

2019

CARBON FOOTPRINT INVENTORY



ACRONYMS

CH4	Methane
CO2	Carbon Dioxide
CEC	Coldair Engineering Company
DIOWS	Dynamic International for Oil & Well Services
EF	Emission Factor
GHG	Greenhouse Gas
GM	General Manager
HCENR	Higher Council for Environment and Natural Resources
HCL	Haggar Company Limited
HDMCC	Haggar Dubai Multi Commodities Centre
HFC	Hydrofluorocarbons
ICT	Information and Communications Technology
IPCC	Intergovernmental Panel on Climate Change
km	Kilometers
kWh	Kilowatt hour
N2O	Nitrous Oxide
PFB	Pasgianos Food & Beverages
PFC	Per-fluorinated Compound
SF6	Sulfur Hexafluoride
t	Tonnes
tCO2e	Tonnes of CO2 equivalent
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resource Institute

TABLE OF CONTENT

Acknowledgment	(3)
Executive Summary	(4)
Introduction	(5)
Company Profile	(5)
Our Commitment	(5)
Carbon Footprint Concept	(6)
What is Carbon Footprint?	(6)
Why is it important?	(6)
Calculation Methodology	(7)
Stages of Carbon Footprint Report	(7)
Companies Covered by the Inventory	(8)
Greenhouse Gas Protocol Initiative	(8)
Emission Factor	(9)
Calculation Scope	(9)
Carbon Footprint 2018	(10)
Total Emissions	(10)
2018 results vs historical data	(12)
HAGGAR DMCC	(13)
Haggar Company Limited	(14)
Coldair Engineering Company	(15)
Pasgianos Food & Beverages	(16)
SUDASAT	(17)
DYNAMIC International Oil & Wells Services	(18)
Dolphin Ghana	(19)
Dolphin Nigeria	(20)
Comparison Overview	(21)
Summary	(23)
Annex	(24)
References	(26)



ACKNOWLEDGEMENT

The Third National Communication Project (TNC) implemented by the Higher Council for Environment and Natural Resources would like to commend and congratulate Haggar Group on the preparation of their Carbon Footprint Report. It was indeed prepared in a highly technical manner using an internationally approved methodology.

Measuring and evaluating Haggar carbon footprint is a key step on the path to a sustainable business practice. Effective carbon management reveals how one's organization can reduce emissions. It also verifies its effective results. This means that the company profits through improved efficiency and greater public approval of its Corporate Sustainability and Social Impact policies.

Haggar's carbon footprint measures and evaluates the total greenhouse gas emissions caused by, or expected from, its operations. Beyond identifying the main sources of emissions, which could trigger innovative solutions to reduce consumption of energy and raw materials.

Our thanks and appreciation are extended to the whole team who worked and cooperated to make this report a huge success.

*Rehab Ahmed Hassan
National Project Manager (TNC) 
Higher Council for the Environment and Natural Resources*

EXECUTIVE SUMMARY

	Net emissions	Total employees	Intensity per employee
2018	7,549 tCO2e	649	11.6 tCO2e
Vs 2016	+21.2%	+0.04%	+16.8%
Vs 2014	+0.05%	-30%	+25%



km driven with a vehicle

106,200



kwh Electricity

5,021,283



number of facilities

30

The Corporate Sustainability and Social Impact Department has calculated Haggar Group 2018 Carbon Footprint based on the standards defined in the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol) for 2018.

Haggar group conducts Green House Gases (GHG) inventory for its group of companies' activities with the aim to undertake, based on the results of this inventory, internal and external reduction measures in collaboration with line ministries, international organizations and civil society organizations, to reduce as well as offset its Green House Gases (GHG) emissions and reduce its carbon print.

The Group first calculated its carbon footprint of its business operations in 2012, this year the Corporate Carbon Footprint was created for the fourth time so that a comparison with the previous years is possible.

This report provides an overview of Haggar Group, its environmental commitments, reasons behind the inventory, the results of the accounted emissions, the methodology used as well as the way forward.

INTRODUCTION

COMPANY PROFILE

The Haggar Group was established in South Sudan in 1904 and present today in 6 sectors across 5 countries in Africa. The group continues to look for opportunities to create and add value across the continent.

We aim to build long-term positions in Agriculture, Energy, and ICT, as we believe these sectors will provide the architecture and foundation for sustainable development across the continent.

The Group's guiding principles, from its inception, have taken into consideration the way in which business is done and governed, and the impact that the businesses will have on all stakeholders, including external communities, the environment and society. Bound by our 'Code of Conduct', we are conscious of how business is done. We adhere to our principles, professional standards and abide by the laws and regulations of the countries we operate in at all times.

Our Code of Conduct guides our decision-making process and ensures that across our businesses the same ethical and moral standards are respected, which share a deep consciousness towards the livelihoods of our Employed Persons and fellow citizens, the marginalized and underserved and the sustainability of our environment.

OUR COMMITMENT

The Group's Environmental Policy helps it meet its vision by outlining climate change objectives, detailing our approaches to combat climate challenges and to help promote initiatives to achieve greater environmental responsibility. This policy further prepares the Group to adopt new and emerging technologies then incorporate them into our mainstream business lines.

Through our environmental policy, we strive not only to reduce the environmental impact of our business activities, but also to deliver environmentally conscious products and services that contribute to sustainable development. We are committed to continuously reducing our greenhouse gas emissions through calculating the Group's carbon footprint internally and reducing our emissions through green initiatives externally.

CARBON FOOTPRINT CONCEPT

What is Carbon Footprint?

The dictionary definition of a carbon footprint is “the amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organization or community.” (Good Energy: What is a Carbon Footprint, 2017).

The carbon footprint is a parameter that represents the total emissions of the greenhouse gases (GHG) that includes CO₂, N₂O, CH₄, HFCs, PFCs and SF₆. It is expressed in mass of CO₂ equivalent, caused directly or indirectly by a product, organization or service throughout its life cycle.

The carbon footprint is required to try to quantify the main emission sources and to have a complete picture of the impact of an organisation on climate change. It is also the first step to carry out a plan to reduce GHG emissions.

Why its it important?

Running an inventory of the Group’s carbon footprint is linked with numerous benefits and decision making opportunities similar to the below:

- The quantification of energy consumption and the identification of the main GHG emission sources of the Group;
- The identification of Group activities with the greatest potential for reducing GHG emission, coupling that with appropriate reduction measures;
- It favours the application of more efficient techniques in different activities leading to cost efficient processes and operations;
- It provides clarity on the environmental impact the company has and its contribution to climate change and hence opportunities for reduction and offsetting; and
- A mean for transparency and a baseline for the company’s commitments to sustainable development goals and particularly those related to climate change and the reduction of GHG. It is of added value to self regulate rather than await future regulations and policies on climate change.



CALCULATION METHODOLOGY

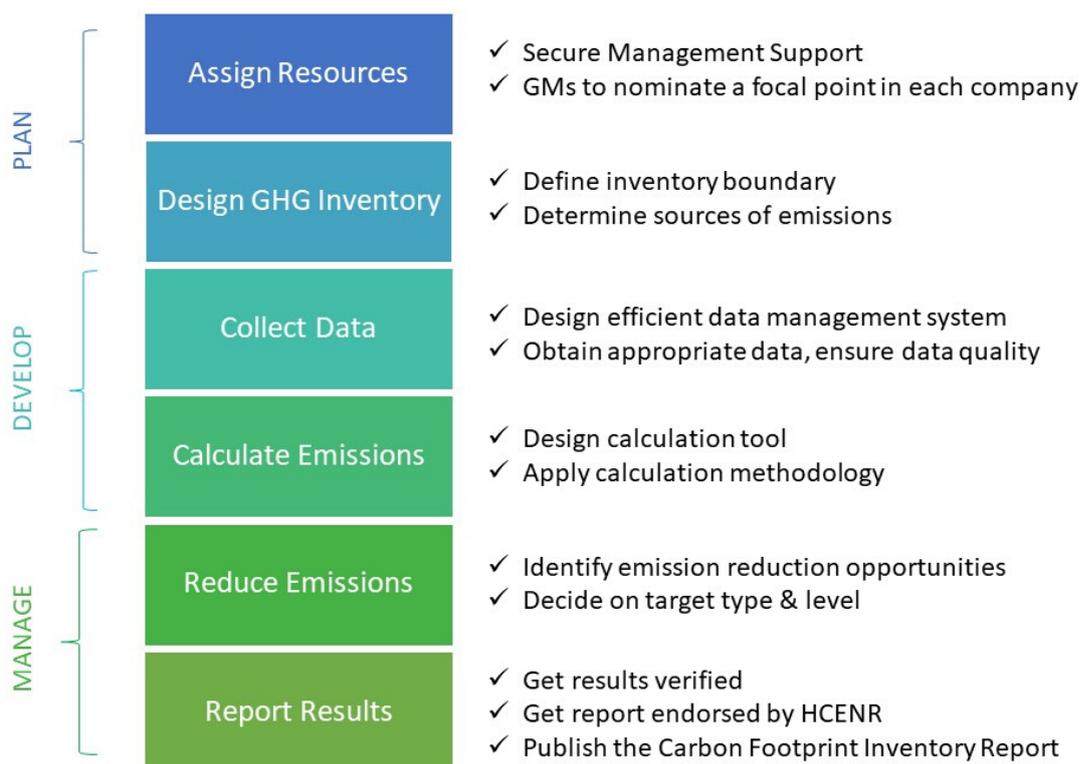
The methodology used to analyse the data is based on established international GHG accounting standards developed by the Intergovernmental Panel on Climate Change (IPCC), the World Resource Institute (WRI) and the World Business Council for Sustainable Development.

