

Regional Commissions New York Office
Global Challenges... Regional Solutions



Towards COP27

Compendium

of Climate-Related Initiatives

Opportunities for climate finance and investments on the SDGs



Shared Prosperity Dignified Life



UN Climate Change High-Level Champions



Towards COP27

Compendium of Climate-Related Initiatives

Opportunities for climate finance and investments on the SDGs



© 2022 United Nations
All rights reserved worldwide

Reference as:

Towards COP27. Compendium of Climate-Related Initiatives: Opportunities for climate finance and investments on the SDGs. (New York: United Nations, 2022). <https://www.un.org/regionalcommissionsnyoffice/news/compendium>.

Disclaimer:

The designations and the presentation of the material used in this publication, including their respective citations, maps and bibliography, do not imply the expression of any opinion whatsoever on the part of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Also, the boundaries and names shown and the designations used in this publication do not imply official endorsement or acceptance by the United Nations.

Any information that may be contained in this publication emanating from actions and decisions taken by States does not imply recognition by the United Nations of the validity of the actions and decisions in question and is included without prejudice to the position of any Member State of the United Nations.

Links contained in this publication are provided for the convenience of the reader and are correct at the time of issue. The United Nations takes no responsibility for the continued accuracy of that information or for the content of any external website.

References to dollars (\$) are to United States dollars, unless otherwise stated.

Photos credit:

Getty Images

Content

4	Foreword
5	Message from President-Designate COP27
6	Statement by the High-Level Climate Champions for COP26 and COP27
7	Introduction
9	Africa
23	Arab Region
37	Asia and the Pacific
51	Latin America and the Caribbean
65	The UNECE Region (Europe, Central Asia and North America)
79	Acknowledgment

Foreword



Amina Mohammed

Deputy Secretary-General
of the United Nations



The 27th Conference of the Parties of the UNFCCC (COP27), the “implementation COP” convenes at a time of multiple crises – from the COVID-19 pandemic to climate, biodiversity, food, and energy crises, to the continuing war in Ukraine, all on top of pre-existing and deepening inequalities. Escalating emergencies, high debt burdens and the rising cost-of-living, compounded by the unequal recovery from the impacts of the COVID-19 pandemic, are impacting people worldwide. Those most vulnerable on the frontlines of the crisis, particularly women and girls, indigenous peoples, and local communities, are experiencing serious hardships including malnutrition, displacement, gender-based violence and loss of opportunities for decent work and education.

These damaging trends must be reversed with cooperation and investment to meet the 2030 Agenda for Sustainable Development and the goals of the Paris Agreement – our roadmaps for recovery and resilience.

We need rapid economic, technological and financial breakthroughs, at scale, to contribute to the reduction of global greenhouse gas emissions by 45 per cent by mid-century, boost adaptation measures to climate change, and build long-term resilience. As a starting point, commitments from developed countries to provide developing countries \$100 billion annually, and to double adaptation finance to at least \$40 billion dollars a year by 2025 from 2019 levels, must be delivered.

Beyond this, multilateral development banks need to completely overhaul their business model to take more risks and finally be in the position to mobilize the private funds which will be needed to meet the demands ahead for just and inclusive transition pathways across energy, food, digital, and financial systems.

This Compendium of climate related initiatives aims to give us a tangible offer of existing opportunities. It showcases a suite of 50 high-impact, investment-ready, country-owned initiatives that respond to country-driven priorities and plans to accelerate the implementation of the Sustainable Development Goals and the Paris Agreement.

I encourage you to use the Compendium as a key source of information to attract interest and concrete investments to keep global heating within the 1.5°C limit, with long-term resilience and adaptation measures that will drive SDG implementation across the board.

Together we can build new models of catalytic collaboration to build a more resilient and sustainable future for people and planet.

Message from President-Designate COP27



H.E. Mr. Sameh Shoukry
Egyptian Minister for Foreign
Affairs and COP27 President



In the run up to COP27, the Egyptian COP27 Presidency was keen to partner with the United Nations system and the Climate Change High-Level Champions in organizing the series of five regional forums on “Climate Initiatives to Finance Climate Action and the SDGs”. Egypt’s vision is that COP27 reflects our commitment to move from pledges to action as an “implementation COP” where we move rapidly towards full, timely, inclusive and at-scale action on the ground. This can only be done through translating commitments and pledges into concrete initiatives and scaling up and replicating success stories to deal with the threat of climate change. The five regional forums directly contribute to this implementation goal by facilitating engagement with a broad set of partners and stakeholders, including representatives of governments, multilateral and private financial institutions and the private sector, aiming at accelerating public and private investment in concrete climate projects.

The five forums witnessed the presentation of a number of promising projects, including those embodied in this compendium, ready to be financed in the areas of mitigation, adaptation and resilience. The deliberations in the forums rightly emphasized the need for and role of public-private partnerships in the mobilization of climate finance. The Egyptian COP27 Presidency emphasizes the need to build on the outcomes of these forums, which will be presented and discussed at COP27, by scaling up investment and finance to translate these projects into reality on the ground in order to deliver on climate ambition and development goals. This would represent an important contribution to narrowing the current gap in Paris Agreement-aligned financial flows.

The adequacy and predictability of climate finance in developing countries is key to achieving the goals of the Paris Agreement. To this end there is an urgent need to unlock climate finance through a massive mobilization of public and private finance for climate action solutions at the local, national and regional levels across the themes of climate action. This would include actions to tackle growing debt pressures, domestic resource mobilization, the potential to tap large pools of private finance, scaling up support from multilateral development banks and other development finance institutions, bilateral and multilateral concessional finance and new and innovative financing instruments and solutions such as the use of SDRs, debt swaps, voluntary carbon markets and private philanthropy. This would also include considering a set of de-risking tools to facilitate the translation of financial assets into financial flows for a strengthened response to climate change.

Statement by the High-Level Climate Champions for COP26 and COP27



Mahmoud Mohieldin
High-Level Champion
(COP27, Egypt)



Nigel Topping
High-Level Champion
(COP26, United Kingdom of Great Britain and Northern Ireland)



We would like to begin by thanking the United Nations regional commissions, the Egyptian COP27 Presidency, and the Climate Change High-Level Champions Team for their dedication and commitment to the planning and execution of the five regional forums on Climate Initiatives to Accelerate Climate Action and Advance the SDGs. Additionally, we would like to extend our thanks to the broad community of public and private partners and stakeholders that contributed time and effort to participate and engage with us on this journey. Last but not least we also wish to convey our deep appreciation to Boston Consulting Group and SLK Capital for their support.

We laud the efforts of all parties that seek to accelerate public and private investment mobilization around investable and scalable projects, portfolios and programmes that are aligned with and support the objectives of the Convention, the Paris Agreement and the 2030 Agenda for Sustainable Development. In this context, the forums were convened to demonstrate that a meaningful pipeline of investable opportunities exists, including across developing countries, and to bring them to the attention of prospective financiers with capital to deploy, be they public or private, commercial or philanthropic. The forums also witnessed constructive discussions on identifying existing gaps and best practices on accelerating investment in climate projects.

The projects included in this Compendium comprise but a small portion of the total number that were submitted for consideration at the forums. They should be considered illustrative and are certainly not exhaustive.

As High-Level Champions, we are grateful for the opportunity to continue to build on the legacy of our predecessors to engage with non-State actors and activate the ‘ambition loop’ with national Governments on enabling environments that will hopefully enhance the prospects of these projects achieving financing and coming to fruition.

We are extremely proud of this initiative and would like to take this opportunity to reiterate our commitment to continue to convene, converge and catalyse radical collaboration among all relevant actors, across sectors and regions, and to intensify efforts to move from ‘assets to flows’ in a just and sustainable manner.

It is said that “it is too late to learn to swim when the water is up to your lips”. We will continue this effort to ensure that the water does not get any higher, because the cost of inaction is very high.

For more information on the rationale for the Champions’ prioritizing this topic and key objectives please see: <https://climatechampions.unfccc.int/we-are-at-a-crossroads/>

Introduction

Ahead of COP27, the United Nations regional economic commissions, leveraging their convening power and networks of experts, partnered with the Egyptian Presidency of COP27 and the United Nations High-Level Champions for Climate Action to organize a series of five roundtables during the summer of 2022 bringing together key stakeholders from the public and private sectors. The primary objective of the roundtables was to showcase investment-ready climate initiatives by Member States and catalyze climate finance and investment flows towards building climate resilience.

Taking a holistic approach towards financing the 2030 Agenda for Sustainable Development in the new global environment and advancing the goals of the Paris Agreement, the roundtables saw presentation of several critical financing-ready climate initiatives,

including those included in the present Compendium, in the areas of mitigation, adaptation and resilience. The roundtables also facilitated discussions between Member States looking to raise capital for climate initiatives, and representatives of financial institutions interested in financing bankable projects that can contribute to transformative adaptation and mitigation outcomes.

The Compendium serves as a tool for resource mobilization by showcasing a meaningful pipeline of investment-ready initiatives, including from across developing countries, to prospective financiers with capital to deploy. It also provides an overview of existing gaps and best practices on accelerating investment in climate initiatives across the five regions of the world.







Africa



Antonio Pedro

Acting Executive Secretary of ECA



Economic Commission for Africa Addis Ababa, Ethiopia

The mandate of the Economic Commission for Africa (ECA) is to promote the economic and social development of its member States, foster intra-regional integration, and promote international cooperation for Africa's development.

Made up of 54 member States, and playing a dual role as a regional arm of the United Nations and as a key component of the African institutional landscape, ECA is well positioned to make unique contributions to address the Continent's development challenges.

For more information, please visit the ECA website:
<https://www.uneca.org/>

Overview of the climate finance landscape in Africa

Africa is one of the most ambitious regions in terms of climate action, with the equivalent of over \$3 trillion of investments in African nationally determined contributions (NDCs).¹ But the flow of finance has not kept pace with this ambition. In particular, the challenge has been to ensure that Africa can attract its share of private finance. Currently only 14 per cent of African climate finance comes from the private sector.²

As climate finance is key to the transition to a resilient and zero-emissions world, under the leadership of Ms. Vera Songwe, United Nations Under-Secretary-General and Executive Secretary of the Economic Commission for Africa, and Mr. Mahmoud Mohieldin, United Nations Climate Change High-Level Champion for COP27 and United Nations Special Envoy on Financing the 2030 Agenda for Sustainable Development, the African Regional Roundtable “Towards COP27: African Regional Forum on Climate Initiatives to Finance Climate Action and the SDGs” was held as part of a global programme of five regional roundtables in the run-up to COP27, with the African edition the first of the series.

The focus of the roundtable lies in the launch of a process for concrete implementation with a catalogue of finance-ready projects that has been presented and negotiated. The meeting benefited from the participation of the private sector across the continent and beyond. Significant synergy was achieved by also engaging with the African group of negotiators as part of the round tables. Based on the high level of interest in the development of carbon markets, the meeting also benefited from the organization of an expert group meeting on the development of a harmonized carbon credit registry for countries of the Congo Basin Climate Commission in parallel.

The round tables were organized around six thematic sessions: a just energy transition, food security, carbon credit markets, digital transformations, the blue economy and water & cities.

The plenary discussions brought together 400 participants in person and online around the 19 projects (68 per cent with a regional scope/impact), selected from a pool of more than 140 projects.

The 19 final projects were presented and discussed in terms of their country/region (number of people, area covered), their climate impacts (renewable energy production, greenhouse gas reduction/avoidance, carbon sequestration), their timeline and the financing required.

The roundtables emphasized key financial vehicles which will improve the prospects for raising the additional finance required to complement the direct investment to be raised by the projects.

The financial instruments included:

- Blended finance - Recognizing the adverse global economic environment, a number of

potential investors emphasized that risk reduction mechanisms such as guarantees would be needed to ensure that finance could be invested in a counter-cyclical manner.

- Debt for climate investment swaps - Allowing African sovereigns to refinance some of their more expensive debt by buying back existing debt and re-issuing new bonds which would be aligned with climate goals through key performance indicators.
- The Economic Commission for Africa (ECA) liquidity and sustainability facility - The facility aims to facilitate the buying and selling of African bonds on a repurchasing market and thereby increase liquidity, and over time reduce the risk of holding African bonds and hence their cost.
- The development of carbon credit markets - Carbon credit markets were also emphasized as means of accelerating action and generating new resources for investment in climate resilience.

The United Nations Climate Champions team, the COP27 presidency and ECA reached a consensus that the facilitation of this project pipeline should be institutionalized as much as possible into the preparation of future conferences of parties to support countries in better accessing private climate investment.

The projects presented allowed a better understanding from the perspective of investors as well as project owners of the requirements in terms of data to allow the projects to be realized. It became evident through the process that the most impactful projects on the continent achieved both mitigation and adaptation outcomes, and these outcomes were mutually reinforcing. With the right support, adaptation projects could also be made bankable.

A large number of projects were also transboundary in nature. These included among others the land regeneration project covering sustainable agriculture across 32 countries with the opportunity to leverage the African Continental Free Trade Area (AfCFTA) to improve food security, as well as the development of carbon credits through the conservation of forests in the Congo Basin to attract investment into marginalized rural communities. Financial innovation was also prioritized in the regional blue bond and debt for climate investment swap proposed to support countries of the western Indian Ocean to establish and maintain marine protected areas and develop sustainable fisheries and eco-tourism businesses, with this project supporting the implementation of the Great Blue Wall initiative. Meanwhile, large-scale renewable energy investments were also prioritized through the Mambila hydro-electric power initiative in Nigeria, which aims to dramatically increase the number of citizens with access to affordable and reliable energy.

1 AfDB https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/AFAC_Brochure_2018.pdf

2 Climate Policy Initiative <https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-africa/>

Mambilla hydroelectric power project

Country/region: Nigeria

Theme: Energy



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 Economic Community of West African States (ECOWAS) countries.

