

aiBANK

بنك الاستثمار العربي
ARAB INVESTMENT BANK



aiBank
CARBON FOOTPRINT REPORT
2021

ABOUT THIS REPORT

This report details the carbon footprint generated by aiBank's headquarters building in 2021 and covers Scope 1, 2 and selected Scope 3 emissions.

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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ACRONYMS AND ABBREVIATIONS

aiB	Arab Investment 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

At the Arab Investment Bank (aiBank), we are well aware of the present and future impacts of climate change. The Paris agreement has set an important global agenda for action on climate change and we recognize it as an immense opportunity for our bank to innovate towards a more sustainable future. We aim to use our knowledge of our environmental impact to better develop more sustainable business scenarios and evaluate our future policies. The Carbon Footprint Analysis uniquely approaches the issue of environmental sustainability in reference to the overall emissions related to our operations.




This report details the carbon footprint generated by aiBank's headquarters, in the Sama tower building, for the reporting period 2021. In conformance with the GHG Protocol Corporate Standard and the CBE mandate, only Scope 1 (direct GHG emissions from sources owned or controlled by aiBank), and Scope 2 emissions (indirect GHG emissions associated with the consumption of purchased electricity) are mandatory to report. Nevertheless, aiBank has decided to conduct its carbon footprint assessment to include selected Scope 3 emissions (other indirect GHG emissions from activities not included in Scope 1 and 2), in addition to WTT emissions from fuel activities.

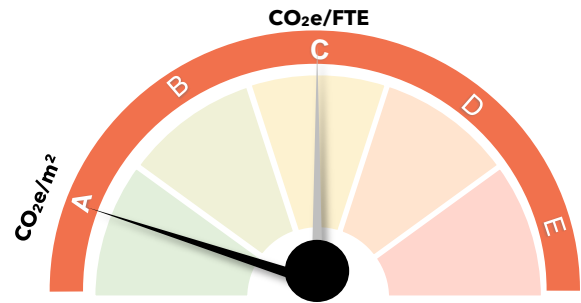
The protocols & standards followed in this assessment are specially developed for accounting and reporting carbon footprint including The Greenhouse Gas Protocol Guidelines, the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories (with 2019 Refinements) and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

PERFORMANCE EVALUATION

Based on the GHG quantification results of 20+ national banks, a newly developed national benchmarking methodology and rating system for the banking sector, has been used in an attempt to assess resource utilization and performance. Based on this rating system, aiBank has scored a **"A"** for its square meter-based carbon intensity **0.16 mtCO₂e/m²**, and an **"C"** for its full-time employee intensity of **2.32 mtCO₂e/FTE**.

BOUNDARIES AND CFP RESULTS

 <p>1 Headquarters Building 8, AbdelKhalik Tharwat St.</p>	 <p>10,400 m² Building Gross Floor Area</p>	 <p>700 FTE Full Time Equivalent</p>
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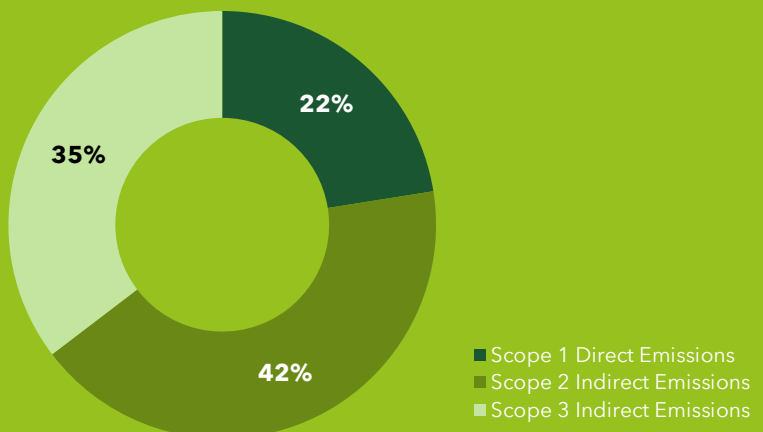
Benchmarking allowed aiBank to determine industry best practices and identify further opportunities for improvement. With the results of this assessment and through a carbon audit of its headquarters, aiBank was able to develop a decarbonization plan to reduce its overall carbon emissions.

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.

