

ADIB



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الإسلامي

ADIB

CARBON FOOTPRINT REPORT
2021



ABOUT THIS REPORT

This report details the carbon footprint generated by ADIB's headquarters in 2021 and covers Scope 1, 2 and selected scope 3 activities.

All the data collected and analyzed within this report follow the World Resources Institute Greenhouse Gas Protocol principles of relevance, completeness, consistency, transparency, and accuracy.

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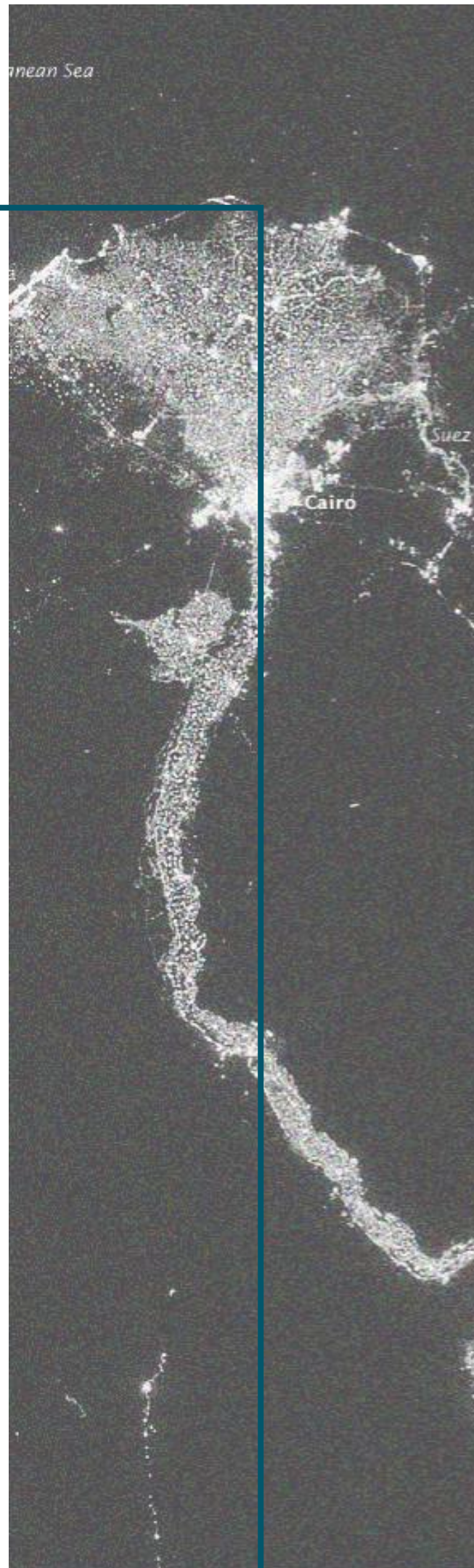
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ACRONYMS AND ABBREVIATIONS

ADIB	Abu Dhabi Islamic Bank
CBE	Central Bank of Egypt
CFP	Carbon Footprint
CH₄	Methane
CO₂	Carbon Dioxide
CO₂e	Carbon Dioxide Equivalent
COP	Conference of the Parties
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 and Wastewater
HFCs	Hydrofluorocarbons
HVAC	Heating, ventilation, and air conditioning
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standard Organization
kWh	Kilowatt Hour
l	Liter
m²	Square Meter
m³	Cubic Meter
mtCO₂e	Metric tons Carbon Dioxide Equivalent
N₂O	Nitrous oxide
NF₃	Nitrogen trifluoride
PFCs	Perfluorocarbons
P.km	Passenger kilometer
Scp	Scope
SF₆	Sulphur hexafluoride
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
WTT	Well-to-Tank

EXECUTIVE SUMMARY

Climate change is one of the global key challenges, and financial institutions are uniquely positioned to push transformation towards a climate-resilient future. Abu Dhabi Islamic Bank (ADIB) 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. With its growing position within the Egyptian banking sector, ADIB realizes its responsibilities and is hereby presenting its first Carbon Footprint (CFP) assessment. This report encompasses details on the carbon footprint generated by ADIB's two headquarters, "Omar Makram" Building and "Garden City" Building, for the year 2021. In conformance with the GHG Protocol Corporate Standard and the mandates of the Central Bank of Egypt - CBE, only Scope 1 (direct GHG emissions from sources owned or controlled by ADIB), and Scope 2 emissions (indirect GHG emissions associated with the consumption of purchased electricity) are mandatory to report. Nevertheless, ADIB has decided to include Scope 3 emissions (other indirect GHG emissions from activities not included in Scope 1 and 2), in addition to WTT emissions from fuel activities to its carbon footprint assessment.

The protocols & standards followed in this assessment are 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.

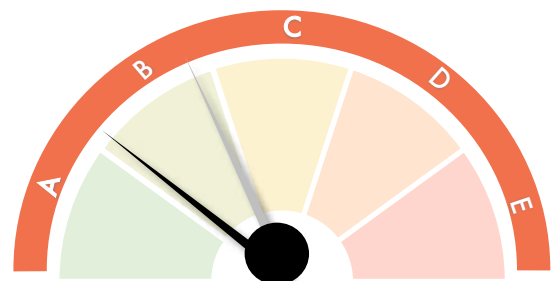
PERFORMANCE EVALUATION

To assess the efficiency level of ADIB's resources' consumption, carbon intensity-based metrics were calculated per unit of area and FTE. For the reporting period 2021, ADIB's reported emissions intensities for Scope 1 and 2 were **1.83 mtCO₂e/FTE** equivalent to **0.2 mtCO₂e/m²** corresponds to a "B" score on the national scale.

BOUNDARIES AND CFP RESULTS



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.



Benchmarking allowed ADIB to determine industry best practices and identify further opportunities for improvement. With the results of this assessment and through a carbon audit of its headquarters, ADIB was able to develop a decarbonization plan to reduce its overall carbon emissions.