Climate Impact



Mitigation (avoidance)

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).

5,457 GWh/yr
Renewable energy



Timelines

Project stage: S3A-Project structuring

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



Key Info



Energy hydro



Infra asset
(greenfield)



Project Structure

Project owner: Federal Ministry of Power, Nigeria



Financing

\$5.8 B
Project cost

N/A
Investment required

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

Project source: PIDA.

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

Restoration of degraded land

Country/region: 32 countries across the African continent

Theme: Agriculture & Land



The African Forest Landscape Restoration Initiative (AFR100) is a country-led effort to bring 128m ha of degraded land in Africa into restoration by 2030, by mobilizing private and public finance at large scale.

Timelines

Project stage: Pre-feasibility

Project timelines: Implemented by 2030

Key Info



Land (restoration)

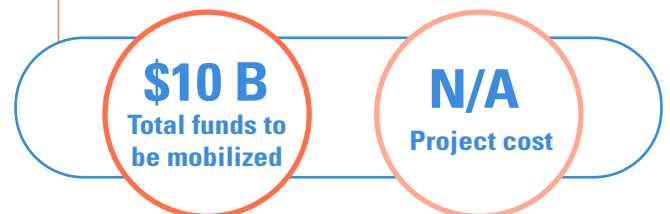


Programme

Project Structure

Project owner: AUDA-NEPAD1 (Secretariat), WRI2, BMZ3, World Bank

Financing



Investment required: Public grants: \$4 bn (of which \$1 bn committed) Philanthropic grants: \$1 bn, Private finance: \$5 bn (of which \$481mn committed).

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) or Deka (deka.moussaragueh@un.org).

Climate Impact

Nature based soil carbon sequestration

32 countries have committed to restore 128m ha of land which would drive 1.7gt of CO₂e/yr carbon sequestration and generate \$170 bn in net benefits from watershed protection and increased crop yields and forest products. Co-benefits include enhancing food security and combatting rural poverty.

1.7gt CO₂e/yr
carbon sequestration

128m ha land

Crop Adaptation in the Nile Valley and Delta

Country/region: Egypt

Theme: Agriculture & Land



Givaga/Stock /Getty Images Plus/Getty Images

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.



Climate Impact



Adaptation and resilience

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 programme 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 \$54 bn by 2030.

1.5mn ha land



Timelines

Project stage: Feasibility

Project timelines: 2023-2030 duration of implementation



Key Info



Agriculture
(crops)



Programme



Project Structure

Project owner: Ministry of Agriculture and Land Reclamation, Egypt



Financing

\$800 M
Project cost

N/A
Investment
required

Investment secured: N/A

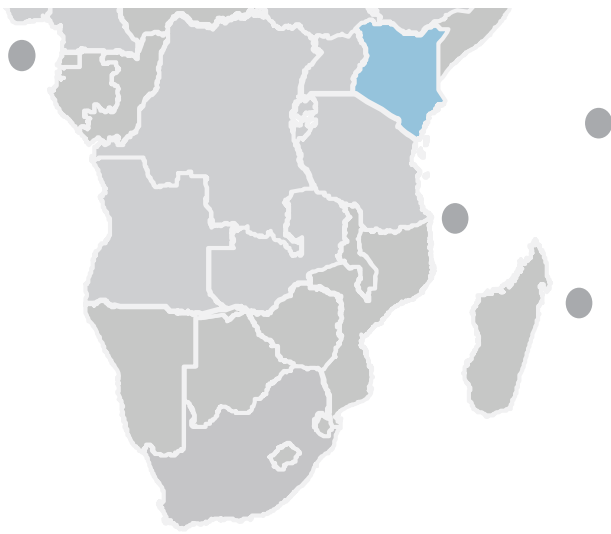
Project source: Egypt NCCS.

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

Transborder submarine fiber PoPs and regional smart hub

Country/region: Kenya

Theme: Digital Transformations



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.

Timelines

Project stage: S3A-Project structuring

Project timelines: : N/A

Key Info



Fibre



Infra asset

Project Structure

Project owner: Intergovernmental Authority on Development (IGAD)

Financing

\$70 M
Required
funding

N/A
Project cost

Investment required: N/A

Climate Impact

Adaptation and resilience

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, with additional significant developmental co-benefits.

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

Regenerative Blue Entrepreneurship Accelerator

Country/region: Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa, Tanzania

Theme: Carbon Credits



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.

Climate Impact

CO₂ Mitigation (removal)

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.

40K ha Mangroves

10K ha Seagrass

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)



Programme

Project Structure

Project sponsor: Great Blue Wall initiative

Project arranger: IUCN

Financing

\$50 M

\$500 M

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

Direct investment required for operationalizing priority pipeline initiatives

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

Project source: GBW.

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

Conservation of Forests in the COMIFAC Area

Country/region: Gabon, Rwanda, Congo Brazzaville, Burundi, Cameroon, Central African Republic, Chad, DRC

Theme: Carbon Credits



Forest conservation programme in the forests in the Commission des Forêts d’Afrique Centrale (COMIFAC) area 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
- Structuring phase:** 2023-2024
- Construction phase:** 2024
- Operational phase:** 2024-2030

Key Info



Carbon credits (forests)

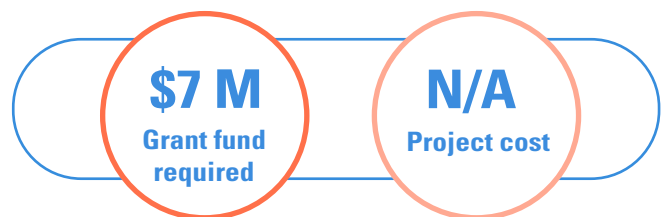


Programme

Project Structure

Project owner: REPALEAC

Financing



Investment required: N/A

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

Climate Impact



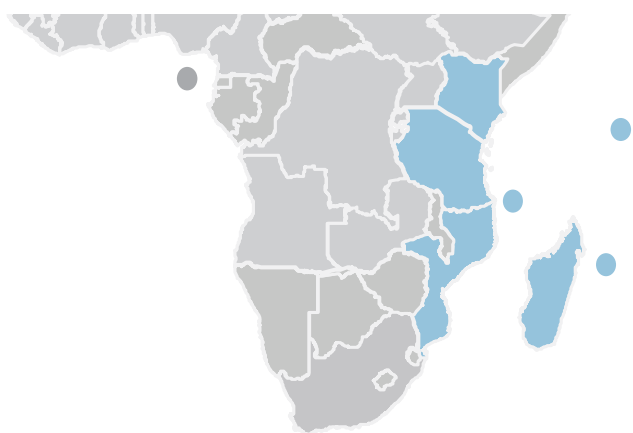
Mitigation (REDD+)

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

Blue Bond and Debt-for-Nature Swap

Country/region: Comoros, Kenya, Madagascar, Mozambique, Tanzania, Seychelles

Theme: Blue Economy



Structuring, pipeline building, and private investor coalition building for the Blue Bond and Debt-for-Nature Swap programme 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.



Climate Impact



Mitigation (nature-based sequestration)

The Blue Bond and Debt-for-Nature Swap programme will lead to the conservation of 2 million km² of the Western Indian Ocean, leading to increased additional capacity of restored and rehabilitated blue ecosystems to sequester up to 100m t CO₂ by 2030.

2m km² critical blue ecosystems restored, rehabilitated and effectively protected and conserved



Timelines

Project stage: Design phase

Project timelines: Implementation by 2030



Key Info



Blue economy
(financing)



Programme



Project Structure

Project owner: Great Blue Wall initiative



Financing

\$5 M
Required
funding

\$5 B
Capitalisation
of regional
bond and debt
restructuring

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

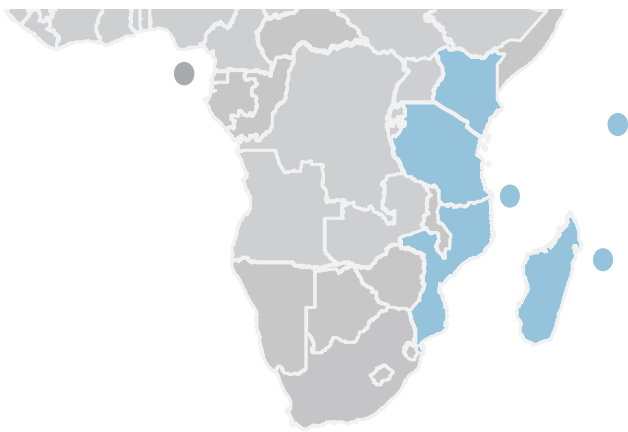
Project source: GBW.

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

Blue Natural Capital Financing Facility (BNCFF)

Country/region: Comoros, Kenya, Madagascar, Mozambique, Tanzania, Seychelles

Theme: Blue Economy



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.

Climate Impact

Mitigation (nature-based sequestration)
Adaption and resilience

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.

500 Ocean ventures by 2030

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.

Key Info



Blue economy (financing)

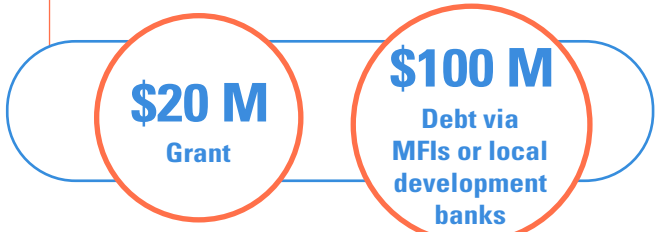


Programme

Project Structure

Project owner: Great Blue Wall initiative

Financing



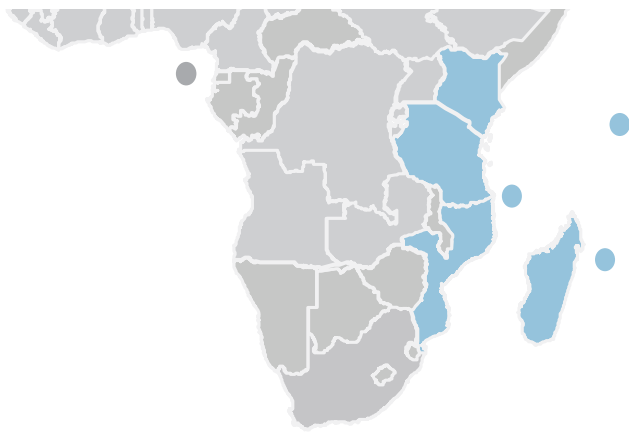
Investment secured: Ocean Hub Africa providing direct funding to projects, and incubation support for supported initiatives, however no funding has been raised for the GBW. Additional commercial funding will be invested into incubated/accelerated ventures.

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

7 Regenerative Seascapes

Country/region: Comoros, Kenya, Madagascar, Mozambique, Tanzania, Seychelles

Theme: Blue Economy



Programme for the creation and management of regenerative seascapes and marine conserved areas in the Western Indian Ocean. Canada keen to initiate the establishment of this Seascape areas, WIOMSA provides scientific backstopping, and NC the regional policy coordination mechanism.

Climate Impact



Mitigation (nature-based sequestration)

The 7 regenerative seascapes programme will lead to the preservation of 1 million km² of marine and coastal area, driving 100m t CO₂e of carbon sequestration, with co-benefits of developing of local blue livelihoods.

1m km²
marine and coastal area

Timelines

Project stage: Design phase

Project timelines: Implementation by 2030

Key Info



Blue economy (financing)



Programme

Project Structure

Project owner: Great Blue Wall initiative

Financing

\$50 M

Grant funding required

N/A

Project cost

Investment required: For establishment and management of these seascapes as well as restoration and blue economy development activities.

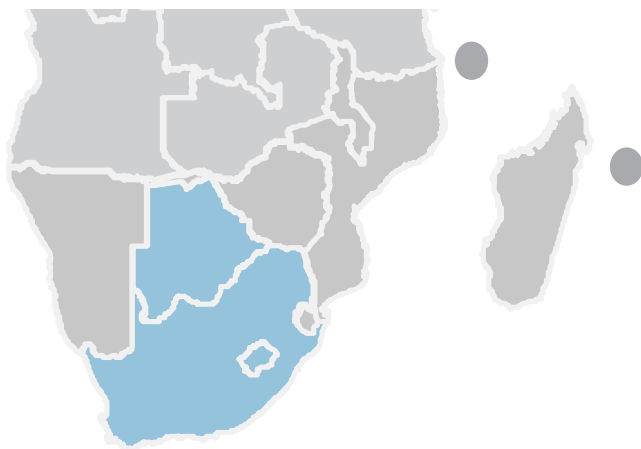
Project source: CGBW.

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

Lesotho-Botswana water transfer

Country/region: Lesotho, South Africa, Botswana

Theme: Water and Cities



Development of a dam and water storage reservoir in the Lesotho Lowlands, and a 712 km 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.

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.

Key Info



Water access

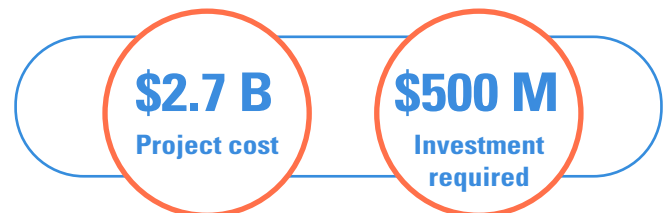


Infra asset (greenfield)

Project Structure

Project owner: Governments of Lesotho Botswana and South Africa

Financing



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

Project source: PIDA.

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

Climate Impact



Adaptation and resilience

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.

150Mm³/yr
Pumped to Botswana





Arab Region



Rola Dashti

United Nations Under-Secretary-General and Executive Secretary of ESCWA



Economic and Social Commission for Western Asia Beirut, Lebanon

The Economic and Social Commission for Western Asia (ESCWA) was created to stimulate economic activity in member countries, strengthen cooperation between them, and promote development. Committed to the 2030 Agenda, ESCWA passionate team produces innovative knowledge, fosters regional consensus and delivers transformational policy advice.

