

2021

CARBON FOOTPRINT REPORT



ABU DHABI COMMERCIAL BANK - EGYPT



About This Report



This report details the carbon footprint generated by the operations of ADCB-E's headquarters in 2021 and covers Scope 1, 2 and 3 emissions. As it is the first assessment of greenhouse gas (GHG) emissions and the first time reporting this assessment, the year 2021 is considered the base year (BY) on which all upcoming years will be referenced. All the data collected and analyzed within this report follow The Greenhouse Gas Protocol outlined by the World Resources Institute (WRI) and adhere to its principles of relevance, completeness, consistency, transparency, and accuracy.

Executive Summary

Climate change is one of the key challenges facing the world and financial institutions are uniquely positioned to push transformation toward a climate-resilient future. Abu Dhabi Commercial Bank - Egypt (ADCB-E), a part of ADCB Group, recognizes the importance of working to conserve the environment while satisfying the needs of current and future generations. Thus, it is choosing to assess its carbon footprint and disclosing the overall emissions related to its operations. ADCB-E is hereby presenting their first Carbon Footprint (CFP) assessment.

In pursuit of a greener Egypt, ADCB-E aims to be in alignment with the country's existing visions. Therefore, the goals of this assessment are in accordance with not only the CBE Mandate, but also the goals of Egypt Vision 2030.

With the reporting period from the 1st of January 2021 to the 31st of December 2021, the year 2021 is serving as the base year (BY) against which all upcoming years will be compared.

Boundaries & Methodology

An organizational boundary refers to the businesses and operations that constitute a company. In the current reporting period that is ADCB-E's head office building, which is located in Al-Mohandseen, Giza, Egypt. The building's gross floor area is 6,600 m² and a total of 639 employees work there every day. We hope that this step will set the foundation for assessing the entirety of our operations in the future.

The operational boundaries are the activities that lead to emissions whether they are direct or indirect. The operational boundaries include direct GHG emissions (Scope 1), indirect GHG emissions from the consumption of purchased electricity (Scope 2), and indirect GHG emissions from other activities (Scope 3).

The analysis and calculations of this assessment followed protocols & standards specially developed for accounting and reporting carbon footprint including The Greenhouse Gas Protocol Guidelines, the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories (with 2019 Refinements) and the ISO 14064-1:2019 Standards.

Carbon Footprint Results

A summary of the Carbon Footprint (CFP) Results is in the table to the right. The absolute carbon emissions are used to keep track of the yearly emissions. They are calculated per Scope and further broken down by activity in the report. Carbon emission intensities are a measurement of the emissions of activities based on certain factors. The most common types of emission intensities are emissions per full-time equivalent (FTE) employees and per area (m²), which are the two types used here for ADCB-E.



Benchmarking allows organizations to determine industry best practices, and identify further opportunities for improvement. The knowledge of our impact obtained from this assessment enabled us to conduct benchmarking, both national and international.

Emission intensities (per FTE and per m²) are used herein to benchmark the performance of ADCB-E nationally. ADCB-E scored an **A** and a **B** respectively.

Towards Carbon Reduction

With the results of this assessment and through a carbon audit of its headquarters, ADCB-E was able to develop a decarbonization plan to reduce its overall carbon emissions.

Absolute Carbon Emissions (mtCO₂e)

Scope 1: Direct Emissions

365
mtCO₂e

Scope 2: Indirect Emissions

554
mtCO₂e

Scope 3: Indirect Emissions

795
mtCO₂e

Total Emissions

1,714
mtCO₂e

Carbon Emission Intensities

Scope 1 & 2 Emissions

1.44
mtCO₂e/FTE

0.14
mtCO₂e/m²

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Introduction

Climate Change & Carbon Footprint

At the current global rate of consumption, humans are consuming natural resources of the planet at a higher rate than it is regenerated. We would need 2 Earths to satisfy our needs by 2030. In order to preserve ADCB-E's resources, it is crucial that we reduce the carbon emissions. As a growing presence in the local banker sector, ADCB-Egypt understands its responsibilities. This includes conducting business from a sustainable perspective through the creation of progressive policies and procedures. ADCB-E is hereby presenting its first carbon footprint assessment.

About the Bank

ADCB Egypt was established in 2020 through the acquisition of UNB. With an aim to deliver revolutionary banking solutions and lead the digitization breakthrough. It reaches out to its customers not only through its highly advanced online services but also through its nationwide network of 46 branches and numerous ATMs.

ADCB-E is actively offering a wide range of financial products, services and innovative digital solutions for Retail, Affluent customers, SMEs and Corporate at the highest level of service excellence and convenience. Committed to serving the national economy in alignment with Egypt's vision 2030 and striving to be a responsible corporate citizen, ADCB-E creates strategic partnerships and invests in significant causes that will create positive social and economic outcomes for our customers and communities. Furthermore, the bank adopts a fully integrated vision for supporting "inclusion via empowerment" by pioneering the integration of people with determination in the banking system, offering special products and services tailored to meet their needs.

Reporting Period & BY

The reporting period is from the 1st of January 2021 to the 31st of December 2021. This is the first carbon footprint assessment of ADCB-E and therefore, 2021 will be considered the base year (BY) on which all future years will be referenced. The BY is subject to alteration if any boundaries change in the future.

Egypt Vision 2030

Egypt has developed its own Sustainable Development Strategy (SDS), Egypt Vision 2030, to address the country's unique requirements and challenges. The vision comprises three dimensions: social, environmental, and economic, each with its own set of pillars, for a total of ten. This calculation of ADCB-E's CFP serves a variety of these pillars.