TOTAL EMISSIONS

<p>564 mtCO₂e</p>	<p>Scope 1 (Direct Emissions)</p> <ul style="list-style-type: none"> - Stationary combustion - Mobile combustion - Fugitive emissions
<p>1,057 mtCO₂e</p>	<p>Scope 2 (Indirect Emissions)</p> <ul style="list-style-type: none"> - Purchased electricity
<p>887 mtCO₂e</p>	<p>Scope 3 (Indirect Emissions)</p> <ul style="list-style-type: none"> - Purchased goods and services - Fuel and energy related activities (Not included in Scope 1 and 2) - Waste generated in operations - Employee commuting - Business Travel

2,508 mtCO₂e



INTRODUCTION

Climate change is a grave issue that we are dealing with and is already impacting human health. Changes in weather and climate patterns can put lives at risk. It has the power to negatively affect 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). Banks have the power to change and influence change in society towards a greener future by incorporating climate and environmental risks into their business operations, both in a systematic manner and with a long-term perspective.

aiBank, has responsibilities that are not limited to achieving success in the banking market only but should include conducting business from a sustainable perspective through the creation of progressive policies and procedures.

aiBank 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 aiBank to benchmark performance indicators and evaluate progress over time with GHG emissions reduction targets.

This report presents aiBank's 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

aiBank was established in 1974 as an investment and commercial bank under the supervision of the Central Bank of Egypt (CBE). It provides all types of banking services to individuals through different retail banking products, investment, and treasury services, as well as

Islamic banking services for which a solid legislative committee is dedicated to work according to Islamic banking standards. That is besides syndicated loans provided to companies, as a key driver to achieving socio-economic development. aiBank provided its services to all its clients through 31 branches spread all over Egypt, yet, it is working on expanding geographically, and opening new branches. In addition, aiBank is expanding its ATM network to cover most vital places. Maintaining client satisfaction through providing distinctive services and enhancing performance is one of aiBank's main goals. aiBank is also focusing on giving back to the society whether economically, socially, or environmentally.

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

The following headquarters with its corresponding boundaries fall under aiBank's organizational boundaries:

Sama Tower Building



8, AbdelKhalik Tharwat, St., Cairo



Building Gross Floor Area

10,400 m²



Employees

700 FTE

* Full-time equivalents (FTE) include full time employees, such as managers, staff, and custodial staff

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 aiBank and therefore, 2021 will be considered the base year to which all future years will be referenced unless significant changes in the inventory boundaries are witnessed.

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 (not included in Scope 1 and 2). In conformance with the GHG Protocol Corporate Standard and the CBE mandate, only Scope 1 and Scope 2 emissions are mandatory to report. Nevertheless, aiBank has decided to conduct its carbon footprint assessment to include some Scope 3 emissions.

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

SCOPE 1

Stationary combustion

Fuel burning - Diesel Generators

Mobile combustion

Owned vehicles

Fugitive emissions

Refrigerants leakage

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

Business travel

OVERALL

METHODOLOGY

Followed Protocols & Standards

To obtain the most accurate carbon footprint assessments aiBank 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. 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 (CO_{2e}). aiBank bank applied 100-year GWPs to all emissions data in this inventory in order to calculate total emissions, in metric tons carbon dioxide equivalent (mtCO_{2e}). 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 mtCO_{2e}, 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 mtCO_{2e}. 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 (mtCO_{2e}). The unit CO_{2e} 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 (CO_{2e}) emissions generated by a unit weight, volume, distance, or duration of the activity, e.g., CO_{2e}/liter fuel consumed, CO_{2e}/km driven or CO_{2e}/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)	1,621
Scope 1 & 2 Carbon intensity (mtCO ₂ e/ FTE)	2.32
Scope 1 & 2 Carbon intensity (mtCO ₂ e/ m ²)	0.16
Total Scope 1, 2 & 3 Emissions (mtCO ₂ e)	2,508

EMISSIONS SUMMARY




Stationary Combustion

0.4
mtCO₂e




Mobile Combustion

191
mtCO₂e



Fugitive Emissions

373
mtCO₂e



Purchased electricity

1,057
mtCO₂e




Purchased goods and services

29
mtCO₂e



Fuel burning (WTT)

49
mtCO₂e



Water usage & wastewater treatment

3
mtCO₂e




Waste generated in operations

30
mtCO₂e



Employee Commuting

767
mtCO₂e



Business Travel

9
mtCO₂e

Scope 1- Direct Emissions

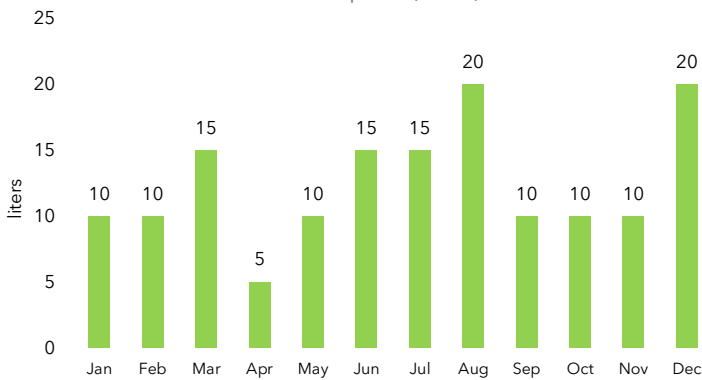
Emissions from sources that are owned or controlled by aiBank include:

