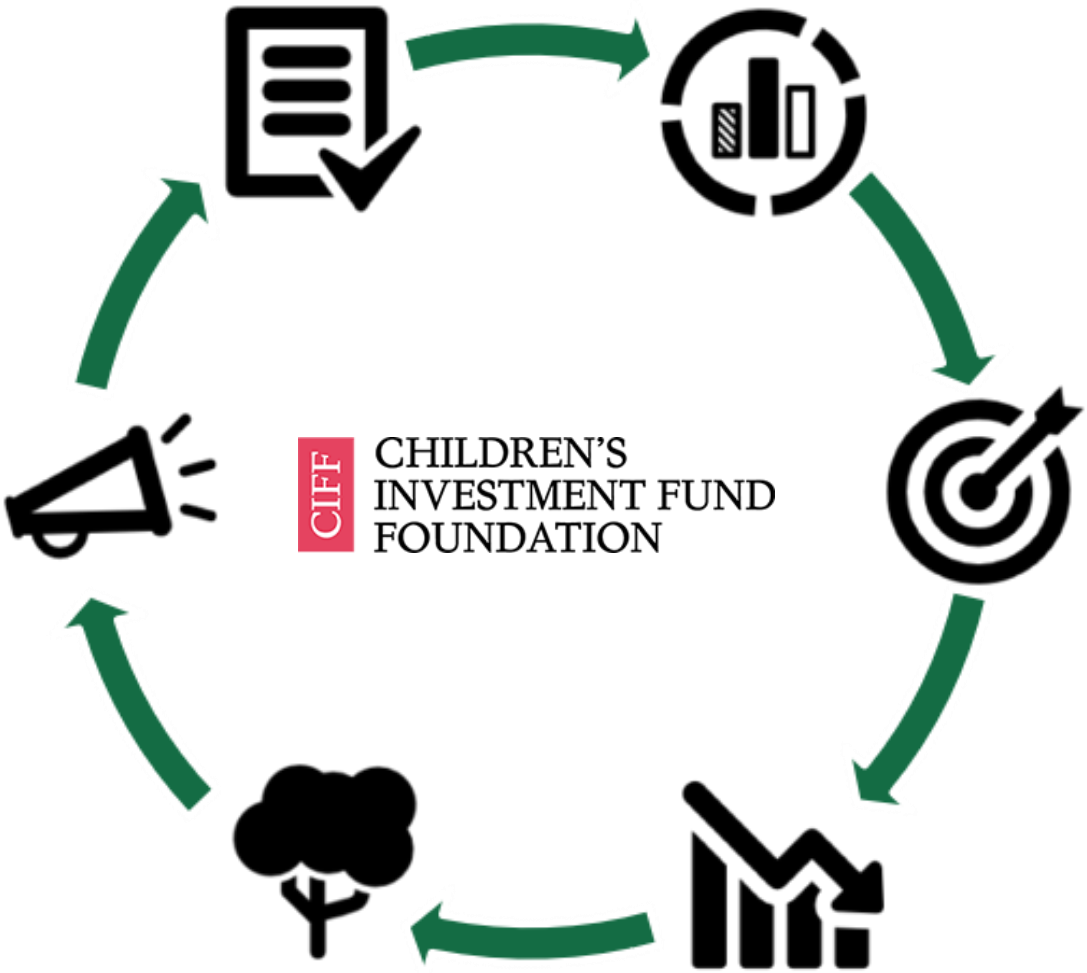
Carbon Footprint Appraisal Report



Assessment Period:
1st July 2019 - 30th June 2020

Carbon Footprint Ltd, Belvedere House, Basing View, Basingstoke, RG21 4HG,
UK | +44 (0)1256 592 599 info@carbonfootprint.com | www.carbonfootprint.com

Executive Summary

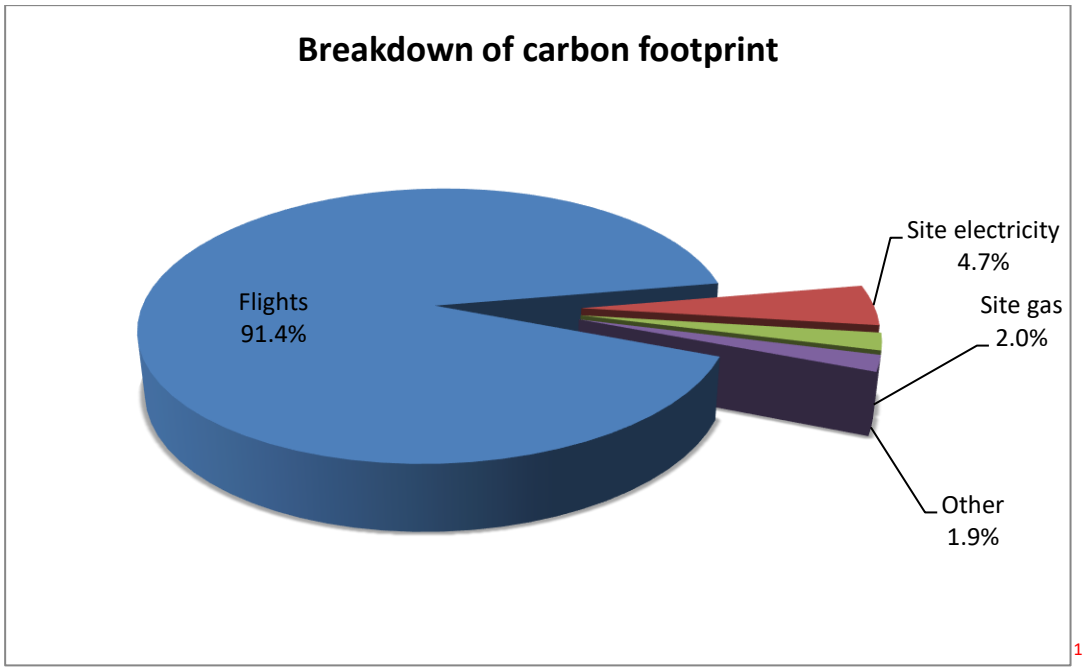
Carbon Footprint Ltd has assessed the greenhouse gas (GHG) emissions of The Children's Investment Fund Foundation (henceforth referred to as CIFF) from 1st July 2019 to 30th June 2020 based on a dataset provided by the company.

Current Performance

- CIFF has reduced its absolute GHG emissions by 32.6% since the baseline year (2018/19).
- Flights continue to account for the greatest proportion of the total footprint at 91.4%.
- Large improvements have been made with data accuracy this year, compared to the previous year's assessment.

Recommendations

- Evaluate the effectiveness of using remote meetings and limited travel during COVID-19, and re-define what your business classifies as "essential" travel going forwards.
- Set reduction targets based on intensity metrics (e.g. emissions per employee and/or per £M disbursement).
- When booking unavoidable flights, consider selecting a specific airline based on their sustainability credentials and how modern their aircraft fleet is.
- Consider switching to a renewable energy tariff across sites. At sites where CIFF reside in a serviced office building, discuss with landlords the possibility of switching energy provider. This can be reflected within the results using the GHG Protocol's dual-reporting method which produces a market-based total and location-based total to be reported alongside one another.



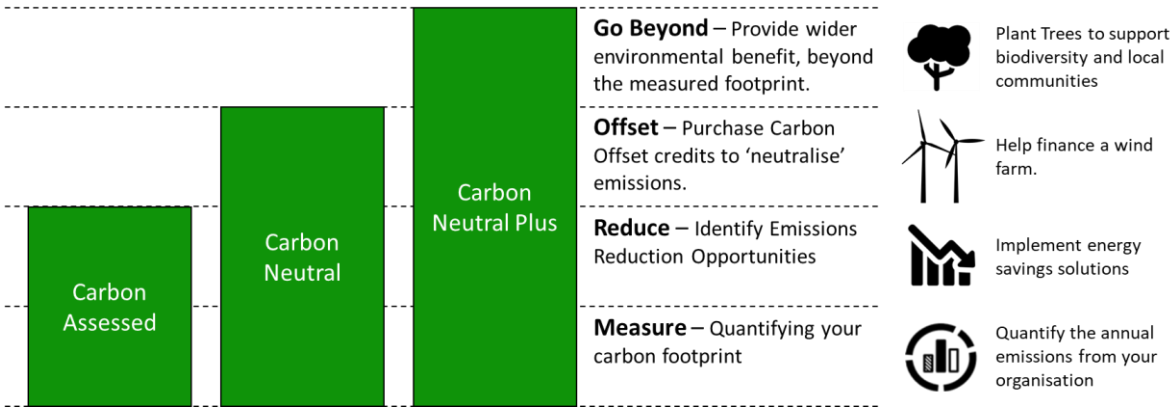
[1]

[1] Other constitutes refrigeration & A/C, site diesel, taxi, rail and grey fleet travel

	Baseline Year 2018/19	Current Year 2019/20	% change from baseline year
Total Tonnes CO_2e[2]	2,407.61	1,623.77	-32.56%
Tonnes of CO_2e per employee	23.60	13.53	-42.67%
Tonnes of CO_2e per £M disbursement	10.65	5.38	-49.48%
Total Tonnes CO_2e with 5% uplift	2,527.98	1,704.96	-32.56%
Tonnes of CO_2e from embodied emissions	23.53	34.28	+45.69%[3]

Due to difficulties collecting some activity data in the baseline year (2018/19), CIFF chose to include a 5% uplift on their calculated tCO_2e. This was carried out with the aim of covering any GHG emissions which had been missed due to data inaccuracies. Although the accuracy of CIFF's data has increased this year, CIFF have chosen to maintain the 5% uplift for the 2019/20 assessment (as seen in the table above).