The carbon accounting has been measured using best practice standards and guidelines. Established emissions factors have been derived from reliable references for each emissions source.

For effective and innovative GHG management, setting operational boundaries that are comprehensive with respect to *direct* (resulting directly from a company's activities – transportation of produced goods using company's vehicles) and *indirect* emissions (resulting from other sources not owned or controlled by the company – electricity used in production) will help the company better manage the full spectrum of GHG gases (Corporate Carbon Accounting and Reporting, 2017).

Emission of greenhouse gases is measured in terms of carbon dioxide equivalents (CO₂e). It is a unit of measurement that makes it possible to measure different greenhouse gases in the same way. By expressing the emissions of a certain greenhouse gas in CO₂e, it is stated how much carbon dioxide would be required to give the same climate impact.

STAGES OF HAGGAR CARBON FOOTPRINT INVENTORY



COMPANIES COVERED BY THE INVENTORY

Haggar Group business units that have been included in this exercise and whose results are covered in this report are:



GREENHOUSE GAS PROTOCOL INITIATIVE

The Greenhouse Gases Protocol establishes comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions. It supplies the world's most widely used greenhouse gas accounting standards, (The Greenhouse Gas Protocol, 2004).

Today, hundreds of companies and organizations around the world are using GHG Protocol standards and tools to manage their emissions. The standard was developed through a decade-long partnership between the World Resources Institute and the World Business Council for Sustainable Development.

In 2006, the standard was used as the basis for the ISO standard 14064-1: Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals, (Greenhouse gases – Part 1, 2016).

EMISSION FACTOR

An emission factor (EF) is a coefficient which allows to convert activity data into GHG emissions. It is the average emission rate of a given source, relative to units of activity or process/processes. An emission factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of the pollutant, (LIFE Clim'Foot: Calculate and Reduce Organizations' Carbon Footprint, 2018).

CALCULATION SCOPE

Greenhouse gas emissions are categorized into three scopes by the most widely-used international accounting tool, the Greenhouse Gas (GHG) Protocol. Scope 1 covers direct emissions from owned or controlled sources. Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company. Scope 3 includes all other indirect emissions that occur in a company's value chain.

The table below shows the different sources of emissions that have been considered for the Haggar Group Carbon Inventory:

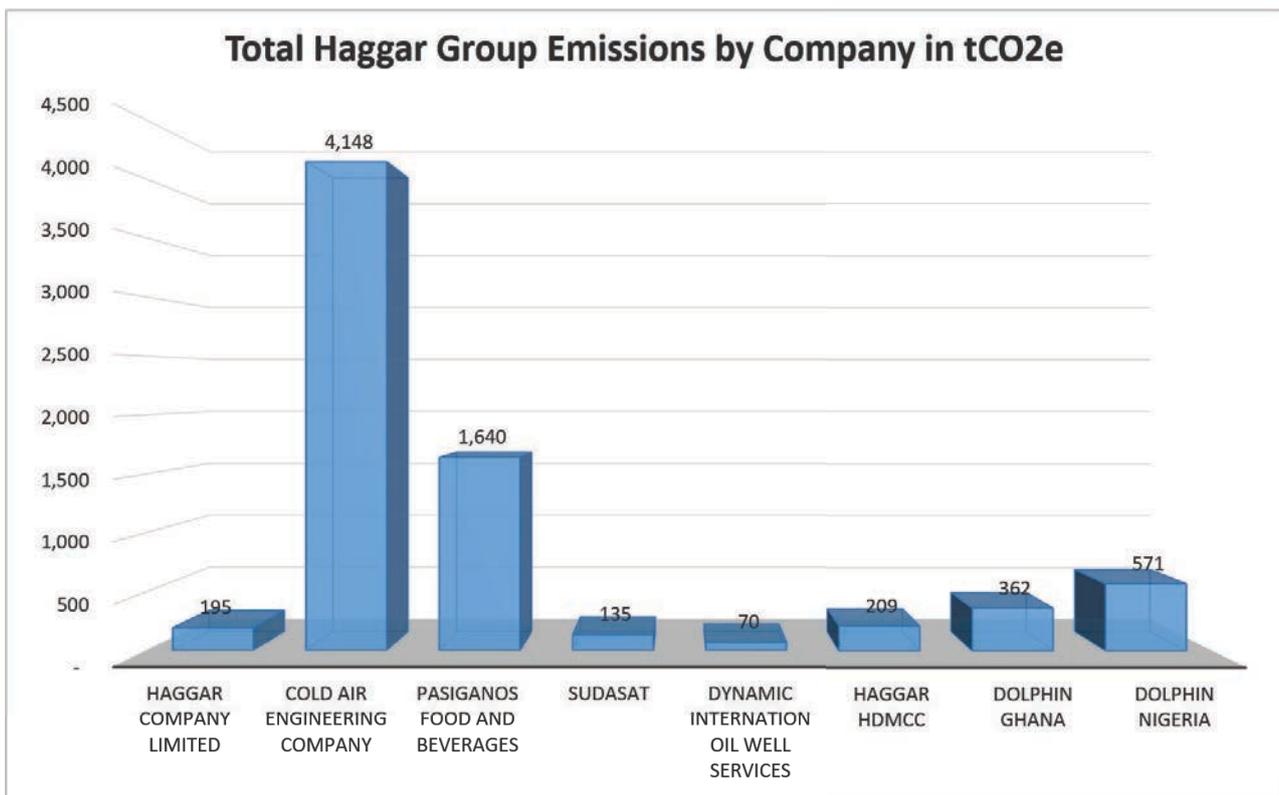
SCOPE 1
Diesel (Vehicles, Vans, Trucks) owned by the company
Petrol Vehicles (Cars owned by the Company)
Diesel in Buildings (All diesel consumed in generators and machinery)
Refrigerants (R22, HFC, etc..)
SCOPE 2
Electricity (Electricity used to power buildings & plants)
SCOPE 3
Business Travel (All airline flights by all employees, business trips via cars & trains, number of nights spent in hotels for business travel)
Goods Transport (Products and materials transported via land, train, air and ship)
Paper bought by the company
Water consumed by the company

CARBON FOOTPRINT 2018

TOTAL EMISSIONS

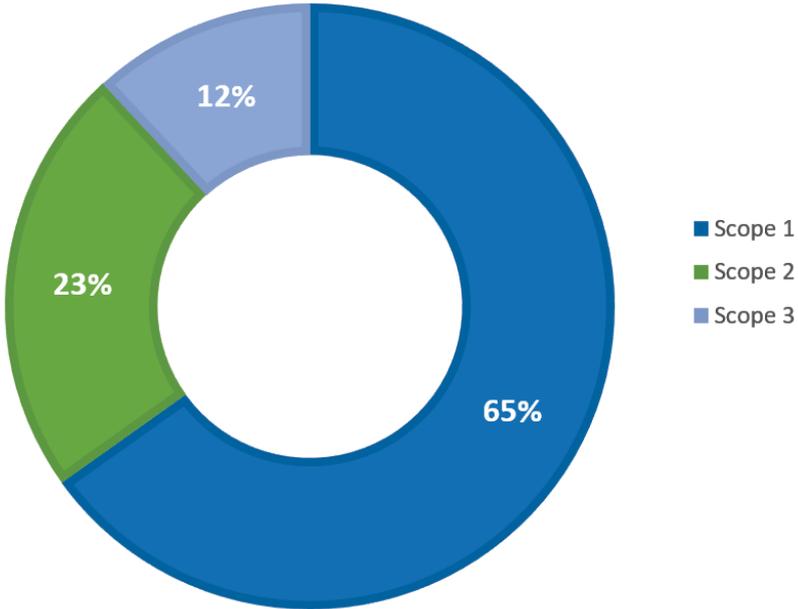
In 2018, Haggar's Group business activities and operations total net emissions were **7,549 tons CO₂**. **4,916 tCO₂e** were direct emissions related to Scope 1, while Scope 2 contributed with **1,737 tCO₂e**, and **896 tCO₂e** resulted by Scope 3.

Coldair Engineering Company was the largest emission contributor as their refrigerant gases (R22 and other HFCs) resulted in (48%) of the total carbon footprint emissions within their activities owned and controlled by the company (Scope 1). Also diesel consumed in machinery and generators contributed to (12%) of the total emissions due to electricity instability in Sudan in 2018. Pasgianos Food & Beverages came second, where their diesel consumption in vehicles (fleet) as well as generators caused the upturn. The same reason of diesel consumption is behind Dolphin Nigeria coming in third place.