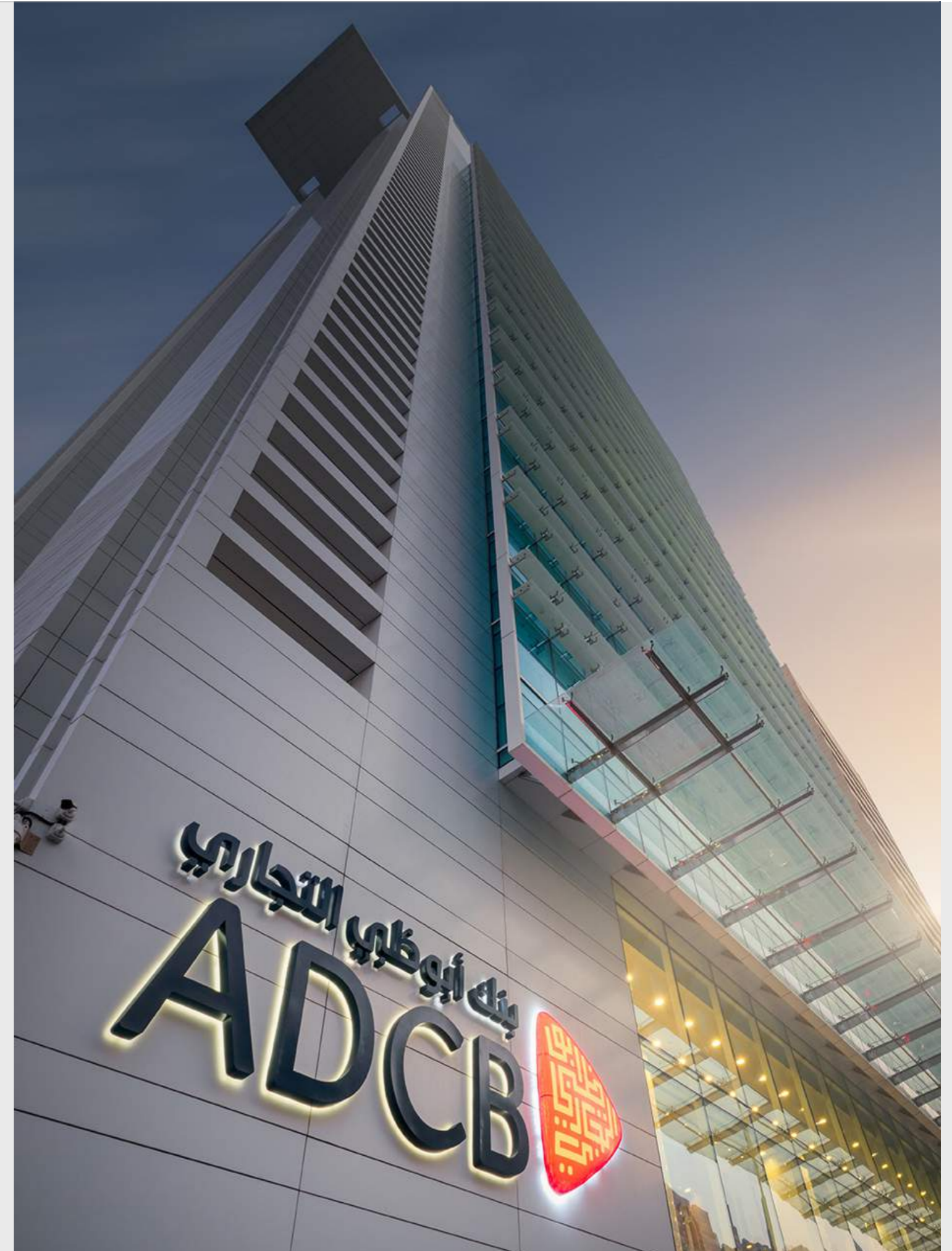


COP27

In November 2022, the United Nations Climate Change Conference, more commonly referred to as COP27, will be held in Sharm el-Sheikh, Egypt. The 27th United Nations Climate Change conference is highlighting the urgent risk of climate change. The Egyptian government has encouraged all local companies and organizations to implement green concepts in its operations including increased efficiency and initiatives towards a circular economy. As a step in the global climate actions, ADCB-E has decided to conduct its first carbon footprint assessment for the year 2021.

CBE Mandate

In support of the government's Sustainable Development Strategy (Egypt Vision 2030), The Central Bank of Egypt (CBE) has encouraged all banks to take steps towards assessing banks' impact on the environment starting with calculating their Scope 1 and 2 emissions.



Inventory Boundaries

Organizational Boundaries



For the purpose of accounting and reporting GHG emissions, the organizational boundary defines the businesses and operations that constitute the company. Companies can choose to report either the emissions from operations over which they have financial or operational control (the control approach) or from operations according to their share of equity in the operation (the equity share approach). ADCB-E uses the operational control approach to calculate and report its GHG emissions.

GHG emissions fall under different Scopes; Scope 1: direct emissions resulting from owned or controlled equipment and assets, Scope 2: indirect emissions resulting from purchased electricity; and Scope 3: other significant indirect emissions resulting from the bank's operations.

In conformance with the GHG Protocol Corporate Standard and the CBE mandate, only Scope 1 and Scope 2 emissions are mandatory to report. Nevertheless, ADCB-E has decided to conduct its carbon footprint assessment to include some Scope 3 emissions.

Operational Boundaries

Operational boundaries determine the approach of incorporating the emitting activities of the reporting company's business in terms of the activities that should be included in the calculations and how the activities should be classified (i.e. direct or indirect emissions).

Reporting Period & BY

The reporting period is from the 1st of January 2021 to the 31st of December 2021. This is the first carbon footprint assessment of ADCB-E and therefore, 2021 will be considered the base year on which all future years will be based on unless boundaries are altered in the future.

The operational boundaries for ADCB-E's 2021 CFP report include the following:

Scope 1: Direct Emissions

Emissions from sources that are owned or controlled by ADCB-E (i.e. any owned or controlled activities that release emissions straight into the atmosphere). Scope 1 activities include the following:



Scope 2: Indirect Emissions

Emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by ADCB-E. For ADCB-E, it includes only purchased electricity.