In order to compensate for the emissions already generated by CIFF, the company could continue with their offsetting programme. This would enable the funding of an equivalent CO_2e saving elsewhere, as well as allowing CIFF to maintain their Carbon Neutral status. Last year you supported projects including Gold Standard Borehole Rehabilitation in Uganda, as well as Gold Standard Fuel Efficient Cookstoves in North Darfur. **Carbon offsets can also be reported alongside your total gross CO_2e emissions within your directors' report under the Streamlined Energy and Carbon Reporting Guidelines (SECR).** This allows CIFF to showcase its carbon neutrality, and commitment to sustainability, by showing the net CO_2e emissions within the report.



[2] Excluding uplifts and embodied emissions
[3] Note: increases in embodied emissions are a result of more accurate, updated emission factors

Table of Contents

Quality Control

Report issue number:	3.0
Date:	18 December 2020
Calculations completed by:	Zoe Booth
Calculations reviewed by:	Georgina Whitlock
Report produced by:	Zoe Booth
Report reviewed by:	Georgina Whitlock
Director approval:	John Buckley

1. Introduction

1.1. Company Overview

CIFF is the world's largest philanthropy that focuses specifically on improving children's lives. CIFF works with a wide range of partners, and areas of work include maternal and child health, adolescent sexual health, nutrition, deworming, tackling child slavery and exploitation, and supporting smart ways to slow down and stop climate change.

1.2. CIFF's carbon management journey

Carbon Footprint provides a simple six step annual journey to enhance your sustainability credentials whilst complying to best practice and differentiating your brand. CIFF has completed the first step of its annual carbon management journey.

The purpose of this report is to:

- Summarise the results of the carbon footprint assessment.
- Provide advice on carbon reduction targets.
- Provide practical recommendations to enhance your sustainability programme and reduce your emissions.

1.3. What is a carbon footprint?

A carbon footprint is a measure of the impact our activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide equivalents (CO_2e). A carbon footprint is made up of two parts, direct and indirect emissions.

1. **Direct emissions:**
   Direct emissions are produced by sources which are owned or controlled by the reporting organisation and include electricity use, burning oil or gas for heating, and fuel consumption as a result of business travel or distribution. Direct emissions correspond to elements within scopes 1, 2 and 3 of the World Resources Institute GHG Protocol, as indicated in Table 1.

Table 1: Direct emissions sources

Footprint	Activity	Scope
Direct	Electricity, heat or steam generated on-site	1
	Natural gas, gas oil, LPG or coal use attributable to company-owned facilities	1
	Company owned vehicle travel	1
	Production of any of the six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs and SF_6)	1
	Consumption of purchased electricity, heat steam and cooling	2
	Employee business travel (using transport not owned by the company)	3

2. **Indirect emissions:**
   Indirect emissions result from a company's upstream and downstream activities. These are typically from outsourced/contract manufacturing, and products and the services offered by the organisation. Indirect emissions correspond to scope 3 of the World Resources Institute GHG Protocol excluding employee business travel as indicated in Table 2.

Table 2: Indirect emissions sources

Footprint	Activity	Scope
Indirect	Employee commuting	3
	Transportation of an organisation's products, materials or waste by another organisation	3
	Outsourced activities, contract manufacturing and franchises	3
	GHG emissions from waste generated by the organisation but managed by another organisation	3
	GHG emissions from the use and end-of-life phases of the organisation's products and services	3
	GHG emissions arising from the production and distribution of energy products, other than electricity, steam and heat, consumed by the organisation	3
	GHG emissions from the production of purchased raw or primary materials	3
	GHG emissions arising from the transmission and distribution of purchased electricity	3

For businesses, the assessment focuses on direct emissions, as these lie under the control of the organisation. However, we ask companies to recognise that there is an indirect emissions footprint and select suppliers based on their environmental credentials alongside price and performance.

1.4. Why is it important?

Climate change is a global threat which will impact the lives of everyone on the planet.

Over the past two decades the effects of climate change have accelerated. Considerable evidence exists proving climate change has been exacerbated by human activity. Changes in our post-industrial lifestyles have altered the chemical composition of the atmosphere, generating a build-up of greenhouse gases – primarily carbon dioxide, methane, and nitrous oxide levels – raising the average global temperature.

The consequences are already evident and will continue to worsen unless significant action is taken and quickly. **Sea level will continue to rise and local climate conditions to be altered, causing an increase in extreme weather events, affecting forests, crop yields, and water supplies. This can lead to homelessness, famine and conflict as resources become scarcer.**

Environmental pollution and climate change affect human health, accelerate species extinction, and disrupt vital ecosystems. **Ambient (outdoor) air pollution is responsible for at least 4 million human deaths each year**[4]. In addition to this, poor air quality and issues of clean water availability leave us

[4] World Health Organisation. https://www.who.int/health-topics/air-pollution

more susceptible to diseases such as COVID-19. Combined with rises in temperature and deforestation (from direct human action and climate change related events), resulting in the displacement of animals from their native habitats, the frequency of disease occurrence will increase, as disease will transfer from animals to other geographical areas and larger human populations.

It is vital that all individuals, businesses, organisations and governments work towards the common goal of reducing greenhouse gas emissions. This carbon footprint assessment will enable CIFF to continue doing its bit by monitoring, reducing and offsetting its emissions.

1.5. ISO 14064-1:2018

This GHG report has been prepared in accordance with Part 1 of ISO 14064: 2018. The GHG inventory, report, or statement has not been verified.

This standard requires the estimation of likely error margin based on a simple error analysis, to identify uncertainty in the calculations. Our simple error analysis provides a level of uncertainty based on the accuracy of the data provided. This shows the error for each emissions source, as well as the sum of these divided by the total emissions, to produce a total percentage error.

1.6. Calculation methodology

The carbon footprint appraisal is derived from a combination of client data collection and data computation by Carbon Footprint's analysts.

Carbon Footprint's analysts have calculated the majority of CIFF's footprint using the 2020 conversion factors developed by the UK Department for Environment, Food and Rural Affairs (Defra) and the Department for Business, Energy & Industrial Strategy (BEIS). These factors are multiplied with the company's GHG activity data. Carbon Footprint has selected this preferred method of calculation as a government recognised approach and uses data which is realistically available from the client, particularly when direct monitoring is either unavailable or prohibitively expensive.

For CIFF's non-UK site electricity, a variety of emission factor sources have been utilised. These are outlined in Table 3. This allows us to account for differences in the mix of electricity generation in different countries.

Table 3: Conversion factor sources per site (non-UK electricity)

Site	Factor Year	Source[5]
India	2018	Climate Transparency Report (2019)
Kenya	2014	IEA factor for Kenya (published 2016)
Ethiopia	2014	IEA factor for Africa (published 2016)
China	2018	Climate Transparency Report (2019)

Additional methodology information is presented in Annex A.

[5] Kenya and Ethiopia (Africa) factors are for electricity generation only and therefore do not include losses through transmission and distribution (T&D)

1.7. Data supplied for the carbon footprint appraisal

A summary of the data supplied by CIFF for the appraisal is presented in Annex B.

1.8. Abbreviations

A/C	Air Conditioning
BEIS	Department for Business Energy & Industrial Strategy
CIFF	Children's Investment Fund Foundation
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
EV	Electric Vehicle
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standards Organisation
km	Kilometres
kWh	Kilowatt Hours
PHEV	Plug-in Hybrid Electric Vehicle
PR	Public Relations
T&D	Transmission and distribution (relating to electricity)
UN	United Nations