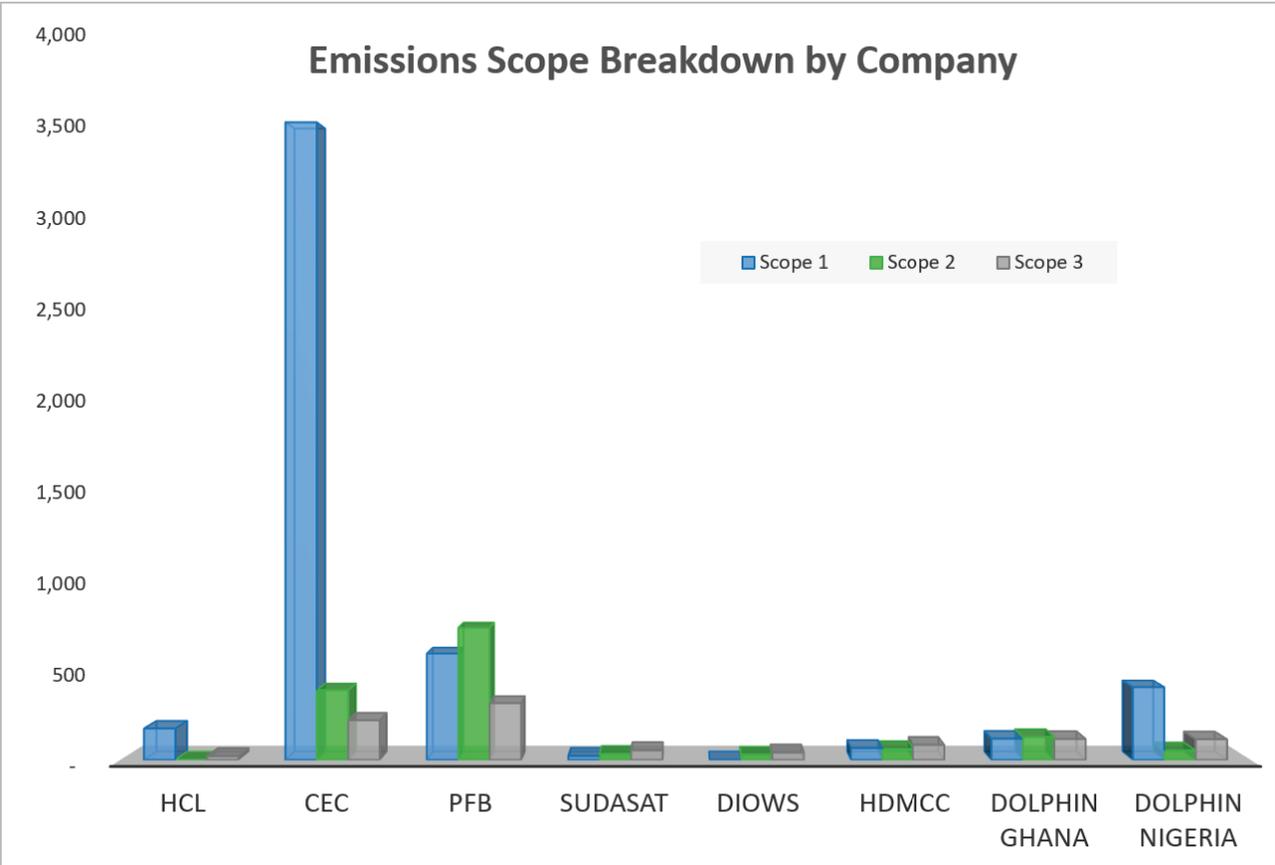


Scope 2 included only the electricity used to power buildings and plants, where the total of 5,021,283 kWh resulted in 1,421 tCO₂e representing 19% of the total emissions. Business Travel was the biggest contributor to (Scope 3) sources of emissions, as more than 100 international flights by employed persons were taken in 2018, with a total flying distance of 367,876 miles.

TOTAL HAGGAR GROUP EMISSION IN 2018 BY SCOPE



Emissions Scope Breakdown by Company



2018 RESULTS VS HISTORICAL DATA

Comparing 2018 Carbon Footprint results to the previous years, we find that the tCO₂e has increased despite the decrease in the business operations: CEC stopped two production lines for ACs and Refrigerators; PFB stopped its returnable glass bottling for soft drinks and DIOWS has reduced its operations portfolio.

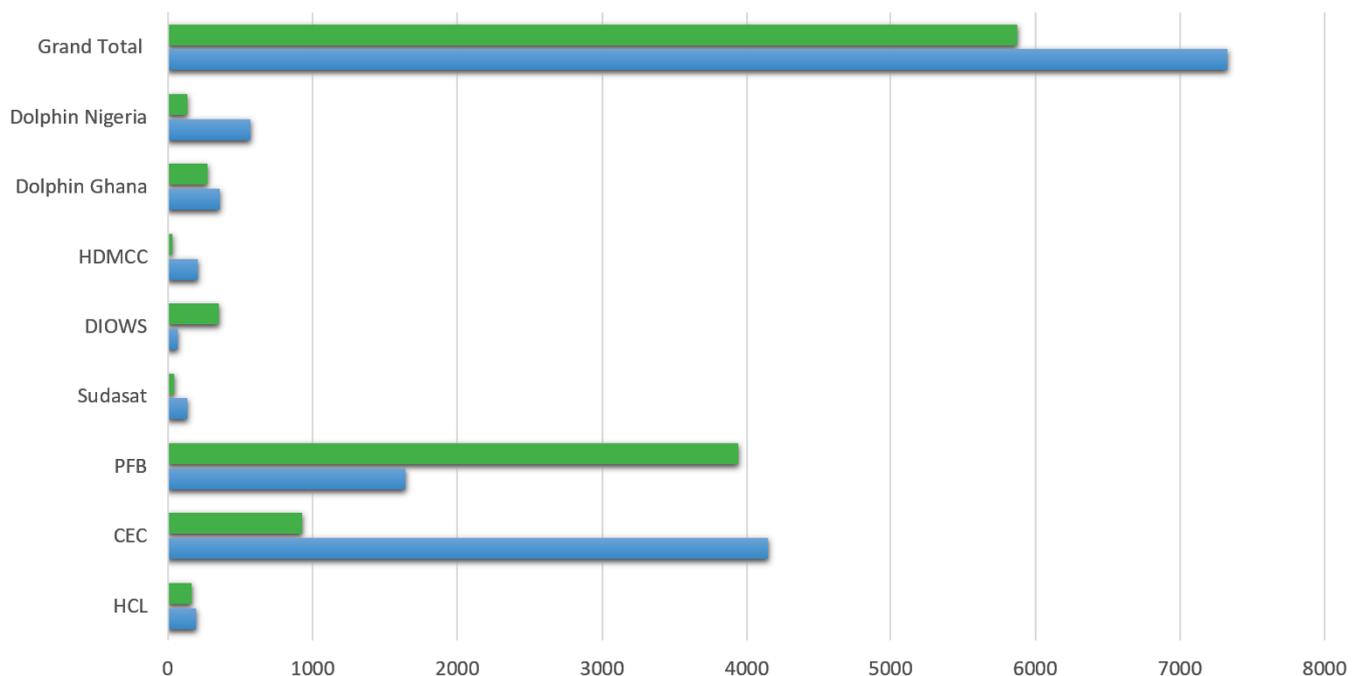
Nevertheless, Haggar Group total net emissions for 2018 has increased from 2016 with the difference mainly related to an increase in fuel consumption. This is directly linked to serious power instability experienced in that year and the need to rely on diesel power generators.

On the other hand, the surge in CEC's use of R22 due to the new product introduced: Air Conditioners, has significantly contributed to the increase in total net emissions.

The large variations are as well caused by differing methodologies that have been undertaken in both calculations and data collection. In 2012, calculations were done manually. In 2014's inventory an outsourced online software called Svante by south pole (South Pole Digital Lab) was used. In 2016, the calculations were done semi-manually using the Greenhouse Gas Protocol Corporate Standard.

Haggar Group	2012	2014	2016	2018	% Year on Year
Scope 1	5,497.10	3,862.60	2,546.30	4,915.50	93%
Scope 2	4,952.40	2,892.90	132.3	1,737	974%
Scope 3	133,282.40	63,549.00	3,197.40	896	-69%
Total Emissions	143,731.90	70,304.50	5,876.00	7,549	25%