Scope 1 (Direct Emissions)

- Stationary combustion
- Mobile combustion
- Fugitive emissions

972
mtCO₂e

Scope 2 (Indirect Emissions)

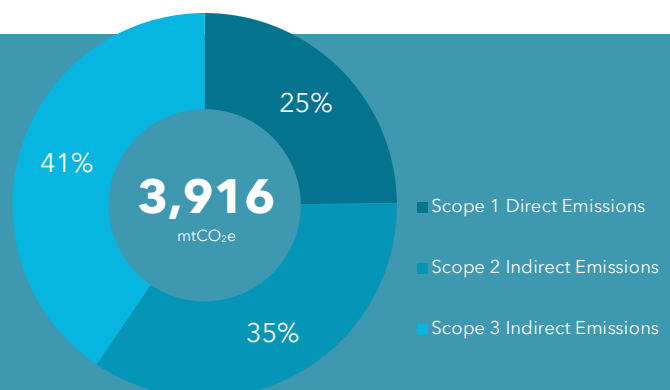
- Purchased energy

1,358
mtCO₂e

Scope 3 (Indirect Emissions)

- Purchased goods and services
- Fuel and energy related activities (not included in Scope 1 and 2)
- Waste generated in operations
- Employee commuting + WTT

1,586
mtCO₂e



TOTAL EMISSIONS

3,916 mtCO₂e

INTRODUCTION

Climate change is one of the major challenges that tackles the world today. It affects people's livelihoods and communities. As climate change worsens, dangerous weather events are becoming more frequent or severe. Caused mainly by hundreds of years of greenhouse gas (GHG) emissions, an urgent action has been underlined in the Sixth Assessment Report by the United Nations' Intergovernmental Panel on Climate Change (IPCC). Like the many other societal sectors, the financial sector plays a role in addressing the issue of climate change. Financial institutions, especially banks, have the power to support in the change as well as influence the change in the surrounding society to help its shift in becoming "Green" by incorporating climate and environmental risks into their daily business operations, both in a systematic manner and with a long-term perspective.

ADIB realized its responsibilities, that is not only limited to achieving success within the Egyptian banking sector but also should include conducting business from a sustainable perspective by creating progressive policies and procedures.

ADIB is hereby presenting their carbon footprint assessment to quantify and assess their business' activities of emitting green-house gasses (GHGs). The intention is to reduce the emissions, by reviewing the way of operation and activities, and setting targets and metrics and continuously follow up on progress, where various actions are taken to achieve a net-zero society. The assessment enables ADIB to benchmark performance indicators and evaluate progress over time. This report presents ADIB's two headquarters carbon footprint from the 1st of January 2021 to the 31st of December 2021, making 2021 the base year to which all future assessments are to be referenced.

ABOUT THE BANK

Abu Dhabi Islamic Bank -Egypt (ADIB-Egypt) is an award-winning bank that started its operations in Egypt after the acquisition of the National Bank for Development (NBD), through the Emirati consortium between Abu Dhabi Islamic Bank and Emirates International Investment Company (EIIC) in 2007. As part of its strategy to be a leading universal Islamic bank in Egypt, the Bank focuses on offering a broad spectrum of Shari'a compliant banking solutions, to cater to the needs of corporate and retail customers, the development of a state-of-the art infrastructure and revamping its 70-branch network.

Aiming at integrating its services, the Bank established an Investment Banking arm, ADIB Capital, ADILease a leasing company, and ADIB Invest an assets management arm. ADIB Egypt succeeded in

establishing a Retail, Corporate & SME platform to serve customers in different segments and provide the necessary services of short-term and long-term finance. All these measures enabled the Bank to build a broad base portfolio of leading local and international companies operating in the Egyptian market as well as a large base of individual clients.

In addition to the asset and liabilities products and treasury services all delivered through client centric teams, ADIB Egypt employs a dynamic team of over 2,300 experts providing a growing portfolio of Shari'a compliant products and services via a stimulating work environment for staff across its nationwide network of 70 branches.

ADIB Egypt believes that the true contribution of a company lies not only in the value it brings to its shareholders and clients, but equally important to the community in which it operates. The Bank has partnered with a number of leading Egyptian NGOs to building bridges towards a brighter and healthier future, and to contribute in nationwide CSR projects supporting underprivileged segments of society.

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 ADIB bank'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, ADIB 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). ADIB uses the operational control approach to calculate and report its GHG emissions.

The following headquarters with their corresponding boundaries fall under ADIB's organizational boundaries:

Garden City Building



9a Rostom St.- Garden City – Cairo



Building Gross Floor Area
7,350 m²



Employees
775 FTE

Omar Makram Building



2A Omar Makram St. -Tahrir Square,
Cairo



Building Gross Floor Area
4,200 m²



Employees
500 FTE

Reporting period

The reporting period is from the 1st of January 2021 to the 31st of December 2021. This is the first carbon footprint assessment of ADIB and therefore, 2021 will be considered the base year to which all future years will be referenced.

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). 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, ADIB has decided to conduct its carbon footprint assessment to include some Scope 3 emissions.

The operational boundaries for ADIB's 2021 CFP report include the following:

SCOPE 1

Stationary combustion

Fuel burning on-site

Mobile combustion

Fuel burning of company owned vehicles

Fugitive emissions

SCOPE 2

Purchased energy

Purchased electricity

SCOPE 3

Purchased goods and services

Fuel and energy-related activities (not included in scope 1 and 2)

Waste generated in operations

Employee Commuting + WTT

Business travel



OVERALL METHODOLOGY

Followed Protocols & Standards

To obtain the most accurate carbon footprint assessments, ADIB follows several international and widely applied standards, protocols, and guidelines specially developed for accounting and reporting. **The Greenhouse Gas Protocol Guidelines, ISO 14064-1:2019 and 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories (with 2019 Refinements)** are the three major guidelines used to ensure the uniformity and accuracy of the reports.



The Greenhouse Gas Protocol Guidelines which include, but not limited to:

- A 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 gases 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). ADIB bank 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. The Kyoto Protocol GHGs 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

The general calculation approach for the emissions, counted in mtCO₂e, is multiplying the activity 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 the gas. The general formula could be applied for each activity to obtain its emissions. Activities included in the current assessment were calculated for the year, 2021. Thus, the emissions accounted for, were those of the total value for each activity in a single year.

$$\begin{array}{ccccc}
 \mathbf{A} & & \mathbf{X} & & \mathbf{EF} & & \mathbf{=} & & \mathbf{E} \\
 \text{Activity} & & & & \text{Emission Factor} & & & & \text{GHG Emissions} \\
 \text{[unit]} & & & & \text{[mtCO}_2\text{e/unit]} & & & & \text{[mtCO}_2\text{e]}
 \end{array}$$

Emission Factor

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 weight, volume, distance, or duration of the activity, e.g., CO₂e/liter fuel consumed, CO₂e/km driven or CO₂e/kWh of purchased electricity etc. The emission factors were identified based on:

- **DEFRA:** Department for Environment, Food & Rural Affairs, UK 2020 and 2021
- **IPCC:** Intergovernmental Panel on Climate Change
- **Country Specific Emission Factors:** Emission factor calculated specifically for Egypt

