

بنك القاهرة  
Banque du Caire



# CARBON FOOTPRINT REPORT

BANQUE DU CAIRE (BDC) – REPORT YEAR: 2021

# About this Report

This report outlines the carbon footprint generated by the operations of BDC's headquarters and two branches in 2021 through the assessment of greenhouse gas (GHG) emissions. It covers Scope 1, 2 and selected activities from Scope 3 emissions. This is BDC's first carbon footprint assessment and therefore the year 2021 is considered the base year (BY) unless a significant change in reporting boundaries is noticed. All the data collected and analyzed within this report follow The Greenhouse Gas Protocol outlined by the World Resources Institute (WRI) and adhere to its principles of relevance, completeness, consistency, transparency, and accuracy.

# Abbreviations & Acronyms

BDC	Banque du Caire
CBE	Central Bank of Egypt
CFP	Carbon Footprint
CH <sub>4</sub>	Methane
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
COP27	27 <sup>th</sup> United Nation's Conference of Parties on Climate Change
DEFRA	Department for Environment, Food & Rural Affairs
EF	Emission Factor
ERA	Egypt Electricity Regulatory Authority
FTE	Full-time Equivalent
GHG	Greenhouse Gases
GWP	Global Warming Potential
HCWW	Holding Company for Water and Wastewater
HVAC	Heating, Ventilating, and Air Conditioning
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standard Organization
kWh	Kilowatt Hour
L	Liter
m <sup>2</sup>	Square Meter
m <sup>3</sup>	Cubic Meter
mt	Metric Tons
mtCO <sub>2</sub> e	Metric tons Carbon Dioxide Equivalent
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
WTT	Well-to-Tank

# TABLE OF CONTENTS

<b>ABOUT THIS REPORT .....</b>	<b>2</b>
<b>ABBREVIATIONS &amp; ACRONYMS .....</b>	<b>3</b>
<b>1 REPORT HIGHLIGHTS.....</b>	<b>6</b>
Boundaries & Methodology	7
Carbon Footprint Results Summary	7
<b>2 INTRODUCTION .....</b>	<b>9</b>
Climate Change & Carbon Footprint	10
About the Bank	10
Egypt Vision 2030	11
COP27	11
CBE Mandate	11
<b>3 INVENTORY BOUNDARIES.....</b>	<b>12</b>
Organizational Boundaries	13
Operational Boundaries	13
Reporting Period	15
<b>4 OVERALL METHODOLOGY.....</b>	<b>16</b>
Followed Protocols & Standards	17
Calculation Approach	17
Emission Factors	19
<b>5 CARBON FOOTPRINT RESULTS.....</b>	<b>20</b>
Scope 1: Direct Emissions	21
Scope 2: Indirect Emissions	22
Scope 3: Indirect Emissions	23
Emissions Summary	25
<b>6 EXTERNAL BENCHMARKING.....</b>	<b>27</b>
National Benchmarking for Scope 1 and 2 Emissions	28
International Benchmarking for Electricity Performance	29
<b>7 DECARBONIZATION PLAN .....</b>	<b>30</b>
<b>8 ANNEX .....</b>	<b>34</b>
Definitions & Terminology	35
Data Sources and Quality	37
Relevancy & Exclusions	39
Carbon Footprint Equations	41
Quality Assurance Statement	43



01

# REPORT HIGHLIGHTS

BANQUE DU CAIRE

It is no doubt that climate change has become one of the most pressing matters our world is facing. Fortunately, banks like Banque du Caire (BDC) are in an ideal position to push transformation towards a more climate conscious future. BDC recognizes its role in working to conserve the environment while satisfying the needs of its clients and aims to take proactive steps to being part of the solution by assessing its carbon footprint and disclosing the overall emissions related to its operations.

BDC is hereby presenting their first carbon footprint assessment.

This assessment is considered as a step towards a more environmentally sustainable future for the bank. In pursuit of a greener Egypt, BDC aims to be in alignment with the country's existing visions. Therefore, the goals of this assessment are in accordance with not only the Central Bank of Egypt (CBE) mandate, but also the goals of Egypt Vision 2030.

With the reporting period from the 1<sup>st</sup> of January 2021 to the 31<sup>st</sup> of December 2021 , the year 2021 is serving as the base year (BY) against which all upcoming years will be compared unless a significance threshold is reached.

## Boundaries & Methodology

Inventory boundaries are divided into organizational and operational. An organizational boundary refers to the businesses and operations that constitute a company. In the current reporting period, is BDC's 1 head office building and 2 out of its 246 branches, setting the foundation for assessing the entirety of our operations in the future. The 'HQ' headquarters is in Cairo with a building gross floor area of 46,200 m<sup>2</sup> and 3,500 FTE . The 'Mohandesein' branch is in Giza with a building gross floor area of 1,100 m<sup>2</sup> and 17 FTE. The 'City Light' branch is in Cairo with a building gross floor area of 458 m<sup>2</sup> and 13 FTE .

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

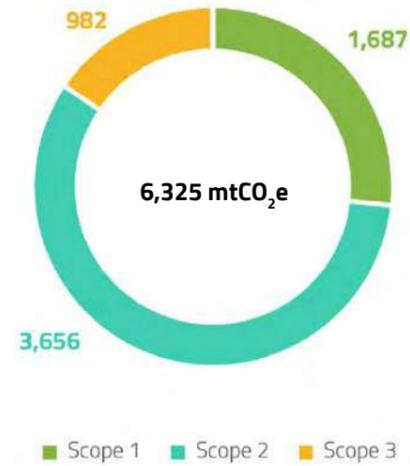
<b>CARBON FOOTPRINT</b>	<b>SCOPE 1</b> Direct Emissions	<b>SCOPE 2</b> Indirect Emissions	<b>SCOPE 3</b> Selected Activities Indirect Emissions
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The analysis and calculations of this assessment followed protocols & standards specially developed for accounting and reporting carbon footprint including The Greenhouse Gas Protocol Guidelines , the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories (with 2019 Refinements) and the ISO 14064- 1:2019 Standards.

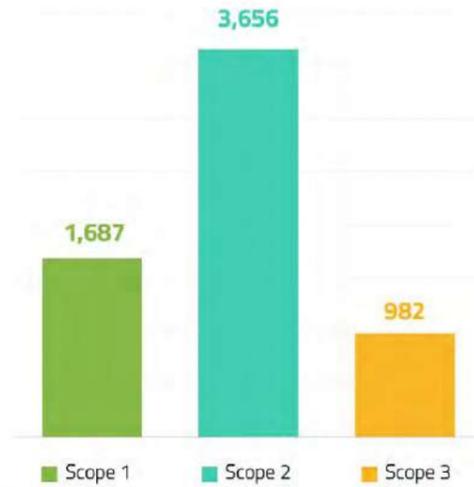
## Carbon Footprint Results Summary

A smary of the CFP is in the charts on the next page. The Absolute Emissions are used to keep track of the yearly emissions. They are calculated per scope and further broken down by activity. Emission Intensities are a measurement of the emissions of activities based on certain factors. The most common types of emission intensities are emissions per employee and per area.