STATIONARY COMBUSTION

Fuel Burning: Diesel

On-site emergency generators at the Headquarters building use diesel fuel to meet electrical demands in the event of a power outage. During the reporting period, the headquarters consumed **150 liters** of diesel in its generators, which resulted in **0.4 mtCO_{2e}** of direct emissions.

Diesel Consumption (liters)



MOBILE COMBUSTION

Fuel Burning: Owned Vehicles

This activity includes direct emissions from owned vehicles.

aiBank uses petrol 92 as fuel in its owned vehicles. The total amount of fuel consumed by all owned vehicles account to a total of **81,600 liters** of petrol 92 fuel, resulting in **191 mtCO_{2e}** of emissions.

FUGITIVE EMISSIONS

Refrigerant Leakage

Total consumption of refrigerants during the reporting period were **206 kg** of R-22 refrigerant, resulting in total emission of **373 mtCO_{2e}**.

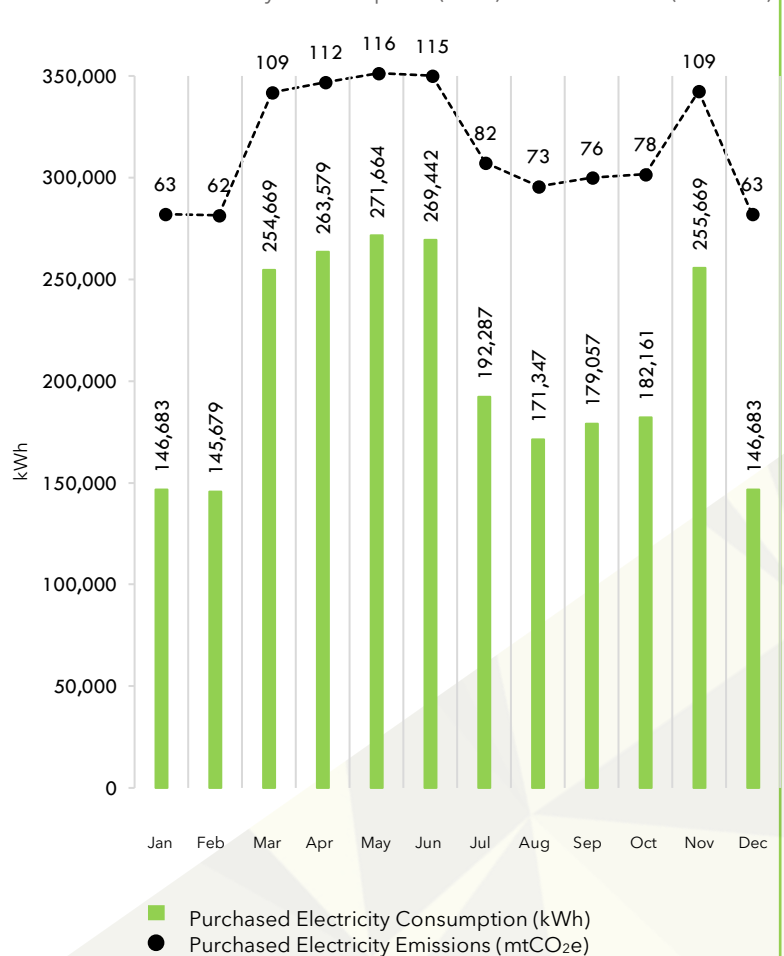
Scope 2- Indirect emissions

Scope 2 emissions accounted for 42% of total emissions in 2021.

PURCHASED ELECTRICITY

aiBank's electricity consumption for the reporting period of 2021 was **2,478,920 kWh**, resulting in total emissions of **1,057 mtCO_{2e}**.

Purchased Electricity Consumption (kWh) and Emissions (mtCO_{2e})



Scope 3- Indirect Emissions

PURCHASED GOODS AND SERVICES

Office Supplies

aiBank's headquarters consumed **12,000 packs** of A4 paper weighing a total of **29,940 kg**, and **50 packs** of A3 paper weighing **250 kg**. This resulted in total emissions of **27.5 mtCO_{2e}**. aiBank also consumed **295 cartridges** of ink causing total emissions of **1.4 mtCO_{2e}**.