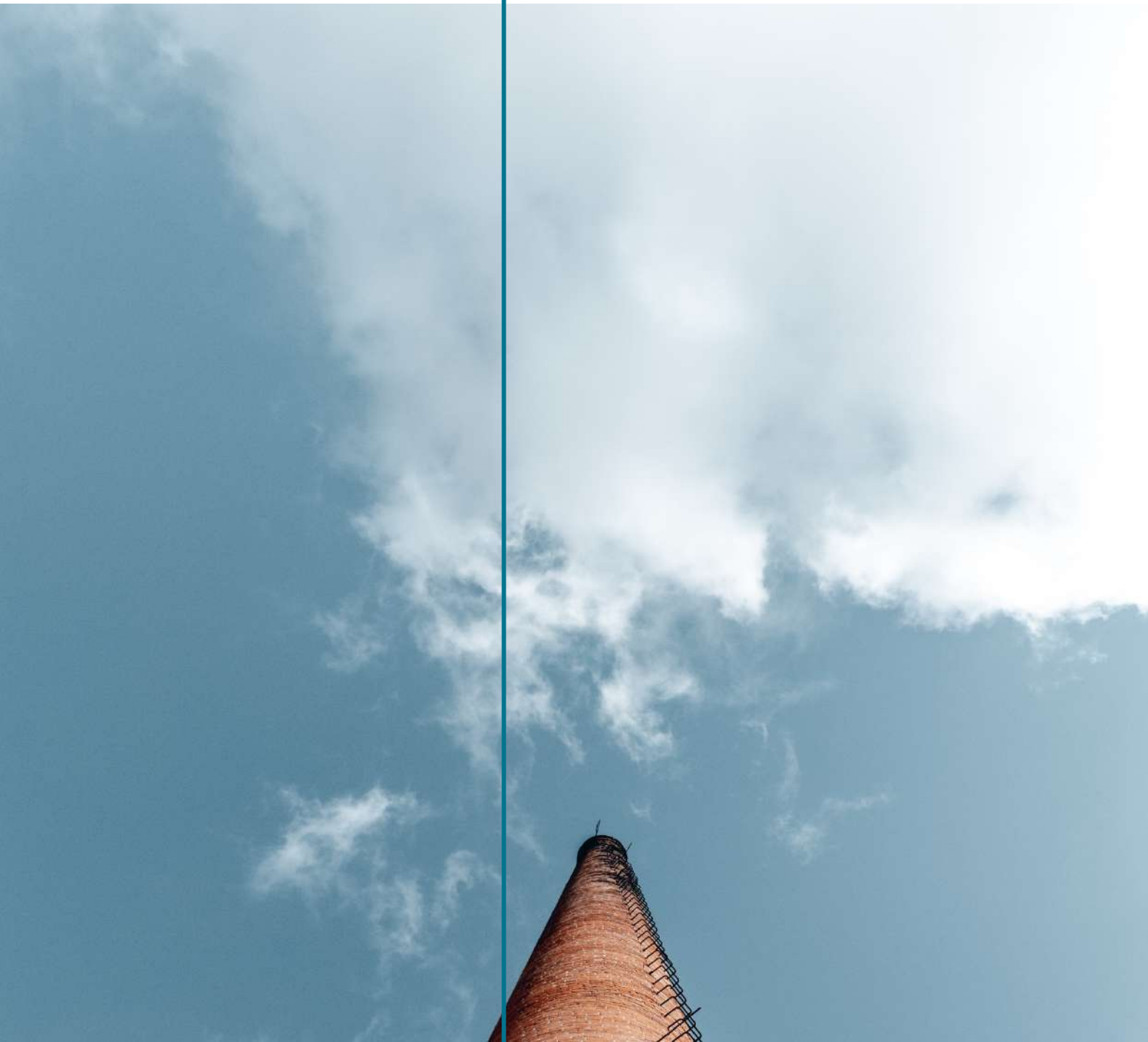
As regards to the country specific grid electricity emission factor, the emission factor is derived based on the **Egyptian Electric Utility and Consumer Protection Regulatory Agency (Egypt ERA)** published reports of monthly data of the grid electricity, where the emission factor is based on Egypt's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

The emission factor for water supply and wastewater treatment is calculated using a conversion formula, provided by the **Holding Company for Water and Wastewater (HCWW)**. Based on the amount of energy consumed in each process, the corresponding emission factor could be obtained.



CARBON FOOTPRINT RESULTS

Total Scope 1 & 2 Emissions (mtCO ₂ e)	2,330
Scope 1 & 2 Carbon intensity (mtCO ₂ e/FTE)	1.8
Scope 1 & 2 Carbon intensity (mtCO ₂ e/m ²)	0.2
Total Scope 1, 2 & 3 Emissions (mtCO ₂ e)	3,916



EMISSIONS SUMMARY



Stationary Combustion

2

mtCO₂e



Mobile Combustion

144

mtCO₂e



Fugitive Emissions

826

mtCO₂e



Purchased electricity

1,358

mtCO₂e



Purchased goods and services

89

mtCO₂e



Fuel burning (WTT)

37

mtCO₂e



Water usage & wastewater treatment

3

mtCO₂e



Waste generated in operations

0.1

mtCO₂e



Employee Commuting

1,398

mtCO₂e



Business Travel

60

mtCO₂e



Scope 1- Direct Emissions

Emissions from sources that are owned or controlled by ADIB include:

STATIONARY COMBUSTION

Fuel Burning: Diesel

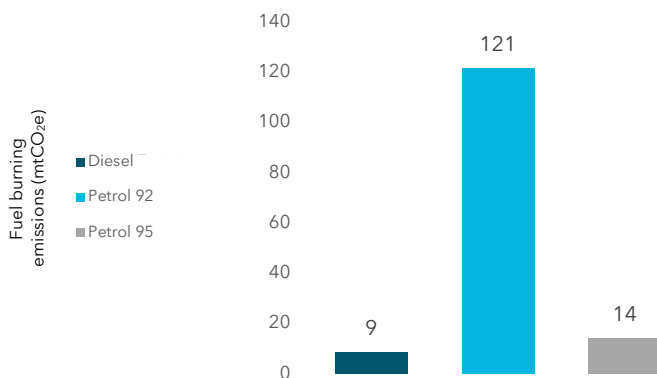
During the reporting period, the headquarters consumed **600 liters** of diesel in its generators, which resulted in **1.6 mtCO₂e** of direct emissions. Garden City Building had a larger share of the emissions with **0.9 mtCO₂e** while Omar Makram Building emitted **0.7 mtCO₂e**.