2021 Absolute Emissions per Scope (mtCO<sub>2</sub>e)



2021 Absolute Emissions Per Scope (mtCO<sub>2</sub>e)



**TOTAL SCOPE 1 & 2 EMISSION INTENSITIES FOR THE THREE BUILDINGS COMBINED – 2021**

Total Scope 1 & 2 Absolute Emissions	5,343 mtCO <sub>2</sub> e
Scope 1 & 2 Carbon Intensity (per Employee)	1.51 mtCO <sub>2</sub> e/FTE
Scope 1 & 2 Carbon Intensity (per Area)	0.11 mtCO <sub>2</sub> e/m <sup>2</sup>

Benchmarking allows organizations to determine industry best practices, and identify further opportunities for improvement. The knowledge of our impact obtained from this assessment enabled us to conduct both national and international benchmarking. Emission intensities are used herein to benchmark the performance of BDC nationally. BDC's calculated carbon emission intensities of HQ's Scope 1 and 2 emissions were 1.49 mtCO<sub>2</sub>e/FTE equivalent to 0.11 mtCO<sub>2</sub>e/m<sup>2</sup> and it scored a B and an A, respectively. Electricity intensity (per m<sup>2</sup>) is used to assess its performance on a wider international level. The electricity intensity of HQ was 180 kWh/m<sup>2</sup>, which gave it a score of C. With the results of this assessment and through a carbon audit of its headquarters, BDC was able to develop a decarbonization plan to reduce its overall carbon emissions.



SCORE	ELECTRICITY INTENSITY (kWh/m <sup>2</sup> )
C	168 - 195



# INTRODUCTION

As one of the oldest and largest Egyptian Banks, Banque du Caire (BDC) understands its responsibilities. Among them are the continued leadership in the banking market by conducting business from a sustainable perspective through the creation of progressive policies and procedures.

BDC is hereby presenting their first carbon footprint assessment to quantify and assess the business' activities of emitting green-house gasses (GHGs). This assessment enables BDC to benchmark GHG emissions performance indicators and evaluate progress over time.

This report presents BDC's carbon footprint across its headquarter located in Nasr City and two branches from its 246 branches distributed among Egypt from the 1<sup>st</sup> of January 2021 to the 31<sup>st</sup> of December 2021. The year 2021 serves as the base year for BDC's CFP unless significant changes in the reporting boundaries are witnessed.

## Climate Change & Carbon Footprint

At the current global rate of consumption, humans are consuming natural resources of the planet at a higher rate than it is regenerated. Accordingly, we would need 2 Earths to satisfy our needs by 2030. To preserve resources, it is crucial that we reduce the carbon emissions.

## About the Bank

Established in 1952, Banque du Caire is one of Egypt's longest-standing banks, with multiple awards under its belt for its full range of services and products across the corporate and retail segments. The bank has grown to become a leader in the Egyptian banking market by capitalizing on its expansive network across the country, talented individuals, and deep knowledge of the local and regional banking sector.

Banque du Caire is a pioneer in the banking industry, having spurred the institutionalization of microfinance across banks in order to promote financial inclusion, community development, and entrepreneurial empowerment. The bank has played an integral role in the country's economic growth since its establishment, having extended financing to corporations across key sectors of the economy. As the bank has grown and evolved to meet dynamic market needs, it has adapted its service offering accordingly. Further to its leading products and services, the bank launched a corporate leasing venture in 2018, Cairo Leasing Corporation (CLC), which has grown to become a leader in Egypt's leasing sector. Banque du Caire also offers access to COMESA markets through Cairo International Bank, its Ugandan subsidiary.

With a network spanning 246 branches, including a brand new digital branch, and 1,452 ATMs across Egypt, the bank has an expansive and rapidly growing network, serving more than three million clients, including leading corporations, high-net-worth individuals, and retail clients. The bank offers some of the Egyptian market's leading banking products and services. The bank has sought to reposition itself as the bank of choice for all stakeholders through an overhaul of its service offerings, including

expanded digital products, upgraded systems and infrastructure, and revamped governance frameworks, in line with global standards.

For the past decades, Banque du Caire has been effectively adopting a wide range of prominent Corporate Social Responsibility initiatives and contributions outside of core banking realm providing a dedicated approach and significant impacts towards sustainable community development in various fields such as: social development, environmental challenges, healthcare, education, poverty, heritage and culture, vocational training and projects supporting the economy, infrastructure, youth, women and special needs. The bank began submitting an annual communication on progress (COP) to the United Nations Global Compact since 2016. BDC is fully committed to ensuring operations are sustainable and drive value for communities.

## Egypt Vision 2030

Egypt has developed its own Sustainable Development Strategy (SDS) 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. BDC's calculation of its CFP serves several 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 27<sup>th</sup> 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, BDC has decided to conduct its first carbon footprint assessment for the year 2021 and theorize a decarbonization plan for a greener future.



## CBE Mandate

In support of the government's Sustainable Development Strategy (Egypt Vision 2030), The Central Bank of Egypt has encouraged all banks to take steps towards assessing banks' impact on the environment starting with 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). BDC's carbon footprint uses the operational control approach. As such, it included:

		
<b>3 Buildings Total</b>	<b>3,530 FTE Total</b>	<b>47,758 m² Total</b>
1 Headquarter in Nasr City	3,500	46,200 m² (11 floors)
Branch 1: 'Mohandesein'	17	1,100 m² (3 floors)
Branch 2: 'City Light'	13	458 m² (2 floors)

## Operational Boundaries

Operational boundaries determine the approach of incorporating the GHG 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).

The emissions fall under different scopes; Scope 1 including direct emissions resulting from owned or controlled equipment and assets, Scope 2 covering indirect emissions from purchased electricity, steam, heat and cooling, and Scope 3 embracing other indirect emissions resulting from the operations.

