



finance initiative

Scaling Private Sector Climate Finance in the MENA Region

Case studies of climate action from UNEP FI member banks

December 2022

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About UNEP FI

United Nations Environment Programme Finance Initiative (UNEP FI) catalyses action across the financial system to align economies with sustainable development. UNEP FI brings the UN together with banks, insurers and investors globally to shape the sustainable finance agenda. As the UN network for the finance sector, we've established the world's foremost sustainability frameworks within the finance industry to address global environmental, social and governance (ESG) challenges. We incubated the Principles for Responsible Investment, now the world's leading proponent on responsible investment, and are facilitating implementation of UNEP FI's Principles for Responsible Banking and Principles for Sustainable Insurance, as well as the UN-convened net-zero alliances. We convene financial institutions to apply the industry frameworks on a voluntary basis and develop practical guidance and tools to position their businesses for the transition to a sustainable and inclusive economy.

About the SDG-Climate Facility Project

With financial support from the Swedish International Development Agency (Sida), the SDG-Climate Facility is a multi-partner platform focusing on the impacts of climate change on human security in the Arab region, especially in the context of countries in crisis. It brings UNDP together with the League of Arab States (LAS), the Arab Water Council (AWC), United Nations Office for Disaster Risk Reduction (UNDRR), UNEP FI, United Nations Human Settlements Programme (UN-Habitat) and World Food Programme (WFP) to deliver climate-oriented solutions that address climate challenges, and to bring co-benefits across the SDGs. In doing so, it aims to scale up access to and delivery of climate finance, including through innovative partnerships with the private sector.

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SECTION 1: Introduction

The global effort to fight climate change (climate mitigation) as well as the need to adapt and build resilience to the changing climate (climate adaptation) pose a set of challenges and opportunities for financial institutions in the MENA region. UNEP FI underwent a consultation process with member banks in the MENA region regarding climate finance in general and opportunities to provide support in scaling private sector finance for climate action in the region. Some recurring topics have been:

- Effective climate action requires clear sectoral priorities for banks to focus on, as well as typologies or taxonomies to guide lending portfolios.
- While banks recognise the importance and the business case for expanding their climate finance portfolios, and climate-aligned refinancing options are generally available, commercially viable climate finance projects are still scarce.
- Banks' climate finance engagement often goes beyond their own lending books by advocating at the national and international levels, and shaping policies and priorities through their system-wide networks.
- The teams within banks frontrunning the climate finance market recognise the need for awareness building with other stakeholders (internal, competitors, regulators) in order to mainstream climate finance.

This study observed key macro trends for climate mitigation and adaptation in the MENA region and collected case studies showcasing projects and exemplifying observable trends.

SECTION 2: The case for climate mitigation finance in the MENA region Addressing the global climate crisis requires drastic transformation of the world's economy—including food production, energy generation, transportation, and infrastructure—and replacement of outmoded technology with low-emissions alternatives that potentially generate socioeconomic and climate adaptation co-benefits. This systemic change requires investment at an order of magnitude and speed that is unparalleled, with an estimated increase of annual energy sector investment from US\$ 2.3 trillion p.a. globally (2.5% of GDP) in recent years to US\$ 5 trillion p.a. in 2030 (4.5% of GDP).¹

At COP26, the Glasgow Financial Alliance for Net Zero (GFANZ) announced over US\$ 130 trillion² of private capital committed to transforming the economy for net zero. Half of the GFANZ commitment comes from UNEP FI's Net-Zero Banking Alliance (US\$ 66 trillion), which represents 43% of banking assets worldwide. As global commitments translate into local action, the MENA region may expect increased investment in climate mitigation solutions, which will create significant investment and lending opportunities for financial institutions in the region.

UNFCCC's Race to Zero report launched at COP26 identifies 17 areas of investment roadmaps globally to achieve climate neutrality by 2050, in four major categories:³

Early technology bets	Maturing technologies in emerging regions	Market creation opportunities	Established investment opportunities
 Off-grid power in Africa Electricity networks in Central and South America 	 Green steel in Asia Pacific Chemicals electrification in Asia Pacific 	 EV chargers in Europe EV chargers in North America 	 Building retrofits and efficiency in MENA Buidlings retrofits and efficiency in Eurasia
 Solar PV in Africa 	 Alternative proteins in Asia Pacific Green hydrogen globally 	 Solar PV in the Middle East Wind in North America Wind in Europe Electricity storage globally 	 Biomethane globally Forest, mangrove and peatland restoration in Central and South America

Of these three are highly relevant to the MENA region:

- Solar PV Africa
- Solar PV in Middle East
- Building retrofits and efficiency in the Middle East

The classification of solar PV in Africa as an "early technology bet" is understood to be based on poor grid connectivity and the need for innovative off-grid solutions.⁴ At the same time, northern and southern Africa show optimum solar resources, and a number of large installed PV plants, exemplifying that large scale PV projects in North Africa are

¹ International Energy Agency: Net Zero by 2050–A Roadmap for the Global Energy Sector

² Glasgow Financial Alliance for Net Zero–Progress Report November 2021

^{3 &}lt;u>UNFCCC Race to Zero and Vivid Economics</u> (2021)

⁴ Solar PV in Africa: Costs and Markets, IRENA (2016)

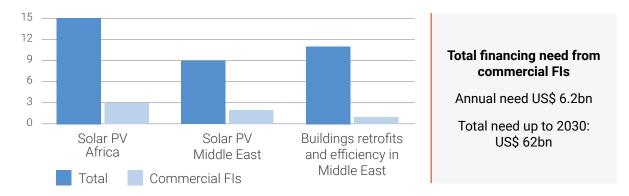
becoming mainstream rather than an early technology, with commensurate large-scale investments. This publication considers the need for differentiation of solar PV investments across the African continent and the possibility to classify northern and southern African countries at a more advanced stage of market development.