Scope 3: Indirect Emissions

Emissions resulting from other activities that are not covered in Scope 1 & 2. ADCB-E. Scope 3 activities include the following:



Overall Methodology

Protocols & Standards

The carbon footprint assessment is conducted based on several international and widely applied standards, protocols, and guidelines specially developed for accounting and reporting, including but not limited to the following:



The Greenhouse Gas Protocol Guidelines
 - Corporate Accounting and Reporting Standard
 - Corporate Value Chain (Scope 3) Accounting and Reporting Standard



ISO 14064-1:2019
 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.



2006 Intergovernmental Panel on Climate Change (IPCC)
 Guidelines for Greenhouse Gas Inventories (with 2019 Refinements).


Calculation Approach

As required by best practice in organizational GHG accounting and the chosen WBCSD/WRI GHG Protocol, all seven Kyoto Protocol greenhouse gasses have been included in the assessment where applicable and material.


Global warming potentials (GWPs) are factors describing the radiative forcing impact of one unit of a specific greenhouse gas (e.g. methane) relative to one unit of carbon dioxide. They are used in GHG accounting to convert individual greenhouse gas emissions to a standardized unit for comparison; carbon dioxide equivalent (CO₂e).

ADCB-E applied 100-year GWPs to all emissions data in this inventory in order to calculate total emissions, in metric tons carbon dioxide equivalent (mtCO₂e). Global warming potential values were sourced from the Intergovernmental Panel on Climate Change's (IPCC) sixth Assessment Report (AR6 2021), the most recent IPCC report available at the time of assessment. GHGs stated in the Kyoto Protocol and their respective GWPs are listed in the table below.


Greenhouse gas	Chemical formula	100-year GWP
Carbon Dioxide	CO ₂	1
Methane	CH ₄	27
Nitrous Oxide	N ₂ O	273
Hydrofluorocarbons (HFCs)	Various	Various
Perfluorocarbons (PFCs)	Various	Various
Nitrogen Trifluoride	NF ₃	17,400
Sulphur Hexafluoride	SF ₆	25,200



1x
The GWP of CO₂



27x
The GWP of CO₂



273x
The GWP of CO₂

Each activity falls under a certain Scope according to the GHG Protocol Guidelines; Scope 1 (Direct emissions), Scope 2 (Indirect emissions associated with the consumption of purchased electricity) and Scope 3 (Indirect emissions) that are a consequence of the operations of the organization but are not directly owned or controlled by the reporting company.

When calculating the CFP of ADCB-E, the emissions of each activity under Scope 1 and 2 have been considered including some activities under Scope 3. The general calculation approach for the emissions, counted in mtCO₂e, is multiplying the activity data with its corresponding emission factor. When doing this, a unit analysis is performed in order to make sure the results of the emissions are obtained in the desired unit mtCO₂e. The general formula for calculating the emissions for each activity is according to the below equation.

The unit of the GHG Emissions is metric tons carbon dioxide equivalent (mtCO₂e). The unit CO₂e refers to an amount of a GHG, whose atmospheric impact has been standardized to that one-unit mass of carbon dioxide (CO₂), based on the global warming potential (GWP) of that gas.

$$[A \times EF = E]$$

Activity, A [unit] x Emission Factor, EF [mtCO₂e/unit] = GHG Emissions, E [mtCO₂e]

The general formula could be applied for each activity to obtain its emissions. All activities were calculated for the year 2021. Thus, the emissions accounted for, were those of the total value for each activity in a single year.

Emission Factors

Emission factors (EF) are representing the quantity of GHGs released to the atmosphere caused by a certain activity. The emission factor is usually expressed as the carbon dioxide equivalent (CO₂e) emissions generated by a unit such as weight, volume and distance, e.g., CO₂e/litre fuel consumed or CO₂e/kWh of purchased electricity etc. The emission factors are retrieved from:

- **DEFRA: Department for Environment, Food & Rural Affairs UK 2021.**
- **2006 Intergovernmental Panel on Climate Change (IPCC): Guidelines for Greenhouse Gas Inventories (with 2019 Refinements).**
- **Country Specific Emission Factors: Emission factor calculated specifically for Egypt.**
- **EPA: United States Environmental Protection Agency**

As regards to the country specific grid electricity emission factor, the emission factor is derived based on the Egyptian Electric Utility and Consumer Protection Regulatory Agency (Egypt ERA) published reports of monthly data of the grid electricity, where the emission factor is based on Egypt's actual fuel mix and power generation.

Carbon Footprint Results

Absolute Carbon Emissions

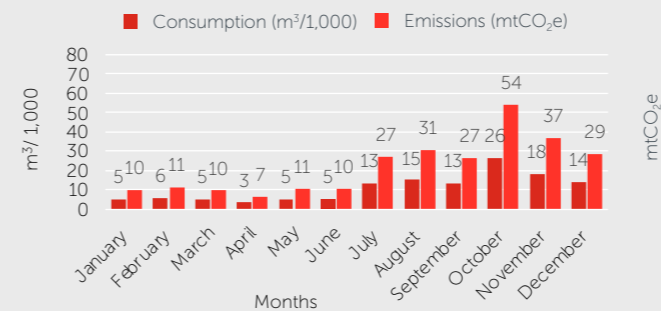


Scope 1: Direct Emissions

Stationary Combustion

Fuel Burning: Natural Gas

Since it is directly used by the owner, the emissions resulting from the consumption of natural gas were accounted for under Scope 1. The quantities consumed in 2021 totaled 128,692 m³ which resulted in direct emissions of 262 mtCO_{2e}. Monthly emissions are below.



Mobile Combustion

Fuel Burning: Owned Vehicles

This activity includes fuel burned in cars and vehicles owned by the bank's headquarters. In 2021, ADCB-E consumed 11,453 liters of petrol fuel which resulted in 27 mtCO_{2e} of direct emissions.