In conformance with the GHG Protocol Corporate Standard, only Scope 1 direct emissions and Scope 2 indirect emissions are mandatory to report. Nevertheless, BDC has decided to include some activities of Scope 3 (indirect) emissions within its first CFP assessment. The operational boundaries for BDC's 2021 CFP report include the following:

<b>CARBON FOOTPRINT</b>	<b>SCOPE 1</b>	<b>SCOPE 2</b>	<b>SCOPE 3</b>
	Direct Emissions	Indirect Emissions	Selected Activities
			Indirect Emissions

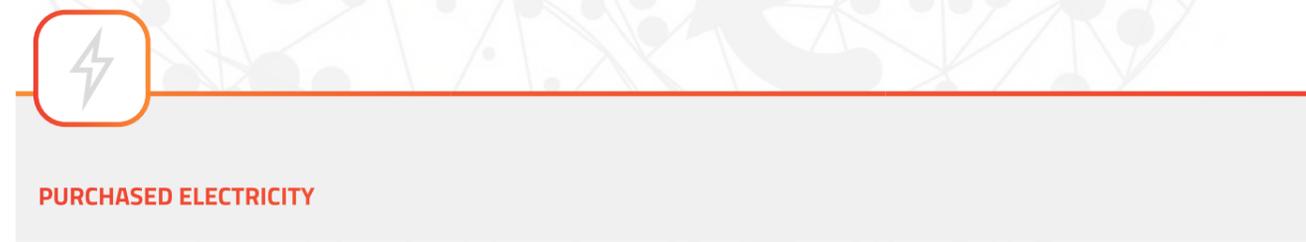
### SCOPE 1: DIRECT EMISSIONS

Scope 1 emissions are those resulting from sources that are owned or controlled by BDC (i.e. any owned or controlled equipment that release emissions straight into the atmosphere). Scope 1 activities include the following:



### SCOPE 2: INDIRECT EMISSIONS

Scope 2 emissions are associated with the consumption of purchased electricity, steam, heat and cooling from a source that is not owned or controlled by BDC. Scope 2 activities include the following:



### SCOPE 3: INDIRECT EMISSIONS

Emissions from sources that are not owned or controlled by BDC. Scope 3 activities include the following:



### Reporting Period

The reporting period is from the 1<sup>st</sup> of January 2021 to the 31<sup>st</sup> of December 2021. This is the first carbon footprint assessment of BDC and therefore, 2021 will be considered the base year on which all future years will be based on. The BY is subject to change if future boundaries are altered.

## Followed Protocols & Standards

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



### THE GREENHOUSE GAS PROTOCOL GUIDELINES

- ➔ 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



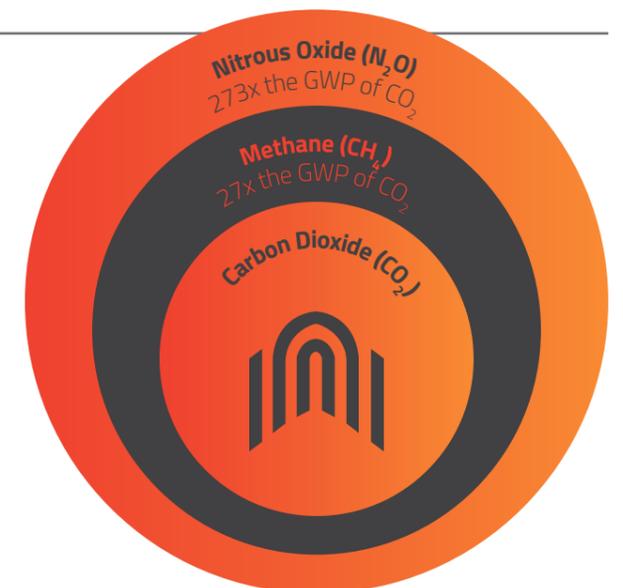
### 2006 INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

- ➔ 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 gasses have been included in the assessment where applicable and material.

Global warming potentials (GWPs) are factors describing the radiative forcing impact of one unit of a specific greenhouse gas (e.g. methane) relative to one unit of carbon dioxide. They are used in GHG accounting to convert individual greenhouse gas emissions to a standardized unit for comparison; carbon dioxide equivalent (CO<sub>2</sub>e).



04

# OVERALL METHODOLOGY

BDC applied 100-year GWPs to all emissions data in this inventory in order to calculate total emissions, in metric tons carbon dioxide equivalent (mtCO<sub>2</sub>e). 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 (or categories of GHGs) and their respective GWPs are listed in the table below.

GREENHOUSE GAS	CHEMICAL FORMULA	100-YEAR GWP
Carbon Dioxide	CO <sub>2</sub>	1
Methane	CH <sub>4</sub>	27
Nitrous Oxide	N <sub>2</sub> O	273
Hydrofluorocarbons (HFCs)	Various	Various
Perfluorocarbons (PFCs)	Various	Various
Nitrogen Trifluoride	NF <sub>3</sub>	17,400
Sulphur Hexafluoride	SF <sub>6</sub>	25,200

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

When calculating the CFP of BDC, the emissions of each activity under Scope 1 and 2 have been considered including some activities under Scope 3. Each activity falls under a certain scope, which is described more in depth under each activity. The general calculation approach for the emissions, counted in mtCO<sub>2</sub>e, is multiplying the activity data with its corresponding emission factor. When doing this, a unit analysis is performed in order to make sure the results of the emissions are obtained in the desired unit mtCO<sub>2</sub>e. The general formula for calculating the emissions for each activity is according to the below equation.

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

GHG Emissions, **E** [mtCO<sub>2</sub>e] = Activity, **A** [unit] x Emission Factor, **EF** [mtCO<sub>2</sub>e/unit]

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

## Emission Factors

Emission factors (EF) are representing the quantity of pollutants released to the atmosphere caused by a certain activity. The emission factor is usually expressed as the carbon dioxide equivalent (CO<sub>2</sub>e) emissions generated by a unit such as weight, volume and distance, e.g., CO<sub>2</sub>e/litre fuel consumed or CO<sub>2</sub>e/kWh of purchased electricity etc. Emission factors are retrieved from:

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

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.

05

# CARBON FOOTPRINT RESULTS

## Scope 1: Direct Emissions

Emissions from sources that are owned or controlled by BDC (i.e., any owned or controlled equipment that release emissions straight into the atmosphere). Scope 1 included stationary and mobile combustion in addition to fugitive emissions.

### STATIONARY COMBUSTION



49 mtCO<sub>2</sub>e

#### FUEL BURNING: DIESEL

Emissions resulting from diesel fuel burning on site, which mainly used in diesel generators. Generators at BDC's HQ and two branches used diesel fuel to meet electrical demands in the event of a power outage. In the reporting period of 2021, generators consumed **18,056 liters** of diesel which resulted in **49 mtCO<sub>2</sub>e** of direct emissions.