Solar PV in the Middle East is classified as a "market creation opportunity", where "technologies are generally mature, but markets for these are under-developed, limiting opportunities for investment".

It is therefore assumed that policy and regulation will be the main driving forces in creating the market and implementing PV technologies in the Middle East.

Building retrofits and efficiency in the Middle East is considered an established investment opportunity "characterized by attractive investment profiles that could benefit from being further unlocked". The major investment into this category is expected to come from households or private companies. Therefore, from a financial institution's perspective, such projects are more likely to transpire in the retail, SME and commercial real estate portfolios.

The need for climate finance in various categories and geographies is shared between various actors such as corporations, development finance institutions (DFIs), governments (incl. state owned enterprises) and households. Commercial financial institutions' roles in each category vary depending on factors such as the state of market development, commercial viability and bankability. The total climate finance needed in categories directly relevant to the MENA region, as well as the share of commercial financial institutions is as follows:



In addition, global initiatives like electricity storage, green hydrogen and biomethane will require some US\$ 65bn p.a. financing until 2025, of which at least US\$ 9bn is to come from commercial financial institutions. However, relevance and adoption in the MENA region is difficult to estimate.

SECTION 3: The case for climate adaptation finance in the MENA region The global push for strengthened climate adaptation was underpinned by its recognition as one of four goals of COP26 in Glasgow.⁵ The establishment of several initiatives, such as the <u>Race to Resilience</u>, the <u>Adaptation Action Coalition</u> and the <u>Adaptation Research</u> <u>Alliance</u>, as well as a renewed focus on the <u>Global Goal on Adaptation</u>, showcases the global political commitment towards climate adaptation action.

In the Middle East and North Africa, the physical impacts of climate change pose a major challenge, particularly sea level rise, heat stress and water scarcity, which will have dire consequences on food production, energy generation, and livelihood opportunities. Increasing risks and economic losses from climate change are creating a need for business models, technologies and investment that help countries manage these risks and build resilience in a positive and inclusive manner.

Global financing of climate adaptation solutions in the public and private sector falls significantly short of the scale needed to achieve resilience. The MENA region is no exception: public finance falls far short of targets and the private sector still fails to attract finance at scale, as climate adaptation solutions usually do not meet mainstream lending criteria of size, tenor and return, while blended finance approaches are underutilised. Furthermore, private sector finance is often focused on localised adaptation solutions (e.g. 'flood protection' or 'efficient resource use'), while still failing to support holistic adaptation projects achieving wider socio-economic resilience.

Increased financing from financial institutions into these sectors would play a vital role in achieving climate resilience in the region.

^{5 &}lt;u>ukcop26.org/cop26-goals/</u>

SECTION 4: Framework for climate action projects classification As identified in stakeholder consultation, guidance is required for banks to be able to classify their portfolios and set sectoral priorities to deliver their climate action commitments.

The World Bank Group's Middle East and North Africa Roadmap (2021–2025)⁶ provides a practical framework for classifying climate action projects into four transformative areas:⁷

- 1. Food Systems, Water Security & Resilient Natural Capital
- 2. Energy Transition and Low-carbon Mobility
- **3.** Climate-smart Cities & Resilient Coastal Economies
- 4. Sustainable Finance for Climate Action

To guide case study submissions for the purposes of this publication, banks were encouraged to seek projects along the lines of the following categories and examples:⁸

	Category	Project example
\bigcirc	Food Systems, Water Security & Resilien	nt Natural Capital
(\mathcal{P})	Promote Climate-Smart Agri-Food Systems	Solar powered irrigation project
	Enhance climate-sensitive water resource management	Wastewater treatment and reuse project
	Build resilient natural capital	Blue carbon project
	Energy Transition and Low-Carbon Mobi	lity
崙	Long-term emissions reduction and economic diversification	Industrial plant modernisation for decar- bonisation
<u> </u>	Renewables and energy efficiency	PV powerplant
	Low-carbon and resilient transport systems	Low-carbon public transport PPP
	Climate-Smart Cities & Resilient Coastal	Economies
	Climate-smart urban development & planning	Green retrofitting of buildings
	Climate-smart public services	Circular city project
	Resilient coastal economies	Climate resilience of a tourism asset
	Sustainable Finance for Climate Action	
ঙ	Greening financial systems	Climate risk stress testing by banks
Š	Identify and address transition risks	Assessment of trade risks
	Green financing for climate-smart investments	Green bonds Financial inclusion programme

Source: Based on World Bank (2022)

The above provides a non-exhaustive framework, and interested banks were encouraged to submit case studies they deemed relevant that may fall outside the World Bank's roadmap framework.

⁶ worldbank.org/en/region/mena/publication/middle-east-north-africa-climate-roadmap

⁷ As the roadmap was developed for the public sector its applicability to the private sector is only possible with appropriate adjustments

⁸ NB: project examples are non-exhaustive and for exemplary purposes only

SECTION 5: Case studies

The purpose of this publication is to showcase climate action of financial institutions in the MENA region, as well as identify and develop strategies to strengthen existing efforts and develop new initiatives for increased climate mitigation and climate adaptation financing. UNEP FI reached out to its members, as well as other leading financial institutions in the region and called them to participate by sharing case studies of past and current climate finance projects. Submitted case studies were screened for various criteria including climate action relevance, geographical alignment and recency.