Haggar Group Companies Emissions 2016 vs 2018



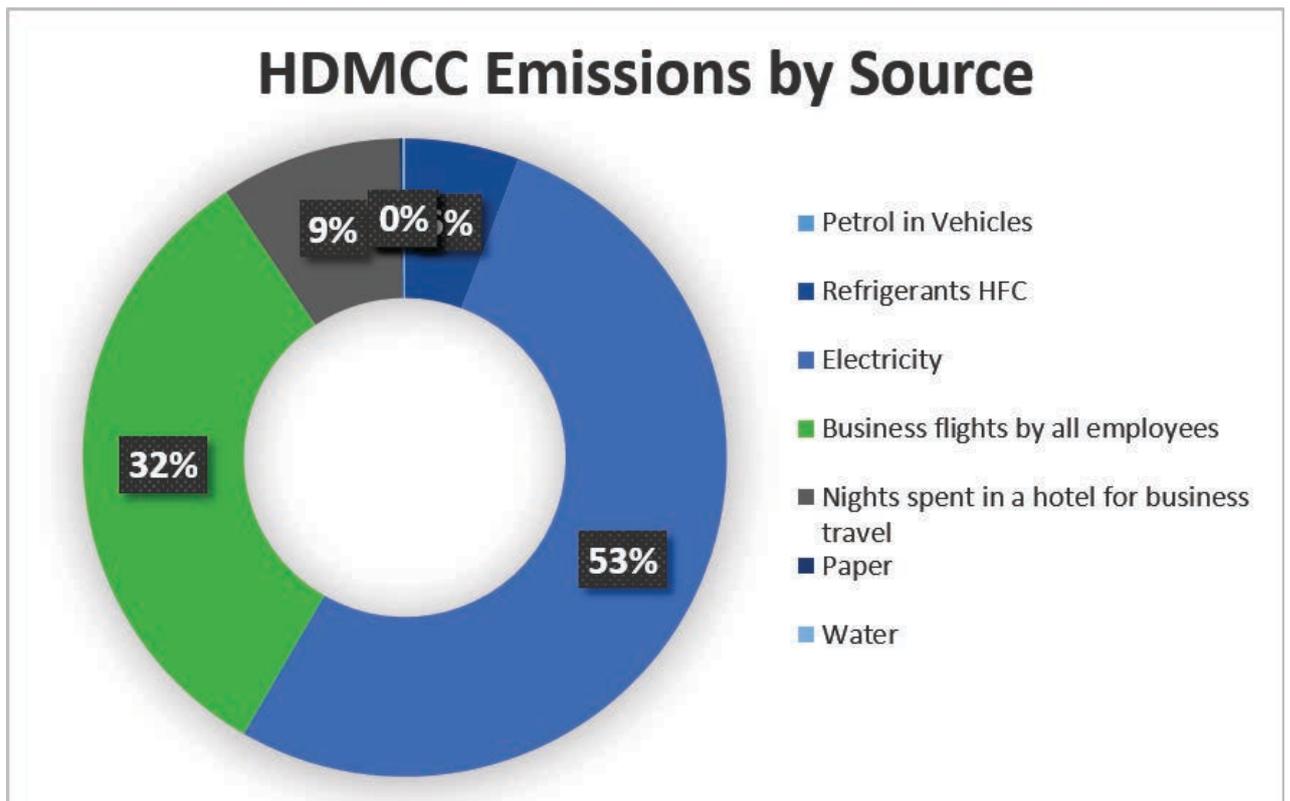


Haggar Dubai Multi Commodities Centre (Haggar DMCC) is the trading arm for the Haggar Group, based out of DMCC and primarily focused on Africa and the Middle East.

Haggar DMCC had an actual headcount of eighteen employed persons in 2018 in one facility (office) based in Dubai. Haggar DMCC had the highest count of business travel flights and nights spent in a hotel for business travel.

However, the main source of emission is the office electricity, followed by Scope 2 data of travel. In addition, refrigerants (HFCs) that were used in fire extinguishers for safety measures contributed to the emissions. The company has very few fuel consumption for petrol in vehicles.

HAGGAR DMCC	Emissions (tCO2e)
Petrol in Vehicles	0.02
Refrigerants HFC	6.50
Electricity	59.73
Business flights by all employees	36.71
Nights spent in a hotel for business travel	10.30
Paper	0.17
Water	0.14



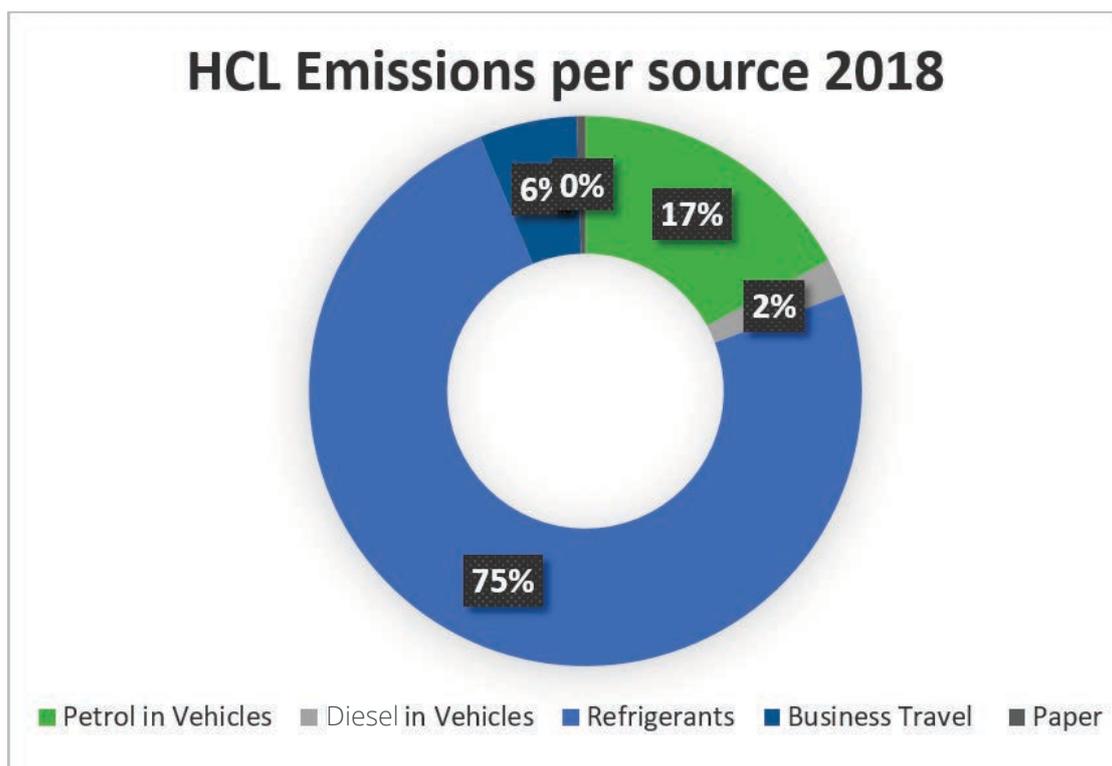


Haggar Group was established in South Sudan in 1904 and present today in 6 sectors across 5 countries in Africa. The group continues to look for opportunities to create and add value across the continent. Haggar Company Limited is the registered business in Sudan.

HCL had around thirty nine work force in 2018, with facilities of one building (office) and one Service Centre (Switches). Cars owned by the company only operate in Petrol, while there is one van that operates in diesel. No machinery and zero fuel consumed in generators as one of the Group subsidiaries covers HCL's diesel and the electricity consumption from the national grid. Refrigerants are only used in the fire extinguishers placed for health and safety purposed. As per the nature of HCL's operations, no goods or materials are transported. Business travel is one of the lowest in the Goup, while paper consumption is as similar as the rest of the companies.

Haggar Company Limited	Emissions (tCO2e)
Petrol in Vehicles	3.9
Diesel in Vehicles	0.5
Refrigerants	1.44
Business Travel	1.33
Paper	0.11

HCL Emissions per source 2018

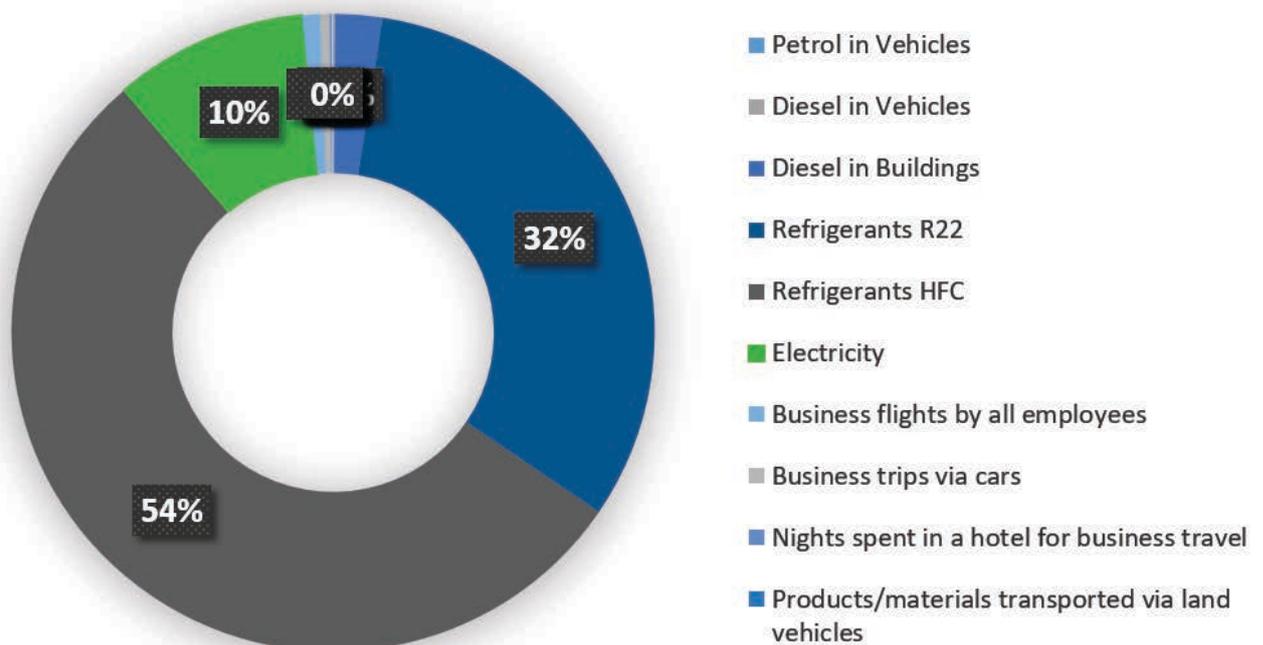


Coldair Engineering Company is a leader in the refrigeration space. The company continues to invest in developing its product portfolio in more general Consumer Electronics market. CEC's workforce was 245 employed persons in 2018, with facilities of one plant (factory) and two service centres in addition to three office buildings.