### MOBILE COMBUSTION



181 mtCO<sub>2</sub>e

#### FUEL BURNING: OWNED VEHICLES

Scope 1 direct emissions include emissions from BDC's owned vehicles. In the year 2021, diesel consumption of owned vehicles at the HQ office was **5,044 Liters** and resulted in **14 mtCO<sub>2</sub>e** of direct emissions. Petrol 92 consumption at the HQ office was **42,084 Liters (99 mtCO<sub>2</sub>e)** and **2,177 Liters (5 mtCO<sub>2</sub>e)** in the Mohandsien branch. A total of **27,108 Liters** of petrol 95 was consumed at the HQ office, which resulted in **63 mtCO<sub>2</sub>e**. In sum, BDC's fuel consumption of owned vehicles in headquarter and the two branches was **74,236 Liters** in 2021 with corresponding emissions of **181 mtCO<sub>2</sub>e**.

### FUGITIVE EMISSIONS



1,457 mtCO<sub>2</sub>e

#### REFRIGERANT LEAKAGE

Refrigerants are fluids used in refrigeration cycles to cool a space. The emissions corresponding to refrigerant leakage were accounted for under scope 1. Both the "R-22" and the "R-134a" refrigerants were used in BDC's HQ office. In the year 2021 the total refrigerant quantities utilized to recharge the various cooling systems were **15 kg** in terms of R-22 and **1,000 kg** in terms of R-134a resulting in **27 mtCO<sub>2</sub>e** and **1,430 mtCO<sub>2</sub>e** respectively. The sum of refrigerants used amounted to **1,015 kg** with emissions totaling **1,457 mtCO<sub>2</sub>e**.

## Scope 2: Indirect Emissions

Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. BDC didn't purchase any heat, steam or cooling during the reporting period. Thus, Scope 2 emissions only include purchased electricity emissions.

### PURCHASED ENERGY



3,656 mtCO<sub>2</sub>e

#### PURCHASED ELECTRICITY

This activity accounts for the largest share of the carbon footprint emissions in most businesses, which is the case also in BDC's emissions, accounting for about 58% of total emissions in 2021. For the reporting period of 2021, BDC's electricity consumption was **8,575,239 kWh** resulting in **3,656 mtCO<sub>2</sub>e**. The breakdown for each HQ/branch can be seen in the next page. The HQ office consumed the most electricity in 2021 with a total of **8,335,453 kWh** resulting in **3,554 mtCO<sub>2</sub>e** in emissions. Mohandsein Branch consumed **128,529 kWh** resulting in **55 mtCO<sub>2</sub>e**. Finally, City Light Branch consumed **111,257 kWh** resulting in **47 mtCO<sub>2</sub>e**.



## Scope 3: Indirect Emissions

Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain. Scope 3 emissions include all sources not within an organization's scope 1 and 2 boundary.

### PURCHASED GOODS AND SERVICES



275 mtCO<sub>2</sub>e

#### OFFICE SUPPLIES

Emissions resulting from the use of the different office supplies fall under scope 3. The purchased goods included A4 paper for office use. The HQ office used **299,400 kg** of paper in 2021, which generated **275 mtCO<sub>2</sub>e**.

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



11 mtCO<sub>2</sub>e

#### FUEL BURNING: DIESEL (WTT)

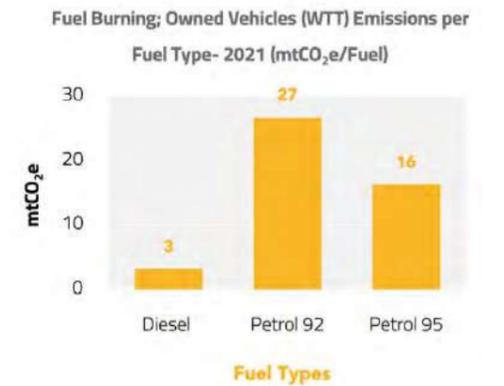
BDC accounted for WTT emissions to capture the maximum climate impacts from fuel burning activities. For the reporting period of 2021, emissions related to diesel fuel burning (WTT) were **11 mtCO<sub>2</sub>e** from the HQ office.



46 mtCO<sub>2</sub>e

#### FUEL BURNING: OWNED VEHICLES (WTT)

WTT resulting emissions from owned vehicles at the HQ office were **46 mtCO<sub>2</sub>e**. Owned vehicle diesel consumption at the HQ office resulted in **3 mtCO<sub>2</sub>e**, petrol 92 consumption made up **25 mtCO<sub>2</sub>e** and **1 mtCO<sub>2</sub>e** in emissions at the HQ and Mohandsein offices, respectively with a total of **27 mtCO<sub>2</sub>e**. Finally, the HQ offices petrol 95 consumption resulted in **16 mtCO<sub>2</sub>e**.



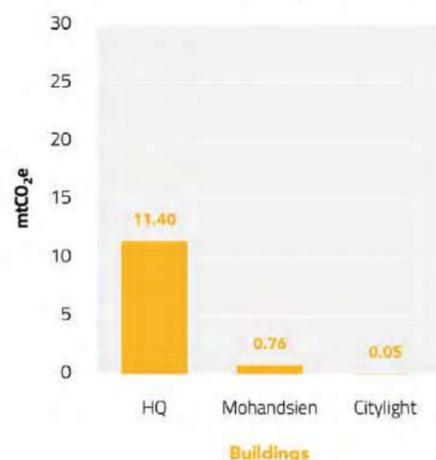


12 mtCO<sub>2</sub>e

### WATER USAGE & WASTEWATER TREATMENT

In terms of water consumption and wastewater treatment emissions, BDC's HQ office and the two branches consumed **69,608 m<sup>3</sup>** of water in 2021 resulting in **10 mtCO<sub>2</sub>e** for water consumption and **2 mtCO<sub>2</sub>e** for wastewater treatment with a total of **12 mtCO<sub>2</sub>e** in emissions. The HQ office consumed the most water of **65,029 m<sup>3</sup>** resulting in **10 mtCO<sub>2</sub>e** for water consumption and **2 mtCO<sub>2</sub>e** for wastewater treatment. City Light branch consumed the least water of **283 m<sup>3</sup>** resulting in **0.12 mtCO<sub>2</sub>e** for water consumption and **0.01 mtCO<sub>2</sub>e** for wastewater treatment.