ESCWA supports its 20 member States in their efforts to ensure prosperity, equality and peace. By analysing regional and national economic, social and environmental trends in the light of global United Nations agendas, ESCWA provides Arab countries with policy recommendations that build on a thorough analysis of facts and commonalities.

For more information, please visit the ESCWA website:
<https://www.unescwa.org/>

Overview of the climate finance landscape in the Arab region

The Arab region is highly vulnerable to climate change. Over the last 20 years, average temperature increased by 0.8°C and is projected to rise 2.5°C by mid-century. Precipitation is projected to decrease but become more volatile, with more frequent droughts and forest fires in some areas and an increase in the number of flash floods in others. This is impacting water and food security as well as urban and rural livelihoods. Integrated watershed management, flood management, irrigation efficiency and improved agricultural productivity are among the top climate action priorities articulated by Arab countries for advancing climate resilience. Arab countries are pursuing transformational projects that achieve adaptation and mitigation co-benefits to meet their sustainable development goals and Paris Agreement commitments. This includes projects to invest in renewables to support water delivery, reduce greenhouse gas (GHG) emissions from treated wastewater reuse, recover and use gas captured from gas flaring and increase energy efficiency in the building and transport sectors.

To achieve and accelerate such climate action, impactful climate finance is necessary. However, public and private sector finance coming to the Arab region fall far short of needs, in terms of both quantity and quality. Over the past decade, Arab countries received about \$34 billion in public international climate finance. However, this amount is less than 7 per cent of what would be required to implement the nationally determined contributions (NDCs) of 11 Arab countries in the coming decade. Furthermore, only one fifth of the funds received supported water and agriculture projects, despite adaptation being the clear priority in Arab countries. Summed over 2010-2022, total flows to mitigation (\$24.84 billion) were three times higher than flows to adaptation (\$7.75 billion). In addition, 87 per cent of climate financing received over the past 10 years was in the form of debt-based instruments. This is alarming as the region is currently facing a historically high debt burden of \$1.4 trillion; recent interest rate hikes, the COVID-19 pandemic and inflation caused by the Russian invasion of Ukraine are adding further fiscal pressures.

More concessional and grant-based climate finance is thus needed, particularly for the region's least developed countries. Innovative climate finance instruments should also be pursued, including climate/SDG debt swaps and donor partnerships as advanced by the Economic and Social Commission for Western Asia (ESCWA). Private sector finance and blended finance present opportunities mostly in middle-income and higher income countries, although such investments have been directed largely towards

mitigation projects able to generate financial returns. In a positive development, multilateral development banks have increased their climate investments in the region, as well as their share of adaptation financing. However, financial commitments for adaptation remain well below those for mitigation.

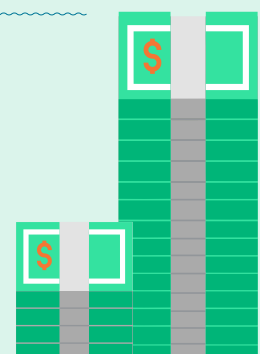
The Arab Regional Forum on Climate Finance, hosted by ESCWA in Beirut on 15 September 2022, addressed the climate finance gap and provided an opportunity for Arab countries to articulate interventions and priority projects for mobilizing financial support for climate action in line with their sustainable development goals. The forum brought together 222 participants from the public and private sectors (136 onsite and 86 online), including ministers and high-level officials from ministries responsible for finance, planning, water, energy, agriculture and the environment as well as representatives from institutional investors, private sector actors, multilateral development banks, bilateral donors and philanthropic organizations. Bankable projects proposed by middle-income Arab countries focused on advancing their national water, energy and food security goals under a changing climate. A total of 30 projects were presented by Arab countries, of which 24 focused on adaptation. The projects solicit \$4.2 billion in climate finance, with 89 per cent targeting adaptation and co-benefits, demonstrating the clear prioritization and need for adaptation finance in the region. Multilateral development banks and institutional investors provided feedback on how countries can elaborate these projects and create investment opportunities in support of national and regional priority actions. Ten priority projects are presented below.

Flows to mitigation summed

\$24.84 billion

were
three times greater
than flows to adaptation

\$7.75 billion
over the period 2010-2020



Energy efficient cooling in buildings

Country/region: Egypt – National

Theme: Energy



The project will establish a financing scheme to promote energy-efficient cooling in both new construction and renovations. The project responds to the Government's mandatory regulations including energy efficiency codes in buildings, minimum energy performance standards and labels for electrical appliances including air conditioners (AC).

Expected outcomes: Establish a financing scheme to promote energy-efficient cooling, provide seed investment and technical assistance for 20,045 AC units (phase I).



Climate Impact



Mitigation

This project aims to promote climate change mitigation through its Vision 2030 and Energy Strategy 2035, achieving 18 per cent energy efficiency savings (based on the 2010 baseline) and 42 percent renewable energy.

873 tons CO₂/\$ million invested

14,546 tons CO₂e carbon saved/yr

Beneficiaries: 3.7 million micro, small and medium enterprises (MSMEs).



Timelines

Current project stage: Under construction (negotiation)

Construction/development period: 13 years

Operating period: 2022-2035



Key Info



Energy



Fund



Project Structure

Project proponents: Ministry of Electricity and Renewable Energy (MoERE); Ministry of Environment (MoE); Central Bank of Egypt

Contractual structure: Government ownership



Financing

\$250 M
Total project cost

\$250 M
Current funds required

Use of funds: Project execution

Investment secured: N/A

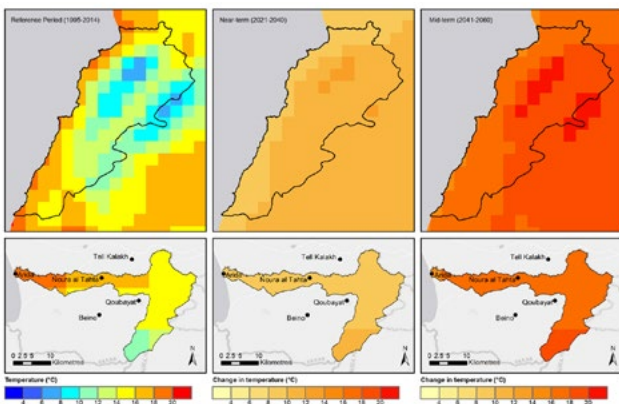
Time frame for financing: 13 years

For further information, reach out to H.E Minister Rania Al-Mashat, Ministry of International Cooperation.
Email: mtaha@moic.gov.eg

Improve forest management to reduce wildfires and strengthen resiliency in Nahr Al Kabir

Country/region: Lebanon – Nahr al-Kabir area

Theme: Agriculture and Land



This intervention aims to reduce fire risk through forestry management, based on the national forestry management guidelines as an important toolbox for use in developing local forest management plans based on forest inventories and forest harvesting plans.

Fire risk management is highly interlinked with the water sector: fire suppression necessitates a large volume of water and the removal of vegetation cover by fires affects both the quality and quantity of water.

Expected outcomes: Managed forests are expected to be less prone to intense and severe fires, reducing the impact on soil, water quality and water quantity.

Climate Impact



Adaptation and resilience

This project aims to promote climate change adaptation by promoting the sustainable use of natural resources, valuing and sustainably managing terrestrial biodiversity in Lebanon, reducing disaster risk and minimizing damages.

Beneficiaries: Villages/towns with the largest areas of 'hotspots' in forest lands especially in the upper part of the basin (Monjez, Qoubayat, Akroum, Aandqet).

Timelines

Current project stage: Pre-feasibility

Construction/development period: 36 months

Key Info



Forestry



Silviculture treatment

Project Structure

Project proponents: Ministry of Environment

Contractual structure: Government ownership

Financing



Use of funds: Project

Investment secured: N/A

Time frame for financing: N/A

For further information, reach out to Ms. Samar Malek, UNFCCC focal point, Ministry of Environment.
Email: samar@moe.gov.lb

Excess water diversion from northern to central Tunisia

Country/region: Tunisia – Central Tunisia

Theme: Water



The project aims to store and divert water from the northern to the central regions of Tunisia and protect from flood damage. It will include several components to provide drinking water, ensure optimal water use and reduce the water deficit during drought years.

Expected outcomes: Improved availability of drinking water in the greater Tunis region and the governorates of Zaghouan and Kairouan by 2030-2050, optimal use of surplus water during periods of abundance in the northern areas, increased water quantities in storage facilities in central regions and completion of the Maleh dam with a storage capacity of 80 million m³.



Climate Impact



Adaptation and resilience

This project aims to promote climate change adaptation by improving the drinking water supply by 2030-2050; optimal use of surplus water in the north; enhanced water storage in the center.

259.4 GWh
renewable energy/yr

65,000 tons CO₂e
carbon saved/yr

Beneficiaries: 5.8 million people in the eight governorates covered by the project.



Timelines

Current project stage: Feasibility/financing being arranged

Construction/development period: 8 years

Planned start date: 01/2024

Planned end date: 1/06/2032



Key Info



Water



Infra asset



Project Structure

Project proponents: General Authority for Dams and Large Water Works; German Bank for Reconstruction and the European Union

Contractual structure: Government ownership



Financing

\$790 M
Total project cost

\$524 M
Current funds required

Use of funds: Project execution

Investment secured: 8 years

Time frame for financing: N/A

For further information, reach out to Faiez M'sallem, General Director of Dams and Major Hydraulic Works, Ministry of Agriculture Hydraulic Resources and Fishing, Tel.: +216 98 212 601 | +216 98 133 828 Email: msallem_faiez@yahoo.com

Energy efficiency in the sustainable urban mobility sector

Country/region: Tunisia – National

Theme: Energy



The project aims to increase the share of public transport in urban mobility and reduce the number of private cars in Tunisian agglomerations, in line with the National Sustainable Urban Mobility Policy action plan.

It also aims to considerably improve air quality, increase the share of the urban population with easy access to public transport by 80 per cent and reduce CO₂ emissions from urban transport by 12 per cent and road fatalities in cities by 50 per cent.

Expected outcomes: Creation of governance structures at the central and local levels, establishment of sustainable financing mechanisms for urban mobility, increase in the share of public transport, development of electric mobility.

Timelines

Current project stage: Pre-feasibility

Construction/development period:

Phase I: 2023-2025 Phase II: 2026-2030

Key Info



Energy efficiency (transport)



Infra asset

Project Structure

Project proponents: Ministry of Transport, Ministry of Finance, ANME, Municipal governments; UNDP, WB, AFD, AfDB, ISFD, FAO, GIZ, KfW

Contractual structure: Government ownership/private ownership

Financing

\$138 M
Total project cost

\$103 M
Current funds required

Use of funds: Project execution

Investment secured: At least 25 years maturity with 5-year grace period

Time frame for financing: N/A

For further information, reach out to Mr. Neji Fathia, Tel.: 97033236 Email: Fathia.neji@transport.state.tn

Climate Impact

CO₂ Mitigation

Transport is the second largest energy consumer and the largest GHG emitter in Tunisia, with a large portion of emissions from urban mobility. Improving the sector's efficiency, notably of public transport and non-motorized transport, would significantly reduce these emissions, which would help achieve the NDC objectives.

340,000 tons CO₂e carbon saved/10yr

Beneficiaries: Municipalities and agglomerations with over 100,000 residents

Al Batina treated effluent line

Country/region: Oman – 3 governorates (Muscat, Barka and Al Musana)

Theme: Water



Constructing a 35 km tertiary treated effluent (TE) line with a capacity of 40,000 m³ per day from Rumais (Barka) to Al Maghsar (Al Musana).

The Oman Water and Wastewater Services Company (OWWSC) is working strategically to enhance the utilization of tertiary TE due to its environmental and economic value in various projects such as food security projects and other industrial and commercial uses.

Expected outcomes: Revival of the agricultural sector in the Al Batinah coast, supply of TE for public/private companies' strategic agricultural projects, supply of TE for 10 million wild trees, reduce use of desalinated water for agriculture and creation of green space.



Climate Impact



Adaptation and resilience
Mitigation

This project aims to promote climate change adaptation by use of tertiary TE from Barka-Al Musana. TE conserves groundwater and reduces the consumption of expensive desalinated water, particularly in the governorates of Batinah South and North which represent 60 per cent of the Sultanate's cultivated area.

2 million tons CO₂/yr
renewable energy



Timelines

Current project stage: Feasibility

Construction/development period: 3-4 years

Planned start date: 1st quarter of 2024 – Project duration two years after completion of the project's budgeting and completion of the necessary studies.



Key Info



Wastewater treatment



Infra asset



Project Structure

Project proponents: Ministry of Agriculture and Fishing Wealth and Environment Authority, Oman Water and Wastewater Services Company (OWWSC) and Oman Food Investment Holding Company

Contractual structure: Government ownership



Financing

\$41.5 M
Total project cost

\$41.5 M
Current funds required

Use of funds: Project

Investment secured: N/A

Time frame for financing: N/A

For further information, reach out to Mr. Hilal Khalfan Al Dhakhri, GM of Business Development and Marketing, Oman Water and Wastewater Company OWWSC.
Email: hilal.dhakhry@owwsc.nama.com

Flood protection dams (Wadi Al Rawdha, Wadi Al-Jifnain, Ifta and Wadi Hiliti)

Country/region: Oman - (Al Mudaaybi, Seeb, Sur and Sohar)

Theme: Water



This project represents a combination of four flood protection dam projects at different locations in Oman, that will be separately implemented. Each dam will be designed to handle floods up to a certain size, measured in the flood's year return period (RPF) and ranging from 200 to 10,000 years. Each dam will also help establish a reservoir with storage capacities of between 1.5 and 16 million m³ at full supply level, depending on the location.