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

WTT emissions include all greenhouse gas emissions from the production, transportation, transformation, and distribution of the fuel used to power the vehicle. aiBank decided to include its WTT emissions to capture the maximum climate impacts from fuel burning activities

Fuel Burning on Site: Diesel (WTT)

WTT emissions resulting from the consumption of diesel in owned generators during the reporting period are **0.09 mtCO_{2e}**.

Fuel Burning: Owned Vehicles (WTT)

WTT emissions resulting from petrol 92 used in owned vehicles are **49 mtCO_{2e}**.

Water Usage and Wastewater Treatment

In the reporting period of 2021, aiBank's headquarters consumed a total of **14,952 m³** of water, resulting in **2.2 mtCO_{2e}** attributed to water usage and **0.4 mtCO_{2e}** attributed to wastewater treatment.

SOLID WASTE DISPOSAL

Throughout the reporting period of 2021, aiBank's headquarters building generated a total of **62,400 kg** of office solid waste, which correspond to **29 mtCO_{2e}** of emissions. The headquarters building also generated a total of **26,400 kg** of shredded paper, which generated only **0.6 mtCO_{2e}**.

EMPLOYEES COMMUTING

Throughout the reporting period 700 employees commuted to and from the headquarters. A total distance of **4,949,901 km** was traveled by employees during 2021, resulting in emissions of **767 mtCO_{2e}** including WTT emissions.

BUSINESS TRAVEL

Air Travel

During the reporting period employees of aiBank's headquarters travelled 3 domestic round trips and 1 international round trips to and from Dubai, resulting in emissions due to fuel burning of **3.7 mtCO_{2e}**. WTT emissions related to air travel for the same period of time were **0.4 mtCO_{2e}**.

Hotel stays

aiBank employees spent a total of **88 nights** in hotels, therefore resulting in total emissions of **5 mtCO_{2e}**.



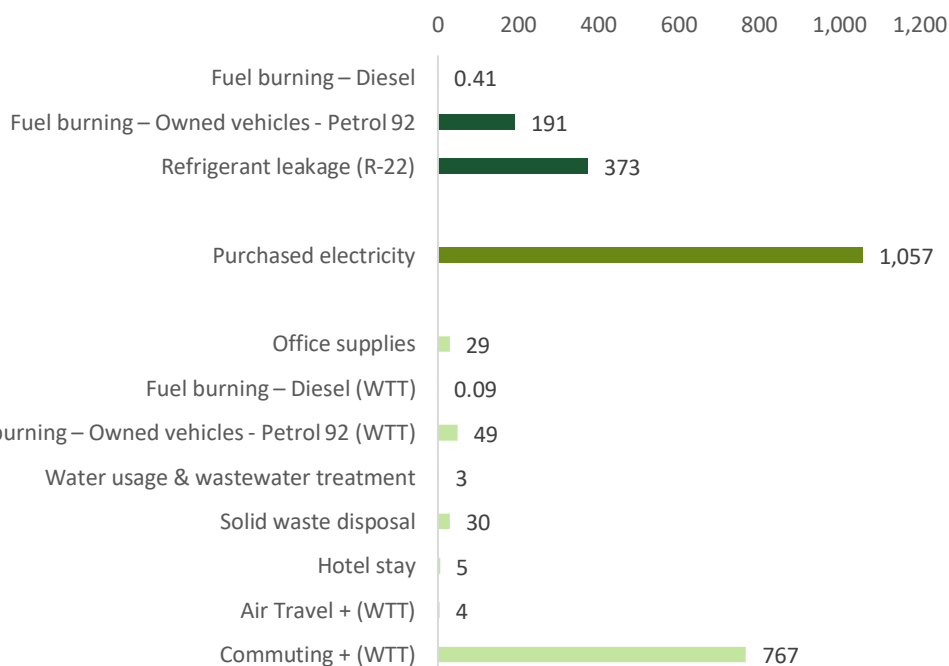
Emissions summary

SCOPE 1 – DIRECT EMISSIONS (mtCO ₂ e)			2021	
Stationary Combustion	Fuel burning – Diesel	0.41	0.07%	22%
Mobile Combustion	Fuel burning – Owned vehicles - Petrol 92	191	34%	
Fugitive Emissions	Refrigerant leakage (R-22)	373	66%	
Total Scope 1 (mtCO ₂ e)		564		