Water Usage & Wastewater Treatment Emissions per Office (mtCO<sub>2</sub>e/Building)



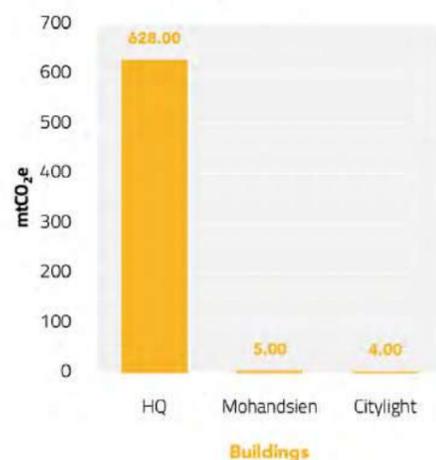
### EMPLOYEE COMMUTING & WTT



637 mtCO<sub>2</sub>e

Total distance travelled by employees to and from their individual workplaces during the reporting period of 2021 was **4,107,766 km**. This distance resulted in **637 mtCO<sub>2</sub>e** including the **133 mtCO<sub>2</sub>e** WTT emissions. Employees working in the HQ office traveled a distance of, **4,048,040 km** in 2021. Employees in Mohandsein and City Light branches traveled a distance of **33,181 km** and **26,545 km**, respectively. Fuel burning emissions resulting from employee commuting in the three buildings were **497 mtCO<sub>2</sub>e**, **4 mtCO<sub>2</sub>e** and **3 mtCO<sub>2</sub>e** respectively, while WTT emissions, were **131 mtCO<sub>2</sub>e**, **1 mtCO<sub>2</sub>e** and **1 mtCO<sub>2</sub>e** respectively.

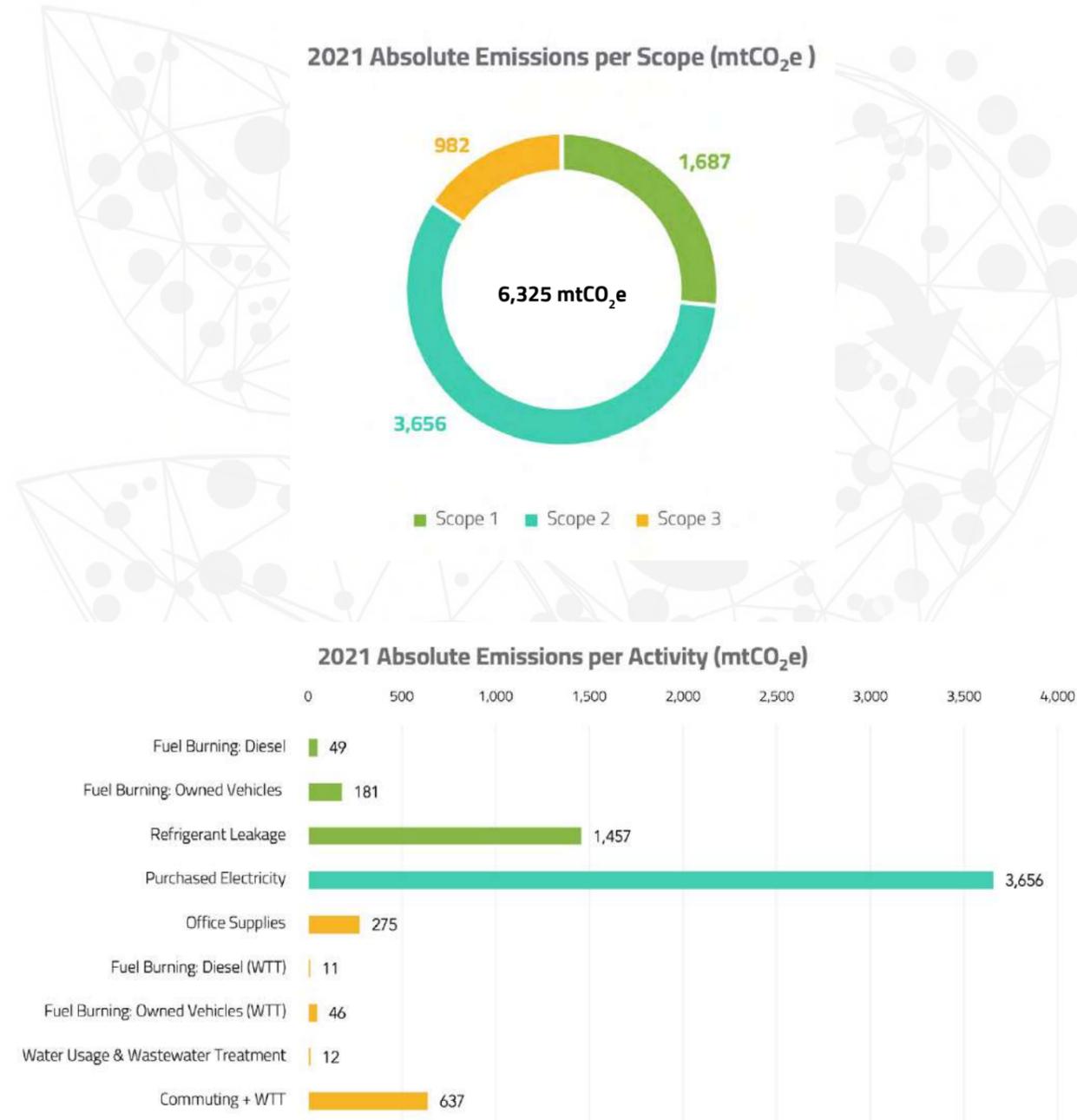
Employee Commuting & WTT Emissions per Office (mtCO<sub>2</sub>e/Building)



## Emissions Summary

SCOPE 1: DIRECT EMISSIONS – 2021		mtCO <sub>2</sub> e	27%
Stationary Combustion	Fuel burning: Diesel	49	
Mobile Combustion	Fuel burning: Owned Vehicles	181	
Fugitive Emissions	Refrigerant Leakage	1,457	
<b>Total</b>		<b>1,687</b>	
SCOPE 2: INDIRECT EMISSIONS – 2021		mtCO <sub>2</sub> e	58%
Purchased Energy	Purchased Electricity	3,656	
<b>Total</b>		<b>3,656</b>	
Total Scope 1 & 2 Emissions – 2021			
Total Scope 1 & 2 Emissions		5,343 mtCO <sub>2</sub> e	
Scope 1 & 2 Carbon Intensity (per Employee)		1.51 mtCO <sub>2</sub> e/FTE	
Scope 1 & 2 Carbon Intensity (per Area)		0.11 mtCO <sub>2</sub> e/m <sup>2</sup>	
SCOPE 3: INDIRECT EMISSIONS – 2021		mtCO <sub>2</sub> e	16%
Purchased goods and services	Office Supplies	275	
Fuel and energy related activities (not included in Scope 1 & 2)	Fuel Burning – Diesel (WTT)	11	
	Fuel Burning: Owned Vehicles (WTT)	46	
	Water Usage & Wastewater Treatment	12	
Employee Commuting	Commuting & WTT	637	
<b>Total</b>		<b>982</b>	
Total Scope 1, 2 & 3 Emissions – 2021		<b>6,325 mtCO<sub>2</sub>e</b>	

This chart shows the percentage of each activity's impact to make it easier to pinpoint the activities that have greater impacts than others. The primary energy-consuming activity in BDC's office buildings is the consumption of purchased electricity.



EXTERNAL  
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.