MOBILE COMBUSTION

Fuel Burning: Owned Vehicles

This activity includes fuel burned in vehicles owned by the bank's headquarters. ADIB uses three different fuel types in its owned vehicles.

- Diesel: with a consumption of **3,154 liters** which resulted in **8.5 mtCO₂e** of emissions.
- Petrol 92: with a consumption of **51,896 liters** resulting in **121.4 mtCO₂e**.
- Petrol 95: with a consumption of **5,972 liters**, which correspond to **14 mtCO₂e** emissions.



Refrigerant Leakage

Cooling the facility requires refrigerant fluids. The emissions corresponding to refrigerant fluid leakage were accounted for under scope 1. Total refrigerants used during the reporting period were **364 kg** and **52 kg** of R-22 and HFC-227ea refrigerant, respectively. This resulted in a total emission of **826 mtCO₂e**.

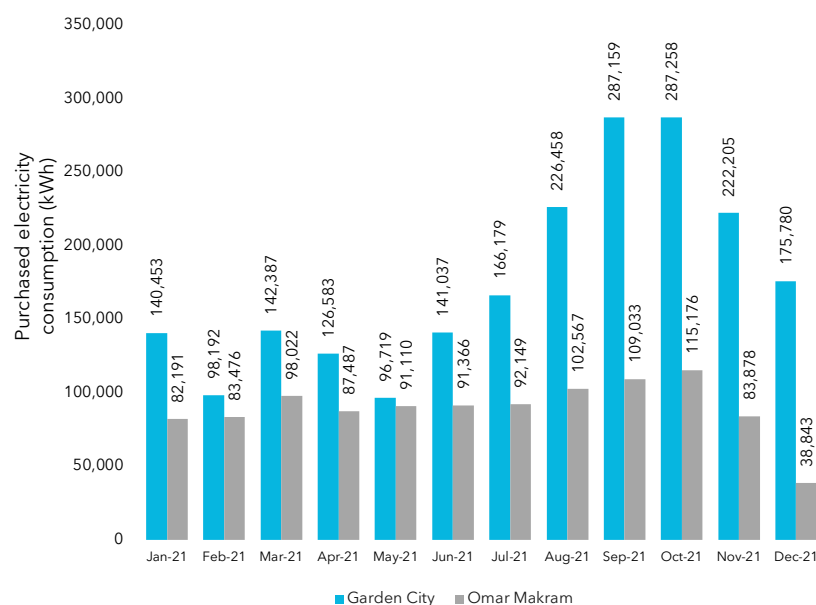
Scope 2- Indirect emissions

Scope 2 emissions accounted for 35% of total emissions in 2021.

PURCHASED ELECTRICITY

ADIB's electricity consumption for the reporting period of 2021 was **3,185,708 kWh**, resulting in a total of **1,358 mtCO₂e**.

The Garden City Building consumed **2,110,410 kWh**, resulting in **900 mtCO₂e** while the Omar Makram Building consumed **1,075,298 kWh** resulting in **458.5 mtCO₂e**.





Scope 3- Indirect Emissions

PURCHASED GOODS AND SERVICES

Office Supplies

ADIB's headquarters consumed **30,259 A4 sheets of paper** weighing a total of **75,496 kg**. This resulted in total emissions of **69.4 mtCO₂e**. ADIB also consumed **4,000 cartridges** of ink causing total emissions of **19.2 mtCO₂e**.

FUEL AND ENERGY-RELATED ACTIVITIES (NOT INCLUDED IN SCOPE 1 AND 2)

Fuel Burning on Site: Diesel (WTT)

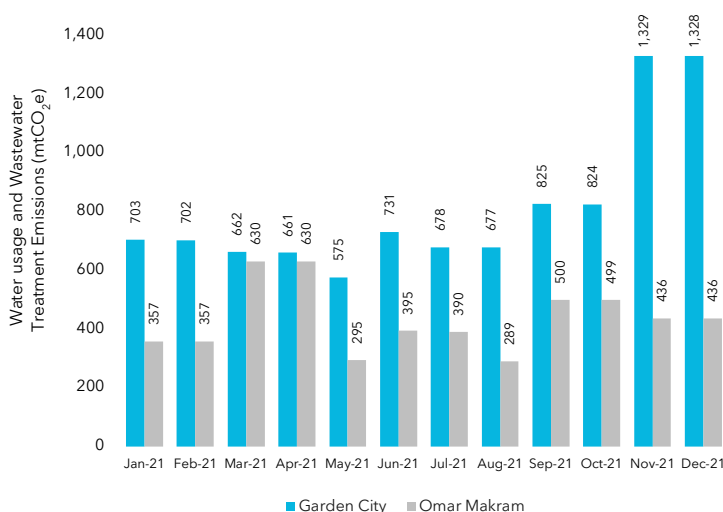
WTT emissions resulting from the consumption of diesel in owned generators during the reporting period are **0.4 mtCO₂e**.

Fuel Burning: Owned Vehicles (WTT)

WTT emissions include all greenhouse gas emissions from the production, transportation, transformation, and distribution of the fuel used to power the vehicle. WTT emissions resulting from diesel, petrol 92 and petrol 95 used in owned vehicles are as follows; **2 mtCO₂e**, **31.3 mtCO₂e** and **3.6 mtCO₂e**, respectively.

Water Usage and Wastewater Treatment

In the reporting period of 2021, ADIB's headquarters consumed a total of **14,909 m³** of water, resulting in **2.2 mtCO₂e** attributed to water usage and **0.42 mtCO₂e** attributed to wastewater treatment. Garden City Building consumed the larger share with **9,695 m³** emitting **1.45 mtCO₂e** attributed to water usage and **0.27 mtCO₂e** attributed to wastewater treatment, while Omar Makram Building consumed **5,214 m³** emitting **0.78 mtCO₂e** attributed to water usage and **0.15 mtCO₂e** attributed to wastewater treatment.



SOLID WASTE DISPOSAL

Throughout the reporting period of 2021, ADIB generated a total of **300 kg** of solid waste, which correspond to emissions of **0.14 mtCO₂e**. Garden City Building generated **225 kg** of solid waste emitting **0.11 mtCO₂e** while Omar Makram Building generated **75 kg** emitting **0.04 mtCO₂e**.

