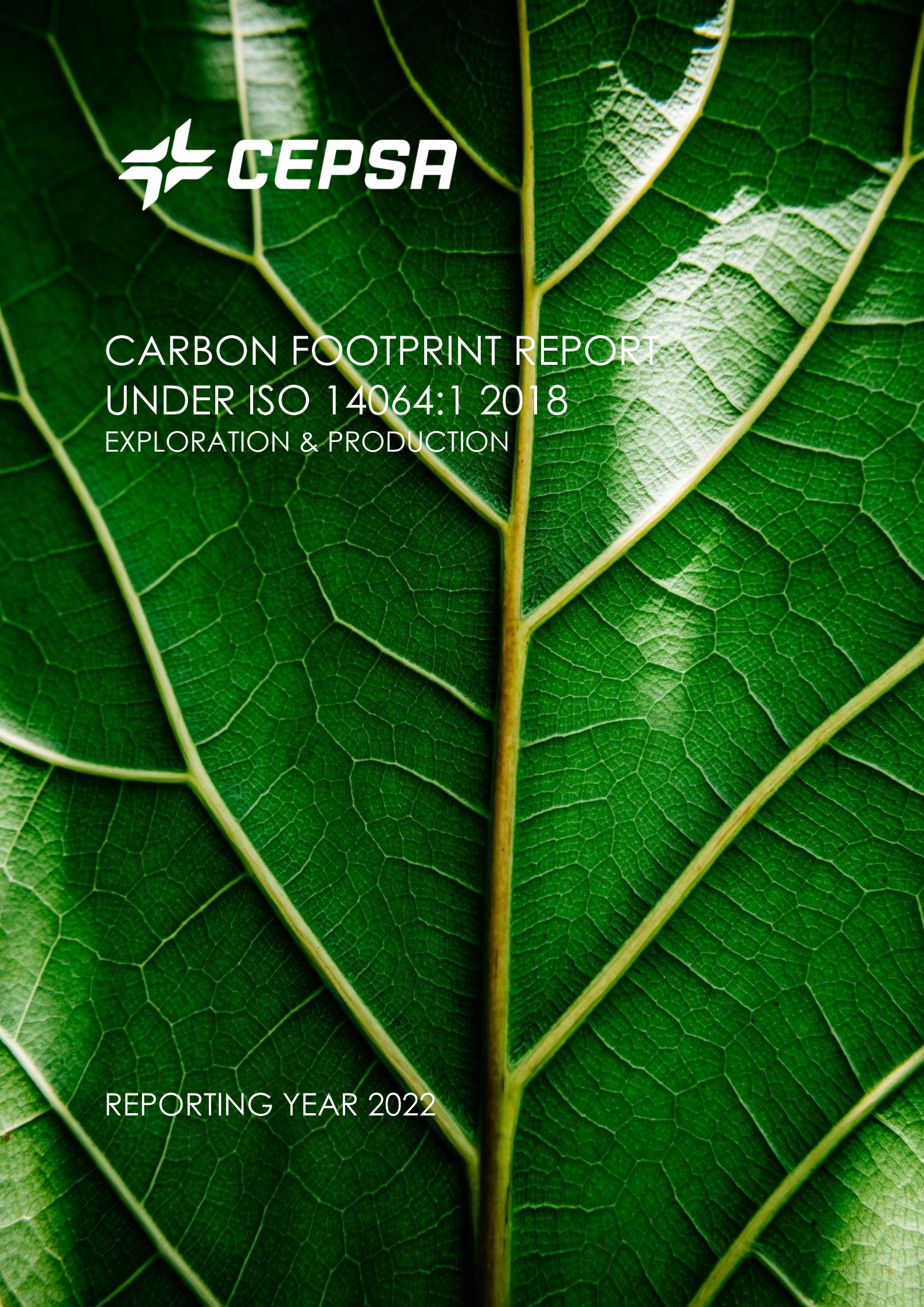

CARBON FOOTPRINT REPORT UNDER ISO 14064:1 2018

EXPLORATION & PRODUCTION

REPORTING YEAR 2022

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2022

01.