#	Bank	Climate action ¹⁰	Location	Year	Sector	Size (US\$)	Climate impact
1		Μ	*	2016	Manufacturing	1.6m	508.5 tCO ₂ e p.a.
2	A BANK TO TRUST	Μ	<u>Ř</u>	2021	Food processing	5.2m	46.0 tCO ₂ e p.a.
3	بَنَـُكَ مُصَـرٌ Banque Misr	Μ	<u>N</u>	2018	Renewable energy	50.1m	423k tCO ₂ p.a.
4	بَنَـُكَ مُصَـرٌ BANQUE MISR	А	<u>k</u>	Ongoing	Agriculture	1.0m	750 bene- ficiaries ¹¹
5	بناء أبوطبيس الأول First Abu Dhabi Bank	Μ		2021	Aviation	1.2bn	4.6m tCO ₂ p.a. ¹²
6	البَـنَكَّالَالْهُـنِّيُ الْمِحِنُّ NATIONAL BANK OF EGYPT بنك أهل مصر	Μ	<u>Ř</u>	2021	Transport	10m	59.5k tCO ₂ p.a.
7	البتاني لاه المركي NATIONAL BANK OF EGYPT بنك أهل مصر	Μ	×.	2020 (ongoing)	Agriculture	6.7m ¹³	7.5m tCO ₂ p.a. ¹⁴

Summary of selected case studies⁹

Note: impact per dollar metrics are not comparable for differences in data (e.g. syndications and impact achievement timelines)

In addition to climate finance projects in the real economy, one additional case study was included: FAB's integration of ESG risk considerations, showcasing the bank's internal efforts to mainstream sustainability in their portfolio management and operations.

⁹ In alphabetical order of banks

¹⁰ M = Mitigation; A = Adaptation

¹¹ Direct and indirect

¹² Net emissions reductions by 2035

¹³ Per October 2022, programme in roll out

¹⁴ Once rolled out

5.1 Bank of Africa: Energy efficiency measures in agricultural product packaging

<u>*</u> *	Country	Year	Size (US\$)	
	Morocco	2016	1.6 million	
Energy Transition and Low-Carbon Mobility	Atlantic Packaging, a manufacturer of plastic packaging materials for agri-food sector (caps, pallets, shrink and stretch films, and spacers), air at modernising its lines of production to reduce energy consumption a improve its standing in a highly competitive market. The company launched an investment program aimed at renovating its injection mo- ing workshop. Atlantic Packaging was able to access MorSEFF (Moro Sustainable Energy Financing Facility) through the Bank of Africa Gro BMCE and green its production process, capital on a commercial opportu- with climate and regulatory benefits.			
Impact metrics	 Impact metrics: Emission reductions Energy savings Impact measurement: Impact measurement was provided through a technical assistance facility financed by EBRD utilising a 3rd party consultant under EBRD-approved methodology. The project's projected impact is: Emission reduction of 508.5 tCO₂e p.a. 			
Key stakeholders	 Energy savings of 80 Atlantic Packaging (c Bank of Africa Group EBRD (manager of M 	lient) —BMCE		

Project details and learnings

Climate problem: Morocco has set high ambitions through its National Sustainable Development Strategy to tackle climate change impacts and energy transition. It compels all economic actors, especially those operating in agriculture, farming (agribusiness), energy, and water sectors to adopt sustainable practices. This will enable them not only to comply with standards and guidelines, but also to reduce their negative impact on the climate and improve their competitiveness.

Commercial opportunity: The client considers this investment a primarily commercial¹⁵ project with climate benefits. This new energy-efficient production line contributes to the reduction of consumption of energy and an increase in production capacity compared

¹⁵ The EBRD SEFF and now GEFF facilities' policy requires all projects to be commercially viable without any subsidy, on a project economics basis. This is a key EBRD policy.

to the traditional pallet production technologies. At the same time, it meets the market demand for a transition from wooden to plastic pallets complying with HACCP (Hazard Analysis Critical Control Point System) guidelines. The project's commercial viability is underpinned by its internal rate of return of 18.8%.

Solution: With the launch of an investment programme aimed at renovating its injection moulding workshop with energy efficient HACCP compliant technologies, the client addresses the problems of meeting market demand, while complying with national decarbonization policies and SDG 12, "Responsible consumption and production". To make sure the project technical requirements are met, verification is executed by an independent consultant.

Learnings: A combination of factors has enabled successful completion of the financing, including:

- Technical assistance provided by EBRD
- Government's commitment to sustainability in its National Sustainable Development Strategy
- Demand-side dynamics for better and more sustainable products
- Capacity and experience within Bank of Africa for sustainability-related topics

Through a blended finance instrument offering financing, technical assistance and financial incentive, the project was able to overcome capacity hurdles. The commitment of the client's senior management to the project set the right tone for overcoming structural resistance.



Main view of the moulding machine



Moulded parts transfer robot

5.2 CIB Egypt: Bakery production line expansion

× _	Country	Year	Size (US\$)	
	Egypt	2021	5.2 million	
Energy Transition and Low-Carbon Mobility	Increased production capacity at the client's bakery factory by installing modern energy efficient production lines. These new production lines are 31% more energy efficient than existing equipment, so CIB's client was able to reduce per unit energy consumption by 21%.			
Impact metrics	Impact metrics Emission reductions Energy savings Job creation 			
	 the International Final cial institutions to as ment impact of the p Energy savings were cal specifications. Jobs may have been has not been measu As result of deployi consumption of the f 	ance Corporation (IFC), hel assess the climate eligibility projects they finance. estimated using the produ- created by increasing produced red or monitored. ng the new more energy	e CAFI tool, ¹⁶ accredited by ping banks and other finan- , and measure the develop- uction line suppliers' techni- uction capacity, though this efficient line, the per unit esulting in emissions reduc- sual baseline).	
Key stakeholders	CIBBakery company (clieProduction Line Supp	·		

Project details and learnings

Climate problem: CIB's client was planning to increase its production capacity to nearly 3 times its old production capacity. Using similar machines to its current production line and following business as usual would have resulted in excessive energy consumption and increased GHG emissions which would have increased its carbon footprint.

Commercial opportunity: Introducing modern production lines, which have the same capacity with lower energy consumption, would result in a reduction in running costs thus increasing the competitiveness of the final product, as well as having a positive impact on the environment (through reduced emissions).

¹⁶ Climate Assessment for Financial Institutions (CAFI) tool

Solution: CIB's client selected and implemented new energy efficient production lines that more than tripled the factory's production capacity, while reducing energy consumption by 20% compared to business as usual.