Vehicles owned by the company were among the least contributors to the emissions, whether petrol cars or diesel vans and trucks. Diesel in machinery and fuel consumed in generators was not of major significance as CEC have not suffered from electrical cuts from the grid contrary to other business units, where the national grid line was stable. Refrigerants were the largest sources not just for CEC but for the whole group, as the company was sourcing R600, R22, R134a for the ACs & refrigerator manufacturing.

Coldair Engineering Company (CEC)	Emissions tCO2e
Petrol in Vehicles	0.91
Diesel in Vehicles	2.72
Diesel in Buildings	94.57
Refrigerants R22	1,279.31
Refrigerants HFC	2,162.16
Electricity	387.42
Business flights by all employees	35.63
Business trips via cars	18.75
Nights spent in a hotel for business travel	4.59
Products/materials transported via land vehicles	0.02
Products/materials transported via air	0.00431
Products/materials transported via ship	0.00139
Paper	0.12
Water	2.36

CEC Emissions by Source



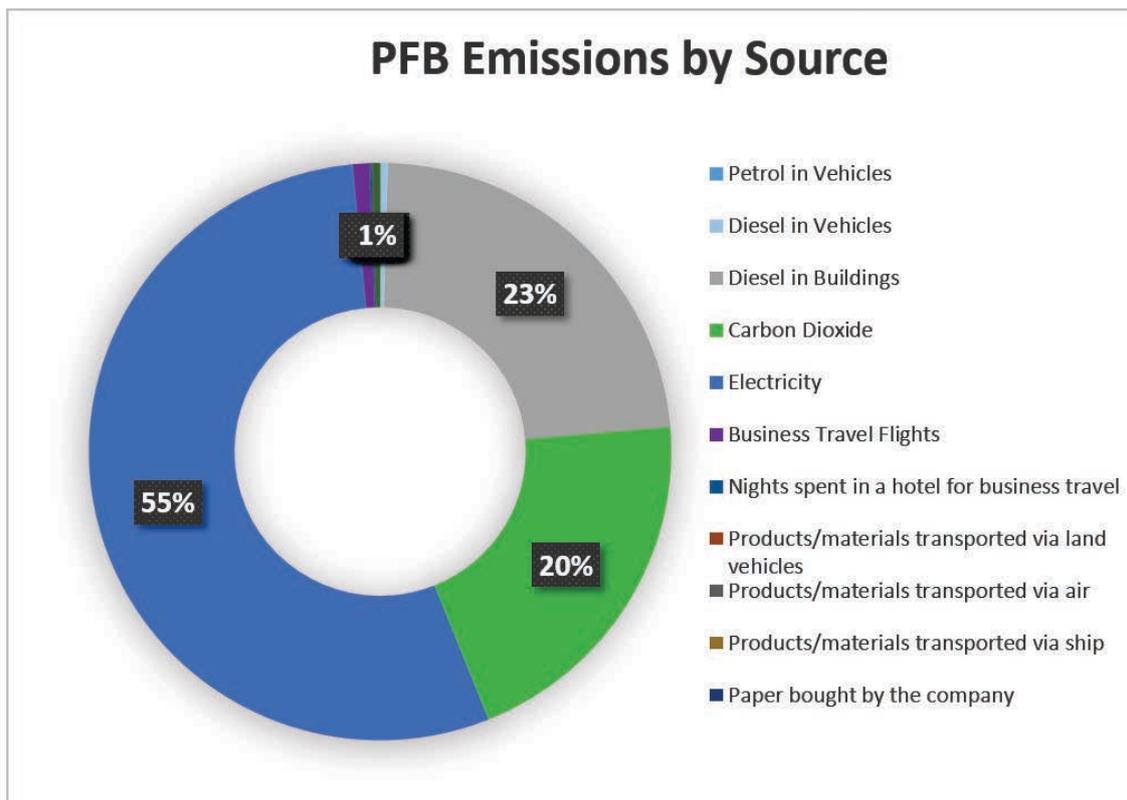


PASGIANOS FOOD & BEVERAGES

Pasgianos Food and Beverages was the first soft drink to be bottled in Sudan. It started in 1937 and in 1999 the company was acquired by Hagggar Group. Since then, the Company has invested in capacity and continues to provide unique national flavors to the carbonated soft drink market.

Pasgianos Food & Beverages (PFB)	Emissions (tCO2e)
Petrol in Vehicles	0.79
Diesel in Vehicles	5.18
Diesel in Buildings	311.78
Carbon Dioxide	273.00
Electricity	733.48
Business Travel Flights	12.17
Nights spent in a hotel for business travel	2.09
Products/materials transported via land	0.37
Products/materials transported via air	0.01
Products/materials transported via ship	0.001
Paper bought by the company	0.10
Water consumed by the company	5.45

PFB had 174 employed person in 2018, operating in one plant (factory) and in three office buildings with two service centres. Cars owned by the company consumed way less fuel than the vans and trucks owned by the company, while diesel in buildings had one of the highest consumption levels related to the power cuts and the need to rely on generators. Network Grid Electricity is a bit high as well as the plant energy demand was high.



SUDASAT is the largest provider of VSAT services throughout Sudan, providing voice and data connectivity to institutions, companies and individuals across the country. The company has 8 transponders on ARABSAT, Badr 6 providing C-band coverage across Sudan and a customer base that spans multinationals, telecom operators, government organizations and development agencies.

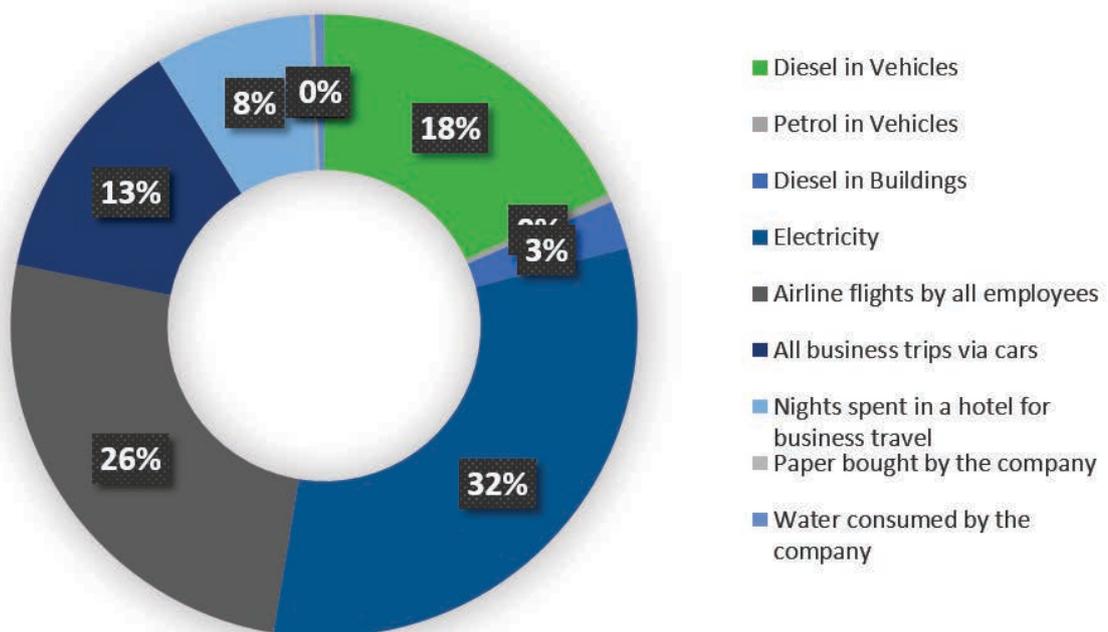
In 2018, SUDASAT had thirty-nine employed person in two offices and one service centre (Data Centres & Switches). The highest source of emission was the Network National Grid Electricity, followed by business travel flights by employees.

Fuel consumption was not high, as the main source was diesel in vehicles (trucks and cars that travel between Khartoum Office and Abu Haraz).

Diesel in buildings was reasonable as well, as electricity cuts were not often.

SUDASAT Emissions by Source	Emissions (tCO2e)
Diesel in Vehicles	18.62
Petrol in Vehicles	0.456
Diesel in Buildings	2.58
Electricity	32.640
Airline flights by all employees	26.36
All business trips via cars	13.439
Nights spent in a hotel for business travel	8.39
Paper bought by the company	0.230
Water consumed by the company	0.50

SUDASAT Emissions by Source



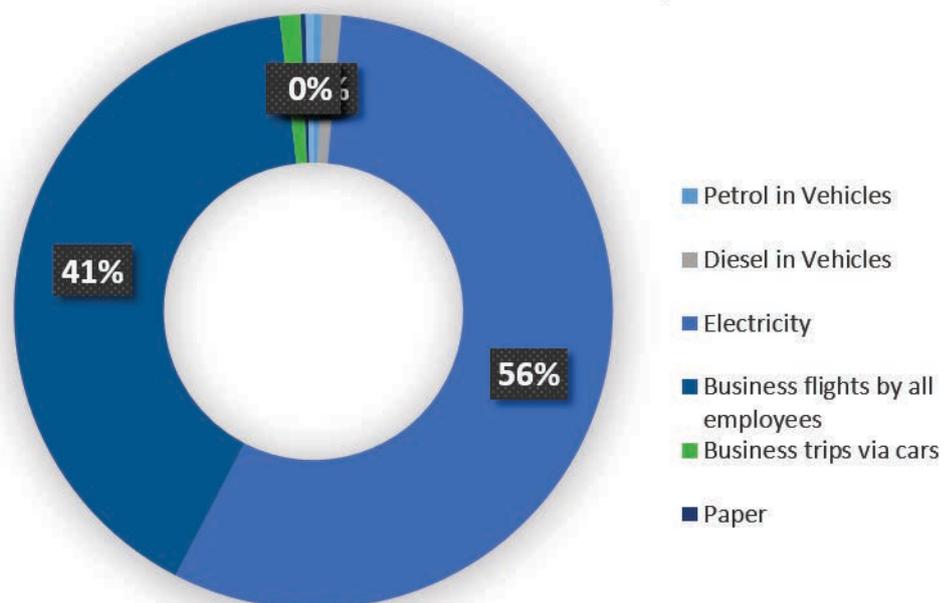
DYNAMIC International Oil Well Services (DIOWS) is Sudan's leading national oilfield services company, supplying solutions and integrated project management that optimize drilling and production performance for customers working in the oil and gas industry.