GOAL

01. Goal

Cepsa continues this year 2022 with its inventory verification plan at the organizational level of Greenhouse Gas (GHG) emissions under the framework of ISO 14064: 1:2018 in line with its Carbon Strategy. The verification includes the emissions of the following GHGs: carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), as well as the fugitive emissions from transportation and fugitive emissions as of hydrofluorocarbons (HFCs) or others from the refills of refrigeration systems.

The process of inventory verification has been carried out in Sustainability HR EP and Carbon Cycle with the accreditation of AENOR with a limited level of assurance and a threshold of maximum relative importance of 5%.

With this report:

- Under our strategy and commitment to reduce our CO_2 emissions, we adopt rigorous monitoring and volunteer audit of these emissions to enhance our transparency and rigor in communication of emissions.
- With the aim of meeting the targets set in the United Nations' Sustainable Development Goals for 2030, Cepsa has identified four priority objectives that it can maximize with its contribution as a global energy company. Climate Action is one of them, aware of climate change, aim to minimize the carbon footprint.

Cepsa has updated its policy framework and climate action policy is available in www.cepsa.com

This Policy aims to establish a framework to articulate the Company's strategy and business model in a manner consistent with its commitment to carry out the necessary climate actions, aligned with the energy transition and a low-carbon economy. https://www.cepsa.com/en/the-company/strategy

Our Commitments

- Establish, monitor and validate by a third-party CO_2 emissions and abatement plan targets as well as in terms of the carbon intensity of its product portfolio.
- Integrate climate change in the company strategy and in all businesses decision-making processes. Analyze risk and opportunity management and climate financial reporting under different climate scenarios.
- Design carbon mitigation and adaptation plan considering the entire value chain and low carbon products growing demand.
- Keep climate-related objectives as monetary reward parameter.

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02.

REPORTING BOUNDARIES

03.

SCOPE

02. Reporting boundaries

Following emissions are reported under this report.

- This report groups **direct GHG emissions** (CO_2, CH_4, N_2O and refrigerant gases) from the facilities, including flaring, combustion, process, fugitive emissions and emissions from mobile sources, (Category 1)

- And **indirect emissions** by purchased energy of the facilities included in the scope of this verification. (Category 2)

- Likewise, this 2022 report includes the **indirect emissions** of the **value chain** corresponding to scope 3 under the GHG Protocol Methodology and under ISO 14064-1:2018 (Categories 3-6)

Greenhouse gas emissions sources have been identified and grouped in accordance with the ISO 14064-1:2018 standard. This standard lists six categories of emissions and differs somewhat from earlier categorisation in line with the GHG Protocol's scopes 1 through 3.

- Category 1: Direct GHG emissions and removals
- Category 2: Indirect GHG emissions from imported energy
- Category 3: Indirect GHG emissions from transportation
- Category 4: Indirect GHG emissions from products used by the organization
- Category 5: Indirect GHG emissions associated with the use of products from the organization
- Category 6: Indirect GHG emissions from other sources

This report, although drawn up in parallel, is developed within the framework of the principles established by Cepsa regarding the quantification of GHG and the establishment of objectives to reduce GHG emissions.

Significance and Materiality

It is necessary to define and explain own pre-determined criteria for the significance of indirect emissions, considering the intended use of the inventory.

Factors for consideration in assessing significance and materiality include:

- Magnitud or Size of the emissions
- Level of Influence on the emission source
- Difficulty in obtaining data
- Poor validity in available estimation approaches

Whilst all of the above would be considered in materiality assessments, the criteria that would mandate disclosure of emissions sources as significant is:

a) Where there is a single source with estimated emissions likely to be at least 1% of total emissions. In this case, that emissions source must be included.

b) Where the total of 'insignificant' sources has estimated emissions likely to be at least 5% of total emissions. In this case, enough of the 'insignificant' emissions must be included until the estimate of excluded emissions is below 5%.

03. Scope

Exploration & Production Operation

Cepsa EP participates in the process of **exploration, development and production** of oil and natural gas, both onshore and offshore fields. Our exploration and production activities are mainly located in North Africa, the Middle East and Latin America. Assets reported under international standard ISO 14064 are managed under operational control, corresponding to these ones described below.