Expected outcomes: Protection from frequent large floods, significant increase in groundwater recharge below the dam and increase in land use, crop density and crop yields.

Climate Impact

Adaptation and resilience

This project aims to promote climate change adaptation by reducing floods in urban area. Dams will retain floodwaters and then either release them under control to recharge underground aquifers or divert the water for agricultural and domestic uses.

Beneficiaries: Residents of the four areas and their properties will be protected from future disaster damages; the dam is intended to protect the area from floods and avoid loss of lives and infrastructure destruction.

Timelines

Current project stage: N/A

Construction/development period:

Wadi Al Rawdha: 01/01/2023-31/12/2024

Wadi Al-Jifnain: 01/01/2023-30/6/2025

Ifta: 01/01/2023-31/5/2025

Wadi Hiliti: 01/01/2023-31/12/2025

Key Info

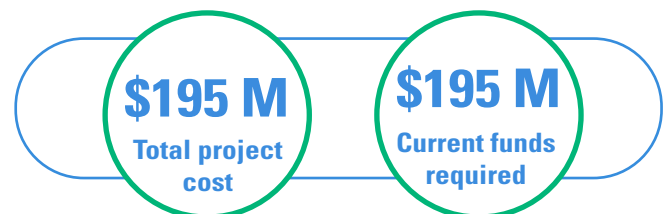


Project Structure

Project proponents: Ministry of Agriculture, Fisheries and Water Resources and Environment Authority

Contractual structure: Government ownership

Financing



Breakdown of the total cost:

Wadi Al Rawdha: \$47 million Wadi Al-Jifnain: \$36 million
Ifta: \$68 million Wadi Hiliti: \$44 million

Time frame for financing: 3 to 7 years

For further information, reach out to Mr. Khalid Al Mashaikhi, Assistant Director General for Dams, Ministry of Agriculture, Fisheries and Water Recourses. Email: ksaa1993@yahoo.com

Recovering of associated gas in In Amenas, Ohanet and Tin Fouye Tabankort

Country/region: Algeria – In Amenas, Ohanet, Tin Fouye Tabankort

Theme: Energy



Algeria through its national oil and gas company “Sonatrach” has invested heavily in more than 30 projects that have substantially reduced associated gas flaring and allowed the monetization of the recovered gas and valuable LPG. However, significant efforts, especially investments, are necessary to achieve zero routine. This project represents a combination of three Recovery Associated Gas Flaring Projects that will be separately implemented in three different regions in Algeria.

The project aims to recover 650,000 m³/day of flared associated gas in Ohanet, 532,000 m³/day in In Amenas and 1.3 million m³/day in Tin Fouye Tabankort.



Climate Impact



Mitigation

This project aims to mitigate climate change by recovering flared gas and using it as a cleaner fuel. Moreover, reducing gas flaring will provide significant improvements for land and ecosystems near flaring sites.

2 million tons CO₂ carbon saved/yr

GHG reduction breakdown:

In Amenas: 447,944.9 tons CO₂e/yr

Ohanet: 547,301 tons CO₂e/yr

Tin Fouye Tabankort: 1,094,602 tons CO₂e/yr



Timelines

Current project stage: Feasibility

Construction/development period: 2023-2027



Key Info



Clean Energy



Infra asset



Project Structure

Project proponents: Ministry of Energy, Sonatrach

Contractual structure: Time-bound concession



Financing

\$116 M

Total project cost

\$116 M

Current funds required

Breakdown of the total cost:

In Amenas: \$41.3 million

Ohanet: \$28.1 million

Tin Fouye Tabankort: \$46.6 million

Time frame for financing: 4 years

For further information, reach out to Ms. Fazia Dahlab, Director of Climate Change, Ministry of Environment and Renewable Energy.
Tel.: +213 561 69 37 09 Email: fdahlab@yahoo.fr

Hilla-Diwaniyah irrigation project

Country/region: Iraq – Babil Governorate

Theme: Water



The Hilla-Diwaniyah irrigation project is planned to be developed over a total area of around 282,000 dunums. The source of water is the Shatt Al-Hilla river, which currently irrigates approximately 276,000 dunums. Water in this project area is slightly saline with an acceptable pH at 78 per cent of sites. Most earth irrigation canals in this area are old, and canals in 30,000 dunums are currently being relined. The lack of water infrastructure used for agriculture in the area is the reason behind the unorganized distribution of water.

Expected outcomes: Increased agriculture productivity as a result of increased water availability (estimated at \$1,340/dunum/yr).

Climate Impact



Adaptation and resilience

This project aims to promote climate change adaptation by increasing agricultural productivity.

Beneficiaries: Farmers and central authority

Timelines

Current project stage: N/A

Construction/development period: 10 years

Key Info



Water



Infra asset

Project Structure

Project proponents: Ministry of Water Resources

Contractual structure: Government ownership

Financing

\$1.27 B

Total project cost

\$1.27 B

Current funds required

Use of funds: Project execution

Investment secured: N/A

Time frame for financing: N/A

For further information, reach out to Mr. Zaid Hammody Habib, General Director of the Planning and Follow-up Directorate, Ministry of Water Resources.
Email: planningdep00@gmail.com

Aqaba-Amman water desalination and conveyance project

Country/region: Jordan – Aqaba to Amman

Theme: Energy



The project's primary objective is to provide 300 million m³ of potable water to Amman and other governorates in Jordan and, possibly, to areas along the pipeline route. The water will come from a reverse osmosis plant south of Aqaba and will be conveyed to Amman via a new, 420 km long water conveyor that for most of its length would run parallel to the existing Disi Conveyor.

Expected outcomes: Increased resilience of the water supply by increasing water production and providing an additional 300 million m³ water per year to Amman.



Climate Impact



Adaptation and resilience



Mitigation

This project aims to increase resilience to climate change by increasing water production and providing an additional 300 million m³ water per year to Amman. Moreover, the project aims to increase the country's renewable energy use by limiting GHG emissions to 3.2 kg CO₂e/m³ of desalinated water delivered to Amman.

Limit of **3.2 kg CO₂e/m³**

Beneficiaries: 4.2-5 million people.



Timelines

Current project stage: Tendered project

Construction/development period: 3 years

Planned start date: 12/2023

Planned end date: 31/12/2026



Key Info



Energy



Infra asset



Project Structure

Project proponents: Ministry of Water and Irrigation

Contractual structure: Time-bound concession



Financing

\$400 M
Total project cost

\$400 M
Current funds required

Use of funds: Project execution

Investment secured: 20 years

Time frame for financing: N/A

For further information, reach out to Mr. Issa Al Awer, National Conveyance Project Manager, Ministry of Water and Irrigation. Email: Issa_Alwer@mwi.gov.jo

Regional Initiative to Promote Small-Scale Renewable Energy Applications in Rural Areas of the Arab Region (REGEND)

Country/region: Regional – Rural areas of five Arab countries

Theme: Energy



Shared Prosperity Dignified Life



REGEND provides affordable and reliable access to renewable energy through field projects, capacity-building and policy recommendations with an emphasis on empowering women entrepreneurs with tools to apply sustainable and environmentally friendly practices.

ESCWA intends to upscale the inclusive and integrated REGEND business model to other Arab communities to support small-scale renewable energy applications.

Expected outcomes: Greater resilience to climate change, low-emission power generation and access to microfinance for rural women entrepreneurs.



Climate Impact



Mitigation

Increased productivity and efficiency through renewable energy and appropriate equipment.

45,000 tons CO₂/25 yr carbon saved

Beneficiaries: 300,000 rural residents, with emphasis on women, young people and people with disabilities and gender parity 50 per cent.



Timelines

Current project stage: feasibility

Construction/development period:
01/01/2023-31/12/2026



Key Info



Energy



Infra asset



Project Structure

Project proponents: ESCWA

Contractual structure: Private ownership



Financing

\$10 M

Total project cost

\$10 M

Current funds required

Use of funds: Project

Investment secured: N/A

Time frame for financing: 4 years

For further information, reach out to Radia Sedaoui, Chief, Energy, Climate Change and Natural Resource Sustainability Cluster, ESCWA. Email: sedaoui@un.org



Asia and the Pacific





Armida Salsiah Alisjahbana

United Nations Under-Secretary-General and Executive Secretary of ESCAP



Economic and Social Commission for Asia and the Pacific Bangkok, Thailand

The Economic and Social Commission for Asia and the Pacific (ESCAP) is the most inclusive intergovernmental platform in the Asia-Pacific region. It promotes cooperation among its 53 member States and 9 associate members in pursuit of solutions to sustainable development challenges.

ESCAP also supports inclusive, resilient and sustainable development in the region by generating action-oriented knowledge, and by providing technical assistance and capacity-building services in support of national development objectives, regional agreements and the implementation of the 2030 Agenda.

For more information, please visit the ESCAP website:

<https://www.unescap.org/>

Overview of the climate finance landscape in Asia and the Pacific

Keeping the global temperature increase to 1.5 °C will, in large part, depend on climate action in Asia and the Pacific. Climate action in turn hinges on unlocking investment in a net zero carbon transition at an unprecedented pace and scale. Developing economies in Asia and the Pacific will need trillions of dollars of investment a year to drive the energy transition and build the necessary resilience of people and infrastructure to cope with the impacts of a changed climate.

So far finance and investment flows have not reached anywhere near the scale needed. The global annual climate finance flows of \$632 billion in 2020 accounted for a fraction of the trillion dollars of investment needed. In Asia and the Pacific, there is a sizable cross-regional disparity with less developed economies benefiting marginally from investment flows. At the same time, adaptation finance is a fraction of the current climate finance (approximately 7 per cent of the global annual climate finance flows in 2020) and is estimated to be predominantly from public sources. Furthermore, the majority of climate finance is raised as debt and is usually short term in nature and frequently insufficient to finance the longer-term requirements of climate-related projects.

While public financing, both national and international, is a critical element of the transition, the bulk of financing needed will inevitably come from the private sector. Investment in clean and renewable energy has become a clear economic choice, evidenced by the fivefold increase in solar energy production and the 80 per cent decrease in cost in the last decade. Electric vehicles are rapidly expanding the market share as most countries embark on the transition to cleaner means of transport. Capital markets are a key intermediary of climate finance and investment and could be an effective channel to redirect capital to the climate transition, such as the tenfold growth in the value of thematic bonds between 2015–2020 in Asia and the Pacific.

Identifying ways of unlocking this private investment was the central purpose of the Climate Finance roundtable organized by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the Climate Champions and the COP27 Presidency. It is part of the global initiative that has helped to identify high potential investment opportunities from around the region and connect them with financiers. Many of the investment opportunities arise from our existing networks and partnerships on nationally determined contributions, the Infrastructure Financing and Public Private

Partnership Network in Asia and the Pacific, the Green Grids Initiative and our work on capital market development. These opportunities can be brought to life through private sector partnership, development and financing, under the leadership of the Glasgow Financial Alliance for Net Zero (GFANZ) and other private financiers looking for investment aligned with the Paris Agreement.

The projects and the Climate Finance Forum also demonstrate that public and private interests can come together to deliver not just on climate change commitments but also the Sustainable Development Goals. The investment in electronic buses in Fiji will transform the lives of thousands of rural households while generating consistent revenue streams. Affordable and clean home heating technologies in urban districts of Mongolia are going to save lives from chronic air pollution while generating green jobs and revenue in the energy sector. Building the resilience of the Indus River Basin, home to 90 per cent of Pakistan's population, will not only improve the lives of a large population, but also generate jobs and income as in the green infrastructure sector.

Asia and the Pacific has been the hub for innovation, and it can provide the global community with the momentum needed to drive the net-zero carbon transition. What we learned from the forum and our work with countries, partners and private financiers was that the momentum is growing for private finance and investments in the net zero transition. The Climate Finance Forum and the pipeline of projects are not the end goal. They are the starting point of a longer-term endeavour to build the missing links and help private investments flow into the right investment opportunities.

Renewable Energy for Climate Resilient Project

Country/region: Bhutan

Theme: Energy



Bhutan is diversifying renewable energy sector from hydropower projects to solar power/panel projects and hydrogen. The main objective of this diversification is to increase energy security, to become a renewable energy hub and to leverage carbon credit trading which enhances resource mobilization for small landlocked countries. In terms of timeline, early finance is better and best options are being explored.

Timelines

Current project stage: Feasibility assessment

Conceptual design period: 2022-2023

Structuring assessment period: 2023

Construction/development period: 2023-2025

Operating period: December 2025

Climate Impact

Mitigation

30 GW
Capacity by 2030

Key Info

Energy

Infra asset (greenfield)

Project Structure

Developer: Government of Bhutan

Contractual structure: Concession

Project sponsors: Government of India, ADB, Government of Japan/JICA, Government of Austria, European Union and World Bank for TA

Project advisors: ADB, World Bank and IMF

Financing

\$1.5 B
Project cost

\$500 M
Grant concessional

Use of funds: Solar and Hydrogen projects

Target gearing: 80% debt, 20% equity

Time frame for financing: 3 years

Min. ticket size: \$40 M

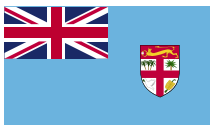
Project source: ESCAP.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Sustainable Mobility with Low Emission, Fiji

Country/region: Fiji

Theme: Transport



This programme aims to decarbonise the public bus sector in Fiji resulting in reduction of CO₂ emissions in the transportation sector through the introduction of electric buses. It encourages a shift to public transportation through improvement of services which will reduce the use of private vehicles and improve traffic conditions. The programme will run the first electric buses in the Pacific region and will provide valid data and reporting for up-scaling electric bus operations within the local conditions in the Pacific region.