Founded in 2006 by Hagggar, the company offers the industry's most complete line of drilling tools and services, as well as the most advanced technology of cementing equipment and down hole tools.

(DIOWS) had 98 employed persons in 2018 working in three facilities (offices and buildings). Offices electricity consumption was the largest source of emissions, noting that it is from the National Network Grid. The company has a very small consumption of fuel in vehicles (petrol & diesel) compared to the rest of the Group companies, noting that DYNAMIC has not directly purchased fuel for generators as it was purchased by the building's tenor. Business travel flights by employed persons came second in sources of emissions as most of the operations are in States other than Khartoum.

DIOWS	Emissions (tCO2e)
Petrol in Vehicles	0.24
Diesel in Vehicles	0.520
Electricity	28.51
Business flights by all employees	20.62
Business trips via cars	0.58
Paper	0.13
Water	0.21

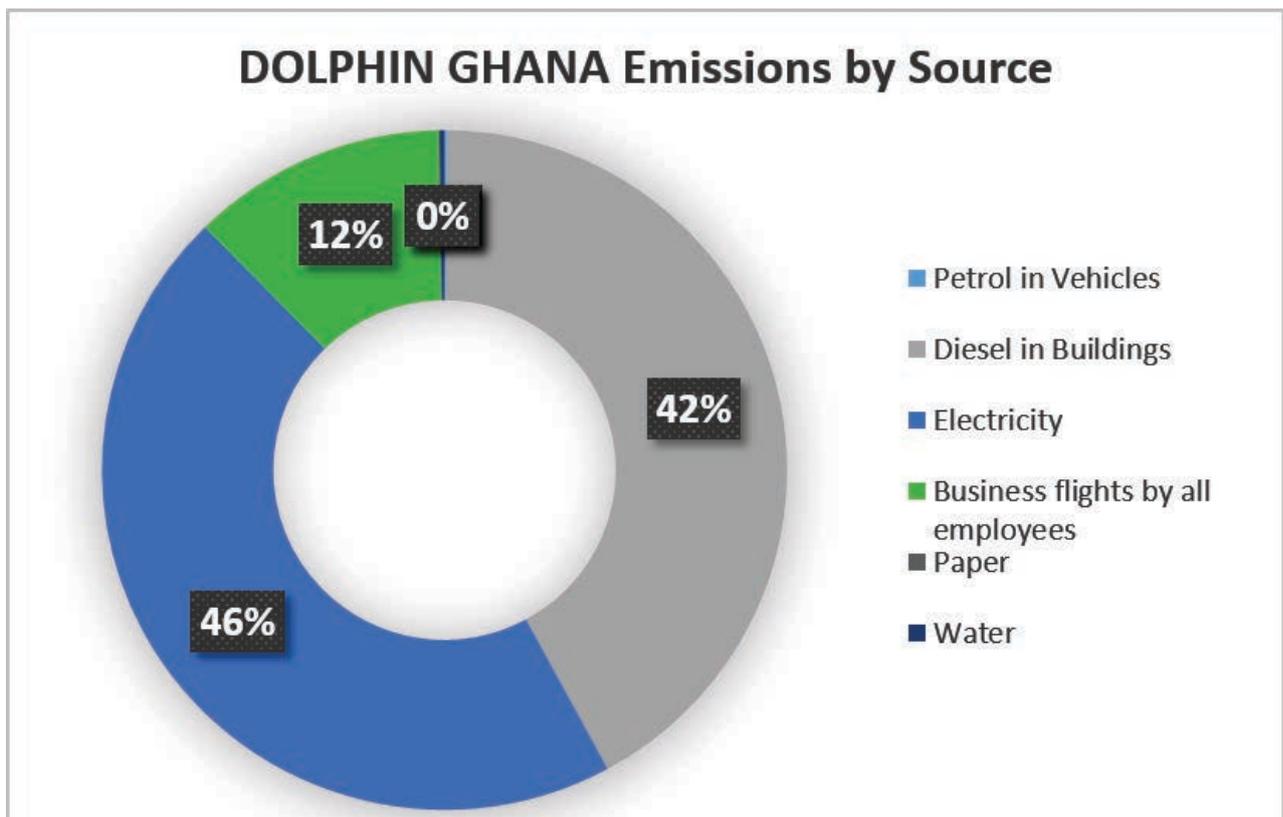
DYNAMIC DIOWS Emissions by Source



Established in 2013 in Dubai – UAE as an African communications carrier, Dolphin specializes in Wholesale Capacity and Internet Bandwidth for Carriers, ISPs and Enterprise customers. With over 60 million US\$ investment in the ACE Submarine cable, Dolphin offers full right of landing in Dakar, Accra and Lagos covering 80% of West African market population.

Dolphin Ghana had twenty-three employed persons in 2018, based in Accra, Ghana. Operating in two buildings (offices) and three Service Centres (Point of Sales-POS). Due to the instability of electricity in the country, Dolphin used large amounts of diesel to power up its facilities. The national network grid electricity is the highest source of emissions in the company, followed by business travel flights by employed persons. Petrol usage in vehicles was not very significant.

DOLPHIN Ghana	Emissions (tCO ₂ e)
Petrol in Vehicles	0.39
Diesel in Buildings	117.50
Electricity	127.63
Business flights by all employees	33.76
Paper	0.18
Water	0.57

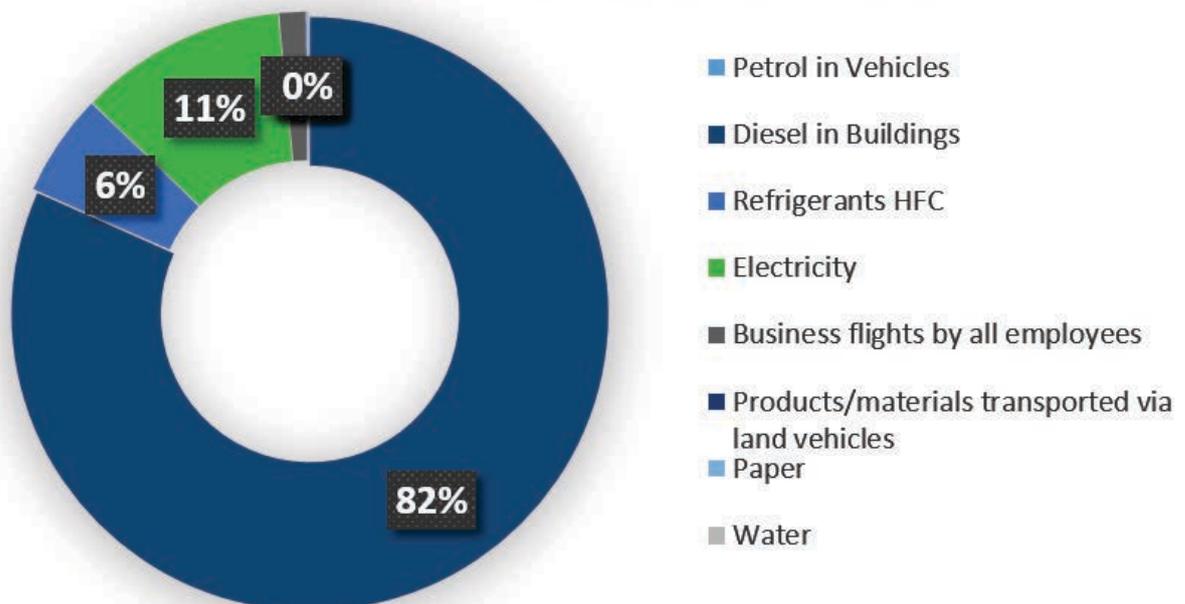


Dolphin aims to be a driving force for the business community of West Africa functioning as a catalyst in extending global reach, high quality and reliable levels of connectivity.

in 2018, Dolphin office in Nigeria had a head count of fourteen employed persons, in two buildings (offices), and two service centres. The largest source of emissions was the diesel used in generators to power up the buildings. As the office, same as in Ghana, suffered from electrical cuts. National Network Electrical Grid has not contributed much to the emissions, compared to other companies. Refrigerants (HFCs) in fire extinguishers were identified as a source of emissions as well.