Fugitive Emissions

Refrigerant Leakage

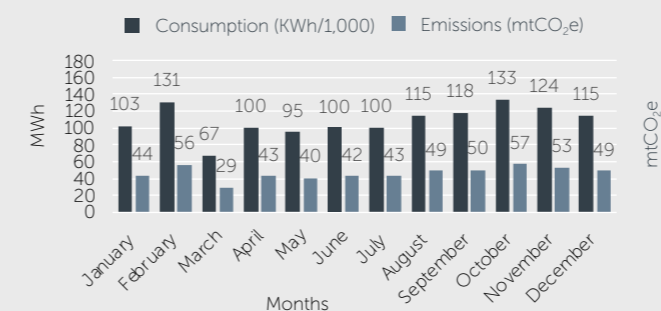
Refrigerants are fluids used in refrigeration cycles to cool a space. ADCB-E headquarters uses two types of refrigerants within its premises: R-22 and HFC-277ea. In the year 2021, the total refrigerant quantities utilized to recharge the various cooling systems were 29.5 kg resulting in 76 mtCO_{2e}.

Scope 2: Indirect Emissions

Purchased Energy

Purchased Electricity

For the reporting period of 2021, ADCB-E's electricity consumption was 1,298,981 kWh resulting in 554 mtCO_{2e}. This activity accounted for 32% of total emissions in 2021 and was the second highest emitting activity.



Scope 3: Indirect Emissions

Fuel & Energy-Related Activities (Not Included in Scope 1 & 2)

Fuel Burning: Natural Gas (WTT)

WTT emissions are those that result from the production of a fuel. WTT resulting emissions from natural gas usage was 45 mtCO_{2e} in headquarters.

Fuel Burning: Owned Vehicles (WTT)

WTT resulting emissions from ADCB-E-owned vehicle fuel burning included petrol fuel. WTT emissions from petrol usage amounted to 7 mtCO_{2e}.

Water Usage & Wastewater Treatment

In the reporting period of 2021 ADCB-E's headquarters consumed 13,356 m³ of water, resulting in 2.37 mtCO_{2e} in total. 0.38 mtCO_{2e} were related to wastewater treatment in particular.

Purchased Goods & Services

Office Supplies

ADCB-E used 8,835 kg of A4 and A3 paper, which resulted in 8.12 mtCO_{2e} in emissions. The bank also used 178 ink cartridges which corresponds to 0.85 mtCO_{2e}.

Business Travel

Air Travel & WTT

The total distance travelled for domestic flights was 7,020 km. The distance for international flights was 24,150 km. This resulted in emissions totaling 4.69 mtCO_{2e}. WTT emissions totaled 0.51 mtCO_{2e}. Total emissions related to air travel was 5.2 mtCO_{2e}.

Hotel Stays

The total number of nights spent in hotels in Egypt and the UAE was 416 resulting in 24.37 mtCO_{2e}.

Rented Cars

The total distance travelled by employees in rented cars in 2021 was 106,622 km, which resulted in 37 mtCO_{2e}. Including the 10.42 mtCO_{2e} WTT emissions, total emissions was 47.44 mtCO_{2e}.

Employee Commuting

Commuting & WTT

The estimated distance travelled by employees to and from their individual workplaces during the reporting period of 2021 was 4,223,109 km. Accordingly, employee commuting resulted in 518 mtCO_{2e} while WTT emissions were 137 mtCO_{2e}. This gives a total employee commuting emissions of 655 mtCO_{2e}.

Carbon Emissions Summary

Scope 1: Direct Emissions - 2021

		mtCO ₂ e	21%
Stationary Combustion	Fuel Burning: Natural Gas	262	
Mobile Combustion	Fuel Burning: Owned Vehicles	27	
Fugitive Emissions	Refrigerant Leakage	76	
Total Scope 1 Emissions		365	

Scope 2: Indirect Emissions - 2021

		mtCO ₂ e	32%
Purchased Energy	Purchased Electricity	554	
Total Scope 2 Emissions		554	

Total Scope 1 & 2 Emissions - 2021

Total Scope 1 & 2 Emissions	918 mtCO₂e
Scope 1 & 2 Carbon Intensity	1.44 mtCO₂e/ FTE
Scope 1 & 2 Carbon Intensity	0.14 (mtCO₂e/ m²)

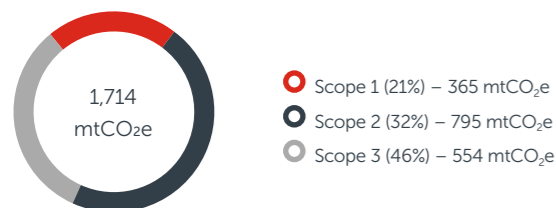
Scope 3: Indirect Emissions - 2021

		mtCO ₂ e	46%
Purchased Goods & Services	Office Supplies	9	
Fuel and Energy-Related Activities (Not Included in Scope 1 & 2)*	Fuel Burning: Natural Gas (WTT)	45	
	Fuel Burning: Owned Vehicles (WTT)	7	
	Water Usage & Wastewater Treatment	2	
Business Travel	Hotel Stay	24	
	Air Travel & WTT	5	
Employee Commuting	Rented Cars & WTT	47	
	Commuting & WTT	655	
Total Scope 3 Emissions		795	

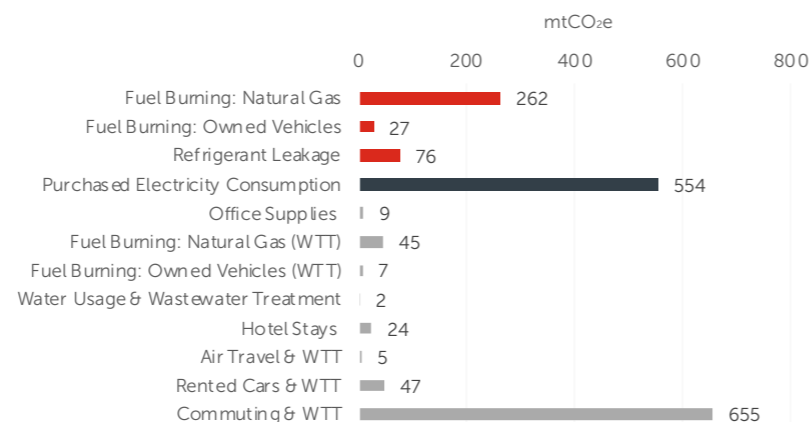
Scope 1,2 & 3 Emissions - 2021

Total Scope 1, 2 & 3 Emissions	1,714 mtCO₂e
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Absolute Emissions per Scope - 2021



Absolute Emissions per Activity - 2021



Scope 3 was the highest category of emissions followed by Scope 2 and Scope 1. Commuting & WTT were the highest emitting activities in Scope 3.