Learnings: This project can be used as a success story to encourage other clients in the same sector to follow a similar path and benefit from its commercial outcomes while delivering a positive climate impact.

5.3 Banque Misr: Benban Solar Park

**	Country	Year	Size (US\$)	
	Egypt	2017/18	50.1 million	
Energy Transition and Low-Carbon Mobility	In fiscal year 2017/2018, Banque Misr arranged a US\$ 50.1 million and EGP 64.1 million syndicated Letter of Guarantee loan for a multinational integrated independent solar power company to deliver an affordable, accessible and sustainable source of clean energy. The loan supported the development of part of Benban solar park, with 6 solar energy projects totalling 380 MW at the Benban site near Aswan. With a total of 1,650 MW, Benban solar park is considered the world's 4th largest single site solar project and is implemented under the second phase of the Egyptian feed-in tariff program. Banque Misr's share of the financed project was 50%. The bank acted as Mandated Lead Arranger, Bookrunner, Facility Agent, and Security Agent. Moreover, the bank has been appointed as the Onshore Security Agent on behalf of the project's foreign financiers and is responsible for all onshore securities.			
Impact metrics	 Impact metrics: Emissions avoided Clean power generati Impact measurement: Impact was measured u 423k tCO₂ p.a. emissi 380 megawatts of clear 	ising client data. ¹⁷ The pro <u>.</u> ons avoided	ject achieved:	
Key stakeholders	 Banque Misr Egyptian Government Multinational Corpora International Financia 	ation		

Project details and learnings

Climate problem: To meet increased energy demand, the Egyptian government's Integrated Sustainable Energy Strategy, ISES 2035, involves stepping up renewable energy sources and improving energy efficiency in the power sector. The government has set a national goal for achieving 42% clean energy by 2035.¹⁸

Commercial opportunity: The Benban solar park, named after a Nile River village nearby, will house 32 power plants capable of churning out a combined 1,650 megawatts of electricity—enough to power hundreds of thousands of homes and businesses. Egypt, a fast-growing country of more than 100 million, requires clean energy to drive growth and fight poverty.

¹⁷ Without additional verification

¹⁸ IRENA 2018

Egypt is located in the sun-belt of the Earth, receiving abundant solar energy at average of direct solar radiation of about 2,000—3,200 kWh/m² p.a.¹⁹ The country's solar energy potential has long interested investors and officials, but the high cost of solar plants has meant that for decades Egypt has relied on fossil fuels to power its towns and villages. Now that the prices of solar components are falling, Egyptian officials are aiming for 42 % of the nation's power to be generated from renewable sources by 2030.

Solution: Benban solar park is the world's 4th largest photovoltaic solar power park with 32 plants over an area of 37.2 km2. The 32 plants generate a total capacity of 1,650 MW nominal power with an annual production of approximately 3.8 TWh.

Banque Misr's share in the project was partial financing of 6 solar plants with a total capacity of 380 MW of clean energy.

The project allows for expansion of Egypt's renewables industry, since it is transferring the latest technologies in solar power production to the country, which will encourage other new investments to commence and grow, enhancing the job market, especially in Upper Egypt where job opportunities are few, as well as reducing the harmful emissions from gas power stations.

Identified barriers: The Benban project is the largest solar park in Egypt and it was the first of its kind, so the documentation, process and requirements were not straightforward. However, the experience and perseverance of all parties to conclude the project was the main reason to close the transaction and complete the project.



¹⁹ Hemeda et. al. 2015

5.4 Banque Misr: Climate smart agriculture

	Country	Year	Size (US\$)	
(t)	Egypt Minya Governorate in Upper Egypt	2019 on-going	1 million	
Food Systems, Water Security & Resilient Natural Capital	aouses and drip irrigation, es for youth (recent univer- addressing climate change n agriculture as their main eas do not own land, which a gribusinesses. Therefore, rant farmers access to land king capital. porate Social Responsibility opetite for commercial lend- d with the lack of commer-			
Impact metrics	 Impact metrics: Reduction in water consumption. Number of beneficiaries with increased climate resilience. Increased land productivity (one feddan's²⁰ greenhouse productivity is equivalent to productivity of four feddans using traditional agricultural practices). 			
	to deliver: • Water conservation of • 125 farmers gained a • 625 indirect jobs (Ven	house across 50 feddans t of 25–50% ²¹ (Adaptation) access to this project (Adap ndors-distributors- agri-eng ty and reducing crop losse	otation + direct jobs) jineers)	
တိုလ် -လ် Key	 125 Smallholders/ collective Misr el Khier–NGO Banque Misr–Corporate Social Responsibility 			
stakeholders				

²⁰ A feddan is a unit of area used in Egypt, Sudan, Syria and Oman, equivalent to 0.42 ha or 1.038 acres

²¹ Compared to traditional irrigation practices like flood irrigation

²² Via capacity building for better farming practices as well as physical protection from weather and birds

Project details and learnings

Climate problem: Egypt's bread basket in the Nile Delta is highly vulnerable to climate change as water scarcity and extreme weather severely impact crop yields and food security.

Commercial opportunity: Increasing the revenue stream for farmers by decreasing crop yield losses.

Solution: The project addresses the repercussions of climate change on yield losses by:

- Building greenhouses to increase productivity and protect crops. Doing so typically
 allows farmers to increase their performance and yields, while improving the quality
 of products. Greenhouse farming protects crops from external threats such as certain
 pests and extreme weather events.
- Using drip irrigation to ensure water efficiency as crops receive the optimal amount of water, thus reducing water waste and increasing the amount and quality of crops.
- Improving farmers' capacity through scientific training.