2. Calculation Scope and Accuracy

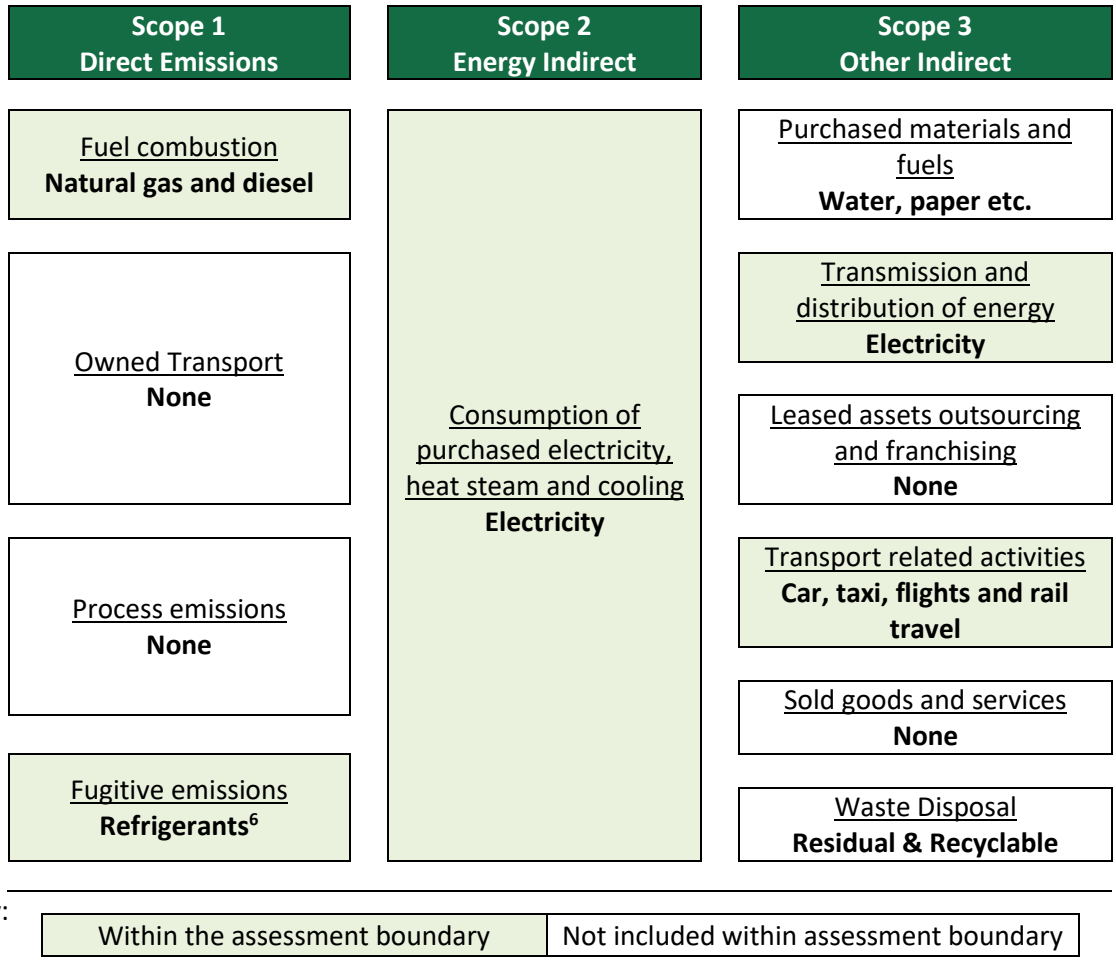
2.1. Scope of this work

Carbon Footprint has assessed the GHG emissions from 1st July 2019 to 30th June 2020 resulting from the energy consumption at CIFF's facilities and its business transport activities.

2.2. Organisational & reporting boundaries

The organisation has accounted for all quantified GHG emissions and/or removals from facilities over which it has operational control. The assessment covers the following reporting boundaries:

Figure 1: Assessment boundary



Indirect GHG sources that are outside the assessment boundary have been excluded from quantification as it is not technically feasible or cost effective, to include these in the GHG assessment.

[6] CIFF was unable to source data for all refrigerants but have chosen to add a 5% uplift to their total tonnes CO_2e to account for a lack of data availability.

2.3. Calculation accuracy & materiality

The result of a carbon footprint calculation varies in accuracy depending on the data set provided. The more accurate the data supplied, the more accurate the final result which will subsequently allow for better targeting of areas where improvements can be made. Materiality is determined by the percentage contribution of each element to the overall footprint.

The data provided is derived from energy bills, expenses claims and data collected by CIFF (Table 4). Based on the accuracy of the data provided, a simple error analysis has been used to estimate the error margin for the appraisal results.

Table 4: Assessment accuracy, materiality and simple error analysis

Dataset	Source of data and comments	Accuracy	Materiality	Uncertainty	Estimated Error Margin (tCO_2e)
Flights	Origin/destination airports, and cabin class from travel provider reports provided for the full data period.	Excellent	Very High (<80%)	1%	14.85
Site electricity	**London –** kWh consumption provided quarterly with sub-metered readings for CIFF's floor for the 12-month period. **Delhi –** Units consumed provided based on utility bills provided for the data period. **Nairobi –** kWh consumption provided based on bills showing readings provided for the data period	Very Good	Low (1-5%)	5%	2.92
	Addis Ababa & Beijing – kWh consumption estimated based on an average m^2 floor area use benchmark from the London, Delhi and Nairobi sites.	Poor (estimated)		90%	16.04
Site gas	**London** – actual readings for the whole building taken and divided by five to apportion to CIFF's single floor use. For the whole period. [7]	Good	Low (1-5%)	10%	3.24
Refrigeration & A/C	**London & Nairobi** – service records provided as evidence.	Excellent	Very Low (<1%)	1%	0.14
	Delhi – email evidence states no top-ups required. No other evidence was provided. **Addis Ababa** – data was not available for this site. **Beijing** – data was not available for this site.	Average		50%	n/a
Taxi travel	Cost data provided for all sites.	Good	Very Low (<1%)	10%	1.25
Rail travel	Cost data provided for all sites.	Good	Very Low (<1%)	10%	0.29
Site diesel	Litres of fuel purchased, sourced from invoices for the full data period.	Excellent	Very Low (<1%)	1%	0.01
Employee owned car travel	Cost data provided from expense claims. Mileage was calculated based on a claim rate of 45p per mile.	Good	Very Low (<1%)	10%	0.04
Total				**+/- 2.4%**	**+/- 38.78**

[7] London is the only site which utilises gas.

Improvements to data since the previous year

This is the second assessment that CIFF have carried out, in conjunction with Carbon Footprint Ltd, to assess their GHG emissions. In line with the recommendations in the previous report, CIFF has improved its data collection processes and improved calculation accuracy in the following ways:

- **Employee numbers -** the provision of employee numbers per site allows the calculation of tCO_2e per employee, per site as an intensity metric. This ensures that a fairer comparison is made between sites and with year-on-year changes to the business (e.g. office growth/reduction).
- **London Gas** - A more accurate consumption figure was provided for the whole building at the London site. This was then apportioned to CIFF's floor.
- **India & Kenya Energy** – both sites provided electricity consumption for the whole period this year. Whereas for the previous assessment, one month's consumption for each site was apportioned to model a 12-month period.
- **India Diesel** – The quantity of diesel (in litres) purchased throughout the 12-month data period was provided this year. Whereas in the previous assessment, one winter month's consumption was extrapolated to model a worst-case 12-month consumption scenario.
- **Air Conditioning (A/C)** – In the previous assessment, data regarding refrigerant gas top ups was only available for the London office. This year the Kenya office has also been able to provide data on top-ups during the period.
- **Flights** – Carbon Footprint Ltd was commissioned, following the previous report, to create a carbon calculator for CIFF to enable them to track their flight-related emissions on a monthly basis by downloading a monthly report from their travel provider. In the previous assessment, due to data availability a 6-month period was extrapolated to model a 12-month scenario. However, this year's assessment uses a full 12-months of data.

Overall, the accuracy of data has improved greatly this year compared to the previous years' assessment. **To further improve accuracy for future assessments, please see recommendations provided in Section 5.**

3. Carbon Footprint Results

3.1. Summary of results

The total carbon footprint for CIFF for the period ending 30th June 2020 was 1,623.77 tonnes CO_2e. Table 5 provides a summary of results for CIFF's carbon footprint calculation by scope and source activity.

Due to difficulty collecting some activity data in the baseline year (2018/19), CIFF chose to include a 5% uplift on their calculated tCO_2e. This was carried out with the aim to cover any GHG emissions which had been missed due to data inaccuracies. Although the accuracy of CIFF's data has increased this year, CIFF have chosen to maintain the 5% uplift for the 2019/20 assessment (see Table 5).

Table 5: Results of CIFF's carbon footprint assessment by scope and source activity

Scope	Activity	Tonnes CO_2e
Scope 1	Site gas	32.38
	Refrigeration & A/C	13.88
	Site diesel	0.54
Scope 1 Sub Total		**46.80**
Scope 2	Electricity generation	64.34
Scope 2 Sub Total		**64.34**
Scope 3	Flights	1,484.81
	Taxi travel	12.51
	Electricity transmission & distribution	11.95
	Rail travel	2.92
	Employee owned car travel (grey fleet)	0.43
Scope 3 Sub Total		**1,512.62**
Total tonnes of CO_2e [8]		**1,623.77**
Tonnes of CO_2e per employee		**13.53**
Tonnes of CO_2e per £M disbursement		**5.38**
Total tonnes of CO_2e with 5% uplift		**1,704.96**
Tonnes of CO_2e from embodied emissions		**34.28**

Figures 2 and 3 show the breakdown of the total GHG emissions produced by CIFF. It can be seen that flights are the greatest contributor to the company's total emissions at 91.4%. Key site utilities (electricity and gas) account for a combined 6.7%. "Other" accounts for less than 2% of the total footprint and comprises refrigeration and A/C, taxi travel, rail travel and grey fleet mileage.