ALGERIA

- Rhourde el Krouf (RKF) crude oil field. Located in the Berkine Basin. 49%-owned by Cepsa, joint operation, in production. Onshore.
- BMS crude oil field. Located in the Berkine Basin. 75%-owned by Cepsa, joint operation, in production. Onshore

COLOMBIA

Onshore. Crude oil. In production:

- Caracara (70%), located in the Los Llanos Basin, operated by Cepsa.
- Llanos 22 (55%), located in the Los Llanos Basin. Operated by Cepsa

PERU

- Block 131: 100%-operated by Cepsa. Onshore and in production. Located in the Ucayali Basin.

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04.

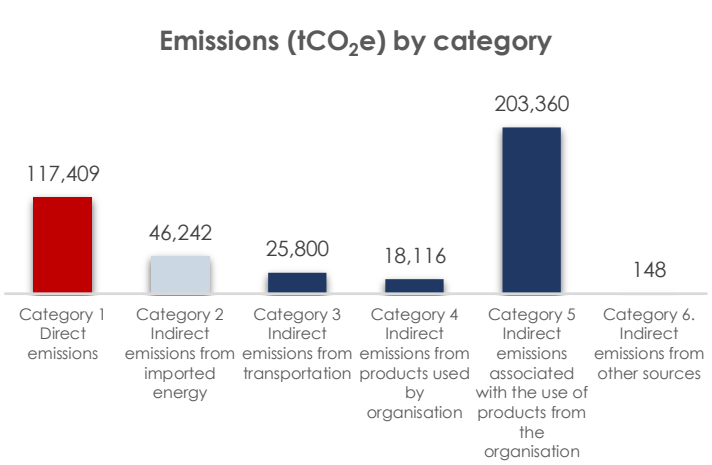
EMISSIONS DATA AND METHODOLOGY

04. Emissions Data and Methodology

4.1. Emissions Data

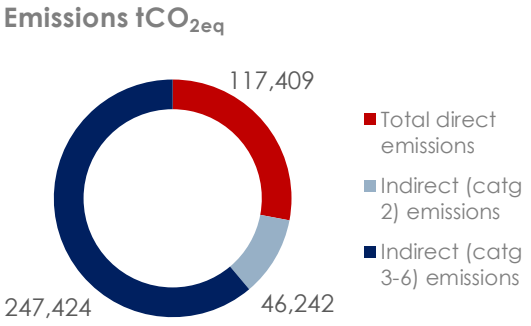
The general distribution of emissions among the above mentioned ISO 14064-1:2018 for the year 2022 categories is shown in the following graph, according to the materiality criteria:

It is seen that Category 5 contributes to the most emissions, specifically the processing of the products sold and their use, this is followed by Category 1 and 2.



Total emissions account to 411,074 tonnes of CO_{2eq}. This sum of emissions does not consider the biogenic emissions

Indirect emissions corresponding to category 2, emissions from purchased energy is shown in the graph as location-approach calculation.



The percentage distribution graphs for carbon footprint by scope show that indirect emissions account for the largest percentage of emissions calculated.

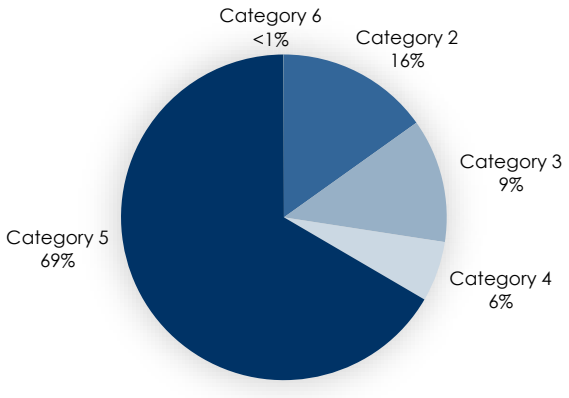
The breakdown of these **direct emissions** is shown in the following table where, in addition to the contributions from combustion, fugitive and refrigerants, the equivalent tons of CO_2 are broken down. Biogenic emissions are shown separately.