SCOPE 2 – INDIRECT EMISSIONS (mtCO ₂ e)			2021	
Purchased Energy	Purchased electricity	1,057	42%	
Total Scope 2 (mtCO ₂ e)		1,057		

Total Scope 1 & 2 Emissions (mtCO ₂ e)	1,621
Scope 1 & 2 Carbon intensity (mtCO ₂ e/FTE)	2.32
Scope 1 & 2 Carbon intensity (mtCO ₂ e/m ²)	0.16

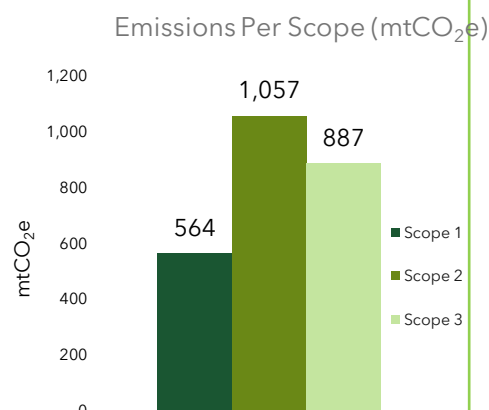
SCOPE 3 – INDIRECT EMISSIONS (mtCO ₂ e)			2021	
Purchased goods and services	Office supplies	29	3%	35%
	Fuel burning – Diesel (WTT)	0.09	0.01%	
Fuel and energy-related activities (not included in Scope 1 and 2)	Fuel burning – Owned vehicles - Petrol 92 (WTT)	49	6%	
	Water usage & wastewater treatment	3	0.30%	
	Waste generated in operations	Solid waste disposal	30	
Business travel	Hotel stay	5	1%	
	Air Travel + (WTT)	4	0.47%	
Employee Commuting	Commuting + (WTT)	767	86%	
Total Scope 3 (mtCO ₂ e)		887		
Total Scope 1,2 and 3		2,508		