Benchmarking

Benchmarking is used to assess the performance of a certain organization over time, and compare it against others within the same industry. In addition, benchmarking allows organizations to determine industry best practices, and identify further opportunities for improvement.

Scope 1 & 2 carbon emission intensities (per FTE and per m²) are used herein to benchmark the performance of ADCB-E nationally, while electricity intensity per m² is used to assess it on a wider international level.

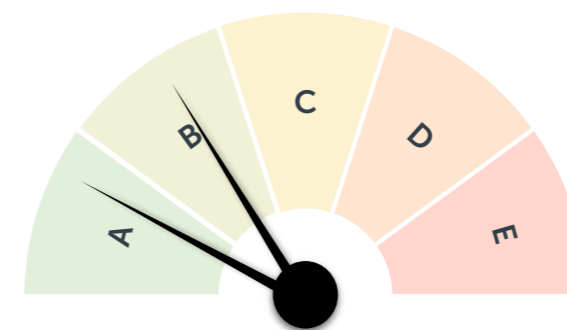
National Benchmarking

Published and unpublished data of a 20+ banks' headquarters were used to calculate the national average emission intensity (per FTE and m²). Accordingly, a methodology for the national rating has been developed.

The below table shows ADCB-E's national rate compared to other headquarters in Egypt. ADCB-E has an emission intensity for the year 2021 of **1.44 mtCO₂e/FTE** & **0.14 mtCO₂e/m²** with a B and A scoring, respectively.

This shows that ADCB-E is below national average. The emissions intensity can be further improved once a decarbonization plan is put in place and implemented.

Score	Emissions Intensity (mtCO ₂ e/FTE)	Emissions Intensity (mtCO ₂ e/m ²)
A	< 1	< 0.2
B	1 - 2	0.2 - 0.4
C	2 - 3	0.4 - 0.6
D	3 - 4	0.6 - 0.8
E	> 4	> 0.8

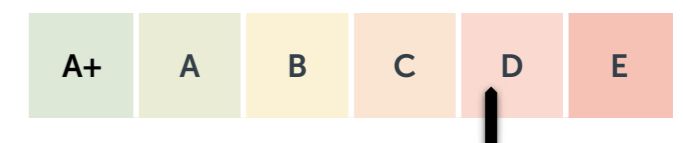


International Benchmarking

The most common type of intensities metrics used for international benchmarking is the electricity intensity. Based on extensive research conducted on international banks and offices, a performance assessment criterion has been developed, as indicated in the below table.

ADCB-E has an electricity intensity of **197 kWh/m²**, which gives it a D scoring, which means that more efficient electricity practices should be implemented within ADCB-E's headquarters to improve its rating.

Score	Emissions Intensity (kWh/m ²)
A+	< 128
A	128 - 148
B	148 - 168
C	168 - 195
D	195 - 218
E	> 218



Towards Carbon Reduction

Decarbonization Plan

The decarbonization plan aims to reserve resource consumption of an organization in pursuit of reducing its overall carbon footprint. To develop a customized decarbonization plan, a carbon audit visit has been conducted to inspect the building's environmental performance. This audit mainly assesses five categories which are shown in the table to the right.

Areas of improvement have been identified throughout the carbon audit visit. Subsequently, the customized decarbonization list of actions is presented in the next page. In the future, feasibility of selected projects will be studied in depth, and its critical aspects will be analyzed to determine its viability; according to which the necessary steps further will be taken.

Each project is divided based on the complexity to implement.

Category	Description
Building Fabric	Building components (such as walls, roofs, windows, and doors) in relation to levels of heat gain/loss.
Heating, Ventilation & Air Conditioning (HVAC)	Heating and cooling systems.
Lighting	Loads related to lighting.
Plugs	Plug loads resulting from various equipment and appliances.
Water	Indirect energy sources related to water usage, waste, and treatment.

Low cost & time to implement
Medium cost & time to implement
High cost & time to implement



Project	Description	Benefits
Complete Carbon Footprint Assessment	Assess the entirety of ADCB-E banking operations & branches and Scope 3 emissions.	+ A fuller picture of ADCB-E emissions and better opportunity to pinpoint areas for improvement.
Install More Efficient Lighting System	Use LED lighting in the building and install daylight and occupancy sensors in open and closed offices, corridors, lobbies and toilets.	+ Increased building efficiency & performance.
Green Building Guidelines	Develop and adopt green building guidelines including refurbishment of building such as insulation, draught proofing, efficient lighting and lighting control, HVAC operational parameters and control, external/internal shading optimization, daylight and occupancy sensors and building energy and water efficiency and management.	+ Improved health and well-being of employees and customers. + Improved customer satisfaction. + Increased employee fulfillment. + Enhanced building performance with longer lifetime and less maintenance.
Capacity Building	Educating employees about climate change, decarbonization and climate resilience.	+ Enhanced capacity building of all employees and workers.
Reduction Targets	Set specific carbon emission reduction targets with deadlines.	+ Reduced long-term and short-term carbon footprint.
Maintenance of Transport fleet	Ensure regular maintenance of all vehicles and equipment on a regular basis, with proper controls and maintenance. Install GPS for all vehicles for shortest routes. Utilize a tracking system for the vehicles and equipment to identify any defects.	+ Reduced indirect costs/Increased profit. + Increased safety of drivers and workers utilizing the equipment. + Possible time savings and well-being of drivers.
Waste Management	Adopt and implement a waste management system (in accordance with international best practices such as ISO 14001).	+ Material circularity. + Waste reduction and allowing for segregation, accurate quantification, and reuse/ recycling/ recovery.
Energy Audit and Management System (EMS)	Adopt an automatic energy system to assist in identifying opportunities to regularly monitor ADCB-E energy use.	+ Increased building efficiency & performance.
Bank Cards	Design an innovative system in which expired banks cards are collected, and its plastic components are recycled.	+ Material circularity. + Waste reduction and allowing for segregation, accurate quantification, and reuse/recycling/ recovery. + Value recovery.
Carbon Offsets	Invest in environmental projects to compensate for ADCB-E share of consumption.	+ Reduced overall carbon footprint.
Green Supply Chain	Design Green Supply Chain policies by setting a criterion for new supplier selection, suppliers' monitoring, and auditing programs, minimizing waste and improve environmental footprint values. The traditional supply chain could be converted to a green one by taking environmental considerations into account at all stages, from product development and manufacturing to distribution and end customers.	+ Compliance with international guidelines. + Potential for both short-term and long-term carbon footprint reduction.
Electric Vehicles	Study the feasibility of electric and hybrid vehicles for ADCB-E transport fleet.	+ Less pollution & enhanced air quality.
Renewable Energy	Utilize renewable energy sources (ie. solar PV).	+ Reduced indirect costs/Increased profit. + Less dependence on grid electricity and diesel generators, with reduced risks of power outage.