Timelines

- Current project stage:** Conceptual design
- Conceptual design period:** 2021-2022
- Feasibility assessment period:** 2021-2023
- Structuring/financing period:** 2021-2023
- Construction/development period:** 2023-2024
- Operating period:** 2024-2026

Climate Impact

CO₂ Mitigation

2000t CO₂e/yr Carbon sequestration

1,750 people are expected to benefit

Phase one of the programme is expected to run for a year and expected to serve 912,500 passengers annually (assuming ten buses). The new fleet of electric buses will increase comfort to passengers which will encourage them for a modal shift to public transportation. The use of electric buses will be scaled up.

Key Info

Transport

Infra asset (greenfield)

Project Structure

Project sponsor: Fijian Government
Contractual structure: Design, build, operate

Financing

\$36.2 M
Project cost

\$4 M
Grant concessional

- Investment secured:** \$1.5 M
- Public capital:** \$1.5 M
- Target gearing:** 70:30
- Time frame for financing:** 5 years
- Min. ticket size:** \$1 M

Project source: ESCAP.
 For further information, reach out to the High-Level Champions.
 Email: hlcfinanceprojects@climatechampions.team

Australia-Asia PowerLink

Country/region: Australia, Indonesia and Singapore

Theme: Energy



Sun Cable's mission is to supply renewable electricity from resource abundant regions to growing load centres, at scale. This starts with the Australia-Asia PowerLink (AAPowerLink), which will use Australia's abundant solar resource to power Darwin and Singapore with large volumes of competitively priced and dispatchable renewable electricity. AAPowerLink will be capable of supplying up to 800 MW of capacity to Darwin and up to 15% of Singapore's total electricity needs. AAPowerLink has the following components:

- Solar Precinct with 17-20 GWp solar generation and 36-42 GWh energy storage to enable 24/7 dispatchable electricity near Elliott, Northern Territory.
- HVDC Overhead Transmission Line which will transmit electricity from the Solar Precinct to the Darwin region. Capacity from the transmission system will then be split for delivery to Darwin and Singapore.
- From Darwin, HVDC subsea cables will transmit ~2 GW of electricity ~4,200km to Singapore, largely through Indonesian waters.

In October 2021, Sun Cable formed an Integrated Project Delivery Team (IPDT) to deliver the AAPowerLink. This is a leading global team, consisting of Bechtel, SMEC (part of the Surbana Jurong Group), Hatch, Marsh, PwC Australia to provide a powerhouse of expertise to deliver this gigascale project.

In June 2022, Infrastructure Australia affirmed the economic merit of Sun Cable's Australia-Asia PowerLink project, advancing the project to Stage 3 'Investment-ready' status on the Infrastructure Priority List

Timelines

Latest milestone: Feasibility assessment

Target financial close: Early-2024

Construction to commence once financial close has been reached

Climate Impact

Mitigation

8.6 million tonnes of CO₂e/yr avoided in total from Singapore and Darwin markets.

8.6 M t
CO₂e/yr

Key Info



Energy
(solar)



Infra asset
(greenfield)

Project Structure

Developer: Sun Cable

Contractual structure: EPCM/delivery partner

Constructor: To be identified through tender

Financing

N/A
Project cost

\$22+ B
Funds required

Investment secured: Sun Cable completed a Series B capital raise in March 2022, that raised AUD210 million with its existing shareholders to fund the development of the company's marquee project, the Australia-Asia PowerLink, as well as accelerate the progress of other multi gigawatt generation and transmission projects

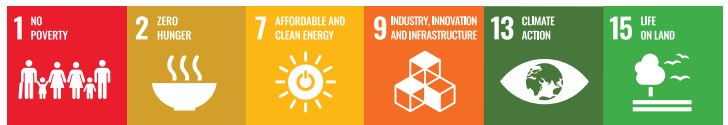
Project source: ESCAP.

For further information, reach out to the High-Level Champions. Email: hlcfinanceprojects@climatechampions.team and UNESCAP at van.nguyen@un.org

Ponggang Mini-hydro Power

Country/region: Indonesia

Theme: Energy



Ponggang village has 2.8 MW hydro-power potential from its river, Cilamaya. Deeply observing the poor economic status of Ponggang village people, IBEKA initiated the development of an on-grid hydro-power plant in Ponggang village. IBEKA plans to develop a special purpose company to accommodate the social goals and business objectives. Ponggang mini-hydro power plant project is the scale-up of the Cinta Mekar I (120 kW) micro-hydro project in 2004, a 5P’s project model that was developed by UNESCAP and IBEKA.

Timelines

- Project stage:** Structuring/financial close
- Funding:** Since 2013
- Establish purpose company:** 2022
- Permitting and PPA:** 2023 Q1—Q2
- Construction and development:** 2023 Q3

Climate Impact

Mitigation (avoidance)

17,393 t CO₂e Substitution

The project potentially substitutes the steam (coal) power plant of Banten 3 Lontar OMU up to 19,922 MWh annually. The renewable energy mitigates 17,393 t CO₂ equivalent. The project requires community involvement to secure the catchment area, especially the natural forest, river and water discharge, and the agricultural area in villages.

~\$300k Yearly income for local community

~\$20m People impacted

5 km² Natural forest and agricultural area

Key Info

Energy (hydro)

Infra asset (greenfield)

Project Structure

Owner: Ponggang Cooperative and Impact Investor (5P’s model/ownership)

Project sponsor: GDF Suez, Bukopin Bank, PT. SMI, Tamaris Hydro, Bezos Earth Fund, UNESCAP

Contractual structure: BOT (On-grid power production for commercial purposes)

Financing

\$5.7 M

Project cost

\$1 M

Grant required

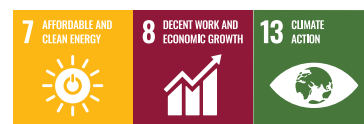
- Investment secured:** \$1 M
- Investment structure:** Blended equity, debt, grant, and mezzanine
- Target gearing:** 70% debt, 30% equity

Project source: ESCAP.
For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Energy transition in Mongolia for cleaner, safe and energy efficient homes

Country/region: Mongolia

Theme: Energy



The project aims to reach the following impact: low emission/low carbon heating technologies such as heat pumps are mainstreamed and scaled up to 8,000 households living in Mongolian traditional ger dwellings and detached houses in urban ger districts of Mongolia. The project will contribute to Mongolia's target of reducing GHG emission and stabilization and expansion of power supply and security.

Timelines

Current project stage: Pilot completed

Conceptual design period: 2022

Feasibility assessment period: 2023

Structuring assessment period: 2024-2025

Construction/ development period: 2025-2026

Operating period: 2024-2026

Climate Impact

Mitigation

Coal reduction of more than 30,000 tonnes throughout the project and estimated GHG emission of 60,000 tonnes per year. At least 200 domestic SMEs will be contracted to produce CHIP and provide technology solutions including design, diversity of products, supply and trading and pre/after sale service and further operation and maintenance. 6,000 of direct and indirect green jobs created in the energy efficiency housing and heating sectors.

8,000 Households to be impacted

182,269 t CO₂e Carbon sequestration

MRV mechanisms and approaches such as those of CDM, NAMA were used

Key Info



Energy



Infra asset (greenfield)

Project Structure

Developer: Ministry of Environment and Tourism of Mongolia and UNICEF Mongolia

Contractors: Gree Corporation of Zhuhai

Latest milestone: Demo project for CHIP has been implemented since 2019 in 3 provinces and 2 districts of Ulaanbaatar

Financing

\$20 M
Project cost

\$15 M
Grant required

Target gearing: 75% grants, 25% private investment

Min. ticket size: \$5 M

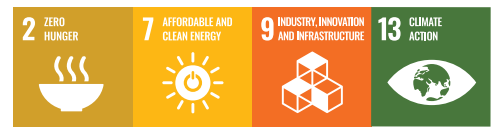
Project source: ESCAP.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Bio Base Asia Pilot Plant

Country/region: Thailand

Theme: Energy



Bio Base Asia Pilot Plant will manage the planned biorefinery pilot plant at Eastern Economic Corridor of Innovation BIOPOLIS, a research hub for bio-based industry in Thailand. The pilot will support the upscaling to pre-commercial stage of bioprocess and bioproduct lab prototypes, helping to develop the biomass valorization by biorefinery concept. The company will operate as a non-profit JV between Thailand’s National Science and Technology Development Agency and Belgium’s Bio Base Europe Pilot Plant.

Timelines

Current project stage: Feasibility assessment

Climate Impact

Mitigation (avoidance)

The project will encourage the conversion of the country’s agricultural resources as raw materials to a wide range of bio-based products, reducing reliance on petroleum-based primary sources for producing chemicals. Additionally, once the biorefinery industry is well established, the previously unused biomass will be utilized and become valuable. This will lessen air pollution from biomass burning and unsupervised open-air decomposition, reducing PM2.5 and greenhouse gas emissions.

178,000 t CO₂e reduced/yr

15k m³ fermentor capacity

Key Info

Energy

Programme

Project Structure

Partners: Thailand National Science and Technology Development Agency, Bio Base Europe Pilot Plant VZW, Belgium

Financing

\$89 M
Current funds required

N/A
Project cost

Investment required for infrastructure and technological knowledge to help overcome the valley of death by bridging the gap between basic research, innovation and the marketplace.

Project source: ESCAP.
For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Transitioning Battambang Province to an agroecological landscape

Country/region: Cambodia

Theme: Agriculture



The project is expected to lead to resilient livelihoods and a greater ability for farmers and communities to adapt to climate change impacts. To achieve a sustainable agricultural landscape, Battambang must solve: (a) a lack of incentivization and support; (b) the limited market and private sector development for supporting agroecology; (c) limited knowledge and education support; (d) limited institutional coordination across land-use sectors and integration into land-use planning.

Timelines

Current project stage: Conceptual design and concept note

Design stage: 2022-2024

Structuring: 2024

Operating period: 2024 onwards

Climate Impact



Adaptation and resilience

This project contributes to climate change adaptation by enhancing the climate resilience of agricultural systems. The project contributes to Cambodia's commitment to achieving emissions reduction by enhancing Soil Organic Carbon sequestration over approximately 80,000ha in Cambodia's Battambang Province. The project is delivering adaptation impacts to 98,000 direct beneficiaries plus 240,000 indirect beneficiaries in improved climate-resilient sustainable livelihoods.

98,000

Direct beneficiaries



Key Info



Agriculture



Programme



Project Structure

Project sponsor: National Committee of Sub-National Democratic Development



Financing

\$13.5 M
Project cost

N/A
Grant required

Public capital: Not yet invested

6 month financing required: \$50K grant required

Project source: ESCAP.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Living Indus Initiative

Country/region: Pakistan

Theme: Water



Living Indus is an umbrella initiative and a call to action to lead and consolidate adaptation and mitigation initiatives to bolster the readiness of the Indus Basin for climate change, including 25 interventions that focus on nature-based solutions and ecosystem-based adaptation approaches to protect, conserve and restore natural, terrestrial, freshwater, coastal and marine ecosystems in the Indus Basin.

Home to 90% of Pakistan’s population and more than 75% of its economy, the Basin is one of the world’s most vulnerable natural systems to the effects of climate change, and an important carbon sink, with 1,464 km² of mangroves that sequester 76 MtCO₂e/yr.

Timelines

Project stage: Pre-feasibility

Project timelines: Across 25 proposed interventions, the timeline varies between less than 5 years to more than 15 years.

Climate Impact



Mitigation



Adaptation and resilience

Living Indus is aimed towards the restoration and repair of the Indus ecosystem and climate change mitigation, with all interventions contributing to or enabling NDCs. NDC priorities supported include investment in nature-based solutions, flood risk mitigation, enhancing protected areas, and mitigation across agriculture, industrial, LULUCF, and waste sectors.

50-100 Mt CO₂e
Reduction by 2030

90% of population
Increased climate resilience

Key Info



Blue economy
with some agriculture, land restoration and water access



Programme

Project Structure

Owner: Ministry of Climate Change, Government of Pakistan

Contractual structure: Technical advisory and implementation support

Project sponsor: United Nations – Food and Agriculture Organization in Pakistan

Financing

\$11-17 B
Project cost

N/A
Grant required

Of the 25 interventions, work is already ongoing independently on ten interventions by different organizations. Living Indus endorses these interventions and seeks additional financing to kick-off new and scale-up piloted and on-going interventions.

Project source: ESCAP.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Hydro-Eco Park at Kallyanpur Retention Pond in Dhaka

Country/region: Bangladesh

Theme: Water



The Hydro-Eco Park project aims to create a modern water-based, integrated bio-diversified ecological park at the 183-acre site in Dhaka, Bangladesh, which will enhance educational, social, transport and commercial infrastructure of the city. It is designed to provide transformational and sustainable urban living. It will involve restoration of water-bodies, redevelopment of landscape, construction of amenities, connectivity with multi-modal transport, and facilities for waste management.