[8] Excluding uplifts and embodied emissions

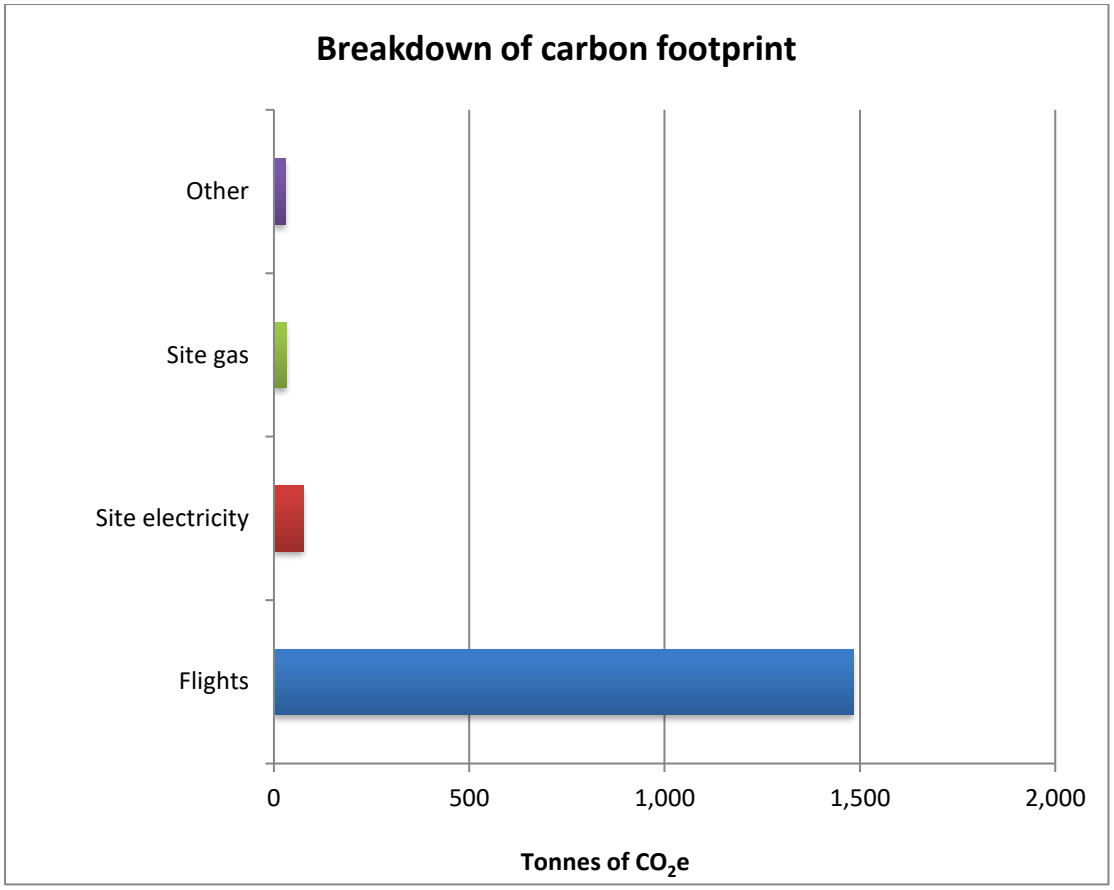


Figure 2: Contribution in tonnes of CO_2e of each element of CIFF's carbon footprint

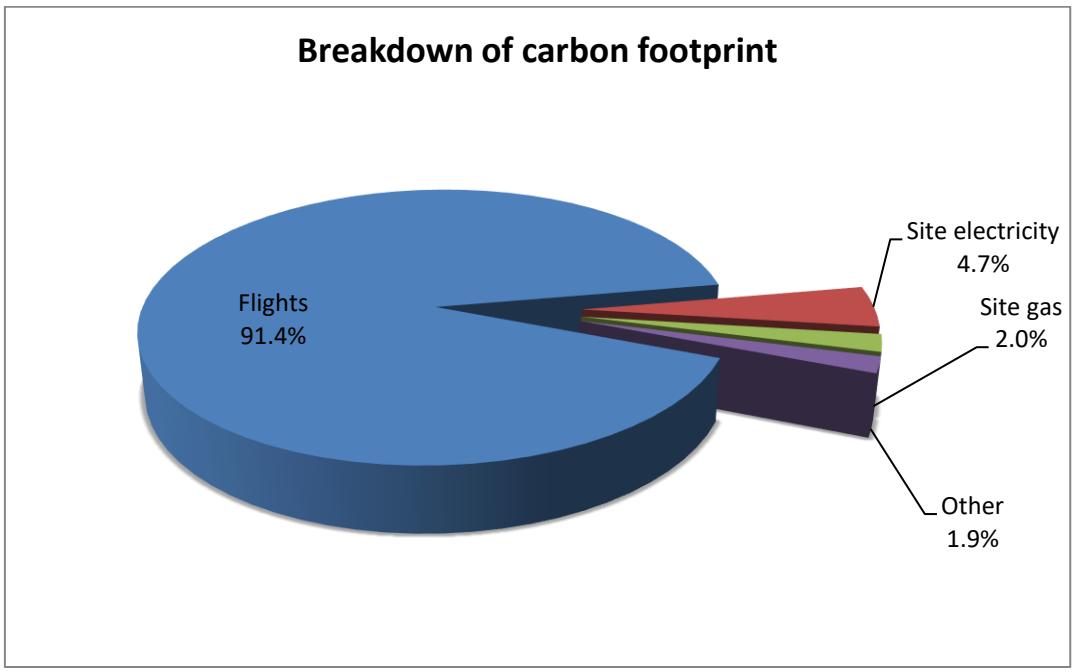


Figure 3: Percentage contribution of each element of CIFF's carbon footprint

3.2. Emissions from energy usage at site facilities

Overview

CIFF has a global presence with five offices based in London (UK), Delhi (India), Nairobi (Kenya), Addis Ababa (Ethiopia) and Beijing (China). CIFF's largest site is a serviced office within a shared building in London, with around two thirds of CIFF's employees being based there. All CIFF sites utilise electricity as their main source of on-site energy. Other sources include natural gas at the London office and diesel fuel for generators within the India office. Overall, electricity accounts for the largest proportion of emissions associated with on-site energy use (Figure 4).

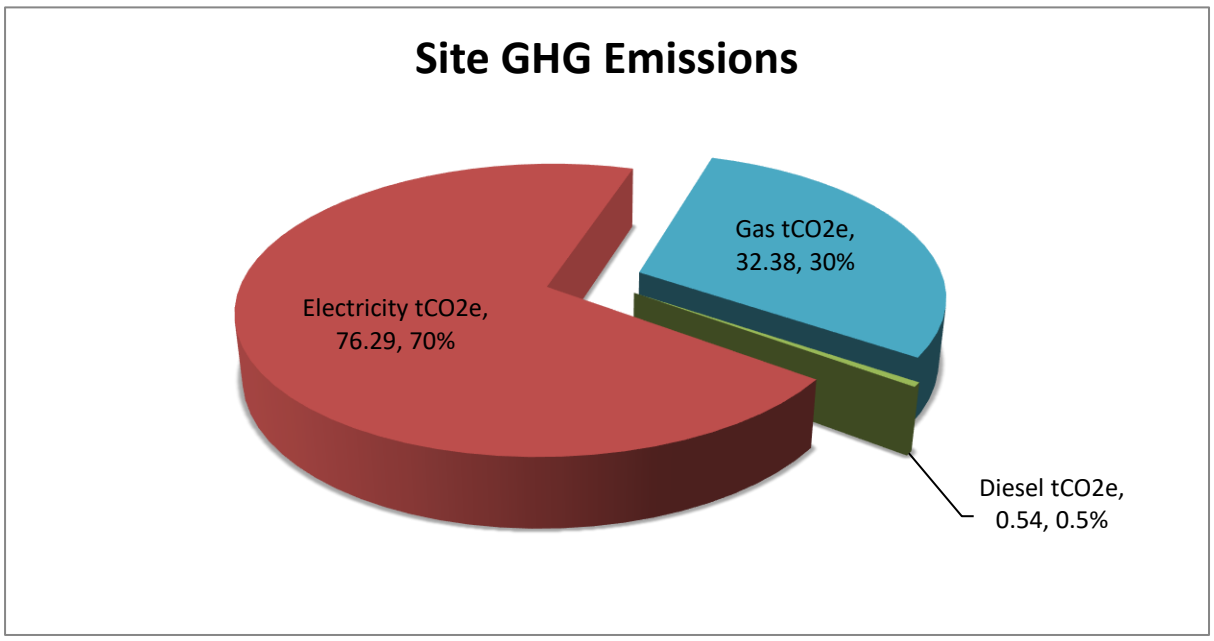


Figure 4: CO_2e emissions on a per energy type basis

Results

Table 6 and Figure 5 show the breakdown of emissions from on-site energy usage at each of CIFF's sites. India produces the highest proportion of GHG emissions associated with site energy (43.0%). London also produces a large proportion of emissions, accounting for 38.2% of the total site emissions (with 77.3% of London's site emissions being caused by natural gas use). Nairobi has the lowest emissions from energy use (tCO_2e). It should be noted that the electricity consumption (kWh) at the Addis Ababa and Beijing sites has been modelled based on the kWh consumption per m^2 floor area based on actual data from the other CIFF sites.