Existing barriers:

The bank aspired to address the interlinkage between food security, climate change and employment in rural areas where people rely on agriculture as their main source of income. Moreover, agriculture is expected to be severely impacted by climate change impacts. The target beneficiaries do not own land and agricultural lands are required as collateral to access bank finance. Access to land rental is granted under this project by the NGO Misr-El Khier. Accordingly, this project was funded under Banque Misr's CSR umbrella.

In the past, farmers were not keen to improve their water management as they did not want to bear higher investment costs to modernize their irrigation systems and practices.

Awareness and education are required to convince farmers to switch from traditional to more modern, resource-efficient technologies that increase income in the long-run.

Video link

5.6 First Abu Dhabi Bank: Etihad Airways

(5)	Country	Year	Size (US\$)		
Ŕ	United Arab Emirates	2021	1.2 billion		
Sustainable Finance for Climate Action	Etihad Airways issued the first sustainability-linked loan in global aviation tied to ESG targets, a US\$ 1.2 billion Sustainability Linked Loan. The loan is aimed to aid Etihad in its pledge to reduce CO_2 emissions to net 50% of 2019 levels by 2035 and attain Net Zero emissions by 2050, as laid out in Etihad Airway's Net Zero strategy. Loan terms are tied to targets related to CO_2 emission reduction, increased corporate governance and the promotion of female participation across the group. FAB acted as Joint ESG Structuring Bank, Joint ESG Coordinator, Joint Bookrunner, Mandated Lead Arranger and Facility Agent for this transaction.				
Impact metrics	 Impact metrics: Environmental/climate: Reduce the carbon emissions intensity of the passenger fleet, as measured in terms of CO₂ emissions per revenue tonne kilometres. Social: Contribute towards the socioeconomic development of the community by increasing employment and upskilling of Emirati women the aviation sector. Governance: Upholding the highest standards of corporate governance ethics and integrity. 				
	Impact measurement:				
	 The structure is based on the achievement of pre-determined, material and ambitious Sustainability Performance Targets (SPTs), which are regularly monitored and externally verified against Key Performance Indicators (KPIs) Etihad Airway's 2019 baseline carbon footprint was 9.1 million tCO₂ p.a., the company follows a strategy to reduce and offset its carbon footprint through various initiatives at the following pace of reduction: 20% in emissions intensity in the passenger fleet by 2025²³ 50% (4.6 million tCO₂ p.a.) net emission reduction by 2035 100% (9.1 million tCO₂ p.a.) net emission reduction by 2050 				
	,	s available in Etihad Airway	-		
Key stakeholders	dinator, Joint Bookru Agent	k —Joint ESG Structuring B nner and Mandated Lead A ructuring Bank, Joint ESG (rranger and Facility		

²³ The target does not strictly imply an absolute reduction in emissions as increased number of passengers may offset intensity reduction.

Project details and learnings

Climate problem: Aviation industry relies on carbon intensive operations and has a large environmental footprint.

Commercial opportunity: There is a need for transition financing to support the pursual of sustainability-related initiatives to reduce the carbon footprint of aviation.

Solution: The Sustainability Linked Loan provides sustainable financing to Etihad Airways, with financial incentives to the company to achieve its Sustainability Performance Targets.

Etihad Airway's decarbonisation strategy encompasses multiple initiatives for carbon emission reduction and offsetting.

Decarbonisation initiatives include an innovation programme (Etihad Greenliner Programme), operational optimisations (fuel policy, engine core wash, aircraft weight deduction etc.), R&D for sustainable aviation fuels.

Offsetting initiatives include customer offset programme, and support of carbon projects (e.g. Etihad Mangrove Forest, and REDD Makame Carbon Tanzania)

Existing barriers: Transition to net zero operations requires a multi-dimensional strategy and implementation. FAB is not in a position to assess the viability of strategies and implementation plans, and is therefore relying on borrowers' projections and estimates. Control mechanisms are introduced in form of external data verification and a financial incentive (lower interest rate for achievement of SPTs).

5.7 National Bank of Egypt: Low-carbon and resilient transport systems

	Country	Year	Size (US\$)	
	Egypt	2021	10 million	
Climate-Smart Cities & Resilient Coastal Economies	Mwasalat Misr is the first international investment into the public transport sector in Egypt, originally initiated in 2016. In 2021 NBE acquired a 20% equity stake in Mwasalat Misr via a capital increase, financing the company's expansion. The capital increase mainly facilitated the acquisition of new electric smart city buses and establishment of park & ride commercial areas. By providing an innovative green transport service, the company contributes to a substantial emission reduction of 59.5 thousand tCO ₂ p.a.			
Impact metrics	 Impact metrics Emission reductions Jobs created Impact measurement Impact measurement was performed internally, based on survey results (establishing passengers' baseline) paired with published literature on emissions and the fleet's technical details. 			
	alternative to privateIncremental 59.5 tho	voidance of 35 thousand to	electrification of the fleet. ²⁴	
Key stakeholders	 Mwasalat Misr (financed entity) Emirates National Group and local private investors (equity investors) Egyptian Ministry of Transport / SuperJet (joint venture partners to Mwasalat Mirs) UNDP, EBRD, World Bank, GEF (non-commercial project investors) 			

Project details and learnings

Climate problem: One of the main challenges in Egypt is the concentration of activity in Cairo, with more than half of the country's formal sector jobs in the city. Roads are congested, with a population of over 20 million people and a rapidly increasing number of cars, trucks and trailers, competing for road space.

Commercial opportunity: Data analysis from the World Bank's sustainable development and infrastructure unit demonstrates that investment in public transport is crucial to addressing air pollution caused by emissions from diesel buses in Greater Cairo. The World Bank's analysis shows that significant carbon reductions can be achieved by shifting away from cars and taxis.

²⁴ This figure will be reached after a transition period once the fleet is entirely electrified by 2030.

While the number of licensed buses has increased at a Compound Annual Growth Rate (CAGR) of 4.90% from 2010 to 2019,²⁵ the average number of seats available to the round-trip passengers per bus is still less, resulting in an overcrowding rate of 2.3 passengers per seat, underlining the need for more public transport services.