Emission source	CO_2 tonnes	CH_4 as CO_2e tonnes	N_2O as CO_2e tonnes
Exploration & production assets			
Direct emissions			
Combustion	68,820	45	64
Flaring	28,160	4,877	0
Fugitives (transport + refrigerants)	829	12,173	0
Mobile sources	2,389	2	50
Biogenic emissions	1,219		
TOTAL w biogenic, tCO_2e		**118,628**	
TOTAL wo biogenic, tCO_2e		**117,409**	

Finally, the contribution of each category of **indirect emissions** is shown below

Emission source	CO_{2eq} tonnes
Exploration & production assets	
Indirect emissions	
Category 2 (purchased energy) location approach	46,242
Category 3 (transport)	25,800
Category 4 (products used)	18,116
Category 5 (use of products)	203,360
Category 6 (others)	148
TOTAL (location approach) tCO_2e	**293,666**

Indirect emissions, tCO_{2eq}



Most relevant indirect category corresponds to **Category 5, use of products,** just crude oil and gas are products from this reported activity and processing associated emissions are the most relevant in chain value.

4.2. Methodolgoy

Direct emissions

- Gas Combustion emissions in stationary sources: CO_2 is reported according to C content calculated from analysis of gases in the facilities according to IOGP methodology. CH_4 and N_2O are reported also according to IOGP emission factors. Activity data of consumed gas in the block is reported to Administrationin the country or region, monthly communications, according to internal measurements.

- Gas Flaring emissions: CO_2 and CH_4 are reported according to C content calculated from analysis of gases in the facilities and applying the oxidation percentages of the IOGP methodology. N_2O is reported according to IOGP methodology emission factors. Activity data of flared gas is reported to Administrationin the country or region, monthly communications, according to internal measurements.

- Diesel Combustion emissions in stationary and mobile sources in facilities: CO_{2eq} is reported according IOGP methodology emission factors for stationary and mobile sources. Activity data are reported according to supplier certificates for mobile source. Bio content is according to product certificate, and it has been applied as zero emissions CO_{2eq} and reported as biogenic emissions.

- Fugitive emissions of refrigerant gases: CO_{2eq} is referred to IPCC AR6 and DEFRA emission factors. Activity data reported under maintenance evidence.

- Fugitive emissions of transport and distribution: CO_{2eq} is referred to IOGP methodology emission factors. Activity data of produced gas is reported to Administrationin the country or region, monthly communications, according to internal measurements.

Indirect emissions from energy

Associated emissions to purchased electricity in facilities under scope. Activity data are reported under invoices. Report of indirect emissions are made under location-based criteria coming from annual database.

Indirect emissions from value chain

Following subcategories as energy and purchased fuels and chemical products (category 4), upstream trasnsportation of chemical products and downstream transportation and distribution of products (category 3), processing products sold, waste and use of products sold (category 5) have consistent activity data for their calculation as they are verified in other categories to carry out emission calculations

Category 3: GHG from transportation

Subcategory Indirect emissions by transport and distribution upstream*

This subcategory has been calculated for the first time this year, improving our scope and knowdledge for our operations. The quantification methodology used for calculating emissions is based on SAP (System Applications and Products in Data Processing) data and chemical products reports. The emission factors used are those reported in Ecoinvent 3.8. It accounts for **64 tones CO_{2eq}**.

Subcategory Indirect emissions caused by employees commuting to work

The emissions associated with trips made by employees between their homes and their worksites using different means of transport (car, aircraft or train), hotel, etc for which the distances travelled, or hotel nights are multiplied by DEFRA emission factors. For this year, we have used the results of a survey for Latam offices among employees as well as data associated with their own performance as rotators in the different fields under this scope. It accounts for ***537 tones*** **CO_{2eq}**.

Subcategory Indirect emissions caused by business travel

The emissions associated with the business trips made by employees using different means of transport (car, aircraft or train), hotel, etc for which the distances travelled, or hotel nights are multiplied by DEFRA 2021 and 2022 emission factors. It has been improved the scope just including Latam travels not considered by 2021.

For this category, segregation by fields has not been carried out, but has been incorporated into the global report of the exploration and production business. It accounts for **487 tones CO_{2eq}**.

Subcategory Indirect emissions by transport and distribution downstream

The quantification methodology used for calculating emissions is based on the activity data (crude produced) and the emission factors based on Ecoinvent 3.8 and considering real sales locations under invoices. This is a relevant improvement in methodology just getting more reliability in emissions. It accounts for **24,776 tones CO_{2eq}**.