When comparing the emissions per employee, Nairobi also shows the lowest tCO_2e/employee ratio. Beijing and Delhi show the highest ratios (2.47 tCO_2e and 2.24 tCO_2e respectively), whilst London shows a lower ratio at 0.52 tCO_2e/per employee; suggesting that the London site is currently operating more efficiently.

Table 6: CO_2e emissions as a result of site energy consumption and per employee

Site	Average no. of staff	Electricity tCO_2e	Gas tCO_2e	Diesel tCO_2e	Total tCO_2e	tCO_2e per employee
Delhi	21	46.46	-	0.54	47.00	2.24
London	80	9.36	32.38	-	41.74	0.52
Beijing	4	9.86	-	-	9.86	2.47
Addis Ababa	4	7.96	-	-	7.96	1.99
Nairobi	11	2.65	-	-	2.65	0.24
Total	**120**	**76.29**	**32.38**	**0.54**	**109.21**	**0.91**

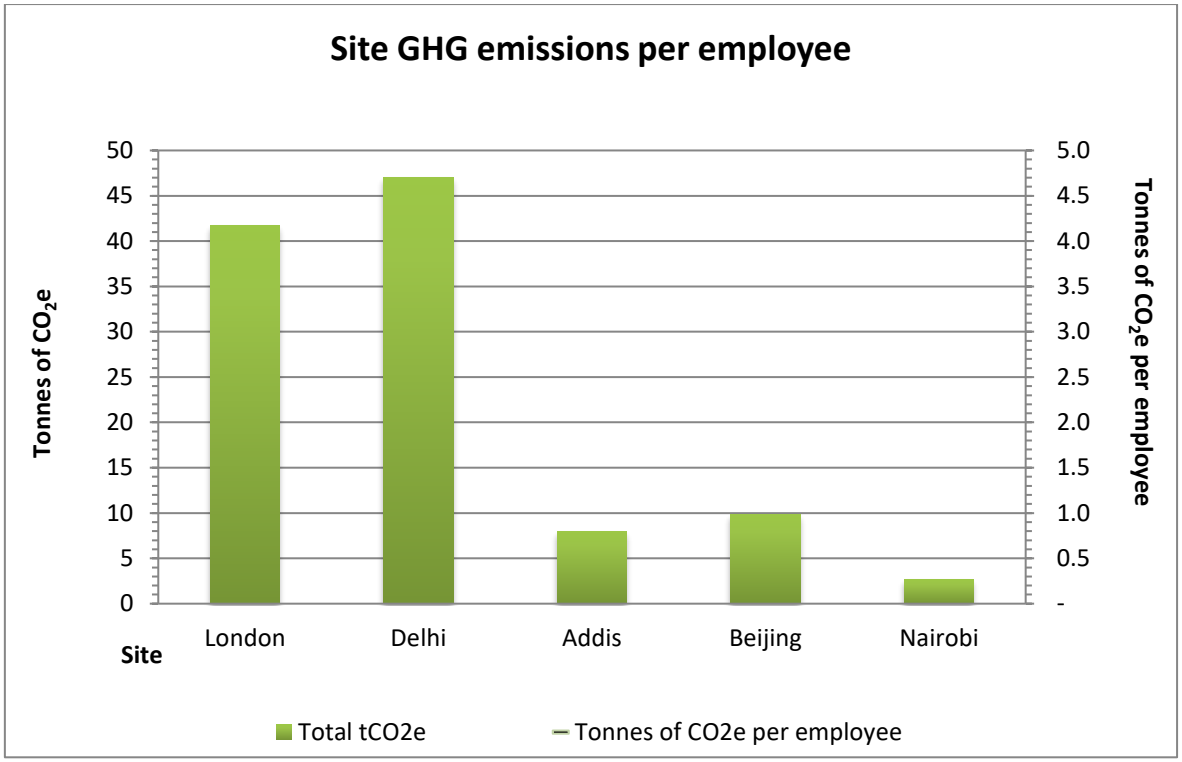


Figure 5: CO_2e emissions on a per site and employee basis

Noticeable reductions have been made across the majority of sites (see Table 7), with London's gas use being the only exception to this. This is likely to be due to a variety of factors including improvements with data accuracy since the previous year's assessment (see Section 2.3), and real reductions in energy use. It should also be noted that CIFF's offices were not in use for three and a half months (mid-March to June) of 12-month data period as a result of government advice and guidelines during the Covid-19 pandemic. This is likely to be a considerable contributing factor to the reductions in energy use seen within this assessment period.

The greatest differences (in terms of percentage) can be seen in Delhi's litres of diesel used within their generators (Table 8). This is partially due to more accurate data, as well as potentially a real reduction in generator diesel use due to an improved electricity supply.

Table 7: Comparison of CO_2e emissions to the previous year by energy type per site

Site	2018/19				2019/20				% change in total tCO_2e
	Electricity tCO_2e	Gas tCO_2e	Diesel tCO_2e	Total tCO_2e	Electricity tCO_2e	Gas tCO_2e	Diesel tCO_2e	Total tCO_2e	
Delhi	90.37	-	3.55	93.92	46.46	-	0.54	47.00	-49.96%
London	14.72	15.94	-	30.66	9.36	32.38	-	41.74	36.14%
Beijing	13.25	-	-	13.25	9.86	-	-	9.86	-25.58%
Nairobi	5.35	-	-	5.35	2.65	-	-	2.65	-50.47%
Addis Ababa	9.26	-	-	9.26	7.96	-	-	7.96	-14.04%
Total	**132.95**	**15.94**	**3.55**	**152.43**	**76.29**	**32.38**	**0.54**	**109.21**	**-28.35%**

Table 8: Comparison of energy consumption and fuels to the previous year by site

Site	2019/20					
	Electricity (kWh)	% change on previous year	Gas (kWh)	% change on previous year	Diesel (litres)	% change on previous year
Delhi	50,915	-46.62%	-	-	201	-84.77%
London	36,975	-30.36%	176,112	103.19%	-	-
Beijing	16,343	-24.50%	-	-	-	-
Nairobi	15,721	-19.38%	-	-	-	-
Addis Ababa	12,934	-33.46%	-	-	-	-
Total	**209,068**		**176,112**	**103.19**	**201**	**84.77**

Table 9 shows an estimation of the embodied emissions per site for a 12-month period. This was calculated using m^2 floor space provided by CIFF, alongside an assumed height of 3m for each site (for a single floor). The emissions factor was sourced from Ecoinvent[9]. The estimation assumes a commercial building has an expected life of 60 years and the total embodied emissions for the building are apportioned across this period to provide an annual allocation.

Table 9: CO_2e as a result of embodied emissions per site (for 12 months)

Site	Floor area (m^2)	Embodied emissions (tCO_2e)
Delhi	975	14.54
London	547	8.16
Beijing	278	4.15
Nairobi	278	4.15
Addis Ababa	220	3.28
Total	**2,265**	**34.28**

[9] Ecoinvent v3.7 emissions factor for multi-storey buildings was used for this calculation

3.3. Emissions from refrigerants

CIFF has two York A/C chillers within their London office and no refrigerant gas top ups were recorded within the data period, according to service records. The Nairobi office have reported gas replenishments during this data period (see Table 8). There are also A/C units at the India, Addis Ababa and Beijing sites. CIFF were unable to obtain records for these units but have chosen to uplift the carbon footprint results by 5% to account for the lack of data (for refrigerants and inaccuracies of other data elements).

For future assessments, refill amounts in kg and refrigerant type will enable full assessment of the emissions associated with CIFF's A/C utilisation. It should be noted that improvement has been made this year compared to the previous year with regards to data collection. I recommend an investigation into CIFF's level of control with respects to the servicing and maintenance of any A/C units at Addis Ababa and Beijing sites. If these are not under CIFF's control, they will not sit within CIFF's scope 1 GHG emissions.

Table 10: CO_2e emissions as a result of on-site refrigerant gas replenishment

Location	Amount Refilled (kg)	Refrigerant type	GWP ($kgCO_2e$)	Emissions (tCO_2e)
Nairobi	6	R410a	2088.00	12.53
Nairobi	2	R32	675.00	1.35
London	0	R410a	0.00	0.00
Delhi	0	Unknown	0.00	0.00
Addis Ababa	Unknown	Unknown	Unknown	Unknown
Beijing	Unknown	Unknown	Unknown	Unknown
Grand Total	**8.00**			**13.88**

The detailed results are given in Annex B.

3.4. Emissions from business travel

Figure 6 and Table 11 show the GHG emissions resulting from business travel. CIFF do not own any vehicles and carry out all of their travel via taxi, rail, grey fleet and flights. This is the first year that CIFF has included business mileage claims where employee owned vehicles are used. Business travel via flights is the greatest contributor to CIFF's total transport emissions at 98.9%. In comparison, the quantity of CO_2e caused by travel via taxi, rail and grey fleet is minimal at a combined 1.1%.