Timelines

Current project stage: Pre-construction

Conceptual design period: 2020-2021

Feasibility assessment period: 2021-2022

Structuring assessment period: 2023-2024

Construction/development period: 2024-2027

Operating period: 2027 onward

Climate Impact



Adaptation and resilience

5000+ Employment generation

3 M+ Citizens impacted

500+ housing units provided

1000+ Community market places for SMEs

Main objectives and benefits:

- Heat-stress reduction
- Storm water drainage and flood mitigation
- Waste management and water quality improvement
- Carbon-capture maximization
- Air pollution reduction
- Biodiversity and nature conservation
- Health and well-being
- Equitable, accessible, gender inclusive safe public space

Key Info



Water



Infra asset (greenfield)

Project Structure

Project sponsor: Dhaka North City Corporation

Other infrastructure: Provided by Government

Latest milestone: Pre-construction

Financing

\$250 M
Project cost

N/A
Grant required

Deal type: Public private partnership

Type of finance required: External funding (e.g. Green Municipal Bonds and EPC Financing)

Project source: ESCAP.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

United Nations Climate Finance Innovation Fund for Women

Countries of impact: Bangladesh, Nepal, Cambodia, Viet Nam, Fiji, Samoa | Fund location: Thailand

Theme: Finance



The Asia-Pacific-focused fund aims at solving the challenges faced by financial service providers and their clients, specifically women-led businesses, in the context of climate change. It puts forward two key challenges to the market: 1. How might we improve financial service offerings to meet net-zero targets? 2. How might we reduce the negative impact of climate change on women entrepreneurs by leveraging FinTech solutions? It builds on UN ESCAP’s Innovation Funds in 2018 with a series of challenges related to sustainable development for Asia-Pacific’s technology and financial service providers to solve. The fund will identify a pipeline of investable initiatives, provide grants as first-loss capital and identify promising initiatives for investment to scale up viable solutions

Timelines

Current project stage: Fundraising
Fund raising period: 2022-2023
Investment period: 2023-2030

Climate Impact

Adaptation and resilience

Impact: 10,000 women-led businesses supported with green transition targeted

10,000
 Women-led businesses supported

Addressable market: 15-25% of MSME markets in target countries

MRV Approach: Financial and non-financial monthly reporting to and spot checks by the fund managers (including beneficiary and climate verification). Annual audited financial reports to be submitted.

Key Info

Finance

Fund

Project Structure

Project sponsor: Global Affairs Canada
Fund structure: Donor supported fund
Risk mitigation: In some countries there is a ESCAP support first loss guarantee in place

Financing

\$20 M
Project cost

\$1.2 M
Public capital invested

Funds investment instruments:

- Grant funding for proof of concept
- Debt and equity to scale up commercially viable solutions (IRR TBD)

Avg. ticket size: \$1-5 M

Project source: ESCAP.
 For further information, reach out to the High-Level Champions.
 Email: hlcfinanceprojects@climatechampions.team





Latin America and the Caribbean



José Manuel Salazar-Xirinachs

United Nations Under-Secretary-General and Executive Secretary of ECLAC



Economic Commission for Latin America and the Caribbean Santiago, Chile

In the half century since its founding, Economic Commission for Latin America and the Caribbean (ECLAC) has made significant contributions to regional development, and its theories and approaches have achieved recognition in many parts of the world.

The 33 countries of Latin America and the Caribbean, together with several Asian, European and North American nations that have historical, economic and cultural ties with the region, comprise the 46 member States of ECLAC. Fourteen non-independent territories in the Caribbean are Associate Members of the Commission policy.

It was founded with the purpose of contributing to the economic development of Latin America, coordinating actions directed towards this end, and reinforcing economic ties among countries and with other nations of the world.

For more information, please visit the ECLAC website:
<https://www.cepal.org/en>

Overview of the climate finance landscape in Latin America and the Caribbean

The roundtable organized by the Economic Commission for Latin America and the Caribbean (ECLAC), the COP27 Presidency and the High-Level Climate Champions on Climate Finance for the Energy Transition in the Latin America and the Caribbean (LAC) region revealed a number of issues for future work by ECLAC and its partners. These include:

Enabling environments

The LAC region is moving towards greening the financial system with the support of many global initiatives. However, the pace is still cautious and slow. Capacity-building and supporting tools are still required. Existing learning platforms need to be leveraged to accelerate the transition.

Bankability initiative

The roundtable evidenced that there is a “missing phase” between conceptualization by Governments and project financing, be it public, private or mixed. This is the bankability phase. Due to the high demand for their services and financial support, development finance institutions tend to disregard non-feasible projects, regardless of their priority status for countries or transformational potential as part of nationally determined contributions (NDCs). A bankability initiative is needed in the region to support NDC investments and finance. The initiative would map interested regional institutions, support capacity development and facilitate partnerships between regional finance institutions and countries.

Benefit sharing

The role of development finance and global capital markets in the energy transition is a key question in a region where sovereign debt dominates the relationship between Governments and large financial institutions. Opportunities around the energy transition imply moving away from commodities to end products or industrial components, expanding the value chain into new fields. Addressing the ownership, high-level management decisions and long-term affordability of the assets involved are key to advancing on such an approach.

In the spirit of the SDGs, while development finance de-risks private finance, private finance should do its part and invest in a mutually beneficial manner, with

due consideration to the real economy’s constraints and needs, guaranteeing the sustainability of the projects over time, and, as appropriate, sharing welfare with the local communities and regions.

Regionalization of new industrial standards

Many of the projects presented during the LAC roundtable have the potential to support regional integration of markets and their value chains. Industrial standards should be harmonized to enable these opportunities, guarantee access to regional markets and promote regional value chains to access global trade.

Framing climate action as SDG action

LAC is a region that has contributed less than 10 per cent of historical GHG emissions, and at the same time is highly vulnerable to climate change. It is also a region with large social, environmental and economic disparities, making the SDG agenda an imperative. In this regard, climate action must be framed within the SDGs to be relevant for the region.

Cerro Dominador Thermal Solar Plant

Country/region: Atacama, Chile

Theme: Energy Transition



The region's first solar thermal plant, which uses 10,600 mirrors spread over a 3-kilometre-diameter esplanade and generates 210 MW.



Climate Impact

Emission avoidance → 210 MW green energy avoiding CO₂ 643 KtonCO₂/yr

Employment → 1,400 jobs in 2020 and 640 jobs in 2021

2,040 new jobs

210 MW/yr renewable energy

643 Kton carbon sequestration



Timelines

Current project stage: Operational

Construction/development period: 2014

Operating period: 2018 (first 100 MW)



Key Info



Energy (solar)



Infra asset (greenfield)



Project Structure

Developer: EIG Global Energy Partners

Offtaker: Abengoa Cerro Dominador

Contractors: Acciona

Latest milestone: The plant was synchronized with the Chilean grid in April 2021.

Project sponsor: CORFO, Natixis, Deutsche Bank, Société Générale, ABN AMRO, Banco Santander, Commerzbank, BTG Pactual, among others



Financing

\$1 B

Total project cost

\$0.2 B

Current funds required

Project financiers: CORFO, BID, KfW, European Union

Investment secured: \$0.8 B

Of which public capital: \$20 M

Project source: ECLAC.

Hydrogen Fuel Cells and Electrolyzers

Country/region: Argentina/Latin America

Theme: Renewable Energies



This project will use renewable energy (i.e., solar PV) to produce hydrogen, thus producing an energy vector with zero emissions.

This project will encompass three main areas:

- Synthesis and characterization of new materials for energy conversion and storage;
- Simulation, design and engineering to predict the behavior of energy conversion systems under diverse conditions;
- Prototype production using the best performance materials at the laboratory scale and pilot plant scaling-up using the results from the engineering analysis.

Climate Impact

Mitigation – emissions removal

Generation and storage of energy

Reduction of emissions (greenhouse gases)

N/A climate impact on land/people

N/A GWh/yr renewable energy

N/A CO₂e carbon sequestration

Timelines

Current project stage: Planning
Conceptual design period: 2022
Structuring assessment period: 2022-2024
Construction/development period: 2024-2025
Operating period: starting in 2025

Key Info

Energy and transport

Research, development and innovation

Project Structure

Developer:
 Instituto Nacional de Tecnología Industrial (INTI)
Offtaker: N/A
Contractors: N/A
Latest milestone: Conceptualization concluded
Project sponsor: N/A
Contractual structure: N/A

Financing



Use of funds: Project execution
Target gearing: N/A **Time frame for financing:** N/A
Min. ticket size: N/A **Investment secured:** N/A
Of which public capital: N/A

Project source: ECLAC.

Photovoltaic Solar Energy in Public Services

Country/region: Guyana

Theme: Energy Transition



The proposed GUYSOL operation will increase the use of renewable energy generation, with specific investments in innovative large-scale solar photovoltaic (PV) and battery energy storage system (BESS) technology.

The Guyana Utility Scale Solar PV Programme (GUYSOL) will invest in eight utility scale solar PV projects totaling 33 MWp with associated 34 MWh energy storage systems distributed in three areas of the country. Specifically, it will invest in 10 MWp in the Berbice area, 8 MWp project on the Essequibo system with a minimum of 12 MWh of battery storage and 15 MWp of plant connected to the Linden system, with a minimum of 22 MWh of battery storage.



Timelines

Current project stage: Feasibility assessment

Conceptual design period: 2022-2023

Structuring assessment period: 2023

Construction/development period: 2022-2026

Operating period: Up to 2026



Key Info



Energy (solar)



Programme



Project Structure

Developer and offtaker: Guyana Power and Light Inc. (GPL) and Linden Electricity Company Inc. (LECI) Government of Guyana

Project sponsor: Norwegian Agency for Development Cooperation and IDB



Financing

\$83.3 M
Project cost

N/A
Current funds required

Support to unlock investment required: N/A

Type of finance required: N/A

Investment secured: N/A

Of which public capital: \$0 M

Project source: ECLAC.



Climate Impact

265,000 beneficiaries

33 MW_p renewable energy

Biorefinery

Country/region: Panama

Theme: Energy Transition



Refinery (with SGP BioEnergy) to produce 180,000 barrels per day of biofuels, including sustainable aviation fuel (SAF) and renewable marine diesel.

Timelines

Current project stage: Conceptual design
Conceptual design period: During 2022
Structuring assessment period: During 2022
Construction/ development period: 2023- 2025
Operating period: Up to 2026

Key Info



Energy



Infra asset (greenfield)

Project Structure

Developer and offtaker: SGP BioEnergy, Government of Panama, Panama Oil Terminals (POTSA)

Contractors: SGP BioEnergy, Panama Oil Terminals (POTSA), among others.

Project sponsor: Government of Panama

Contractual structure: Contract

Financing

\$7 B

Total cost

N/A

Current funds required

Target gearing: To be defined

Time frame for financing: In association with GS

Investment secured: To be defined

Of which public capital: To be defined

Project source: ECLAC.

Climate Impact

Reduction of the plant's carbon footprint: By 80%
Barrels of biofuels: 180,000/day

1,000 new jobs created

180,000/day barrels of biofuels

-80% reduction of plant's carbon footprint

Retrofit Project in Quito

Country/region: Quito, Ecuador

Theme: Electric Mobility



The project consists of two phases:

- Phase 1: Retrofit of public transport fleet, Municipally owned.
- Phase 2: Retrofit of privately owned public transportation fleet.

For Phase 1: strengthening of local technical capacities, generation of a programme for the reconversion of the municipal vehicle fleet (153 units), implementation of BRT recharging infrastructure and adaptation of exclusive channel, and reconversion of municipal BRT. For Phase 2: generation of a programme for the reconversion of the public transport fleet, privately owned through public banking and implementation of recharging infrastructure.



Climate Impact

Reduced carbon emissions: Diesel buses 5.567 tCO₂e/yr, Heavy diesel buses 16.473 tCO₂e/yr

Reconversion of the municipal vehicle: 153 units

153 reconverted municipal vehicle fleet

22.040 tCO₂e carbon sequestration



Timelines

Current project stage: Conceptual design

Conceptual design period: 2022-2023

Structuring assessment period: 2023

Construction/development period: 2023-2024

Operating period: 2025-2035



Key Info



Electric vehicles



Programme



Project Structure

Developer: Corporación de Promoción Económica de Quito - CONQUITO Secretaría de Movilidad del Municipio de Quito

Project sponsor: N/A



Financing

\$80 M

Project cost

N/A

Current funds required

Support to unlock investment required: Structuring the financial feasibility of the project

Type of finance required: Debt

Investment secured: N/A

Of which public capital: Expect no public capital

Project source: Secretaría de Movilidad del Distrito Metropolitano de Quito, Secretaría del Ambiente del Distrito Metropolitano de Quito.

A. Electromobility and B. Electrification in public transportation routes in the San Salvador Metropolitan Area (AMSS)

Country/region: El Salvador

Theme: Electric Mobility and Energy Transition



A. The objective of the project is to introduce electric mobility in public passenger transportation on AMSS routes through the development of legal and regulatory frameworks conducive to the promotion of electromobility, as well as the acquisition of public transportation units, the construction of a photovoltaic project on site and the installation of charging stations.

B. This project is aligned with the 2020-2050 vision of the National Energy Council (CNE) detailed in the National Energy Policy (PEN), which seeks to develop a pilot project that considers the different routes of public transport that travel in the public transport routes that transit in the AMSS and new routes that allow the development of a sustainable mobility strategy.

Climate Impact

Reduced carbon emissions: 4,179 (t CO₂e/yr)

Renewable energy generation

Beneficiaries: 13,400 people/day

Jobs created: 100 jobs

13,400 beneficiaries

4,179 tCO₂e reduced carbon emissions

5,075 MWh/yr renewable energy

Timelines

A. Electromobility

Current project stage: Conceptual design
Conceptual design period: March–December 2022

Structuring assessment period: May–July 2023

Construction/development period: August 2023–April 2024

Operating period: 2024–2039

B. Electrification

Current project stage: Conceptual design

Conceptual design period: N/A

Structuring assessment period: N/A

Construction/development period: N/A

Operating period: 2030

Key Info



Energy



Infra asset (greenfield)



Electric vehicles

Project Structure

Electromobility

Developer and offtaker: Government of San Salvador

Contractors: Bidding process has not yet been initiated

Project sponsor: Approaches to potential stakeholders

Contractual structure: To be defined

Electrification

Developer and offtaker: Government of San Salvador

Project sponsor: N/A

Contractual structure: Concession

Financing

A. Electromobility

\$50 M

Total

B. Electrification

\$420 M

Total

Target gearing: \$50 M debt/\$25 M equity

Time frame for financing: 1 year

Investment secured: to be defined

Of which public capital: \$25 M (A), Expect no public capital (B)

Project source: Consejo Nacional de Energía de El Salvador.