Solution: The project aims to reduce carbon emissions caused from cars' exhaust fumes by establishing the first public transportation company in Egypt using green energy (natural gas²⁶ and electricity) and cashless payment, as the vision of the company is to be carbon neutral by 2030. After a successful 6-month pilot with the country's first electric bus in 2019, the company launched the Sustainable Transport Project. In cooperation with UNDP, Global Environmental Facility (GEF), Ministry of Housing, Ministry of Environment, Cairo University and Giza governorate, the project offers premium quality bus services along with free park & ride facilities (to Mwasalat Card holders). As part of its expansion, the company underwent a capital increase, underwritten by NBE, and acquired 70 city buses (20 natural gas and 50 electric).

In 2022, Mwasalat Misr established a joint venture, the "SuperJet company", with the Egyptian Ministry of Transport, with the objective of providing green, smart, sustainable public transport for mega-projects nationally and regionally, including the new administrative capital, the ring road Bus Rapid Transit (BRT), and public transport in Sharm El-Sheikh.

Mwasalat Misr has also signed a Memorandum of Understanding (MoU) with Cairo Metro Company ensuring integration between both transport networks through:

- 1. inclusion of Mwasalat Misr's schematic map in the official map of Cairo Metro,
- 2. payment method integration, and
- **3.** coordinated smart passenger information systems (e.g. Estimated Times of Arrival (ETAs) shown on LED screens)

Learnings: A combination of factors has enabled successful completion of the project, including:

- Multi-stakeholder cooperation for the establishment of park & ride facilities
- Successful piloting of new technologies (100% electric buses)
- Successful navigation of public services sector by signing MoUs and establishing joint venture with key public partners
- Establishment of premium quality transport services
- Integration with existing transport network ensuring mutual synergies.

The company's expansion potential is underpinned by growing demand for public transport services, however addressing it in a climate neutral way is dependent on the establishment of technological infrastructure and successful integration with exiting transport ecosystem (e.g. LED displays and payments).

²⁵ CAGR: compound annual growth rate

²⁶ Natural gas is used as a transition fuel, as it offers 70% emission reduction to diesel, however carbon neutrality is envisaged for 2030.



Picture taken at signing of shareholder's agreement the National bank of Egypt has signed with the aim of contributing to Transport systems, by injecting new capital into the company, enabling it to own 20% of the company's shares, the picture below represents the agreement that took place with the presence of the following from the right to the left respectively:

- One of the project's board members.
- NBE's investment & Investment trustees' group CEO.
- NBE's Deputy Chairman.
- NBE's Chairman.
- CEO of the holding company of the project.
- The project CEO.
- A shareholder

5.8 National Bank of Egypt: Finance for Solar Irrigation

NBE has partnered with IFC to help small scale Egyptian farmers access financing to purchase solar irrigation systems, reducing their reliance on diesel-powered generators and boosting their productivity and income. With IFCs help NBE was able to set up and is currently rolling out an innovative financing product (currently financing 110 farmers).

	Country	Year	Size (US\$)	
	Egypt	2020 ongoing	6.7 million ²⁷	
Food Systems, Water Security & Resilient Natural Capital	NBE has partnered with IFC to help small scale Egyptian farmers access financing to purchase solar irrigation systems, reducing their reliance on diesel-powered generators and boosting their productivity and income. With IFCs help NBE was able to set up and is currently rolling out an innovative financing product (currently financing 110 farmers).			
Impact metrics	Impact metricsEmission reductionsFarmer empowermer	nt		
impact metrics	 Impact measurement Emissions reductions were estimated with the technical assistance of IFC using a 0.78 tCO₂/kWp conversion factor Farmer empowerment was measured in number of farmers enabled to invest into modern technology Scaling the conversion factor to the estimated market potential of 470,000 pumps (conservative assumption) leads to a emission reduction estimate of 7.5 MT CO₂ p.a. 			
Key stakeholders	 Farmers Solar PV firms Ministry of Agricultur Ministry of Irrigation New and Renewable 	and Water Resources		

Project details and learnings

Climate problem: Agriculture both contributes to climate change and is affected by it. Most Egyptian farmers lack direct access to grid electricity and are highly reliant on diesel both for direct use of equipment (i.e. pumps), and generation of electricity. About 30–35% of a farmer's expenditure is for fuel, oil, grease and maintenance of pumps. This affects dramatically the farmer's competitiveness, profitability, and productivity.

Commercial opportunity: An estimated one million diesel-powered pumps across Egypt could potentially be replaced by solar. As per IFC's estimates the total feasible market size of replacing diesel pumps by PV pumps for a payback period below 3 years is about USD 2bn. Using solar power for water pumping could potentially save farmers

²⁷ As per October 2022, lending programme ongoing

about 30–35% of their farming expenditure (pre financing costs). This will enhance their competitiveness in terms of improving their cash flow in the long-run (after financing has been paid back) and allow them to invest in developing their production.

Solution: The project addresses the identified problems and opportunities by supporting Egyptian farmers' access to financing for the purchase of solar irrigation systems. With the implementation of the project NBE helps Egyptian farmers with reducing their reliance on diesel-powered generators and boosting their productivity and income. NBE partnered with IFC in an advisory engagement to develop a financial product that enables farmers and agriculture firms to purchase and install solar irrigation pumps. The program finances equipment provided by PV firms accredited by the New and Renewable Energy Agency. With the help of IFC the project has verified technical and financial feasibility through pilot case studies and visits to farms, which was the basis for developing a lending product addressing market need.

Barriers: The project faced and addressed existing barriers such as the absence of detailed market data, lack of knowledge throughout the value chain and the modest collaboration between PV firms and bank. The project tackled those barriers and now there is a better understanding of the market and the technology and there is a better collaboration between the bank and PV firms.