The majority of flights are taken in business class (51.2%), although 47.3% are taken in economy or premium economy (Figure 7). **Business class is 50% more carbon intensive than flying economy on short-haul flights; and 190% more carbon intensive than economy on long-haul flights.** Therefore I recommend encouraging staff to travel in economy class wherever possible to reduce emissions associated with flights.

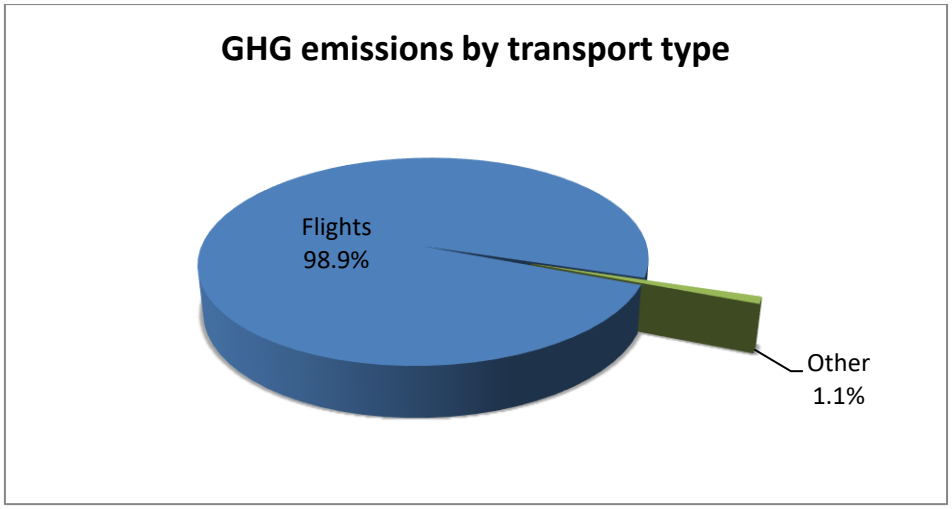


Figure 6: Percentage contribution of each element to transportation emissions

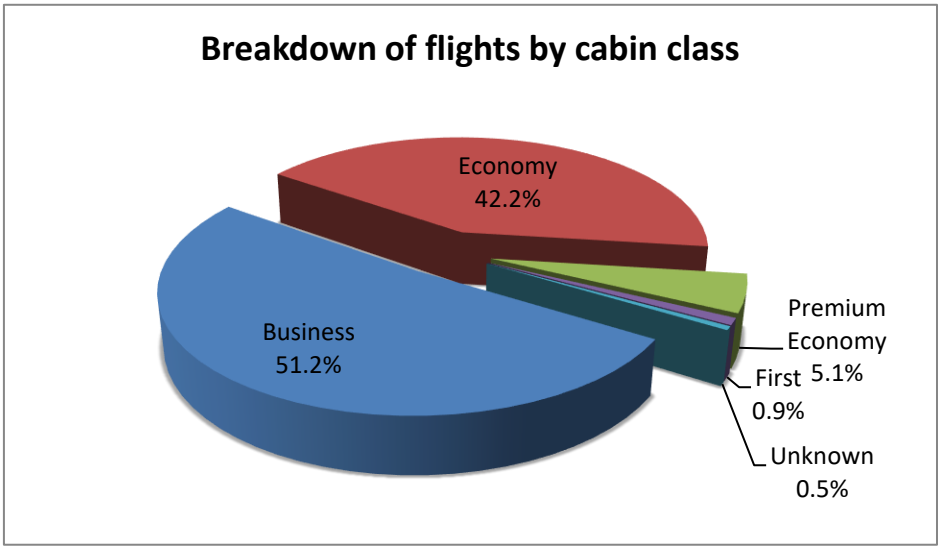


Figure 7: Percentage of flights taken by cabin class type

Table 11 shows an overall reduction in emissions associated with business travel this year, compared to the 2018/19 assessment (baseline) period. This can be attributed to a combination of real-term reductions in travel (as CIFF focus on reducing unnecessary travel and utilising rail travel over other methods where possible), and global travel restrictions during the Covid-19 pandemic (from March onward within the UK).

Table 11: CO_2e emissions due to transportation

Type of Travel	Tonnes of CO_2e	% change on previous year
Flights	1,484.81	-33.64%
Taxi travel	12.51	-4.14%
Rail travel	2.92	+33.94%
Employee owned car travel (grey fleet)	0.43	n/a
Total	**1,500.68**	**-33.38%**

The detailed results are given in Annex B, including the ability to filter flights based on department.

4. Comparison and Benchmarking

4.1. Comparison to base year emissions

This is the second carbon footprint assessment CIFF has carried out. For the baseline year emission data please refer to the 2018/19 report.

Table 12 and Figures 8 & 9 show historical emissions per activity, as well as CIFF's total carbon footprint and carbon intensity metrics (tonnes of CO_2e per employee and tonnes of CO_2e per £M disbursement).

Table 12: CIFF's carbon footprint comparison and percentage change

Element	Baseline Year 2018/19	Current Year 2019/20	% change on baseline year (2018/19)
Flights	2,237.36	1,484.81	-33.6%
Site electricity	135.53	76.29	-43.7%
Site gas	15.94	32.38	+103.1%
Refrigeration & A/C	0.00	13.88	n/a
Taxi travel	13.05	12.51	-4.1%
Rail travel	2.18	2.92	+34.1%
Site diesel	3.55	0.54	-84.8%
Employee owned car travel (grey fleet)	-	0.43	n/a
Total Tonnes of CO_2e	**2,407.61**	**1,623.77**	**-32.6%**
Tonnes of CO_2e per employee	**23.60**	**13.53**	**-42.7%**
Tonnes of CO_2e per £M disbursement	**10.65**	**5.38**	**-49.5%**

CIFF has decreased its total carbon footprint by -32.6% between this period and the baseline year. This is mainly due to reductions in emissions associated with flights. CIFF was due to implement a departmental carbon budget for flights in February/March. However, the impacts of Covid-19 have prevented all business flights and therefore this initiative was put on hold until restrictions are lifted. Therefore the reductions in GHG emissions can largely be attributed to an inability to travel via flights during the Covid-19 pandemic. There has also been a significant reduction in emissions from the use of electricity usage. Reductions in GHG emissions compared to the baseline year can also be seen through the intensity metrics, with a 42.67% reduction in GHG emissions per employee and a 49.48% reduction per £M disbursement.

Split by element, the greatest reductions are in site diesel, electricity and flights. Emissions from gas used on site has more than doubled compared to the precious year. This can largely be attributed to improved data accuracy within this year's assessment. Emissions from rail travel increased by 34%, however, this is positive as it is likely a result of CIFF's efforts to replace some flights and taxi travel with rail which has a lower carbon intensity per passenger km. Due to the significant improvements in data accuracy this year (see Section 2.3), detailed comparison against the previous year is difficult. However, future assessments should maintain a similar level of accuracy, allowing for better comparison moving forward.

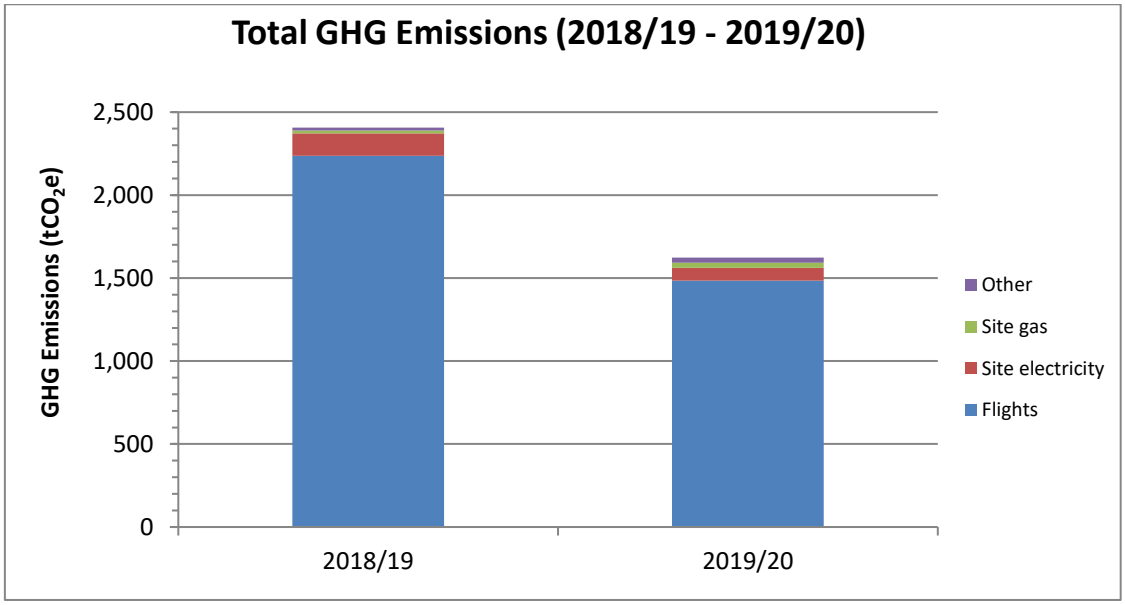


Figure 8: Detailed emissions comparison for the various aspects of CIFF's emissions