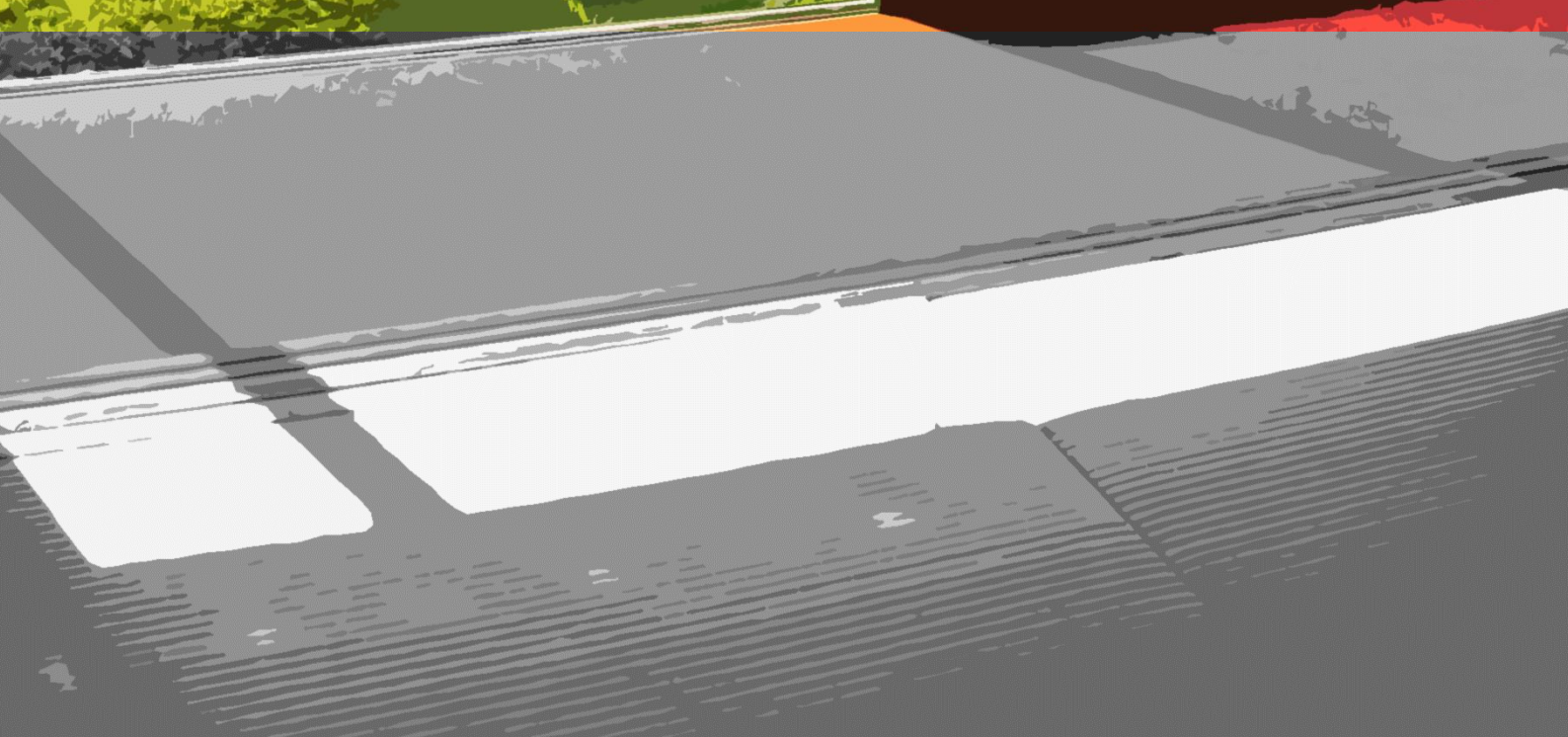
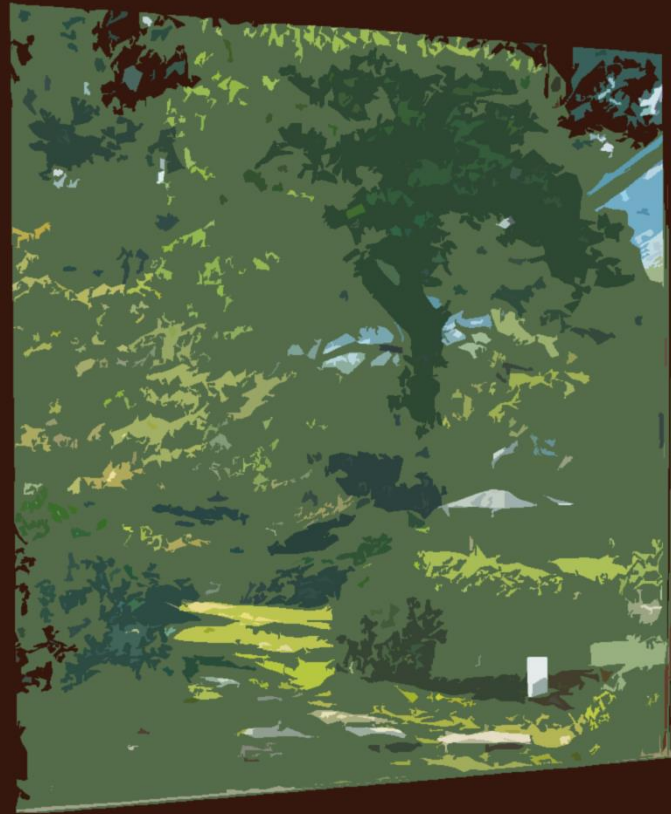
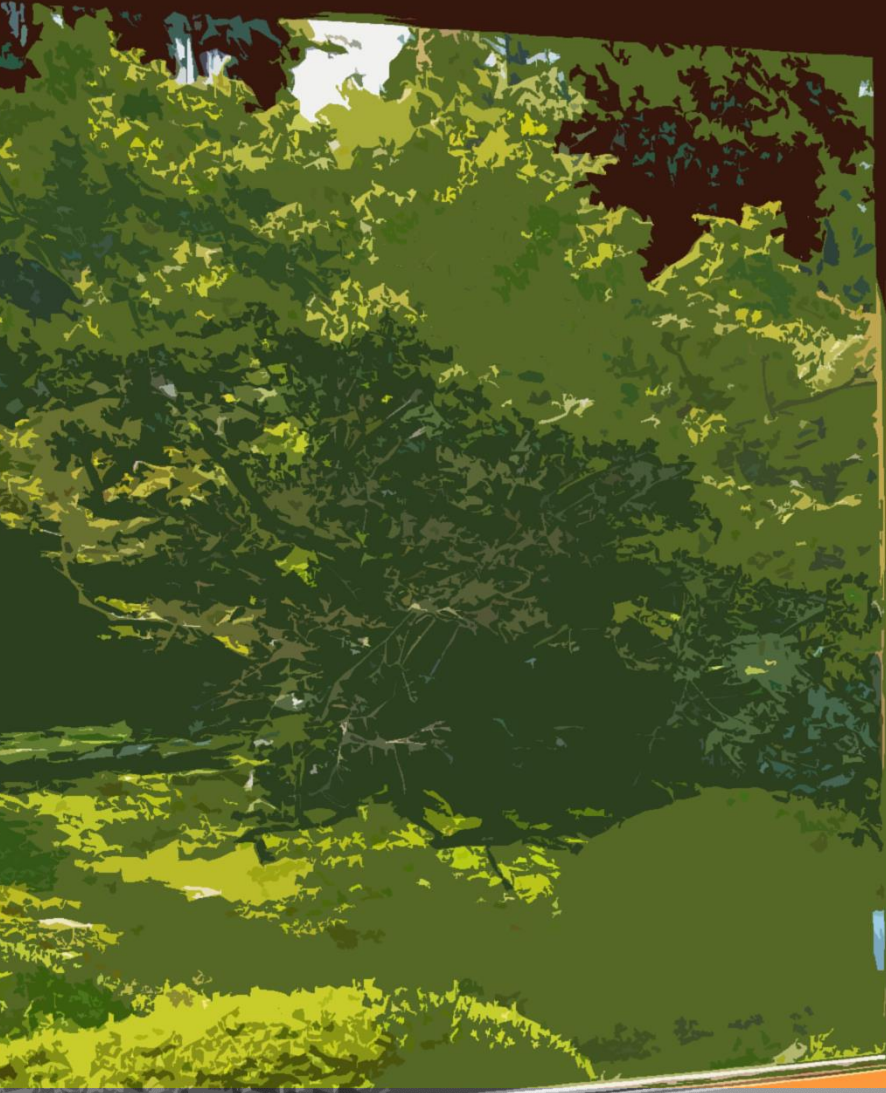
Scope 1: Refrigerants leakage (R-22) reported the largest share of GHG emissions in Scope 1, accounting to around 66% of total Scope 1 emissions.