Annex

Abbreviations & Acronyms

ADCB-E	Abu Dhabi Commercial Bank - Egypt
BY	Base Year
CFP	Carbon Footprint
CH ₄	Methane
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COP27	27th United Nations' Conference of Parties on Climate Change
DEFRA	Department for Environment, Food & Rural Affairs
EF	Emission Factor
ERA	Egypt Electricity Regulatory Authority
FTE	Full-Time Equivalent
GHG	Greenhouse Gases
GWP	Global Warming Potential
HCWW	Holding Company for Water & Wastewater
HFCs	Hydrofluorocarbons
HVAC	Heating, Ventilating, and Air Conditioning
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standard Organization
kWh	Kilowatt Hour
L	Liter
m ²	Square Meter
m ³	Cubic Meter
mtCO ₂ e	Metric tons Carbon Dioxide Equivalent
MWh	Megawatt Hour
NF ₃	Nitrogen Trifluoride
N ₂ O	Nitrous Oxide
p.km	Passenger-kilometer
PFCs	Perfluorocarbons
PV	Photovoltaic
SDS	Sustainable Development Strategy
SF ₆	Sulphur Hexafluoride
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
WTT	Well-to-Tank

Definitions & Terminology

Base Year	A base year is a reference year in the past with which current emissions can be compared. In order to maintain the consistency and comparability with future carbon footprints, base year emissions need to be recalculated when structural changes occur in the company that change the inventory boundary (such as acquisitions or divestments). If no changes to the boundaries of the inventory happen, the base year is not adjusted.
Carbon Footprint	The amount of Carbon Dioxide that an individual, group, or organization lets into the atmosphere in a certain time frame.
CO ₂ e	Carbon dioxide equivalent or CO ₂ equivalent, abbreviated as CO ₂ e, is a metric used to compare the emissions from various GHGs on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
Direct Emissions	Greenhouse gas emissions from facilities/sources owned or controlled by a reporting company, e.g. generators, blowers, vehicle fleets.
Emission Factors	Specific value used to convert activity data into greenhouse gas emission values.
Fugitive Emissions	Fugitive emissions are emissions of gases or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities. As well as the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.
GHG Protocol	Greenhouse Gas Protocol – uniform methodology used to calculate the carbon footprint of an organization.
GWP	Global Warming Potential – an indication of the global warming effect of a greenhouse gas in comparison to the same weight of carbon dioxide.
HVAC	HVAC (heating, ventilating, and air conditioning; also heating, ventilation, and air conditioning) is the technology of indoor and vehicular environmental comfort. Its goal is to provide thermal comfort and acceptable indoor air quality.
Indirect Emissions	Greenhouse gas emissions from facilities/sources that are not owned or controlled by the reporting company, but for which the activities of the reporting company are responsible, e.g. purchasing of electricity.
Kyoto Protocol	It operationalizes the United Nations Framework Convention on Climate Change by committing industrialized countries to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets.
Operational Boundary	Determination of which facilities or sources of emissions will be included in a carbon footprint calculation.
Organizational Boundary	Determination of which business units of an organization will be included in a carbon footprint calculation.
Refrigerant	A refrigerant is a substance or mixture, usually a fluid, used in a heat pump and refrigeration cycle.
Renewable Energy	Energy from a source that is not depleted when used, such as wind or solar power.
Scope 1	Emissions from sources that are owned or controlled by the reporting entity (i.e. any owned or controlled activities that release emissions straight into the atmosphere).
Scope 2	Emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by the company.
Scope 3	Emissions resulting from other activities. This includes transport fuel used by air business travel, and employee-owned vehicles for commuting to and from work; emissions resulting from courier shipment; emissions from waste disposal; ... etc.

Data Sources & Quality

All the information used to compute the various footprints comes from ADCB-E's database. The data quality has been evaluated and presented below, with data from each activity evaluated independently to enable for better analysis. The most used types of data are:

Primary Data: Data taken from documents that are directly linked to the assessment, such as electricity invoices, to calculate emissions caused due to electricity.

Secondary Data: Such as databases, studies, and reports.

Assumptions: Assumptions made based on internationally recognized standards and studies.