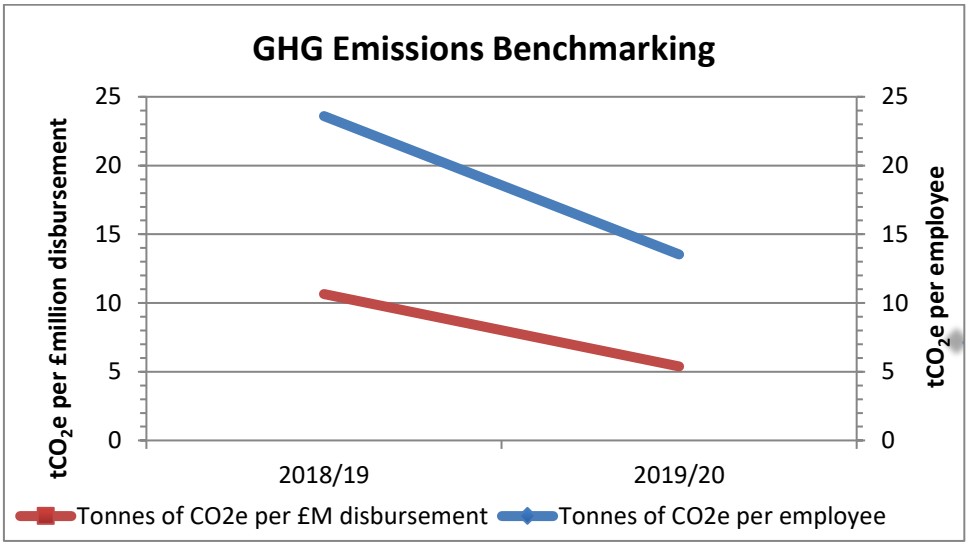


Figure 9: Carbon footprint of CIFF for internal benchmarks

Carbon Footprint recommends that organisations use the base-year GHG inventory as a benchmark to measure against. When using the base-year GHG inventory as a benchmark, organisations can set realistic reduction targets and measure their progress year on year. This can also provide excellent marketing opportunities, where real figures can demonstrate your commitment towards helping fight climate change.

4.2. External benchmarking

Table 13 summarises your results to enable you to compare your performance with other organisations.

Table 13: CIFF's benchmarked GHG emissions

Scope 1 & 2 Emissions	2019/20
Scope 1 & 2 tonnes CO_2e	111.14
Scope 1 & 2 tonnes CO_2e per employee	0.95
Scope 1 & 2 tonnes CO_2e per £ million disbursement	0.37

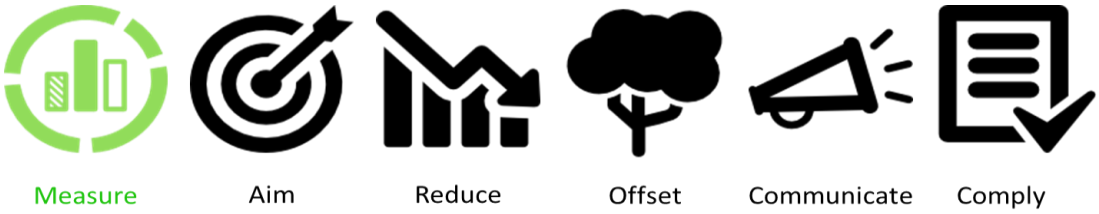
Table 14 is a summary of scope 1 and 2 emissions for a selection of companies. These companies have been chosen for comparison due to the nature of their business (Save the Children UK) or due to their global presence (American Express and Citigroup). The data used is derived from publicly disclosed annual reports. This enables you to compare your performance with respect to these organisations.

Table 14: Comparison of Scope 1 & 2 emissions per employee with similar companies

Company Name	S1 & 2 emissions per employee (tCO_2e)
American Express (2019)	2.14
Citigroup (2019)	3.08
Save the Children UK (2018)	0.97

5. Key Recommendations

The following recommendations are designed to help you build upon the results of the appraisal and your carbon management over the coming year.



5.1. Carbon & sustainability targets

5.1.1. Target setting

I recommend that CIFF sets internal targets to reduce emissions and develop an action plan to achieve these. All targets set should be reviewed regularly and amended accordingly (i.e. target increased if it is met ahead of schedule). I recommend a combination of short-term and long-term targets based on absolute and intensity metrics. These can be measured in terms of activity data (e.g. kWh) or emissions.

Carbon Footprint Ltd can provide support with setting appropriate targets for your business. For further information, please speak to a member of our team.

5.1.2. Improving the accuracy of future carbon footprint assessments

The estimated overall error margin is +/- 2.4%, equating to 38.78 tCO_2e. To improve the accuracy of future assessments, we recommend the following:

- **Refrigeration & A/C** – Investigate whether there are any A/C units within the Addis Ababa and Beijing sites under CIFF's control. Evidence is yet to be provided for these elements of CIFF's carbon footprint. If there are units within CIFF's control, service/maintenance records should provide information regarding the refrigerant gas type and the kg gas topped-up throughout the data period (if any). If these are not within CIFF's control, these will not be counted within CIFF's scope 1 GHG emissions.
- **Electricity (Addis Ababa & Beijing) -** Request meter readings at the beginning and end of the data period (as a minimum) for the Addis Ababa and Beijing sites to calculate kWh consumption for the 12-month data period.
- **Flights** – Consider asking your travel provider for an excel-based flight report including individual legs to improve the accuracy of the flight distances used to calculate GHG emissions. If your travel provider is able to provide this information, CIFF's Carbon Footprint Ltd bespoke flight calculator can be adapted to include this.

5.2. Reducing emissions

CIFF has undertaken a number of actions to reduce its emissions since the previous year; including the introduction of departmental carbon budgets for flight travel. To further reduce GHG emissions, we recommend the following:

- Evaluate the effectiveness of using remote meetings and limited travel during COVID-19, and re-define what your business classifies as "essential" travel going forwards. **Where travel is considered essential, continue to encourage employees to use rail over air travel where possible; or travel via economy class. This can also be integrated into a company travel policy to ensure that these measures are taken by all employees.**
- When booking unavoidable flights, consider selecting a specific airline based on their sustainability credentials and how modern their aircraft fleet is. Check out how different airlines compare on our sustainable flying webpage: https://www.carbonfootprint.com/sustainable_flying.html
- Switch to a renewable energy tariff across sites. At sites where CIFF reside in a serviced office building, discuss with landlords the possibility of switching energy provider - this could be negotiated at the point of contract renewal. This can be reflected within your calculations by using the GHG Protocol's dual-reporting method which allows you to report your market and location-based emissions alongside one another. Please note that this report currently shows your location-based emissions only.
- Where buildings are multi-tenanted, CIFF could set up a 'green tenants forum' consisting of 'sustainability champions' from each company; with quarterly meetings in which behavioural changes and energy reduction campaigns within the building can be discussed and organised (e.g. take the stairs challenge).

5.2.1. Setting carbon reduction budgets based on emissions

Having an agreed and defined system for investing in future carbon reduction activities helps drive carbon reduction and cost savings in a business. Many leading organisations are doing this through setting an "Internal Carbon Tax" or an "Internal Carbon Price" within their organisation (see http://www.carbonfootprint.com/internal_carbon_pricing.html for more information).

We suggest starting by setting a price of £20-25 per tonne of CO_2e, as this typically relates to 1-6% of the cost of causing emissions (as shown in the table below). You may wish to collect the "taxation" by each functional group (depending on their emissions), or simply account for this at the top-level company budgeting.

Table 15: Carbon price compared to energy and travel costs

Emissions Source	Electricity	Natural Gas	Car Miles	Flights
1 tonne CO_2e is equivalent to	2400 kWh	5500 kWh	3300 miles	5200 km
Cost to produce 1 tonne CO_2e	£335	£220	£1485*	£400
£20 carbon price represents	6%	9%	1%	5%

**assumes a rate of 45p per mile*

We recommend allocating this defined budget to help both internal and external carbon reduction activities. For example, it could be split:

- 75% on internal carbon reduction measures
- 25% on external carbon offsetting activities

Investments in internal carbon reduction activities should be made based on the level of carbon savings and the associated cost savings. Good carbon reduction investments usually pay for themselves and give a return on investment to the business within 3 years. Carbon offsetting return on investment is primarily measured through access to tenders, brand enhancement and PR (use marketing return on investment techniques).

5.3. Carbon offsetting

Carbon offsetting is a great way to compensate for the emissions that you cannot reduce, by funding an equivalent carbon dioxide saving elsewhere.