Emission intensities (per FTE and per m<sup>2</sup>) are used herein to benchmark the performance of BDC's headquarters nationally, while electricity intensity per m<sup>2</sup> is used to assess it on a wider international level.

## National Benchmarking for Scope 1 & 2 Emissions

Published and unpublished data of a 20+ banks' headquarters were used to calculate the national average emission intensity (per FTE and m<sup>2</sup>). Accordingly, a methodology for the national rating has been developed. The emission intensities of HQ for the year 2021 are 1.49 mtCO<sub>2</sub>e/FTE equivalent to 0.11 mtCO<sub>2</sub>e/m<sup>2</sup>. This means that BDC has a **B** score regarding intensity per FTE and an **A** score regarding intensity per m<sup>2</sup>. The below table shows BDC national rate compared to other headquarters in Egypt.

This shows that BDC's HQ has a satisfactory emissions intensity per FTE and per m<sup>2</sup>. It can be further improved by implementing a decarbonization plan.

SCORE	EMISSIONS INTENSITY (mtCO <sub>2</sub> e/FTE)	EMISSIONS INTENSITY (mtCO <sub>2</sub> e/m <sup>2</sup> )
<b>A</b>	< 1	<b>&lt;0.2</b>
<b>B</b>	<b>1 - 2</b>	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 type of intensities metrics used for international benchmarking is the electricity intensity. Based on extensive research conducted on international banks and offices, a performance assessment criterion has been developed, as indicated in the below table. BDC's HQ has an electricity intensity of 180 kWh/m<sup>2</sup>, with a score of **C**. This gives a room for improvement by implementing energy efficiency practices.

	SCORE	ELECTRICITY INTENSITY (kWh/m <sup>2</sup> )
	A+	< 128
	A	128 - 148
	B	148 - 168
	<b>C</b>	168 - 195
	D	195 - 218
	E	> 218

# DECARBONIZATION PLAN

The knowledge of our impact obtained from this assessment helps us develop more sustainable business scenarios and evaluate our 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 below table.

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

Areas of improvement have been identified throughout the carbon audit visit. Subsequently, the below customized decarbonization list of actions is presented in the table below.

In the future feasibility of selected projects will be studied in depth, and its critical aspects will be analyzed to determine its viability; according to which the necessary steps further will be taken.

 High cost & time to implement	 Medium cost & time to implement	 Low cost & time to implement
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	PROJECT	DESCRIPTION	BENEFITS
	Complete Carbon Footprint Assessment	Assess the entirety of BDC banking operations & branches and scope 3 emissions.	<ul style="list-style-type: none"> <li>A fuller picture of BDC emissions and better opportunity to pinpoint areas for improvement.</li> </ul>
	Enhance the Efficiency of the Lighting Systems	Install occupancy and daylight sensors for the lighting system in open spaces, corridors, stairs and toilets. Use more efficient lighting systems such as LED.	<ul style="list-style-type: none"> <li>Reduced electricity consumption and cost</li> </ul>
	Improve the Efficiency of Water System	Install low flow and auto shut-off faucets.	<ul style="list-style-type: none"> <li>Reduced water consumption</li> </ul>

	PROJECT	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.	<ul style="list-style-type: none"> <li>Reduced indirect costs/Increased profit</li> <li>Identification of any leakages and avoid higher costs of reparation at a later stage</li> <li>Increased safety of workers</li> </ul>
	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	<ul style="list-style-type: none"> <li>Reduced indirect costs/Increased profit</li> <li>Less pollution and enhanced air quality</li> <li>Increased safety of drivers and workers utilizing the equipment</li> <li>Possible time savings and well-being of drivers</li> </ul>
	Green Building Guidelines	Develop and adopt green building guidelines including refurbishment of building such as insulation, draught proofing, efficient lighting and lighting control, HVAC operational parameters and control, external/internal shading optimization, daylight and occupancy sensors and building energy and water efficiency and management.	<ul style="list-style-type: none"> <li>Improved health and well-being of employees and customers</li> <li>Improved customer satisfaction</li> <li>Increased employee fulfillment</li> <li>Enhanced building performance with longer lifetime and less maintenance</li> </ul>
	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.	<ul style="list-style-type: none"> <li>Reduced indirect costs/Increased profit</li> <li>Identification of any leakages and avoid higher costs of reparation at a later stage</li> <li>Increased safety of workers</li> </ul>
	Reduction Targets	Set specific carbon emission reduction targets with deadlines.	<ul style="list-style-type: none"> <li>Reduced long-term and short-term carbon footprint</li> </ul>
	Capacity Building	Educating employees about climate change, decarbonization and climate resilience.	<ul style="list-style-type: none"> <li>Enhanced capacity building of all employees and workers</li> </ul>
	Sustainability Policies	Introduce and adopt sustainability policies for BDC business & activities, with commitment to practices and standards to promote environmentally and socially responsible operations, incl. developing low-carbon business travel policy.	<ul style="list-style-type: none"> <li>Enhanced sustainability performance with reduced environmental impacts</li> </ul>

	PROJECT	DESCRIPTION	BENEFITS
	Carbon Offsets	Invest in environmental projects to compensate for BDC share of consumption.	<ul style="list-style-type: none"> <li>Reduced overall carbon footprint</li> </ul>
	Energy Audit and Management System (EMS)	Adopt an automatic energy system to assist in identifying opportunities to regularly monitor BDC energy use.	<ul style="list-style-type: none"> <li>Increased building efficiency &amp; performance</li> </ul>
	Waste Management	Adopt and implement a waste management system (in accordance with international best practices such as ISO 14001)	<ul style="list-style-type: none"> <li>Material circularity</li> <li>Waste reduction and allowing for segregation, accurate quantification, and reuse/ recycling/ recovery</li> </ul>
	Bank cards	Design an innovative system in which expired banks cards are collected, and its plastic components are recycled.	<ul style="list-style-type: none"> <li>Material Circularity</li> <li>Waste reduction and allowing for segregation, accurate quantification, and reuse/recycling/recovery</li> <li>Value recovery</li> </ul>
	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.	<ul style="list-style-type: none"> <li>Compliance with international guidelines</li> <li>Potential for both short-term and long-term carbon footprint reduction</li> </ul>
	Renewable Energy	Utilize renewable energy sources (ie. solar PV).	<ul style="list-style-type: none"> <li>Reduced indirect costs/Increased profit</li> <li>Less dependence on grid electricity and diesel generators, with reduced risks of power outage</li> </ul>
	Electric Vehicles	Study the feasibility of electric and hybrid vehicles for BDC transport fleet.	<ul style="list-style-type: none"> <li>Less pollution &amp; enhanced air quality</li> </ul>