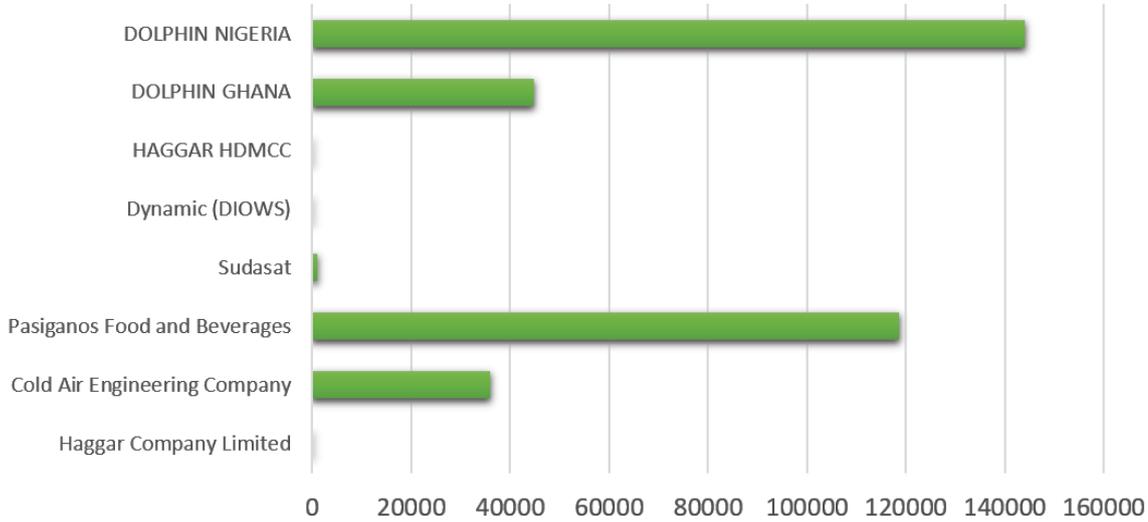
DOLPHIN NIGERIA	Emissions (tCO ₂ e)
Petrol in Vehicles	0.07
Diesel in Buildings	378.28
Refrigerants HFC	25.74
Electricity	51.97
Business flights by all employees	6.33
Products/materials transported via land	0.30
Paper	0.11
Water	0.44

DOLPHIN NIGERIA Emissions by Source

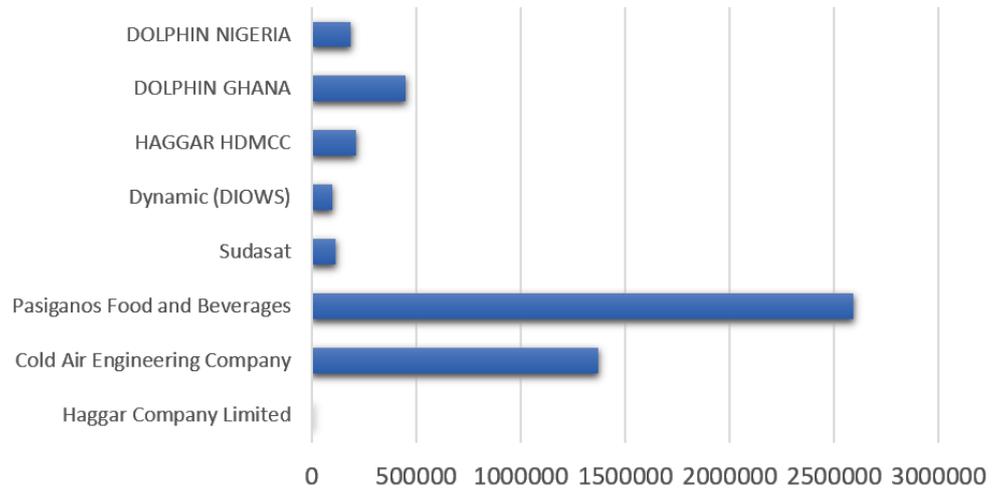


COMPARISON OVERVIEW

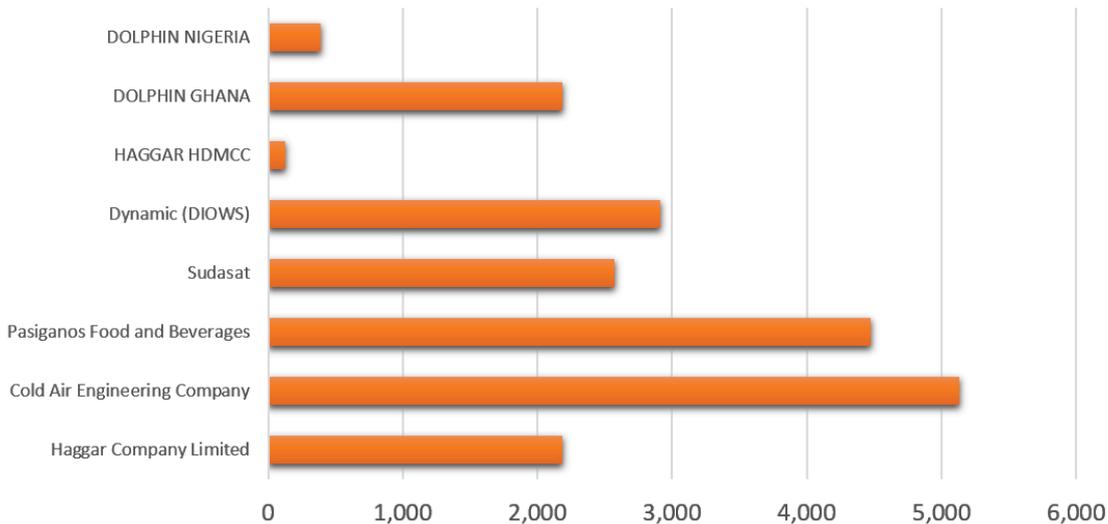
Diesel Consumed in Buildings (Generators)/ liters



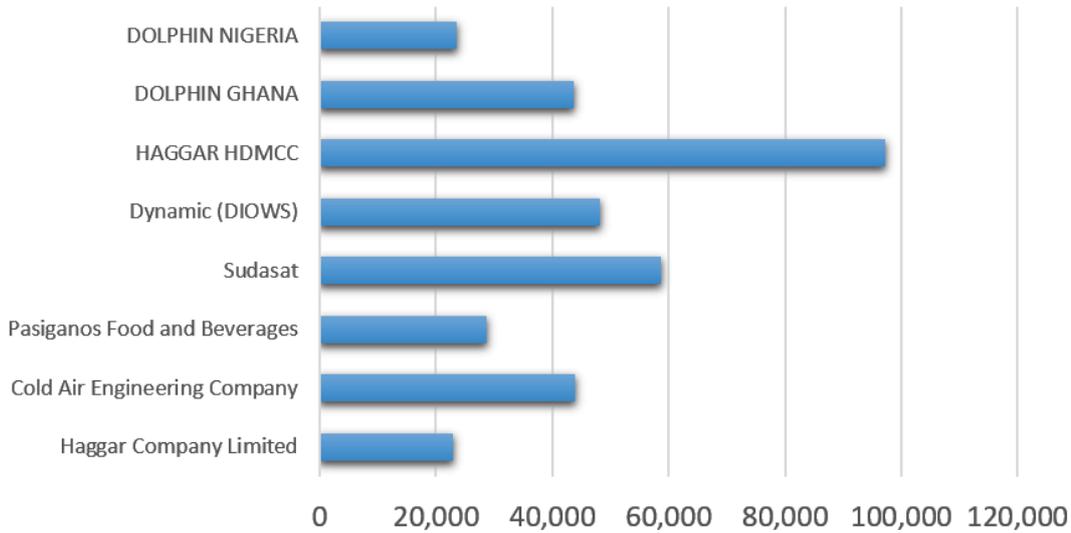
Electricity used to power buildings and plants/kWh



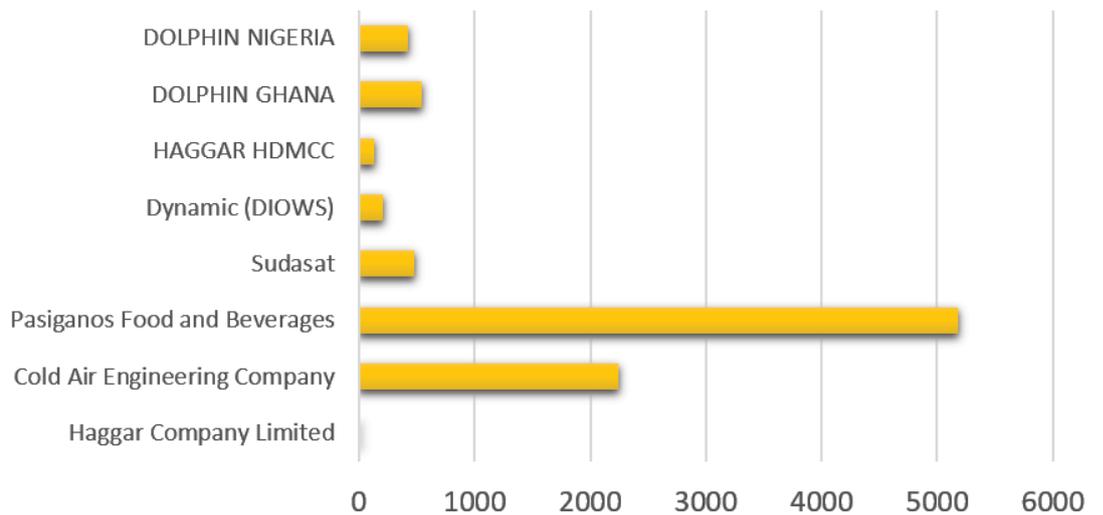
Petrol Vehicles Owned by the Company / km