In order to compensate for the emissions already generated by CIFF, the company could continue their carbon neutrality programme. This would enable the funding of an equivalent CO_2e saving elsewhere, as well as allowing CIFF to achieve our Carbon Neutral standard. **Carbon offsets can also be reported alongside your total gross CO_2e emissions within your directors' report under the Streamlined Energy and Carbon Reporting Guidelines (SECR).** This allows the company to showcase their carbon neutrality, and commitment to sustainability, by showing the net tCO_2e emissions within their report.

We can provide both UK-based and international projects for you to support. The majority of projects focus on the development of renewable energy in developing countries, however there are others which have a greater focus on social benefits as well as environmental benefits. Further detail on the type and specific projects that we currently have in our portfolio can be provided on request or be found at: http://www.carbonfootprint.com/carbonoffsetprojects.html.

Example of Carbon Offsetting Projects:

Tree Planting in UK Schools

Avoided Deforestation in the Brazilian Amazon

Clean Water in Rwanda

5.4. Carbon Footprint Standard

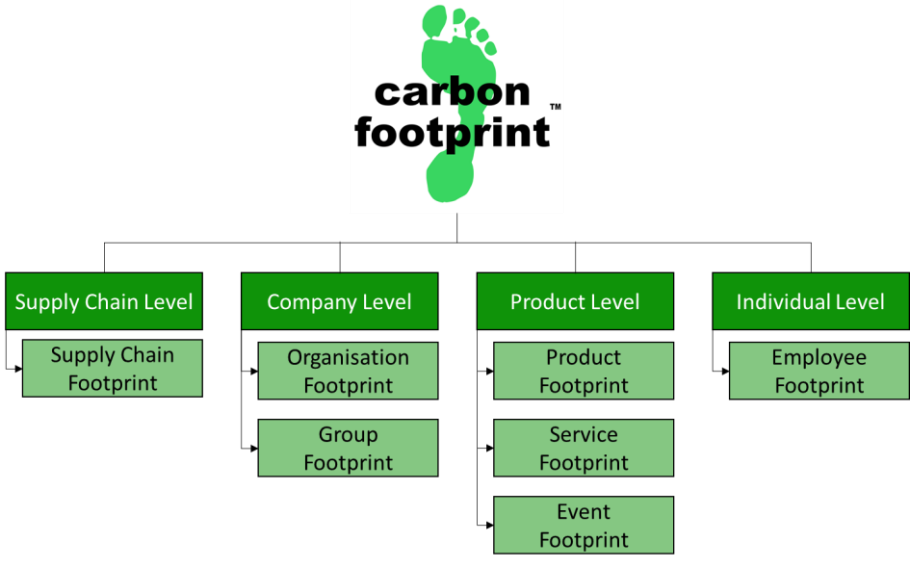
5.4.1. Brand endorsement

CIFF, in conjunction with Carbon Footprint Ltd, has assessed its carbon footprint and shown a reduction of 32.56% based on its absolute emissions compared to their baseline year. By achieving this CIFF has qualified to use the Carbon Footprint Standard branding. This can be used on all marketing materials, including website and customer tender documents, to demonstrate your carbon management achievements.

The Carbon Footprint Standard is recognition of your organisation's commitment to carbon management. The text to the right-hand side of the logo demonstrates what level you have achieved in line with international best practice.

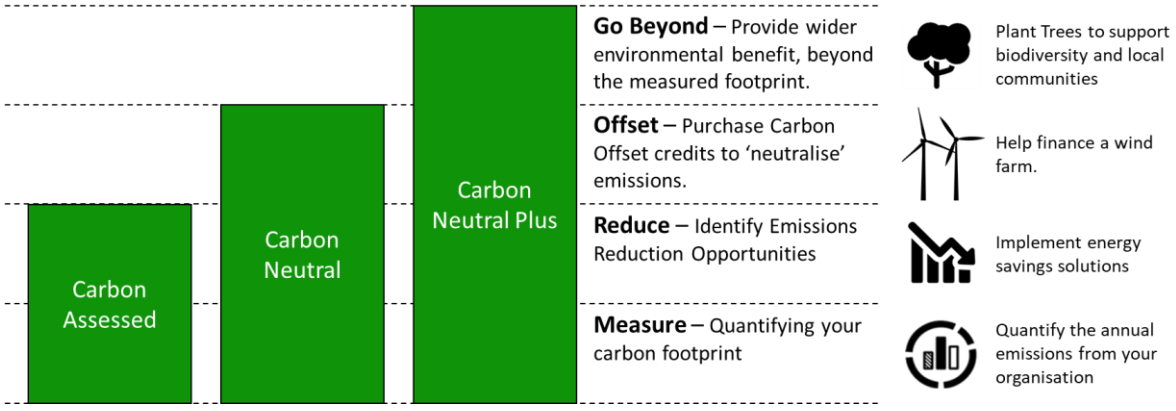
5.4.2. Scope

As you are at the beginning of your Carbon Footprint Journey, you have decided to focus on the carbon footprint at the organisational level. This is a great start. Over time, you can progress your carbon footprinting to increase the scope and encompass your products, supply chain and your employees. By doing so you will be able to receive the Carbon Footprint Standard for these categories, thus standing out amongst your competitors and truly driving the sustainability or your brand.



Once the scope has been identified, the Carbon Footprint Standard will allow CIFF to develop from a novice to an exemplar in the market. You can progress from a Carbon Assessed Organisation to a Carbon Neutral or a Carbon Neutral Plus Organisation by supporting a range of environmental projects that come with wider CSR and PR opportunities.

Alongside the sustainability rationale, this will allow you to leverage the Carbon Footprint Standard to truly stand out in your market. Progressing will resonate with like-minded customers and will help your business grow.



5.4.3. Communicate

Make sure you communicate your actions and achievements effectively, both within your organisation, to help develop your culture, and externally to help improve your brand image.

When promoting your actions, be sure to utilise all marketing channels available to you, such as website, newsletters, brochures, press releases, conferences/events and social media etc.

You should:

- Explain why climate change matters to you (for more information visit: www.carbonfootprint.com/warming.html)
- Tell the story of where you have come from, the progress you have made and what your commitment is for the future (e.g. targets).
- Be clear and accurate about what you have achieved – take care not to exaggerate.
- Use the Carbon Footprint Standard branding, certificates, images of offset projects you are supporting and graphs of your carbon performance to help communicate your point in a clear and enticing manner.

5.5. ISO standards

Consider implementing an environmental management system (EMS) to ensure environmental data is measured and monitored effectively. Goals/targets should be set and an action plan created. For wider recognition, and the potential to win more business, CIFF could consider getting their EMS certified to internationally-recognised ISO 14001 standard.

To keep up-to-date on law and best practice, you can also contact us to subscribe to our newsletters.

6. References

1. BEIS GHG Conversion Factors for Company Reporting (June 2020)
2. Guidelines to Defra's Greenhouse Gas (GHG) Conversion Factors for Company Reporting – annexes (June 2013)
3. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (March 2004)
4. IEA factors for Africa (published 2016)
5. Climate Transparency 2019 report
6. Carbon Mapping 2018 Carbon Mapping Report 2018 (savethechildren.org.uk) (August 2019)

A. Annex A – Calculation Methodology (Additional Notes)

A.1 How is the carbon footprint calculated?

Carbon Footprint confirms that the methodology used to quantify the carbon footprint meets the following principles:

a) The subject and its boundaries have been clearly identified and documented.
b) The carbon footprint has been based on primary activity data unless the entity could not demonstrate that it was not practicable to do so, in which case an authoritative source of secondary data relevant to the subject was used.
c) The methodology employed minimised uncertainty and yielded accurate, consistent and reproducible results.
d) Emission factors used are germane to the activity concerned and current at the time of quantification.
e) Conversion of non-CO_2 greenhouse gases to CO_2e has been based upon the 100-year Global Warming Potential figures published by the IPCC or national (Government) publication.
f) Carbon footprint calculations have been made exclusive of any purchases of carbon offsets.
g) All carbon footprints have been expressed as an absolute amount in tCO_2e.

A.2 Biomass

There are no CO_2 emissions from the combustion of biomass to be considered within this report.

A.3 Greenhouse gas removals

Within the calculation of CIFF's carbon footprint, there are no business processes resulting in the reduction of greenhouse gases from the atmosphere to be deducted from the calculation.

B. Annex B – Supplied Data and Emissions Breakdown

This annex shows the data that CIFF has supplied Carbon Footprint Ltd for the calculation of its emissions. Annex B has been prepared in an MS Excel format; please see document "2020_11 Annex B CIFF v1".

B.4 Scope 1 emissions breakdowns

The table below demonstrates the company's Scope 1 CO_2e emissions in their respective greenhouse gases.

Table 16: CO_2e Emissions breakdown for Scope 1 emissions into their greenhouse gases.

Activity	kg CO2e	kg CO_2 in CO_2e	kg CH_4 in CO_2e	kg N_2O in CO_2e
Site gas	32,381.74	32,321.94	42.55	17.30
Site diesel	540.26	533.31	6.89	0.00
Refrigeration & A/C	13,878.00			
Total	**46,800.01**	**32,855.25**	**49.44**	**17.30**