Barriers: Through this project NBE has identified:

- The importance of creating synergies with international donors
- The importance of developing specific green credit products
- The importance of partnerships with relevant stakeholders
- The importance of building internal capacity building



5.9 First Abu Dhabi Bank: Integration of ESG risk considerations

In addition to financing projects in the real economy banks undertake internal measures of increasing the sustainability of their portfolios and operations. The following case study provided by First Abu Dhabi Bank exemplifies how banks take internal measures that ultimately have a steering effect through their portfolios:

S	Country	Year
(5) (5)	UAE and overseas operation of FAB Group	2021
Sustainable Finance for Climate Action	In 2021, FAB introduced an ESG lens into the risk management pro minimise exposure to potential losses resulting from ESG issues an opportunities that create positive environmental and social impact their core business of providing financial products and services.	

Project details and learnings

Climate problem: Changes in market dynamics, such as the establishment of emission standards and carbon prices, will have a direct impact on the financial positions of FAB's clients, making climate risk an important element of credit decisions. FAB is already working on understanding the climate risks associated with its non-green assets and measures to mitigate them. The bank committed to implementing the recommendations of the Task-force for Climate-related Financial Disclosures' (TCFD) around Governance, Strategy, and Risk Management in 2021 and is currently integrating the TCFD framework to publish disclosures in 2023.

Commercial opportunity: Tackling climate change opens opportunities for financial institutions to provide innovative financing products for energy efficiency upgrades, renewable power generation, green buildings, green transport, and climate-smart agriculture and architecture. In addition, there is a growing community of investors seeking new climate and environmentally friendly opportunities, which FAB can use to diversify its funding base and reduce its funding costs. FAB's assumption is that a greener composition of its assets will lead to a lower portfolio risk grading (credit and other risk channels), which will reduce the cost of funding of its liabilities, similar to the dynamics observable in the green bond market.

Solution:

Integration of ESG Risk Considerations:

A stand-alone ESG risk assessment tool, developed by FAB, provides ESG risk ratings to the bank's entities (clients and vendors) and portfolios. The tool combines qualitative inputs from ESG risk questionnaires with quantitative risk data from ESG rating agencies²⁸ to grade portfolios under 'Acceptable', 'High' and 'Severe'.

²⁸ While FAB cooperates with ESG rating agencies on data sharing, the bank's ESG risk assessment is driven by its internal policies and methodology.

Strategies and escalations have been designed around these ESG risk ratings in line with the Group ESG Risk Policy.

FAB's ESG risk assessment at counterparty, transaction and vendor level begins with conducting negative screening against a list of clients, countries, and activities that are ineligible for business based on the bank's strategic ESG preference, values, and local requirements.

In addition to negative screening, the Bank also applies different approaches in conducting business with certain countries and sectors of heightened sensitivity to ESG risks, which the bank calls 'ESG critical activities' (e.g., palm oil industries, waste incineration without energy capture, hazardous substances). These are not considered within the exclusionary list, but have the potential to pose negative impacts on the environment and society. In such cases, FAB applies certain conditions to limit its exposure to critical activities (e.g., revenues generated from critical activities should not be more than 25% of the entity's revenue, ESG risk mitigation measures are in place with a clear action plan, ESG monitoring, KPIs, etc.).

Climate Risk Assessment and Stress Testing:

As part of FAB's measures to respond to growing interest from stakeholders (regulatory agencies, investors, clients, risk rating agencies and internal stakeholders), it initiated climate stress testing on all its bank portfolios to identify related physical and transition risks of climate change. FAB has carried out two climate risk stress testing/scenario analysis exercises for two of its international portfolios-Hong Kong and UK, in voluntary submissions to the Hong Kong Monetary Authority and the Bank of England. These exercises are part of the development of capability and infrastructure for larger scale climate risk assessment exercises in the future. The results have also increased FAB's awareness of its portfolio climate risk exposure and will lead to internal data-driven climate risk management processes in the future. In line with the TCFD's recommendations, the bank assesses two sources of climate risk-transition risk and physical risk. On a macro level, under each climate risk scenario, the macro-economic indicators are expected to reflect the combined impact of the transition risk and physical risks. On a customer level, FAB's pilot climate stress testing was aimed to assess customers' physical and transition risk impact on financial performance. The testing followed three key steps: (1) Climate/transition scenarios, (2) Borrower-level calibration, and (3) Portfolio impact assessment.

A fully integrated risk management framework accounting for climate change risks is anticipated by 2023. Further details are available in FAB's <u>2021 ESG report</u>.

Existing barriers: Lack of easy access to ESG related data from suppliers, vendors, clients, etc.

Learnings: This project is viewed as a crucial risk mitigation measure, which aids FAB in its collaboration with various business lines to provide innovative financing products for emerging sustainability issues. It enables FAB to take decisions backed by data to support the growing community of investors seeking new climate- and environment-related opportunities.

Section 6: Observable trends and conclusions

Observable trends

The case studies presented above provide a glimpse into the dynamics driving climate finance in the Middle East and North Africa region. While the case studies can only provide individual data points within a larger market and are far from exhaustive, some key observations may assist further efforts in scaling climate finance in the region:

- 1. Defining and verifying climate projects and accordingly climate finance remains a challenge due to the lack of authoritative definitions or a taxonomy. Therefore, the approach to creating climate portfolio strategies, assessing individual projects and creating climate finance products remains piecemeal. Banks participating in this publication have taken one of the following approaches:
 - **a.** Assess climate eligibility of projects using third party tools (e.g. IFC's CAFI tool).
 - **b.** Rely on bespoke technical assistance provided by development banks (e.g. as part of green wholesale funding schemes like MorSEFF).
 - c. Develop own assessment methodologies.
 - d. Use client data with or without additional verification.
- 2. Banks' climate action is primarily observable in their lending books, but is not limited to them. Broader policy engagement, advocacy and projects around the banks' operations (e.g. green retail branches) are observable in the region.
- **3.** Technological advancement leading to commercially viable projects (e.g. cost competitive solar PV, energy efficient production lines, aviation industry innovation) is key to deepening climate finance pipelines, as companies, governments and financiers balance between the multiple objectives of climate, environmental, economic, and social returns.
- 4. The per dollar climate impact achieved by the case studies in this publication varies significantly, which may be in part due to the use of different assessment methodologies. While the number of data points does not allow any statistical analysis to be performed, it appears that commercial projects with climate co-benefits (e.g. energy savings from energy efficient production lines) deliver lower per dollar climate returns than renewable energy projects.