	High cost & time to implement		Medium cost & time to implement		Low cost & time to implement
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## Definitions & Terminology

<b>Base Year</b>	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.
<b>Carbon Footprint</b>	The amount of Carbon Dioxide that an individual, group, or organization lets into the atmosphere in a certain time frame.
<b>CO<sub>2</sub>e</b>	Carbon dioxide equivalent or CO <sub>2</sub> equivalent, abbreviated as CO <sub>2</sub> 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.
<b>Direct Emissions</b>	Greenhouse gas emissions from facilities/sources owned or controlled by a reporting company, e.g. generators, blowers, vehicle fleets.
<b>Emission Factors</b>	Specific value used to convert activity data into greenhouse gas emission values.
<b>Fugitive Emissions</b>	Fugitive emissions are emissions of gases or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities. As well as the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.
<b>GHG Protocol</b>	Greenhouse Gas Protocol – uniform methodology used to calculate the carbon footprint of an organization.
<b>GWP</b>	Global Warming Potential – an indication of the global warming effect of a greenhouse gas in comparison to the same weight of carbon dioxide.
<b>HVAC</b>	HVAC (heating, ventilating, and air conditioning; also heating, ventilation, and air conditioning) is the technology of indoor and vehicular environmental comfort. Its goal is to provide thermal comfort and acceptable indoor air quality.
<b>Indirect Emissions</b>	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.

<b>Kyoto Protocol</b>	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.
<b>Operational Boundary</b>	Determination of which facilities or sources of emissions will be included in a carbon footprint calculation.
<b>Organizational Boundary</b>	Determination of which business units of an organization will be included in a carbon footprint calculation
<b>Refrigerant</b>	A refrigerant is a substance or mixture, usually a fluid, used in a heat pump and refrigeration cycle
<b>Renewable Energy</b>	Energy from a source that is not depleted when used, such as wind or solar power.
<b>Scope 1</b>	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).
<b>Scope 2</b>	Emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by the company.
<b>Scope 3</b>	Emissions resulting from other activities. This includes transport fuel used by air business travel, and employee-owned vehicles for commuting to and from work; emissions resulting from courier shipment; emissions from waste disposal; ... etc.



## Data Sources and Quality

All the information used to compute the various footprints comes from BDC’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.

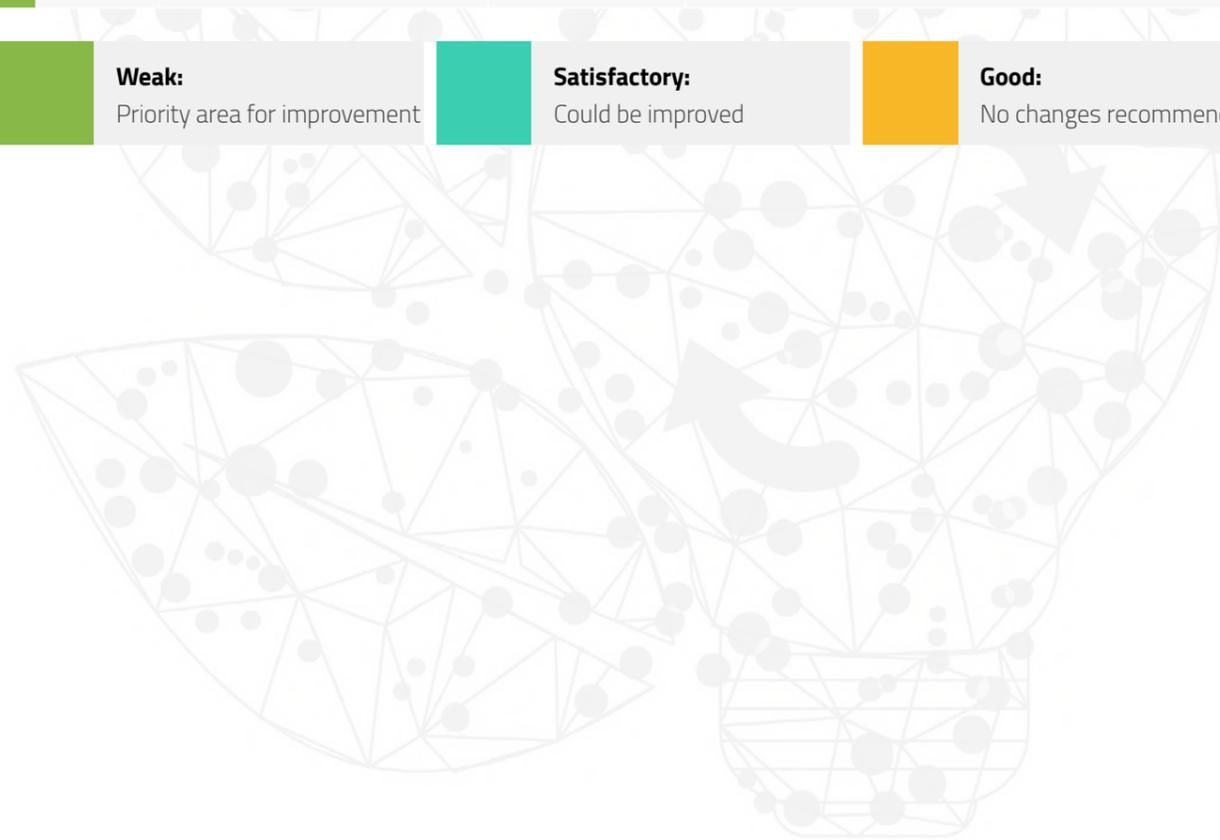
CFP Data quality for the base year 2021:

	SCOPE	ACTIVITY	DATA	NOTES
	1	Fuel Burning: Diesel	18,056 Liters	Data received as an annual consumption. More accurate monthly recording system is recommended.
	1	Fuel Burning: Owned Vehicles (Diesel)	5,044 Liters	Data received as an annual consumption. More accurate monthly recording system is recommended.
	1	Fuel Burning: Owned Vehicles (Petrol 92)	44,261 Liters	Data received as an annual consumption. More accurate monthly recording system is recommended.
	1	Fuel burning: Owned Vehicles (Petrol 95)	27,108 Liters	Data received as an annual consumption. More accurate monthly recording system is recommended.
	1	Refrigerant Leakage (R-134a)	15 kg	Data received as a total quantity of cylinders consumed in 2021.
	1	Refrigerant Leakage (R-22) <sup>1</sup>	1000 kg	Data received as a total quantity of cylinders consumed in 2021.
	2	Purchased Electricity	8,575,239 kWh	Data was received on a monthly basis.
	3	Paper Consumption	299,400 kg	Paper consumption data provided only for HQ. A better tracking system needs to be established in all offices and branches.