EMPLOYEES COMMUTING

ADIB employees used different transportation means to commute to and from their offices. 50 employees used rented coasters by the bank while remaining employees used other different means of transportation. Accordingly, the estimated distance traveled by ADIB's **1,275 employees** were **9,015,892 km**. This resulted in **1,106 mtCO₂e** fuel burning emissions and **292 mtCO₂e** WTT emissions. Employee commuting is the largest GHG emitting activity in all scopes with a percentage of 36%

BUSINESS TRAVEL

Air Travel

During the reporting period employees of ADIB travelled 62 domestic round trips and 1 international round trip to and from Hungary resulting in emissions - due to fuel burning of **14.75 mtCO₂e**. WTT emissions related to air travel for the same period were **1.62 mtCO₂e**.

Hotel stays

ADIB employees of both headquarters spent a total of **751 nights** in hotels, therefore resulting in total emissions of **42.4 mtCO₂e**.

Rented Cars

Throughout the reporting period rented cars were used for different business-related activities such as attending meetings and conferences. A total of **3,405.8 km** was travelled causing fuel burning emissions of **0.59 mtCO₂e** and WTT emissions of **0.17 mtCO₂e**.



Emissions summary

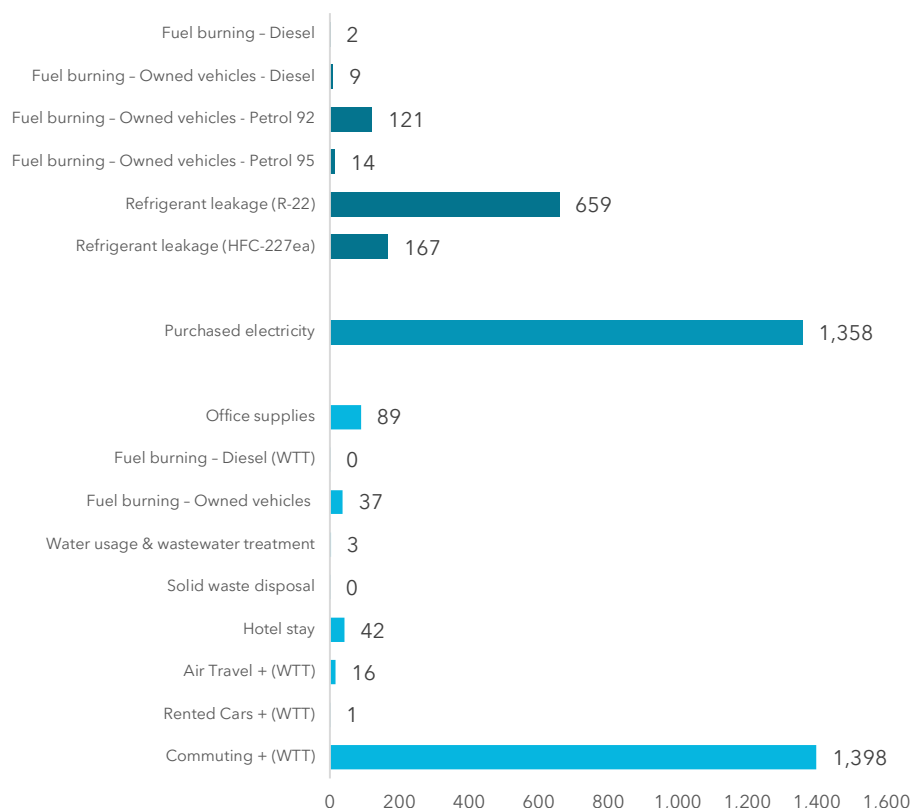
SCOPE 1 - DIRECT EMISSIONS (mtCO ₂ e)		2021	
Stationary Combustion	Fuel burning - Diesel	2	0.2%
	Fuel burning - Owned vehicles - Diesel	9	0.9%
Mobile Combustion	Fuel burning - Owned vehicles - Petrol 92	121	12%
	Fuel burning - Owned vehicles - Petrol 95	14	1%
Fugitive Emissions	Refrigerant leakage (R-22)	659	68%
	Refrigerant leakage (HFC-227ea)	167	17%
Total Scope 1 (mtCO ₂ e)		972	25%

SCOPE 2 - INDIRECT EMISSIONS (mtCO ₂ e)		2021	
Purchased Energy	Purchased electricity	1,358	35%
Total Scope 2 (mtCO ₂ e)		1,358	

Total Scope 1 & 2 Emissions	2,330	mtCO ₂ e
Scope 1 & 2 Carbon intensity	1.83	mtCO ₂ e/FTE
Scope 1 & 2 Carbon intensity	0.20	mtCO ₂ e/m ²

SCOPE 3 - INDIRECT EMISSIONS (mtCO ₂ e)		2021	
Purchased goods and services	Office supplies	89	6%
	Fuel burning - Diesel (WTT)	0.38	0.02%
Fuel and energy-related activities (not included in scope 1 and 2)	Fuel burning - Owned vehicles - Diesel	2	0.13%
	Fuel burning - Owned vehicles - Petrol 92	31	2%
	Fuel burning - Owned vehicles - Petrol 95	4	0.23%
	Water usage & wastewater treatment	3	0.17%
Waste generated in operations	Solid waste disposal	0.14	0.01%
	Hotel stay	42	3%
Business travel	Air Travel + (WTT)	16	1%
	Rented Cars + (WTT)	0.76	0.05%
Employee Commuting	Commuting + (WTT)	1,398	88%
Total Scope 3 (mtCO ₂ e)		1,586	41%