Circularity of lithium batteries

Country/region: Argentina

Theme: Recycling



This project aims to lay the foundations to generate a comprehensive circular economy programme for batteries, to be able to give technical definitions to regulate the battery recycling activity and provide support to all the actors involved. Train human resources and generate a platform to evaluate the scaling of projects to achieve a lithium battery waste management system that meets regional needs or that generates the necessary links to be able to replicate the project in other countries based on local experience. This project proposes the development of three lines of intervention to establish the foundations of a comprehensive circular economy system for lithium batteries: sector observatory; training of human resources; and installation of a pilot plant.



Climate Impact

Resource recovery

Waste management services; extraction of raw materials

Reduction of waste and mining activity

N/A climate impact on land/people

N/A GWh/yr renewable energy

N/A CO₂e carbon sequestration



Timelines

Current project stage: Planning

Conceptual design period: 2022

Structuring assessment period: 2022-2023

Construction/development period: 2024-2025

Operating period: Starting in 2025



Key Info



Extraction of raw materials/energy storage/waste management



Research, development and innovation



Project Structure

Developer: **INTI** | **65** Ann 1957-2022

Instituto Nacional de Tecnología Industrial (INTI)

Offtaker: N/A

Contractors: N/A

Latest milestone: Conceptualization concluded

Project sponsor: N/A

Contractual structure: N/A



Financing

\$2 M

Project cost

\$2 M

Current funds required

Use of funds: Project execution

Target gearing: N/A

Time frame for financing: N/A

Min. ticket size: N/A

Investment secured: N/A **Of which public capital:** N/A

Project source: INTI, gmontiel@inti.gov.ar

Lithium Nanotechnology Project

Country/region: Chile

Theme: Energy



Development of lithium nanoparticles for the manufacture of additives for batteries and energy storage systems so that they are more efficient when used, due to the type of reactivity and efficiency of the nanoparticles. In this way, it will also be possible to have smaller and more flexible batteries to increase the use and consumption of applications and reduce the weight of the batteries with these nanomaterial additives, which is a key factor in electromobility for land and air.

Climate Impact

Added value to the lithium resource with an increase in light and flexible battery applications and a decrease in the weight of batteries with nanomaterials. This implies a better use of the batteries and less waste, in addition to the benefit of lower consumption due to the weight/mobility ratio.

SDGs 7, 8, 9 and 12

Gradually reach **400 Wh/kg** in a battery with more than **500** cycles and **80%** retention capacity.

Timelines

Current project stage: Conceptual stage
Conceptual design period: 2021-2023
Structuring assessment period: 2022-2024
Construction/development period: 2025
Operating period: End of 2025

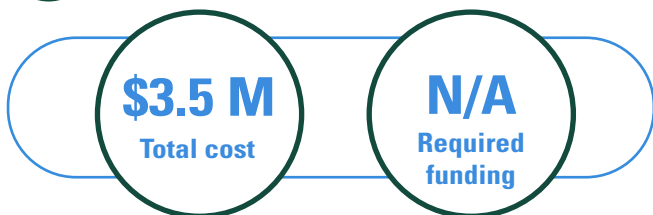
Key Info

Energy and mining **Lithium batteries and nanomaterials**

Project Structure

Developer: Nanotec S.A.
Offtaker: The target market is battery Nanotec S.A. manufacturing companies for a world market of \$2 billion
Contractors: Nanotec S.A.
Project sponsor: Nanotec S.A.
Latest milestone: Development of 9 different types of lithium composite nanoparticles in a test state for batteries and for industrial production

Financing



Use of funds: Development of lithium nanoparticles
Target gearing: N/A **Time frame for financing:** N/A
Min. ticket size: N/A **Investment secured:** N/A
Of which public capital: N/A

Project source: Nanotec S.A. Patricio Jarpa, <https://www.nanotecchile.com/>.

Regional Program for Local Financial Institutions

Country/region: Chile, Ecuador, Panamá, Perú

Theme: Energy



The project will support LFI in their SME engagement and financing for climate action.

The project will benefit 1,214 projects in the 4 countries and the estimated target is the following:

- 57% energy efficiency
- 19% renewable energy
- 24% land use

A key issue for this initiative, is the engagement with 11 local financial institutions that will step up their learning curve in climate finance with the support by CAF and the CCF.

Two proposed lines of action:

1. Green financing
2. Technical assistance to local institutions

Climate Impact

1,214

Mitigation and adaptation projects

- 57% energy efficiency
- 19% renewable energy
- 24% land use

1,214 EE, RE and land use projects

10.7 MtCO₂e carbon mitigation

Timelines

Current project stage: Review of market assessment (due to postCovid circumstances)

Conceptual design period: 2018-2019

Structuring assessment period: 2022-2023

Construction/ development period: 2025-2026

Operating period: 2026 - onwards

Key Info



Project Structure

Developer: SME of Chile, Ecuador, Panamá and Perú

Project sponsor: CAF, Banco de Desarrollo de América Latina, Green Climate Fund

Contractors: Developer SME through 11 Local financial institutions

Latest milestone: Contract signed between CAF and the GCf in July 2022

Financing

> \$150 M
Project cost

\$150 M
Funds required

Support to unlock investment required: Financing SME mitigation projects

Type of finance required: Debt

Investment secured: 150 M

Of which public capital: TBD

Project source: CAF.

Caribbean Resilience Fund

Country/region: The Caribbean

Theme: Finance



The CRF is a special purpose financing vehicle (SPV) to leverage long-term low-cost development financing for the Caribbean while ensuring the availability of resources for investment in adaptation and mitigation initiatives in the development of green economic sectors.

Looking for an initial capital injection of about \$30 million sourced from Caribbean Governments, the private sector, and the international community, including the multilateral development banks (MDBs) and the GCF.

Climate Impact

Long term impact in adaptation and mitigation actions by all Caribbean countries

- Invest in green industry development for climate adaptation and mitigation
- It will include public-private partnerships
- Support for debt restructuring involving climate action

Timelines

Current project stage: Setting up the SPV
Conceptual design period: 2015-2020
Structuring assessment period: 2021-2023
Construction/development period: 2023
Operating period: 2023 – onwards

Key Info



Investment fund



Programme

Project Structure

Developer: ECLAC
Offtaker: CARICOM
Contractors: Bidding process has not yet been initiated
Project sponsor: Governments of Antigua and Barbuda, Saint Lucia, and Saint Vincent and the Grenadines
Contractual structure: SPV

Financing



Use of funds: Resilience building, growth and competitiveness, liquidity and debt facility

Target gearing: 30 M

Time frame for financing: Capital needed for the first 20-30 months of operation

Investment secured: N/A

Of which public capital: 49% (14.7 M) by 2025

Project source: ECLAC





The UNECE Region

(Europe, Central Asia
and North America)



Olga Algayerova

United Nations Under-Secretary-General and Executive Secretary of UNECE



Economic Commission for Europe, Geneva, Switzerland

The major aim of the United Nations Economic Commission for Europe (UNECE) is to promote pan-European economic integration. UNECE includes 56 member States in Europe, North America and Asia. However, all interested United Nations member States may participate in the work of UNECE. Over 70 international professional organizations and other non-governmental organizations take part in UNECE activities.

UNECE contributes to enhancing the effectiveness of the United Nations through the regional implementation of outcomes of global United Nations conferences and summits. It gives focus to the United Nations global mandates in the economic field, in cooperation with other global players and key stakeholders, notably the business community.

UNECE also sets out norms, standards and conventions to facilitate international cooperation within and outside the region.

For more information, please visit the UNECE website:

<https://unece.org/>

Overview of the climate finance landscape in the UNECE region (Europe, Central Asia and North America)

The focus countries of the United Nations Economic Commission for Europe (UNECE) Regional Forum (17 emerging economies¹ in the UNECE region) have significant potential for improving energy efficiency, expanding renewable energy deployment and moving towards decarbonization of industry and transport. However, most countries continue to depend heavily on fossil fuels, with relatively smaller shares of renewables in their total final energy consumption and huge losses of heat, electricity and overall energy in transportation and distribution. As the need for energy security gains momentum in the focus region, especially following the start of the war in Ukraine in early 2022, countries must urgently invest in energy efficiency, renewable energy and decarbonization efforts to end their dependence on fossil fuels.

So far, the focus countries have seen finance and investment flows mostly targeted at fossil fuels. Finance and investment flows into renewables, while emerging, have not reached anywhere near the scale needed to make progress on transition in the next decades. Most of the finance and investment is estimated to be from public sources, national or international. Much more is needed to attract private investors and private capital, be it from commercial banks or capital markets, especially the long-term loan tenors needed to finance the transformational investments underpinning the green, digital and energy transitions.

Facilitating the identification and activation of these private financial resources was the central purpose of the UNECE Regional Forum. Entitled *Towards COP27: UNECE Regional Forum on Climate Initiatives to Finance Climate Action and the SDGs – Regional cooperation on enhancing sustainable management and financing for the critical raw materials required for low-carbon transitions*, the Forum was organised by UNECE in partnership with the incoming Egyptian Presidency of COP27 and the United Nations Climate Change High-Level Champions for COP26 and COP27. The UNECE Regional Forum was part of the global initiative that has helped to identify high potential investment opportunities from around the globe and connect them with financiers. The UNECE Regional Forum was held on 17 October 2022 in Geneva, as the last of the regional conferences organised by the regional commissions.

The UNECE Forum specifically focused on the availability of critical raw materials as a fundamental condition for the green transition. A resilient, sustainable and ethical supply of critical raw materials (such as lithium, nickel, copper, cobalt, manganese, graphite and rare earth elements) is essential for clean energy, a transition to more sustainable mobility and the digital transformation.

The green transformation is already driving a massive increase in the demand for these minerals. For example, over the next two decades demand is expected to rise over 40 per cent for copper and rare earth elements, 60–70 per cent for nickel and cobalt and almost 90 per cent for lithium. The World Bank estimates that over 3 billion tons of minerals and metals will be needed to deploy wind, solar and geothermal power and energy storage required for achieving a sub-2°C future. The production, refining and use of these materials in low carbon technologies will require billions of dollars' worth of financing and collaboration between the private and public sectors. Recycling and the implementation of other circularity principles can make an important contribution to meeting the demand for critical raw materials.

The Forum's focus on critical raw materials was fully rewarded – there was strong interest from the finance sector at the Forum as well as strong demand for support from Governments. The production, refining and use (as well as, importantly, reuse and recycling) of these materials in low-carbon technologies requires careful attention to several important environmental, economic and social considerations. All stakeholders must cooperate to share relevant information and knowledge about the environmental, social and governance (ESG) dimensions of critical raw material supply chains and ultimately improve their ESG performance.

UNECE worked with the Governments of the focus countries, project sponsors and private companies to identify a sample of projects showcasing investment opportunities in the region. The pipeline of projects presented at the Forum served to: illustrate potential, create connections between Governments and financiers and identify gaps where we need to help. Projects ranged from renewable energy production to means of energy storage, from critical raw materials to waste and digitalization (worth a total of \$10 billion), as well as two additional multi-billion initiatives on green hydrogen and green ammonia.

¹ Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Republic of Moldova, Republic of North Macedonia, Serbia, Tajikistan, Türkiye, Turkmenistan, Ukraine, and Uzbekistan

Moreover, the Forum delivered a nuanced analysis of challenges (the important role of innovation and new technologies, mining externalities, lack of harmonised information and data, etc.) and opportunities (circular approaches, traceability, scaling up potential through public-private partnerships (PPPs) aligned with the Sustainable Development Goals (SDGs)). The Forum also highlighted the critical need to include critical raw materials within the remit of climate finance, such as green bonds (and other ESG/SDG-aligned finance), as playing a crucial role in securing access to the necessary capital to foster innovation and contribute to delivering on the Paris Agreement and the SDGs.

Finally, and crucially since the UNECE focus region has a large existing capital stock invested in older heavy industries, the Forum explored the concept of transitional finance (“transform instead of divest”). The Forum highlighted that there are clear sustainability focus trajectories for sectors such as hydrogen, ammonia and critical raw materials, among others, which – if UNECE can help countries with both strategy and practice – will make a real difference to reducing CO₂ emissions.

The UNECE region has the potential to provide the global community with the critical raw materials and the decarbonized energy needed to support their own transitions and paths to net zero. What was learned from the Forum and UNECE work with countries, partners and private and public financiers was that momentum is growing for private finance and investments in the net zero transition. The Forum also emphasised the importance of SDG considerations being included throughout the different project stages, from project design and financing to implementation. UNECE PPPs for an SDG approach offer a useful tool in this regard. The Climate Finance Forum and the pipeline of projects are not the end goal. They are the starting point of a longer-term endeavour to build the missing links and help public and private investments flow into the right investment opportunities.

Voltalia solar photovoltaic plants

Country/region: Albania

Theme: Energy



Voltalia is developing two projects over a combined surface of 317 hectares of non-productive salty lands:

(a) The Karavasta 140MW photovoltaic plant (PV), that will be the largest PV in the Western Balkans. The plant will be interconnected to the national grid through a 20 km long overhead line.

(b) 100 MW ground-mounted Spitalla Solar PV Park, off the Adriatic Coast, in the port city of Durres.

Timelines

Project stage: (a) Under construction since July 2022; (b) structuring and execution

Project timeline:
 (a) Construction: 2021;
 commercial operation date: 2023;
 (b) construction: 2023;
 commercial Operation date: 2024

Climate Impact

Mitigation (avoidance)

(a) Karavasta will supply energy to over 220,000 Albanian families.

The project will avoid the emissions of 96,500+ tons of CO₂, the equivalent of 9.5% of the emissions from the industrial sector in Albania.

(b) Spitalla will supply energy to over 154,000 households.