- 5. Climate projects in the region tend to have broader socio-economic and environmental impacts.
- 6. Climate finance in the region is led by a few banks, but is not yet mainstream. Banks believe that mainstreaming of climate products will deepen pipelines, which are still relatively scarce and limited to a few countries (e.g. the case studies included in this publication are from Egypt, UAE and Morocco only).
- 7. In line with global trends, climate mitigation finance is outpacing climate adaptation finance. While the region is highly vulnerable to climate change and adaptation action is needed, defining and measuring climate adaptation projects remains challenging. The only climate adaptation project in this publication is a CSR initiative, i.e. commercially non-viable.
- 8. While not exclusive to climate finance, some of the recurring topics for sustainable finance in emerging markets, like regulatory hurdles and low capacity at various levels are also observable throughout the case studies in this publication.
- **9.** Many of the case studies in this publication require blending with concessional financing from international climate funds (e.g. GCF, GEF) or multilateral development banks (e.g. World Bank), suggesting that the financial risks associated with climate-related financing are still too great for commercial institutions in the region.

Recommendations

Scaling private sector climate finance in the region will depend on multiple factors and is dependent on the concerted effort of stakeholders across all sectors.

- 1. A climate finance taxonomy led by the finance sector and vetted by credible civil society organisations could provide a much-needed framework for climate finance in the region. While a taxonomy (or even a typology) may require a long and resource-intensive process, a more practical approach may be a strategic roadmap for private sector climate finance in the region that could identify focus sectors and initiatives required to develop and scale efforts holistically across climate adaptation and mitigation.
- 2. Roll out of existing tools, such as TCFD-aligned risk assessment methodologies and the development of regional and national transition pathways, as well as capacity building efforts to banks could streamline the evaluation, verification and monitoring of climate projects.
- **3. Safeguarding of socio-economic and environmental project impacts** in order to capture co-benefits would contribute to a better sustainability of climate projects in the region.
- **4. Innovation will continue driving climate projects to the mainstream.** While global innovation is often 'imported' to the region (e.g. solar PV), locally driven innovation (e.g. aviation industry, climate smart agriculture) may play an increasingly important role in finding locally palatable solutions.

- 5. Availability of climate projects and climate finance are interdependent. Therefore initiatives to deepen pipelines (awareness, capacity building, incentive schemes, incubators/accelerators etc.) could be paired with the rollout of climate-related wholesale funding to banks as well as awareness and capacity building.
- 6. While climate mitigation finance seems to be on its way to the mainstream, adaptation finance initiatives seem to be lagging behind. Climate adaptation finance goes hand-in-hand with an understanding and management of climate risks in the banks' portfolio. As exemplified by FAB's ESG risk integration project, understanding risks in the portfolio can lead to the development of portfolio strategies, active risk management with existing clients, but also integration of climate risks into the underwriting process, where projects with better adaptation outcomes (i.e. better management of climate risks) will be favoured.

Section 7: Glossary

AWC BMCE BoA BRT CAFI CAGR CEO CIB COP26 CSR EBRD EGP ESG ETA EV FAB FI GDP GEF GFANZ HACCP HSBC	Arab Water Council Banque Marocaine du Commerce Extérieur Bank of Africa Bus Rapid Transit Climate Assessment for Financial Institutions Compound Annual Growth Rate Chief Executive Officer Commercial International Bank Egypt 2021 United Nations Climate Change Conference Corporate Social Responsibility European Bank for Reconstruction and Development Egyptian Pound Environmental, Social and Governance Expected Time of Arrival Electric Vehicle First Abu Dhabi Bank Financial Institution Gross Domestic Product Global Environmental Facility Glasgow Financial Alliance for Net Zero Hazard Analysis Critical Control Point System British multinational bank formerly known as Hongkong and Shanghai Banking Corporation
	International Finance Corporation
IRENA	International Renewable Energy Agency
ISES KPI	Egyptian government's Integrated Sustainable Energy Strategy Key Performance Indicator(s)
kWp	Kilowatt-peak
LAS	League of Arab States
LED	Light-emitting diode
MENA	Middle East and North Africa
MorSEFF	Morocco Sustainable Energy Financing Facility
MoU	Memorandum of Understanding
MW	Megawatt
NGO	Non-governmental Organisation

PJSC PPP PV	Public Joint Stock Company Public-Private-Partnership Photovoltaic
R&D	Research and Development
REDD	Reducing Emissions from Deforestation and Forest Degradation
SDG	Sustainable Development Goals
SIDA	Swedish International Development Agency
SPT	Sustainability Performance Targets
TCFD	Taskforce for Financial Disclosures
TW	Terawatt
UAE	United Arab Emirates
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP FI	United Nations Environment Programme Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
US\$	United States Dollar
WFP	World Food Programme

UN () environment programme

finance initiative

United Nations Environment Programme Finance Initiative (UNEP FI) is a partnership between UNEP and the global financial sector to mobilise private sector finance for sustainable development. UNEP FI works with more than 450 members—banks, insurers, and investors—and over 100 supporting institutions—to help create a financial sector that serves people and planet while delivering positive impacts. We aim to inspire, inform and enable financial institutions to improve people's quality of life without compromising that of future generations. By leveraging the UN's role, UNEP FI accelerates sustainable finance.

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