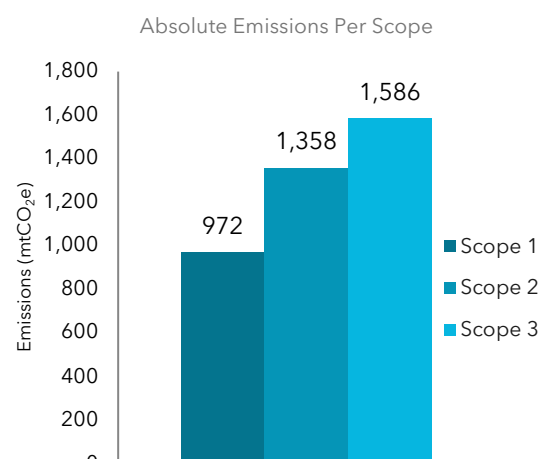
Total Scope 1, 2 & 3 Emissions (mtCO ₂ e)	3,916
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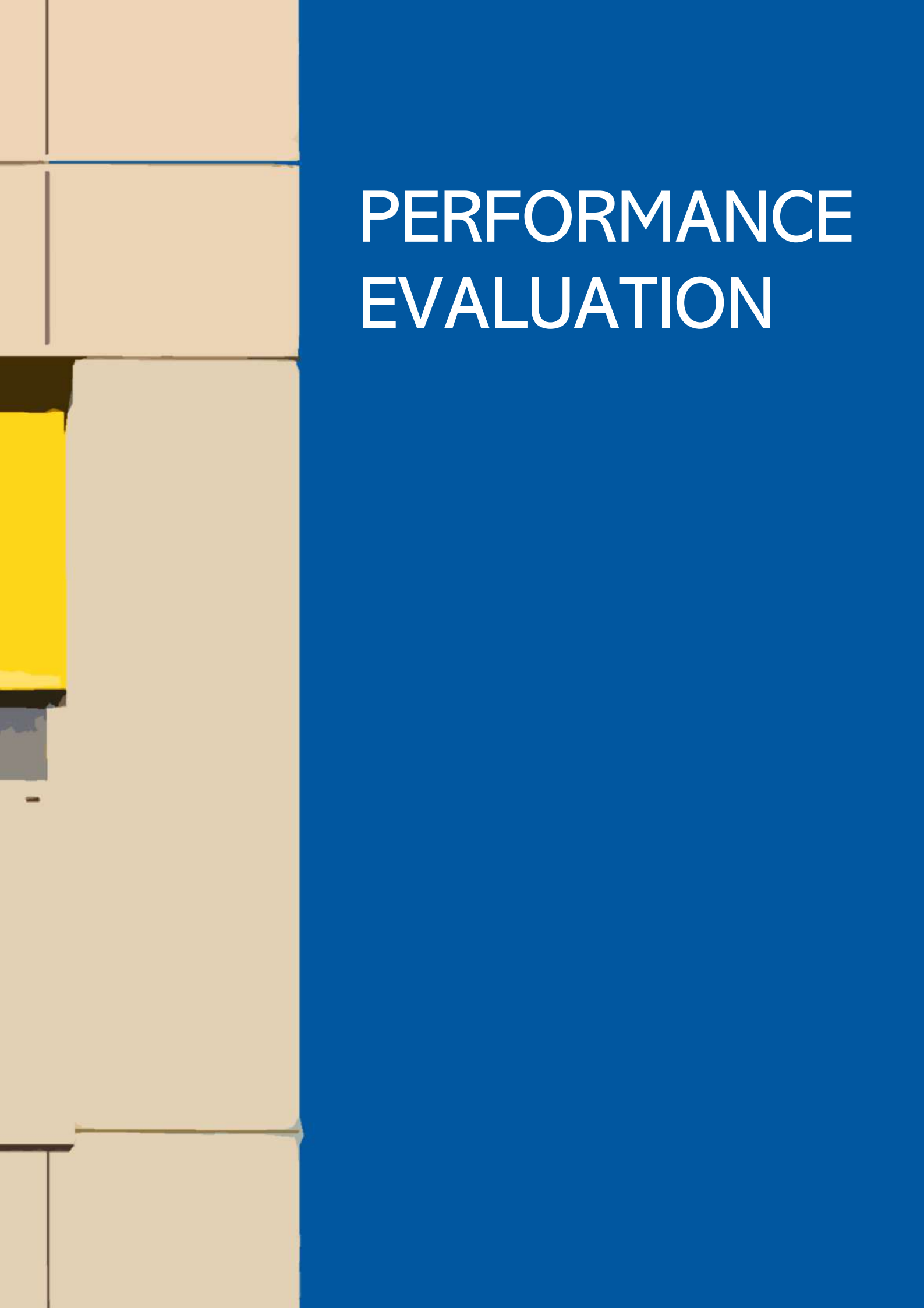


Scope 1: Refrigerants leakage (R-22) reported the largest share of GHG emissions in Scope 1, accounting to around 68% of total Scope 1 emissions.

Scope 2: Purchased energy accounts for 35% of total emissions.

Scope 3: Employee commuting represents 88% of scope 3 emissions and 36% of total emissions.





PERFORMANCE EVALUATION

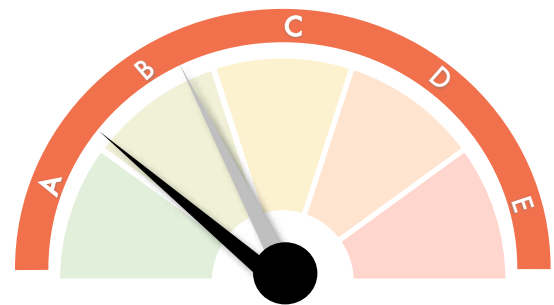


Benchmarking

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 ADIB nationally, while electricity intensity per m² is used to assess it on a wider international level.

National Benchmarking for Scope 1 & 2 Carbon Emissions

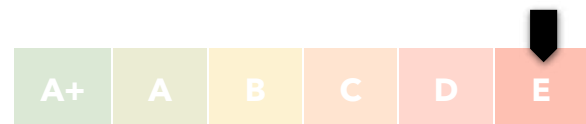
Published and unpublished data of a 20+ banks' headquarters were used to calculate the national average emission intensity (per FTE and m²). Accordingly, a methodology for a national rating has been newly developed. The below table shows ADIB's national rank compared to other headquarters in Egypt. ADIB has an emission intensity for the year 2021 of **1.83 mtCO₂e/FTE** equivalent to **0.2 mtCO₂e/m²** with a B in both categories.