The quality of the data is divided into 3 separate levels to better pinpoint what improvements can be made for each activity. They are as follows:

Good: No changes recommended
Satisfactory: Could be improved
Weak: priority area for improvement

Scope	Activity	Data	Data Resolution
1	Fuel Burning: Natural Gas	128,692 m ³	Consumption data were recorded on a monthly basis.
1	Fuel Burning: Owned Vehicles	11,453 liters	Consumption data were recorded on a monthly basis.
1	Refrigerant Leakage (R-22)	16 kg	Data on the number and sizes of cylinders were recorded on a yearly basis.
1	Refrigerant Leakage (HFC-227ea)	13.5 kg	Data on the number and sizes of cylinders were recorded on a yearly basis.
2	Purchased Electricity	1,298,981 kWh	Consumption data were recorded on a monthly basis.
3	Paper Consumption	8,835 kg	Data on the quantity of paper packs were recorded on a yearly basis.
3	Ink Consumption	178 toners	Data on the number of toners were recorded on a yearly basis.
3	Fuel Burning: Natural Gas (WTT)	128,692 m ³	Consumption data were recorded on a monthly basis.
3	Fuel Burning: Owned Vehicles - Petrol (WTT)	11,453 liters	Consumption data were recorded on a monthly basis.
3	Water Usage & Wastewater Treatment	13,356 m ³	Consumption data were recorded on a monthly basis.
3	Air Travel & WTT	31,170 km	Data on the number of passengers, the flight type, the flight route and flight distance were recorded on a yearly basis.
3	Hotel Stays	416 nights	Data on number of residents, country of stay and total nights were recorded on a yearly basis.
3	Rented Cars	106,622 p.km	Data on number of users, vehicle type and one way distance were recorded on a monthly basis.
3	Commuting & WTT	10,561,077 p.km	Tracking system is recommended to record actual commuting data as in this reporting period commuting emissions were calculated based on assumptions.

Relevancy & Exclusions

The following section describes the GHG emission sources that were excluded from ADCB-E's GHG inventory due to data not being available, or not technically feasible to obtain or for data whose emission quantification is beyond ADCB-E's operation and control; which were under Scope 3 emissions. The exclusion rationale per category has also been specified.

Excluded Organizational Boundaries

Only ADCB-E's headquarters were assessed in this report. In future reports, ADCB-E aims to cover its branches to achieve the fullest picture of its carbon footprint.

#	Activity	Description	Emissions (mtCO ₂ e)	Status
1	Purchased Goods and Services	Contains only purchased paper and ink.	8.98	Relevant, calculated
2	Capital Goods	Emissions from embodied carbon in the properties owned by ADCB-E, such as buildings, cars, etc.	N/A	Relevant, not yet calculated
3	"Fuel And Energy-Related Actives (Not Included In Scope 1 And 2)"	Includes WTT from fuel burning activities, as well as energy consumed to supply municipal water and treat it.	53.79	Relevant, calculated
4	Upstream Transportation and Distribution	Transportation from ADCB-E's internal courier shipment upstream supply chain.	N/A	Relevant, not yet calculated
5	Waste Generated in Operations	Includes emissions from the transportation of solid waste and the landfill emissions from the disposed waste.	N/A	Relevant, not yet calculated
6	Business Travel	Emissions from air travel, hotel stays and rented cars are included under this category.	77.02	Relevant, calculated
7	Employee Commuting	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company).	1,638	Relevant, calculated
8	Upstream Leased Assets	This category is not relevant to ADCB-E's business and therefore has been excluded.	N/A	Not relevant, explanation provided
9	Downstream Transportation	Emissions from ADCB-E's external courier shipment in addition to the cash-in-transit related emissions.	N/A	Relevant, not yet calculated
10	Processing of Sold Products	Includes emissions occurring due to bank issued cards and other products.	N/A	Relevant, not yet calculated
11	Use of Sold Products	This should include emissions from the use of internet banking and other sold products.	N/A	Relevant, not yet calculated
12	End of Life Treatment Of Sold Products	This category is not yet embraced in the calculations but could include end of life treatment of credit cards distributed to the customers.	N/A	Relevant, not yet calculated
13	Downstream Leased Assets	Emissions resulting from ATM transactions are measured as the power used during active and inactive ATM hours.	N/A	Relevant, not yet calculated
14	Franchises	This category is not relevant to ADCB-E's business and has therefore been excluded.	N/A	Not relevant, explanation provided
15	Investments	Operation of investments (including equity and debt investments and project finance).	N/A	Relevant, not yet calculated

Carbon Footprint Equations

Scope 1: Direct Emissions

Stationary Combustion

Fuel Burning: Natural Gas

The total consumption of natural gas for ADCB-E's headquarters was recorded on a monthly basis in m³.

$$\text{Fuel burning: Natural gas emissions (mtCO}_2\text{e)} = \text{Fuel consumption (m}^3\text{)} \times \text{EF (mtCO}_2\text{e/ m}^3\text{)}$$

Mobile Combustion

Fuel Burning: Owned Vehicles

ADCB-E's owned vehicles were used to transport the managers, employees, packages, etc. The type of fuel used was petrol.

$$\text{Fuel burning: Owned vehicles emissions (mtCO}_2\text{e)} = \text{Fuel consumption (L)} \times \text{EF (mtCO}_2\text{e/ L)}$$

Fugitive Emissions

Refrigerant Leakage

Refrigeration fluids are fluids which are used to cool a space in refrigeration cycles. Each year, refrigerants (in this case both type R-22 and HFC-227ea) were used to re-charge the cooling systems used in each building in order to compensate for the leakage that happened during the operating year. All related data was found in ADCB-E's database.

$$\text{Refrigerants leakage emissions (mtCO}_2\text{e)} = \text{Refrigerant leakage (kg)} \times \text{EF (mtCO}_2\text{e/kg)}$$

Scope 2: Indirect emissions

Purchased Electricity

Emissions from purchased electricity are the product of the national grid emission factor and the annual electricity consumption of each building. The electricity consumption in ADCB-E's was obtained from the database in kWh. The total electricity consumption of the year was calculated using the formula below:

$$\text{Purchased electricity emissions (mtCO}_2\text{e)} = \text{Electricity consumption (kWh)} \times \text{EF (mtCO}_2\text{e/kWh)}$$

Scope 3: Indirect emissions

Purchased Goods & Services

Office Supplies

Purchased goods are the commodities used by the different sectors. For the head office, this is the paper and ink. The resulting emissions fall under Scope 3. The yearly amounts of purchased goods per type have been retrieved from the internal data recordings, as units of items. The emissions were obtained by multiplying the emission factor per unit by the weight or the number of items.