<sup>1</sup> This relatively large amount of refrigerant was a result of an accident that led to a major leakage

SCOPE	ACTIVITY	DATA	NOTES
3	Water Usage & Wastewater Treatment	69,608 m <sup>3</sup>	Data was received on a monthly basis.
3	Commuting & WTT	4,107,766 km	Tracking system is recommended to record actual employee commuting data. As for the current reporting period, it is calculated based on assumptions.

<b>Weak:</b> Priority area for improvement	<b>Satisfactory:</b> Could be improved	<b>Good:</b> No changes recommended
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## Relevancy & Exclusions

The following section describes the GHG emission sources and sinks that were excluded from BDC's GHG inventory due to data not being available, or not technically feasible to obtain or for data whose emission quantification is beyond BDC's operation and control. The exclusion rationale per category has also been specified.

### EXCLUDED ORGANIZATIONAL BOUNDARIES

Only BDC's headquarter and two branches were assessed in this report. In future reports, the aim is to cover all BDC offices and branches to acquire the full picture of BDC's carbon footprint.

### SCOPE 3

#	ACTIVITY	DESCRIPTION	EMISSIONS (mtCO <sub>2</sub> e)	STATUS
1	Purchased Goods and Services	This included paper only.	275	Relevant, calculated
2	Capital Goods	Emissions from embodied carbon in the properties owned by BDC, such as buildings, cars, etc.	N/A	Relevant, not yet calculated
3	Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)	Emissions from the power used to process municipal wastewater and provide clean water, as well as WTT from fuel burning.	70	Relevant, calculated
4	Upstream Transportation and Distribution	Transportation from BDC's upstream supply chain.	N/A	Relevant, not yet calculated
5	Waste Generated in Operations	Covers emissions from office waste generated by employees and landfill emissions from the waste disposal.	N/A	Relevant, not yet calculated
6	Business Travel	Emissions from air travel and hotel stays are included under this category.	N/A	Relevant, not yet calculated
7	Employee Commuting	This includes emissions from rented coasters as well as from employees who commute using other modes of transportation.	637	Relevant, calculated

#	ACTIVITY	DESCRIPTION	EMISSIONS (mtCO <sub>2</sub> e)	STATUS
8	Upstream Leased Assets	This category is not directly relevant to BDC's operations and has therefore been excluded.	N/A	Not relevant, explanation provided
9	Downstream Transportation	BDC's downstream transportation emissions include transportation of business cards and letters to clients, armored vehicles, etc.	N/A	Relevant, not yet calculated
10	Processing of Sold Products	Includes emissions occurring due to bank issued cards.	N/A	Relevant, not yet calculated
11	Use of Sold Products	This should include emissions from the use of internet banking and other sold products.	N/A	Relevant, not yet calculated
12	End of Life Treatment of Sold Products	This category is not yet embraced in the calculations but could include end of life treatment of credit cards distributed to the customers.	N/A	Relevant, not yet calculated
13	Downstream Leased Assets	Emissions resulting from ATM transactions are measured as the power used during active and inactive ATM hours.	N/A	Relevant, not yet calculated
14	Franchises	This category is not relevant to BDC'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

Diesel is consumed by the generators that supply BDC's buildings' electricity demands in case of electricity cutout and emergency.

$$\text{Fuel Burning: Diesel Emissions (mtCO}_2\text{e)} = \text{Fuel Consumption (L)} \times \text{EF (mtCO}_2\text{e/ L)}$$

#### Mobile Combustion

Owned vehicles fuel burning falls under scope 1 direct emissions. As for the owned vehicles of BDC, fuel type and fuel consumption in liters were obtained from the database. These were utilized to estimate the emissions occurring from owned vehicles.

$$\text{Fuel Burning: Owned Vehicles Emissions (mtCO}_2\text{e)} = \text{Fuel Consumption (L)} \times \text{EF (mtCO}_2\text{e/ L)}$$

#### Fugitive Emissions

Refrigeration fluids are fluids which are used to cool a space in refrigeration cycles. Each year, two refrigerants are used to re-charge the cooling systems used in each building to compensate for the leakage that happened during the operating year. The refrigerant type used in the offices is R-22 and R-134a.

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

### SCOPE 2: INDIRECT EMISSIONS

#### Purchased Electricity

Emissions from purchased electricity are the product of the national grid emission factor and the annual electricity consumption of each building. Purchased Electricity falls under Scope 2 (Indirect emissions). The electricity consumption includes all BDC's headquarters, and the two branches and amount of money purchased (EGP). Therefore, 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 and the two branches, this is the paper consumption. 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 number of items. In the case of paper, the weight of the paper is first multiplied by the quantity.

**Purchased Goods Emissions (mtCO<sub>2</sub>e) =  $\sum$  Quantity of Item (units) x EF of each item (mtCO<sub>2</sub>e/unit)**

### Fuel and Energy-Related Actives (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, such as diesel & Petrol 92 & 95 consumed by BDC's buildings and distribution fleet were included in WTT emissions. For each amount and type of fuel burned, the general formula was applied to determine the relevant emissions.

**WTT Emissions (mtCO<sub>2</sub>e) = Fuel Consumption (unit) x WTT EF (mtCO<sub>2</sub>e/unit)**

#### Water Supply and 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.

**Energy Consumption (kWh) = Water Supply/ Wastewater (m<sup>3</sup>) x Conversion Formula (kWh/m<sup>3</sup>)**

**Water Supply & Treatment (mtCO<sub>2</sub>e) = Energy Consumption (kWh) x EF (mtCO<sub>2</sub>e/kWh)**

### Employee Commuting

Data were calculated by estimating the distance travelled by the employees, based on the office geographical locations and surveys on the average distance between the employees' homes and their work-site. The travelling 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. Out of this, the commuting emissions of each category is approximated using emission factors from DEFRA, including WTT emissions.

**Employees Commuting Emissions (mtCO<sub>2</sub>e) = Travelled Distance (km) x EF (mtCO<sub>2</sub>e/ km)**

## Quality Assurance Statement

To Banque du Caire's Board of Directors,

We have been appointed by Banque du Caire to conduct carbon footprint calculations pertaining to BDC's operational activities in Egypt for the period from 1<sup>st</sup> of January 2020 to the 31<sup>st</sup> of December 2021.

### Auditor's 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.

### Auditor's 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 BDC. 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 BDC's raw data used in the carbon footprint calculations have not been thoroughly collected, verified and truly represent BDC'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 BDC 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.

157, Baehler's Mansions Building, 2nd Floor, 26th of July Street,  
 Zamalek, Cairo, Egypt

**Tel/Fax:** +202 2735 4033

**Email:** info@be-masader.com

**Website:** http://www.be-masader.com

*Abdelhamid Beshara*

environmental & energy services  
**masader**



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