163,548 t CO₂e/yr
carbon sequestration

>265 GWh/yr
renewable energy

Key Info

Energy (solar)

Infra asset (greenfield)

Project Structure

Project sponsor: French company, Voltalia

Contractual structure: Build, own, operate and transfer; 30-year concession; 15-year sales contract with the Albanian public operator (50% and 70% of electricity output for Karavasta, and Spitalla respectively).

Stakeholders: EBRD

Financing

EUR 210 M

Total cost

N/A

Current funds required

Investment: A combination of equity, project finance debt and grant

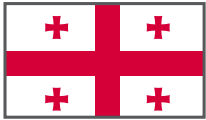
(a) EUR 125 M (b) EUR 83 M

Project source: UNECE.
 For further information, reach out to the High-Level Champions.
 Email: hlcfinanceprojects@climatechampions.team

Nigoza wind power plant

Country/region: Georgia

Theme: Energy



The Nigoza wind power plant with 50MW installed capacity is being implemented in cooperation with the Energy Development Fund of Georgia.

It will generate up to 200 GWh in its first year and up to 5,000 GWh over a 25-year period. Full feasibility study (including 4 years measurement camping), ESIA, grid connection survey and all other necessary studies for the project have been conducted. Government and the project company are currently negotiating to sign the Implementation Agreement.

Timelines

Current project stage: Feasibility/financing being arranged

Conceptual design period:

Structuring assessment period:

Construction/development period: Q4'2023

Operating period: N/A


Climate Impact

Mitigation (avoidance)


100,000 - 190,000 t CO₂e/yr
carbon sequestration

258.75 GWh/yr
renewable energy

Key Info



Energy
(wind)



Infra asset
(greenfield)

Project Structure

Project sponsor: JSC Calik Georgia Wind*

Contractual structure: Build, own, operate

Financing

\$70 M
Total cost

N/A
Current funds required

Project finance target structure: Equity 30% and debt 70%

Note: * Shareholders: GEDF 15%, Calik Enerji Sanayi Ticaret A.S – 85%.

Project source: UNECE.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Svevind Green Hydrogen Project – Hyrasia One

Country/region: Kazakhstan

Theme: Energy



The Svevind Green Hydrogen project would install ~40 GW of onshore wind power and solar PV to feed 20 GW of electrolyzers that will produce green hydrogen. The green hydrogen complex will convert yielded renewable electricity to produce 2 million tons of hydrogen and/or up to 11 million tons of ammonia per year. The exact ratio of green hydrogen and ammonia production will be adjusted based on the offtake structures. The output is set to be exported to markets in Eurasia.

Timelines

Project stage: Conceptual design (finalization stage). On-site surveys and environmental impact assessment are underway.

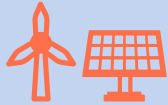
Project timeline: The facility will be commissioned in 5 phases. Planning and execution are scheduled for a 10+ year period.

Climate Impact


CO₂ Mitigation (avoidance)

- Two-thirds of the solar and wind output would be used to power electrolyzers that would create about 3 million tons of hydrogen per year from water.
- The resulting green hydrogen, in either liquid or gas form, is produced without any GHG emissions.
- The advantage of hydrogen, beyond being clean, is that it is easy to transport or sell abroad.

Key Info



Energy
(wind and solar power)



Infra asset
(greenfield)

Project Structure

Project sponsor: Svevind Energy Group

Financing

EUR
10+ B
Total cost

N/A
Current funds
required

Investment: A combination of equity, project finance debt and grant

Project source: UNECE.
For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

«Kambar-Ata 2» Hydropower plant

Country/region: Kyrgyzstan

Theme: Energy



Construction of the Kambatirskoy Hydropower plant near the Toktogu lake. Total capacity 1860MW for an annual production up to 5,6 GWh. The project has been identified as a project of national interest and the realisation phase is planned to take place in two stages:

- Stage 1: ancillary civil works and high voltage transmission lines (\$18,9m)
- Stage 2: construction of the dam and the power plant (~\$498,9m)

Timelines

Project stage: Feasibility assessment

Project timeline: N/A

Climate Impact

Mitigation (avoidance)

N/A t CO₂e/yr
carbon sequestration

5.6 GWh/yr
renewable energy

Key Info



**Energy
(Hydro)**



**Infra asset
(greenfield)**

Project Structure

Project sponsor: Power Plant OJC

Technical partners: Lavalin (Canada)

Financing

\$517.8 M
Total cost

N/A
Current funds
required

Financing:

Stage 1 will be financed in two phases:

- Phase 1: worth \$18.9 M corresponds to technical studies and feasibility analysis.
- Phase 2: valued at \$498.9 M, for the realisation of civil works.
- Debt will be raised from a combination of DFIs and commercial banks.

Project source: UNECE.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

ElevenEs Battery Plant

Country/region: Serbia

Theme: Energy



Serbian battery developer, ElevenEs, has developed technology to produce lithium iron phosphate (LFP) batteries for electrical vehicles (EV) and energy storage applications. ElevenEs along with investor EIT InnoEnergy will build the first LFP battery gigafactory in Europe that will produce 300 MWh per year. After two years, production will expand to 8 GWh, and to 16 GWh after 2028. The factory will be based close to Serbia's Jadar valley, home to one of Europe's largest deposits of lithium.

Timelines

Project stage: Structuring and execution

Project timeline: The first phase of production, with a capacity of 300 MWh, should start by 2023.

Climate Impact

CO₂ Mitigation (avoidance)

- LFP cells last more than twice as long as competing chemistries, they can be recharged up to 6,000 times, charge faster, can be repeatedly charged to 100% state-of-charge and cause practically no fires in EVs.
- The Project will later be expanded to a capacity of 16 GWh – enough to equip more than 300,000 electric vehicles (BEVs) with batteries each year.
- The factory will use 100% renewable energy.

N/A t CO₂e/yr
carbon sequestration

300 MWh/yr
renewable energy

Key Info



Energy
(CRM)



Infra asset
(greenfield)

Project Structure

Project sponsor: ElevenEs

Financing

\$1.2 B
Total cost

N/A
Current funds
required

Project finance: ElevenEs has signed agreements with EIT InnoEnergy. The project will also be backed by funds from the European Union.

Project source: UNECE.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Management of critical raw materials and Energy

Country/region: Tajikistan

Theme: Energy



Tajikistan developed various programmes to manage Critical Raw Materials (CRM), including: (a) International Standard for the Assessment of Reserves of CRM*; (b) Survey for deposits of rare earth elements in the Pamirs. The project allows assessing the prospecting potential of lithium, beryllium, and other critical minerals as well as discovering new deposits of rare earth elements in the Pamirs based on regional geochemical data, satellite remote sensing interpretation, and geological fieldworks.

Timelines

Project stage: Conceptual design

Project timeline: Implementation period 01/01/2023 to 31/12/2025

Climate Impact

Mitigation (avoidance)

N/A tons CO₂e/yr
carbon sequestration

N/A GWh/yr
renewable energy

Key Info



Energy
(CRM)



Programme

Project Structure

Project sponsor:

(a) State Commission of the Republic of Tajikistan for Mineral Reserves

(b) Department of Geology under the Government of the Republic of Tajikistan

Financing

\$8 M
Total cost

N/A
Current funds
required

(a) \$3 M

(b) \$5 M

Note: * The project will entail (a) organizing trainings and courses on the international standards and new software; (b) implementing programmes in mining and geological industry; (c) drafting legal documents and adapting them to international standards; (d) organizing of consultations and seminars on convergence of approaches.

Project source: UNECE.

For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Biofuels Production in Ukraine

Country/region: Ukraine

Theme: Energy and Transport



Project involves liquid biofuels (advanced bioethanol and corn ethanol, advanced biodiesel and vegetable oil biodiesel), biogas and biochemicals and recycled chemicals like biomethanol and recycled methanol from mixed waste. Feedstock include waste oils and fats, straw, mixed municipal waste, kitchen wastes, vegetable oils and corn.

European biofuels produced from domestic raw materials in a strictly sustainable manner achieve emission savings between 70%-90% compared to fossil fuels. Recycled biochemicals prevent use of virgin fossil raw materials (oil).

Timelines

Project stage: Conceptual design

Project timeline: N/A

Climate Impact

Mitigation (avoidance)

1.2 million t CO₂e/yr
carbon sequestration

4,680 GWh/yr
renewable energy

Additional project benefits:

- Spur circular economy
- Make Ukraine self-sufficient and improve energy trade balance
- Diversify energy sources
- Increase food security
- Decarbonize transportation
- Divert waste from landfill

Key Info

Energy (biomass)

Infra asset (brownfield)

Project Structure

Project sponsor: Envien Group

Financing

EUR \$1.2 B
Total cost

N/A
Current funds required

- Total capex includes:**
- EUR 400 M waste to chemical facility
 - EUR 330 M biorefinery facility
 - EUR 300 M advanced bioethanol facility

Project source: UNECE.
For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Green Ammonia Production

Country/region: Eastern Europe, Central Asia (Uzbekistan) and MENA Region (including Egypt)

Theme: Agriculture



The project aims to lead to the transition of the nitrogen fertilizer industry to net zero CO₂ emissions by 2050. Ammonia is the critical ingredient in all mineral nitrogen fertilizers. Using green hydrogen as fuel, itself produced by electrolysis powered by solar energy with integrated battery storage system makes a major contribution to reducing CO₂ emissions from fertilizer manufacture while significantly reducing energy intensity.

Timelines

Project stage: Conceptual design

Project timeline: Staged implementation 5-7 years


Climate Impact

CO₂ Mitigation (avoidance)


Green ammonia production would enhance food security and have uses in diverse energy vectors for global shipping, aviation and other high CO₂ emitting energy users.

1.8%
of global CO₂e elimination

Key Info



Climate smart agriculture



Infra asset (greenfield)

Project Structure

Project sponsor: N/A;

Stakeholders: EBRD, International Fertilizer Association (IFA), etc.

Policy support: International Energy Agency (IEA)

Financing

\$2 B
Total cost

N/A
Current funds required

Initial investment of \$150 million in integrating a green hydrogen electrolysis production unit powered by zero carbon solar energy with integrated battery storage (IFA member company Fertiberia).

Project source: International Fertilizer Association. For further information, reach out to the High-Level Champions. Email: hlcfinanceprojects@climatechampions.team

Global Climate-Neutral Resource Management Platform

Country/region: Regional initiative including Kazakhstan and other Central Asian countries initially

Theme: Digital



The project is part of the concept of Low-Carbon Development by 2060 using best technologies, which would require significant investments to modernize the industry. In 2021, Kazakhstan notified a reformative environmental legislation, according to which the licensing system will be based on the best available technologies. A pilot digital platform will be developed that allows storing a database of processes and technologies and calculating the economic effect of measures to reduce the carbon footprint.

Timelines

Project stage: Conceptual design

Project timeline: 10 years

Phase I: Kazakhstan – 2 years

Phase II: Central Asia – 3 years

Phase III: Global coverage – 5 years

Climate Impact

Mitigation (avoidance)

Digital information support for the avoidance of approximately 100 million tons of CO₂e in Central Asia by 2030.

100 million t CO₂e/yr
carbon sequestration by 2030

Data not found **GWh/yr**
renewable energy

Key Info



Digital solutions



Infra asset (greenfield)

Project Structure

Project sponsor: Eurasian Engineering Association and International Technology and Investment Project Center, Kazakhstan

Financing

>\$17 M
Total cost

N/A
Current funds required

Project source: UNECE.
For further information, reach out to the High-Level Champions.
Email: hlcfinanceprojects@climatechampions.team

Resource management strategy and Atlas

Country/region: Ukraine

Theme: Energy



The following projects will help Ukraine reduce its dependence on the import of mineral resources and increase exports : a) Formulation of a single national multi-level resource management strategy for energy, mineral, renewable and water resources b) Mineral & Raw material Atlas: development of regulatory conditions for domestic production of mineral raw materials, preparation of new deposits, geological exploration works, and reassessment of drinking groundwater resources.

Timelines

Project stage: N/A

Project timeline: a) 12months b) 24 months

Climate Impact

Mitigation (avoidance)

Strategies and mechanisms for the post-war recovery of resource-intensive sectors of Ukraine's economy will be developed with the objective to achieve climate neutrality, resource use efficiency, mineral base development and integrated water resource management.

N/A tons CO₂e/yr
carbon sequestration

N/A GWh/yr
renewable energy

Key Info



Research



Programme

Project Structure

Project sponsor: State Commission of Ukraine on Mineral Resources (SCMR)

Financing

\$110 M
Total cost

N/A
Current funds required

Overall cost:

a) \$25M

b) \$85M estimate need per year (budget of the Government of Ukraine is currently at \$5-7Mper year)

Project source: UNECE

(*) United Nations Resource Management System (UNRMS) implementation will allow Ukraine to achieve sustainable development standards.

For further information, reach out to UNECE (reserves.energy@un.org)

Acknowledgment

The Compendium is a product of a successful tripartite partnership between the United Nations regional commissions, the United Nations High-Level Climate Champions and the Egyptian COP27 Presidency under the leadership of the United Nations Deputy Executive Secretary. The partnership aimed at identifying investment opportunities in each of the five regions for unlocking access to climate finance, especially in emerging markets and developing economies, to address the impact of the climate crisis from the perspectives of mitigation and adaptation and to advance the Sustainable Development Goals.

Special thanks go to the teams of the Economic Commission for Africa (ECA), the Economic Commission for Europe (ECE), the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic and Social Commission for Asia and the Pacific (ESCAP), the Economic and Social Commission for Western Asia (ESCWA), the High-Level Champions, the Egyptian COP27 Presidency and the Regional Commissions New York Office (RCNYO) for their invaluable support in mobilizing stakeholders, organizing the regional roundtables and producing this Compendium.





Scan the QR code with your phone to download the digital copy of the Compendium and access related information.