Scope 2: Purchased electricity accounts for 42% of total emissions.

Scope 3: Employee commuting represents 86% of Scope 3 emissions.



PERFORMANCE EVALUATION

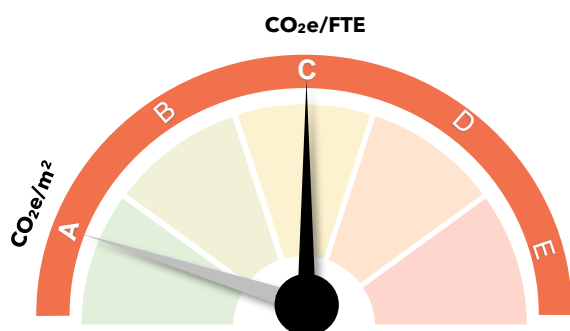


Benchmarking

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

National Benchmarking for Scope 1 and 2 Emissions

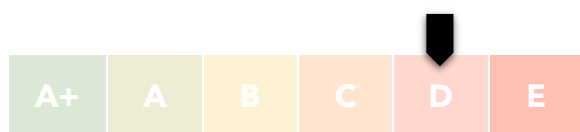
Based on the GHG quantification results of 20+ national banks, Masader¹ has developed a national benchmarking methodology and rating system for Egypt's banking sector, in an attempt to assess resource utilization and performance. The below table shows aiBank's national rank compared to other banks' headquarters in Egypt. aiBank has an emission intensity for the year 2021 of **0.16 mtCO₂e/m²** equivalent to **2.32 mtCO₂e/FTE** and scored a "A" and an "C" score, respectively.



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 research conducted on international banks and office buildings, a performance assessment criterion has been developed¹, as indicated in the below table. Based on this criterion, aiBank scored a "D" with an electricity intensity of **215.6 kWh/m²**.



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

¹ Source: Masader Environmental Solutions and Energy Services (www.be-masader.com)

TOWARDS CARBON REDUCTION
















Decarbonization Plan


The knowledge of the impact obtained from this assessment helps us develop more sustainable business scenarios and evaluate the future policies with a series of projects with different levels of complexity to implement. The decarbonization plan aims to reduce the energy consumption of an organization's operations in pursuit of reducing its overall carbon footprint. To develop a customized decarbonization plan, a carbon audit has been conducted to inspect the building's environmental performance. This audit mainly assesses five categories which are shown in the adjacent table.


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


Areas of improvement have been identified through the carbon audit. Subsequently, a customized decarbonization list of actions has been crafted for aiBank. In the future feasibility of selected projects will be studied, and its critical aspects will be analyzed to determine its viability; according to which the necessary steps further will be taken.