Category 4: GHG from products used

Subcategory Indirect emissions from purchased additives to the crude oil

This subcategory has been calculated this year as the first time, improving our scope and knowdledge for our operations. The quantification methodology used for calculating emissions is based on SAP data and chemical products suppliers reports. The emission factors used are those reported in Ecoinvent 3.8. It accounts for **903 tones CO_{2eq}**.

Subcategory Indirect emissions from purchased fuels and electricity and transimissions and distribution losses.

The quantification methodology used for calculating emissions is based on the activity (electricity and diesel consumption) data and the emission factors published by DEFRA 2022. For biogenic content (in diesel) the factor used include cultive, transformation and transport and is obtained from specific renewable directive.

In the case of electricity, based on DEFRA 2021, it involves losses by generation transmission and distribution. It accounts for **17,213 tones CO_{2eq}**.

Subcategory Indirect emissions caused by wastes generated in operations*

The methodology used for calculating emissions is based on the activity data (wastes) multiplied by DEFRA emission factors. It accounts for **65 tones CO_{2eq}**.

Category 5: GHG from use of products

Subcategory Emissions from the use stage of the product

The quantification methodology used for calculating emissions is based on the activity data (crude produced) and the ratio of direct (category 1) and indirect emissions (category 2) per ton of crude oil processed in our refineries published in our annual management report. It accounts for **201,237 tones CO_{2eq}**.

Category 6: GHG from other sources

Subcategory Emissions from the use of upstream leased assets

This subcategory has been calculated this year as the first time, improving our scope and knowledge for our operations. The quantification methodology used for calculating emissions is based on the activity data from natural gas and electricity invoices and national inventory emission factors. It accounts for **148 tones CO_{2eq}.**

*Emissions from these subcategories described have been calculated based on the above description and found not to meet the materiality requirements (lower than 5%) so that they are not included in the graphs.

However, they have been included in the current report, with the aim of report all associated emissions with traceable activity data as well as to incorporate new categories. For categories not included in this report due to the difficulty of accessing the data, action plans are being developed.

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05.

EXCLUSIONS AND UNCERTAINTY

05. Exclusions and Uncertaintty

5.1. Exclusions

No exclusions.

5.2. Uncertainty

The estimated uncertainty of the emissions is a combination of the uncertainty of the emission factors and the activity data.

For the calculated emissions, a controlled and minimized relative importance is established, since they are calculated based on the activity data of the facilities and emission factors. These data are subject to control by the competent administration, therefore, they are measured and controlled to manage their amount. The uncertainty of the activity data of gas is very low due to the validation of the daily data through the process data software and the measurement equipment which are validated and accredited by third party. Diesel quantities are also validated by third party and in this case the activity data come from bills.

As for the emission factors used, they come from contrasted and specific sources, so their level of uncertainty is known and controlled. The emission factors calculated internally are based on measurements of calibrated and externally verified analytical equipment or analysis of the gases according to IOGP report under API Compendium methodology.

During this year 2022 a specific methodology to evaluate the uncertatinty associated to activity data and emission factors has set. It consists on evaluating the uncertainty based on a scale from 1 to 3, 1 for higher uncertainty and 3 for lower uncertainty, and versus the weight of each tyoe of emissions in the global. This methodology will let us to monitor the reliability of our emsisions and set a plan to improve.

The application of these considerations makes it possible to minimize as far as possible the uncertainty of the data provided in this Carbon Footprint report.

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06.

BASE YEAR

06. Base Year

As part of our continuous improvement in the accuracy of calculation process and a significant change in the quantified GHG emissions data, it was decided to establish the base **year** in **2021**.

Total GHG emissions for 2021 year account to 496,825 tonnes of CO_{2eq}, corresponding 144,981 tonnes to direct emissions, 46,242 tonnes to indirect emissions category 2 and 297,031 tonnes to rest of indirect emisisons categories 3 -6.

In 2022, Total emissions decreased around 17% in comparison with 2021, mainly to lower activity, improvement in location-approach emission factor for power supply and improvement in calculation methoodlogy for indirect categories 3-6, overall increasing the scope in reporting.