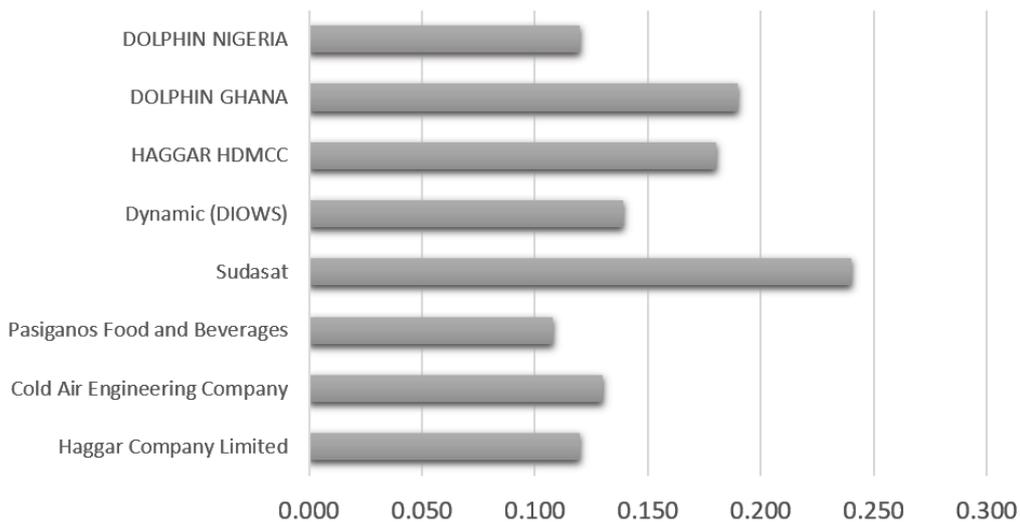
Business Travel Flights By Employees / km



Water Consumed by the Company/ m3



Paper bought by the company/tonne



SUMMARY

The Carbon Footprint Inventory has been conducted for eight companies of Haggar Group for the year 2018. The Corporate Sustainability & Social Impact Department has implemented the exercise as part of its environmental responsibility. An internal calculation tool has been developed and used for the first time for accurate estimations and improved procedures than applying a manual calculation methodology. The data collection aims at continuously collecting more sound data and ensuring its quality was done through the support of a specialized consultant, coordination with focal persons from each company, endorsement of the HCENR and a very diligent review process.

WAY FORWARD

We are advocating for raising environmental awareness and strengthening climate change dialogue internally among employed persons and externally with our different stakeholders.

In 2019, we have developed a Sustainability Index that measures Social Return on Investment (SROI) along with the Group's Return on Investment (ROI) coming up with what is referred to as Complete Returns. The index includes, among others, the following targets that would positively contribute to the Carbon Footprint till 2025:

- SDG 7 By 2030, increase substantially the share of renewable energy in the company energy mix.
- SDG 9 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.
- SDG 13 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

ANNEX

Emission Factors used are from the United Kingdom Department for Environment, Food & Rural Affairs (DEFRA). Electricity consumption comes from various countries as follows:

Sudan = 0.305 tCO₂e/MWh;

Ghana = 0.479 tCO₂e/MWh;

Nigeria = 0.573 tCO₂e/MWh; and

UAE: 0.676 tCO₂e/MWh according to the IGES GRID Emission Factor.

SCOPE 1

Emission Factor	Unit	2018	2016	Description	% Year on Year
Diesel Vehicles	km	0.17753	0.18307	Passenger vehicles, average car, diesel, km	-3%
Petrol Vehicles	km	0.18368	0.19184	Passenger vehicles, average car, petrol, km	-4%
Diesel Vans	km	0.2568	0.26578153	Delivery vehicles, Average (up to 3.5 tonnes), diesel, km	-3%
Diesel Trucks	km	0.87287	0.878926634	Delivery vehicles, All HGVs, Average Laden, km	-1%
Diesel in Buildings	litres	2.62694	2.6116252	Fuels, Liquid fuels, Diesel average biofuel blend, litres	1%
Natural Gas	kWh	0.20437	0.204440909	Fuels, Gaseous fuels, Natural Gas, kWh (Net CV)	0%
Refrigerants	kg	1810	1810	Refrigerant & other, HCFC-22/R22 = chlorodifluoromethane, kg	0%
	kg	1430	2447.684211	Refrigerant & other, Average of all HFCs as no specific stated, kg	-42%

SCOPE 2

Emission Factor	Unit	2018	2016	Description	% Year on Year
Electricity	kWh	0.28307	0.41205	UK Electricity EF for reference	-31%

SCOPE 3

Emission Factor	Unit	2018	2016	Description	% Year on Year
Goods Transport	tonne.km	0.2568	0.26578153	Freighting, Vans, Average vans, diesel, km	-3%
	tonne.km	0.033505329	0.02950	Freighting, Rail, tonne.km	14%
	tonne.km	1.23205	1.41112	Freighting, Freighting flights, international to/from non-uk, km, with RF	-13%
	tonne.km	0.004574	0.004546	Freighting, Sea freighting, Crude tanker, Average, tonne.km	1%
Paper	tonnes	955.6535	939	Materials, Paper, Paper, tonnes	2%
Water	m3	1.052	1.052	Water supply, m3 + Water treatment, m3	0%
Waste	tonnes	586.5313	421	Waste, municipal waste, landfill, tonnes	39%
Energy not in Scopes 1 or 2	kWh	0.08283	0.10475	UK Electricity WTT and T&D EF for reference	-21%
	litres	0.61846	0.554336122	WTT fuels, liquid fuels, Diesel, average biofuel blend, litres	12%
	kWh	0.02841	0.02776	WTT fuels, gaseous fuels, natural gas	2%
	km	0.04196	0.03771	WTT Passenger vehicles, average car, diesel, km	11%
	km	0.04985	0.03754	WTT Passenger vehicles, average car, petrol, km	33%
	km	0.06133	0.05533	WTT Delivery vehicles, Average (up to 3.5 tonnes), diesel, km	11%
	km	0.1632	0.182980448	WTT Delivery vehicles, All HGVs, Average Laden, km	-11%
	km	0.04594	0.03762	WTT Passenger vehicles, average car, unknown fuel, km	22%
	km	0.00182	0.00182	WTT Passenger vehicles and travel, international rail, km	0%
	tonne.km	0.02704	0.05533	WTT Freighting, Vans, Average vans, diesel, km	-51%
	tonne.km	0.00756	0.00601	WTT Freighting, Rail, tonne.km	26%
	tonne.km	0.13498	0.15007	WTT Freighting, Freighting flights, international to/from non-uk, km, with RF	-10%
	tonne.km	0.000885	0.00083	WTT Freighting, Sea freighting, Crude tanker, Average, tonne.km	7%
	Business Travel and WTT Business Travel	km	0.17753	0.18307	Business travel land, Cars by size, Average car, diesel, km
km		0.01226	0.01214	Business travel land, Rail, International rail, passenger.km	1%
Nights		52.12857143	52.12857143	Hotel stay, average of all countries listed as Sudan not an option, room per night	0%
passenger.km		0.139964703	0.137124809	Business travel air, international to/from non-UK, economy	2%
passenger.km		0.22395	0.21939	Business travel air, international to/from non-UK, premium economy	2%
passenger.km		0.4059	0.39764	Business travel air, international to/from non-UK, business class	2%
passenger.km		0.55987	0.54846	Business travel air, international to/from non-UK, first class	2%
passenger.km		0.01533	0.01458	WTT Business travel air, international to/from non-UK, economy	5%
passenger.km		0.02453	0.02333	WTT Business travel air, international to/from non-UK, premium economy	5%
passenger.km		0.04447	0.04229	WTT Business travel air, international to/from non-UK, business class	5%
passenger.km		0.06134	0.05833	WTT Business travel air, international to/from non-UK, first class	5%

REFERENCES

- (1) Corporate Carbon Accounting and Reporting, (2017) [online],
https://www.researchgate.net/publication/324727295_Corporate_Carbon_Accounting_and_Reporting_in_Turkey_Analysis_of_Companies_in_the_BIST_Sustainability_Index
(Accessed November 2019)
- (2) Good Energy: What is a Carbon Footprint? [online]
<https://www.goodenergy.co.uk/about-us/>
(Accessed January 2020)
- (3) Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, (2016) [online]
<https://www.iso.org/standard/38381.html>
(Accessed November 2019)
- (4) LIFE Clim'Foot: Calculate and Reduce Organizations' Carbon Footprint (2018) [online]
<http://www.climfoot-project.eu/en/what-emission-factor>
- (5) South Pole Digital Lab
<https://www.southpole.com>
<https://svante.green/#/start>
(Accessed December 2019)
- (6) The Greenhouse Gas Protocol (2004) [online],
<https://ghgprotocol.org/about-us>
(Accessed October 2019)



Haggar Group Corporate Sustainability & Social Impact Department

Email: csi.info@haggargroup.ae



<https://www.haggargroup.ae>