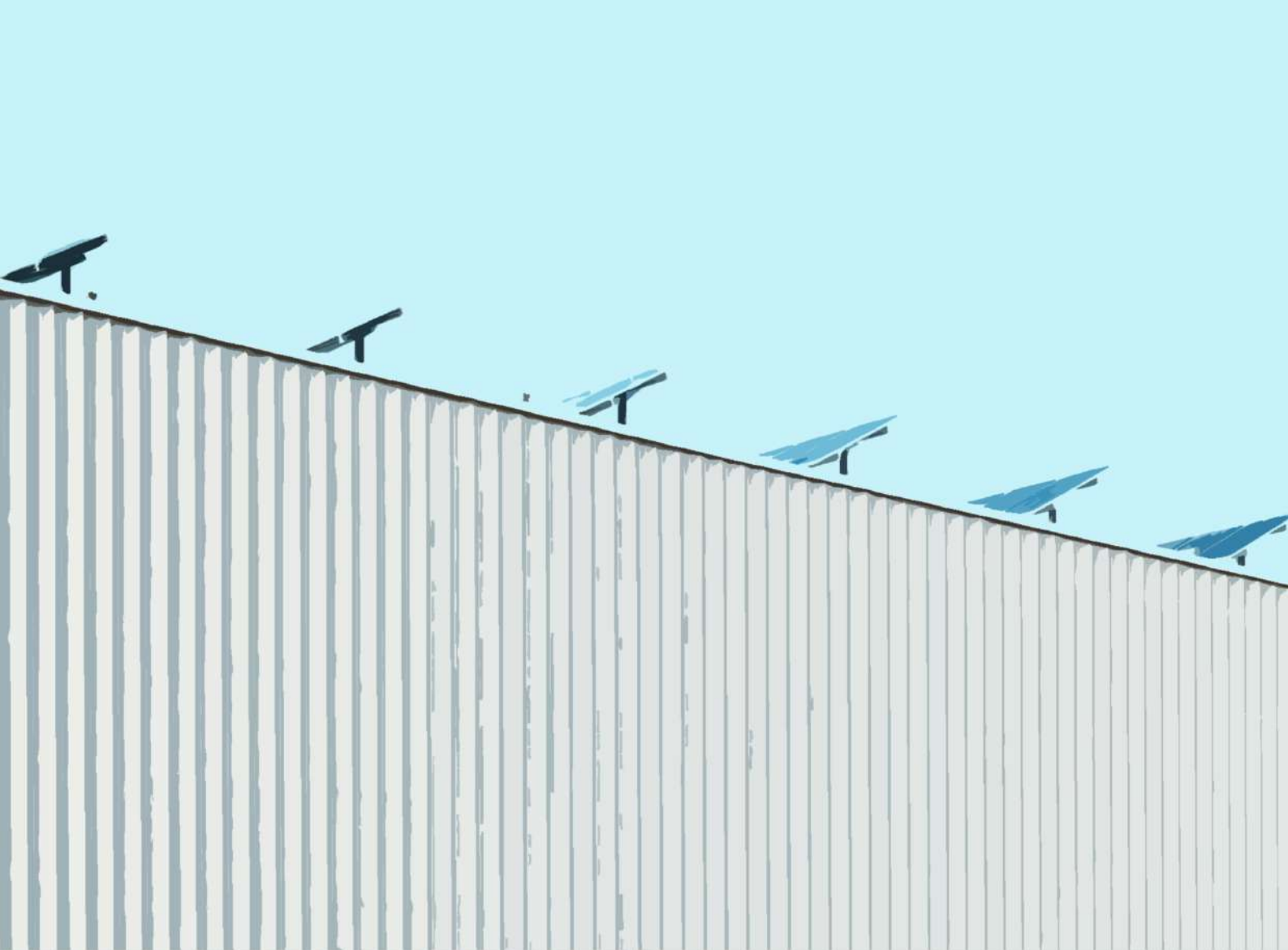
Score	Emission Intensity (mtCO ₂ e/FTE)	Emissions Intensity (mtCO ₂ e/m ²)
A	<1	<0.2
B	1-2	0.2 - 0.4
C	2-3	0.4 - 0.6
D	3-4	0.6 - 0.8
E	>4	>0.8

International Benchmarking for Electricity Performance

One of the most common types of intensity 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. ADIB has an electricity intensity of **275.8 kWh/m²**, which gives an E scoring.



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



OUR WAY FORWARD TOWARDS DECARBONIZATION

Leveraging on this very first assessment, ADIB will be able to develop more sustainable business scenarios and evaluate the future policies with a series of projects with different levels of complexity to implement. The Bank's plan towards decarbonization aims to reduce the energy consumption of the organization's operations in pursuit of reducing its overall carbon footprint. For this reason, a carbon audit has been conducted to inspect the building's environmental performance covering five categories which are shown in the adjacent table. Based on these results, ADIB will further analyze its viability and take further steps.

Category	Description
Building Construction	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, water waste, and treatment



PROJECTS

DESCRIPTION

BENEFITS

MAINTENANCE TO
AVOID
REFRIGERANTS
LEAKAGE

Conduct regular maintenance at head office utilizing refrigerants to identify any leakages and ensure proper reparations instead of loss of refrigerant leakages since refrigerant leakage reported the largest share of GHG emissions in scope 1, accounting to around 68% of total Scope 1 emissions.

- Reduced indirect costs/Increased profit
- Identification of any leakages and avoid higher costs of reparation at a later stage
- Increased safety of workers

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 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

SUSTAINABILITY
POLICIES

Introduce and adopt sustainability policies for ADIB business & activities, with commitment to practices and standards to promote environmentally and socially responsible operations, including developing low-carbon business travel policy.

- Enhanced sustainability performance with reduced environmental impacts



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 due dates.

- Reduced long-term and short-term carbon footprint

WATER SYSTEM
EFFICIENCY

Water efficiency audit for all facilities to achieve reduced water usage and consumption. Install low flow or shut-off faucets in ADIB's Garden City building.

- Reduced indirect costs/Increased profit
- Less water use contributes positively to a society going towards water scarcity

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
- Less pollution and enhanced air quality
- Increased safety of drivers and workers utilizing the equipment
- Possible time savings and well-being of drivers

LIGHTING SYSTEMS
EFFICIENCY

Install occupancy and day light sensors.
Use daylight more efficiently.

- Reduced electricity consumption and cost

WASTE
MANAGEMENT

Adopt and implement an integrated 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



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

ENERGY AUDIT AND
ENERGY
MANAGEMENT
SYSTEM (EMS)

Adopt an automatic energy system to assist in identifying opportunities to regularly monitor ADIB energy use.

- Increased building efficiency & performance

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



CARBON OFFSETS

Invest in environmental projects to compensate for the share of ADIB emissions.

- Reduced overall carbon footprint



RENEWABLE ENERGY

Utilize renewable energy sources (e.g. solar PV).

- Reduced indirect cost/ increased profit
- Less dependance on grid electricity and diesel generators, with reduced risk of power outage



Easy: Low cost & time to implement



Average: Medium cost & time to implement



Hard: High cost & time to implement

Annex



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.
CO₂e	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. Besides the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.
GHG Protocol	Greenhouse Gas Protocol is a uniform methodology used to calculate the carbon footprint of an organization.
GWP	Global Warming Potential is 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) 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	Direct 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	Indirect 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	Indirect emissions resulting from other activities that are not covered in scope 1 and 2. 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 and Quality

All the information used to compute the various footprints comes from ADIB's database. The data quality has been evaluated and presented below, with data from each business sector evaluated independently to enable for better analysis and display of resolution and further explanations. 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.

