development activities</p>

Source: GBW

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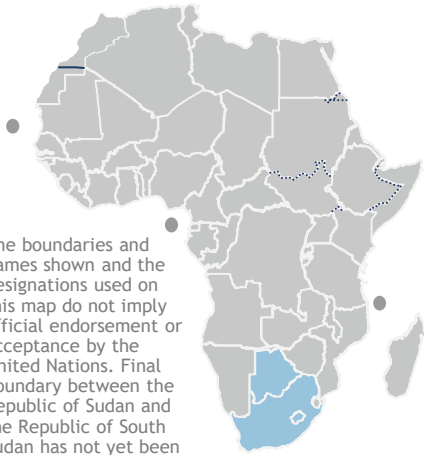
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## Theme 6 | Water & cities

# Lesotho-Botswana water transfer



## Region



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## Countries

Lesotho, South Africa, Botswana

## Project overview

Development of a dam and water storage reservoir in the Lesotho Lowlands, and a 712km bulk water conveyance system through South Africa to Botswana. The project aims to ensure supply of water to the three countries, under the Integrated Water Resources Management Plan of the Orange-Senqu River Basin

## Key info



Water access



Infra asset  
(greenfield)

## Owner

Governments of Lesotho,  
Botswana and South Africa

## Climate impact



Adaptation &  
resilience

**150Mm<sup>3</sup>/yr**

Pumped to Botswana

The Lesotho-Botswana water transfer project will help address the major short, medium and long-term problem of water security in the region, which is set to be exacerbated by climate change

## Timelines

**Project stage:** S2A-Pre-Feasibility

**Project timelines:** MoU established in 2013 for desktop study framework. Pre-feasibility study started in 2018 with expected completion in 2021

## Financing

**\$2.7bn**

Total project cost

**\$500m**

Investment required

## Investment secured:

NEPAD-IPPF: \$1.5bn, Grant financing: \$0.4bn,  
Counterpart contribution: \$0.3bn  
Project preparation cost estimated at \$6.2m,  
secured \$5.9m from NEPAD IPPF, SIWI, CRIDF,  
GWP-SA & ORASECOM

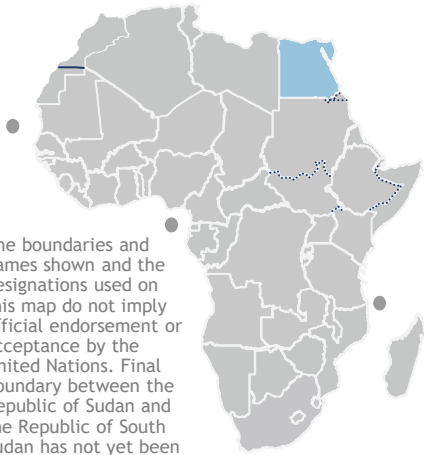
Source: PIDA

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# Water desalination using solar energy



## Region



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## Project overview

The Egyptian government plans to construct 6 solar desalination plants in 4 governorates to gradually reduce dependence on freshwater supplies from the Nile, as population growth and climate change threaten to reduce availability per capita

## Timelines

**Project stage:** Feasibility assessment

**Project timelines:** Within 5 years

## Key info



Water access



Infra asset  
(greenfield)

## Owner

Ministry of Housing,  
Utilities, and Urban  
Communities

## Financing



Total project  
cost

**Investment secured:** N/A

## Countries

Egypt

## Climate impact



Adaptation &  
resilience

The project will increase adaptation to possible freshwater shortages due to reduced Nile flows as a result of climate change, while also leading to a reduction in CO2 emissions due through renewable energy

**625k m3/day**

Water supply

**4m** People

Source: Egypt NCCS

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# Congo Basin solid river waste treatment



## Region



## Project overview

Sorting, treatment, transformation, and recycling plant on a 100ha site in Brazzaville, intended to clean solid waste, such as plastic bags, out of the Congo river. The facility will include a fleet of 45 garbage trucks, and will commercialize the recycled waste as glass powder, granules of plastic, iron plates, fuel, green manure, etc.,

## Timelines

**Project stage:** Feasibility assessment

**Project timelines:** Within 5 years

## Key info



Water access



Infra asset  
(greenfield)

**Owner**  
N/A

## Financing

**\$41m**

Total project cost

**Investment secured:** N/A

## Countries

Congo

## Climate impact



Adaptation &  
resilience

**N/A**

The plant will contribute towards the preservation of the urban water in the waterways of the Congo Basin and Atlantic Ocean, while also creating 2.2k jobs, directly and indirectly

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