$$\text{Paper emissions (mtCO}_2\text{e)} = \text{Weight of paper (kg)} \times \text{EF (mtCO}_2\text{e/kg)}$$

$$\text{Ink emissions (mtCO}_2\text{e)} = \text{Number of cartridges (units)} \times \text{EF of each cartridge (mtCO}_2\text{e/unit)}$$

Fuel & Energy-Related Activities (Not Included in Scope 1 & 2)

Well-to-Tank (WTT)

WTT emissions are those that result from the production of a fuel, including resource extraction, initial processing, transportation, fuel production, distribution and marketing, and delivery into a consumer vehicle's fuel tank. WTT emissions were taken into consideration in order to reflect the full range of climatic impacts from fuel-burning activities. All fuel burning activities, including natural gas & petrol consumed by ADCB-E's head office were included in WTT emissions. For each amount and type of fuel burned, the general formula was applied to determine the relevant emissions.

$$\text{WTT Emissions (mtCO}_2\text{e)} = \text{Fuel Consumption (unit)} \times \text{WTT EF (mtCO}_2\text{e/unit)}$$

Water Usage & Wastewater Treatment

The emission factor for water supply and wastewater treatment is calculated by using a conversion formula, provided by Holding Company for Water and Wastewater (HCWW). The emissions are based on the amount of energy consumed in each process. The emission factors for water supply and wastewater treatment are accordingly calculated by multiplying the conversion factor by the electricity emission factor. At the same time, a unit analysis is performed to make sure the units are conforming.

$$\text{Energy consumption (Wh)} = \text{Water supply/ Wastewater (m}^3\text{)} \times \text{Conversion formula (Wh/m}^3\text{)}$$

$$\text{Water supply \& treatment (mtCO}_2\text{e)} = \text{Energy consumption (kWh)} \times \text{EF (mtCO}_2\text{e/kWh)}$$

Business Travel

Air Travel & Well-to-Tank (WTT) Emissions

In 2021, both international and domestic flights took place both domestically and internationally. ADCB-E's data records provided data of flight routes and no. of tickets. The flight distances have been obtained from airport distances calculator. The emissions factors were obtained from DEFRA as average passenger, flights to/from non-UK countries.

$$\text{Air travel emissions (mtCO}_2\text{e)} = \text{Distance travelled per passenger (p.km)} \times \text{EF (mtCO}_2\text{e/ p.km)}$$

Hotel Stays

For each of the hotel stays, location and no. of nights and residents were obtained from ADCB-E's data records. Employees stayed in Egypt and the UAE throughout the year of 2021. DEFRA is providing the emission factors per hotel night for each country.

$$\text{Hotel stay emissions (mtCO}_2\text{e)} = \text{Hotel stays (nights per country)} \times \text{EF (mtCO}_2\text{e/ night per country)}$$

Rented Cars

To calculate the emissions for rented cars, no. of users, vehicle type and distance were obtained from ADCB-E's data records. All rented cars in 2021 were average passenger cars.

$$\text{Rented car emissions (mtCO}_2\text{e)} = \text{Distance travelled per passenger (p.km)} \times \text{EF (kgCO}_2\text{e/ p.km)}$$

Employee Commuting

Commuting & WTT

Data were calculated by estimating the distance traveled by the employees, based on the office geographical locations and surveys on the average distance between the employees' homes and their work-site. The traveling distance percentages for commuting were estimated for 15 different distances from 5 km to 75+ km, and then multiplied by the number of working days in a year to get the total distance traveled.

$$\text{Employees commuting emissions (mtCO}_2\text{e)} = \text{Travelled distance (km)} \times \text{EF (mtCO}_2\text{e/ km)}$$

Quality Assurance Statement

To the Bank's Board of Directors',

We have been appointed by the Bank to conduct carbon footprint calculations pertaining to the Bank's operational activities for the period from 1st of January 2021 to the 31st of December 2021.

AUDITORS' INDEPENDENCE AND QUALITY CONTROL

We adhere to integrity, objectivity, competence, due diligence, confidentiality, and professional behavior. We maintain a quality control system that includes policies and procedures regarding compliance with ethical requirements, professional standards, and applicable laws and regulations.

AUDITORS' RESPONSIBILITY

In conducting the carbon footprint calculations, we have adopted the Greenhouse Gas Protocol Guidelines, IPCC Guidelines for Greenhouse Gas Inventories, and ISO 14064-1:2019 specification with guidance at the organization level for quantification and reporting of GHG emissions and removals.

It is our responsibility to express a conclusion about the quality and completeness of the primary data collected/ provided by the Bank. We have performed the following quality assurance/ quality control tasks:

- Several rounds of data requests were performed whenever the received information was not clear;
- All data presented in this report were provided by the reporting entity and revised and completed by our technical teams;
- For data outliers, meetings were held to investigate the accuracy of the data and new data was provided when requested;
- Any gaps, exclusions and/or assumptions have been clearly stated in the report.

CONCLUSION

Based on the aforementioned procedures, nothing has come to our attention that would cause us to believe that the Bank's raw data used in the carbon footprint calculations have not been thoroughly collected, verified and truly represent the Bank's resource consumption in the reporting period related to all categories/aspects identified in this report. We do not assume and will not accept responsibility to anyone other than the Bank for the provided assurance and conclusion.

Dr. Abdelhamid Beshara, Founder and Chief Executive Officer
MASADER, ENVIRONMENTAL & ENERGY SERVICES S.A.E CAIRO,
October 2022

Abdelhamid Beshara



masader



COMMUNITY MEMBER

2022

TCFD

TASK FORCE ON CLIMATE RELATED FINANCIAL RISK

ABOUT MASADER

Masader is an innovative interdisciplinary consulting, design and engineering sustainability firm based in Cairo, aiming at leveraging positive impact across the MENA region and globally. It specializes in Resource Efficiency, Sustainable Management of Natural Resources and Integrated Sustainability Solutions. Since 2015, Masader has led 100+ projects across the areas of energy, environment, climate change & carbon footprint, circular economy, green building (LEED), as well as corporate sustainability strategies, reporting and certification.

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