Scp	Activities	Data	Resolution
1	Fuel burning - Diesel	600 liters	Average monthly consumption data in liters were used per facility.
1	Fuel burning - Owned vehicles - Diesel	3,154 liters	Consumption data were recorded monthly in liters used for both facilities combined. Tracking system is recommended to record data for each building separately.
1	Fuel burning - Owned vehicles - Petrol 92	51,896 liters	Consumption data were recorded monthly in liters used for both facilities combined. Tracking system is recommended to record data for each building separately.
1	Fuel burning - Owned vehicles - Petrol 95	5,972 liters	Consumption data were recorded monthly in liters used for both facilities combined. Tracking system is recommended to record data for each building separately.
1	Refrigerant leakage (R-22 and HFC-227ea)	416 kg	Data on the number and sizes of cylinders were provided per facility on a yearly basis.
2	Purchased electricity	3,185,708 kWh	Consumption data were recorded monthly in kWh per facility.
3	Paper consumption	75,496 kg	Data on the quantity of paper packs were recorded on a yearly basis for both facilities combined. Tracking system is recommended to record data for each building separately.
3	Other supplies	4,000 toners	Data on the number of cartridges were recorded on a yearly basis for both facilities combined. Tracking system is recommended to record data for each building separately.
3	Water usage & wastewater treatment	14,909 m ³	Consumption data were recorded monthly in m ³ per facility.
3	Office solid waste disposal	300 kg	Daily sample was used to estimate the total amount of waste generated annually per facility.
3	Air Travel + (WTT)	13,392 km	Data provided on a yearly basis of total trips for the two facilities combined. Tracking system is recommended to record data for each building separately.
3	Hotel stays	751 nights	Total number of hotel nights for the two facilities combined. Tracking system is recommended to record data for each building separately.
3	Rented Cars + (WTT)	3,406 km	Number of rented cars and destination of each has been provided on yearly basis for the two facilities combined. Tracking system is recommended to record actual commuting data per facility.
3	Commuting + (WTT)	9,015,892 km	Tracking system is recommended to record actual commuting data per facility as in this reporting period commuting emissions were calculated based on assumptions.



Good - No changes recommended



Satisfactory - Could be improved



Relevancy and Exclusions

#	Activity	Description	Emissions (mtCO ₂ e)	Status
1	Purchased goods and services	Contains only purchased paper and ink and aiming for larger coverage of purchased products and services.	88.6	Relevant, calculated
2	Capital goods	Emissions from embodied carbon in the properties owned by ADIB, such as buildings, cars, etc.	N/A	Relevant, not yet calculated
3	Fuel and energy-related activities (not included in scope 1 and 2)	Includes WTT from fuel burning and transportation, as well as energy consumed to supply municipal water and treat it (Diesel WTT, Owned Cars WTT, Municipal Water usage, WWT).	40	Relevant, calculated
4	Upstream transportation and distribution	Emissions from ADIB's internal courier shipment and 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.	0.1	Relevant, calculated
6	Business travel	Emissions from air travel and hotel stays are included under this category, as well as emissions from rented cars.	60	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).	1,398	Relevant, calculated
8	Upstream leased assets	This category is not relevant to ADIB's business and therefore has been excluded.	N/A	Not relevant, explanation provided
9	Downstream transportation	Emissions from ADIB'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	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 included 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 ADIB'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: Diesel

Average monthly consumption of the amount of diesel used by ADIB in terms of liters used.

$$\text{Fuel burning: Diesel emissions (mtCO}_2\text{e)} = \text{Fuel consumption (l)} \times \text{EF (mtCO}_2\text{e/l)}$$

Mobile Combustion

Fuel Burning: Owned Vehicles

For ADIB's owned vehicles, the database was used to determine fuel type and fuel consumption in liters. These data were used to calculate the emissions using the below equation.

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

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. Some estimations were made by ADIB to provide refrigerant data.

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

SCOPE 2: INDIRECT EMISSIONS

Purchased Electricity

Emissions from purchased electricity are the product of the national grid emission factor and the annual electricity consumption. The electricity consumption in ADIB 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 and services

Office supplies

Purchased goods are the commodities used by the different sectors. For the headquarters, 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. Data provided was for the two buildings combined, data needs to be specified for each building.

$$\begin{aligned}\text{Paper emissions (mtCO}_2\text{e)} &= \text{Weight of paper (kg)} \times \text{EF (mtCO}_2\text{e/kg)} \\ \text{Ink emissions (mtCO}_2\text{e)} &= \text{Number of cartridges (units)} \times \text{EF of each cartridge (mtCO}_2\text{e/unit)}\end{aligned}$$

Fuel and energy-related activities (not included in scope 1 and 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 diesel & petrol consumed by ADIB's headquarters 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.

$$\begin{aligned}\text{Energy consumption (Wh)} &= \text{Water supply/ Wastewater (m}^3\text{)} \times \text{Conversion formula (Wh/m}^3\text{)} \\ \text{Water supply \& treatment (mtCO}_2\text{e)} &= \text{Energy consumption (kWh)} \times \text{EF (mtCO}_2\text{e/kWh)}\end{aligned}$$

Waste generated in operations

Solid waste disposal

Emissions from solid waste disposal are the product of the emission factor for each waste type and the quantity of waste for each type in addition to the waste fate. (i.e., the transportation to the landfill and the landfilling procedure were included in the emission factor of the landfilled waste).

$$\text{Solid Waste Emissions/ Shredded Paper (mtCO}_2\text{e)} = \text{Quantity of waste/type (tons)} \times \text{EF/ type of waste (mtCO}_2\text{e/tons)}$$

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 worksite. 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 travelled.

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



Business Travel

Hotel stays

Locations, number of hotel rooms and number of nights were acquired from ADIB's data records. The emission factors per hotel night for each country, including UK and non-UK nations, are provided by DEFRA. Data provided was for the two buildings combined, data needs to be specified for each building

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

Air Travel + (WTT)

Number of flights carried out in 2021 with their route have been retrieved from ADIB's data records. The airport distance calculator was used to determine the flight distances. The emissions factors were based on typical passenger flights to and from non-UK nations and taken from DEFRA. Data provided was for the two buildings combined, data needs to be specified for each building separately in the upcoming assessments.

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

Rented Cars

Emissions resulting from business travel rented vehicles fall under scope 3 as they are not owned by the bank. The emissions are calculated by multiplying the traveled distance per passenger by the corresponding emission factor. The following formula is used to calculate the exact emission factor in mtCO₂e.

$$\text{Business Travel Emissions (mtCO}_2\text{e)} = \text{travelled distance} \times \text{Number of passengers (p.km)} \times \text{EF (mtCO}_2\text{e/p.km)}$$



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



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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COMMUNITY MEMBER



ADIB



مصرف أبوظبي
الإسلامية