Project	Description	Benefits
Lighting Systems Efficiency 	Install occupancy and day light sensors, ideally integrated within a building management system. Use daylight more efficiently.	-Reduced electricity consumption and cost
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 66% of total Scope 1 emissions.	<ul style="list-style-type: none"> - 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. External shadings need to be cleaned regularly, as entered daylight is reduced due to accumulated dirt.	<ul style="list-style-type: none"> - 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 aiBank business & activities, with commitment to practices and standards to promote environmentally and socially responsible operations, incl. 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 auto shut-off faucets.	<ul style="list-style-type: none"> - Reduced indirect costs/Increased profit - Less water use contributes positively to a society going towards water scarcity

	Maintenance of Transport fleet 	<p>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</p>	<ul style="list-style-type: none"> - 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
	Bank cards 	<p>Design an innovative system in which expired banks cards are collected, and its plastic components are recycled.</p>	<ul style="list-style-type: none"> -Material Circularity -Waste reduction and allowing for segregation, accurate quantification, and reuse/recycling/recovery -Value recovery
	Green supply chain 	<p>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.</p>	<ul style="list-style-type: none"> -Compliance with international guidelines -Potential for both short-term and long-term carbon footprint reduction
	Carbon offsets 	<p>Invest in environmental projects to compensate for the share of aiBank emissions.</p>	<ul style="list-style-type: none"> - Reduced overall carbon footprint
	Waste Management 	<p>Adopt implement an integrated waste management system (in accordance with international best practices such as ISO 14001).</p>	<ul style="list-style-type: none"> - Material circularity. - Waste reduction and allowing for segregation, accurate quantification, and reuse/ recycling/ recovery.
	Renewable Energy 	<p>Utilize renewable energy sources (e.g. solar PV).</p>	<ul style="list-style-type: none"> -Reduced indirect cost/ increased profit -Less dependance on grid electricity and diesel generators, with reduced risk of power outage

 Hard: High cost & time to implement

 Average: Medium cost & time to implement

 Easy: Low 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 aiBank'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	150 liters	Consumption data was recorded as a total annual value.
1	Fuel burning - Owned vehicles - Petrol 92	81,600 liters	Consumption data was recorded as a total annual value.
1	Refrigerant leakage (R-22)	206 kg	Consumption data was recorded as a total annual value.
2	Purchased electricity	2,478,920 kWh	Monthly consumption of electricity was retrieved from electricity invoices.
3	Paper consumption	30,190 kg	Data on the quantity of paper packs were recorded on a yearly basis.
3	Other supplies	295 toners	Data on the number of cartridges were recorded on a yearly basis.
3	Water usage & wastewater treatment	14,952 m ³	Consumption data was recorded as a total annual value.
3	Solid waste disposal	88,800 kg	Average quantity and weight of office solid waste bags and shredded paper generated daily were used to estimate the annual solid waste generation
3	Air Travel + (WTT)	7,780 km	Data on number of passengers, the flight route and flight distance were recorded on a yearly basis.
3	Hotel stays	88 nights	Data on number of residents, country of stay, and total nights were recorded on a yearly basis.
3	Commuting + (WTT)	4,949,901 km	Tracking system is recommended for future reporting periods to record actual commuting data 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.	29	Relevant, calculated
2	Capital goods	Emissions from embodied carbon in the properties owned by aiBank, 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 wastewater generated from the bank's operations.	52	Relevant, calculated
4	Upstream transportation and distribution	Emissions from aiBank'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.	30	Relevant, calculated
6	Business travel	Emissions from air travel and hotel stays are included under this category.	9	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).	767	Relevant, calculated
8	Upstream leased assets	This category is not relevant to aiBank's business and therefore has been excluded.	N/A	Not relevant, explanation provided
9	Downstream transportation	Emissions from aiBank'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 aiBank'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

Diesel fuel is consumed by the generators that supply the head quarter's electricity demands in case of electricity cutout and emergency. Average monthly consumption of the amount of diesel used by aiBank 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 aiBank'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 were used to re-charge the cooling systems used in the building in order to compensate for the leakage that happened during the operating year. The type of refrigerants used was R-22.

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

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 aiBank was obtained from the database in kWh. The total electricity consumption of the fiscal 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 includes only 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.

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

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 aiBank'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

Office solid waste

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).

Shredded paper waste

aiBank has its archive, where paper that is no longer needed to be archived is shredded on a yearly basis.

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

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 aiBank's data records. The emission factors per hotel night for each country, including UK and non-UK nations, are provided by DEFRA.

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

Air Travel + (WTT)

Number of flights carried out in 2021 with their route have been retrieved from aiBank'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.

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



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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