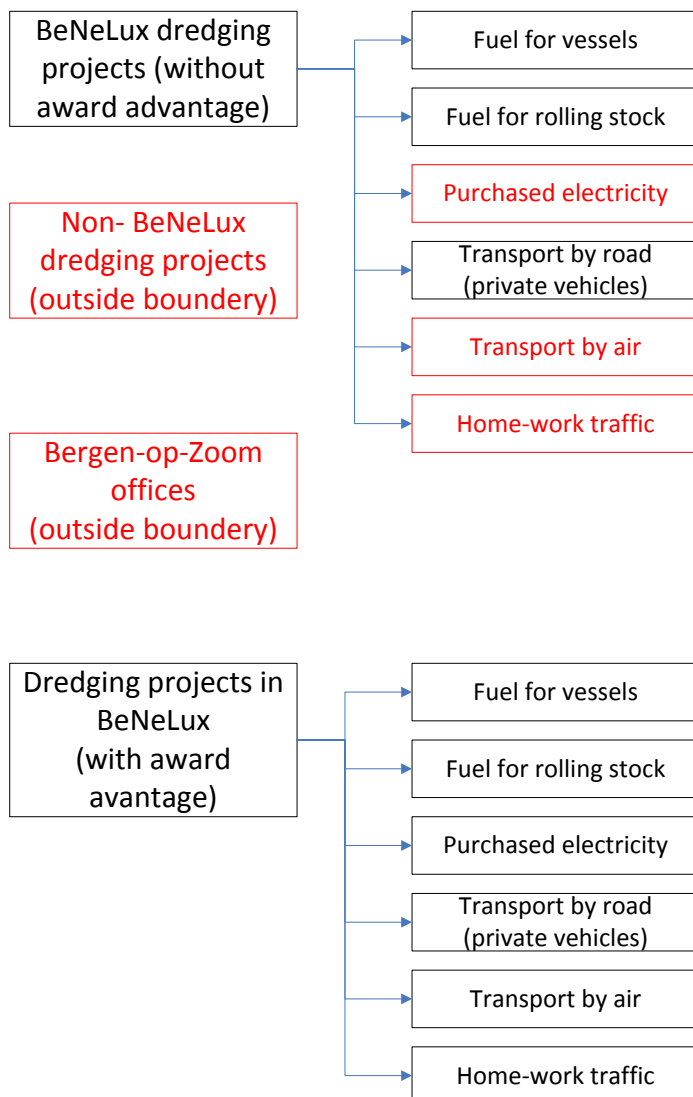


<b>Date</b>	16/09/2013				
<b>Revision</b>	00				
<b>Comments</b>	Start				

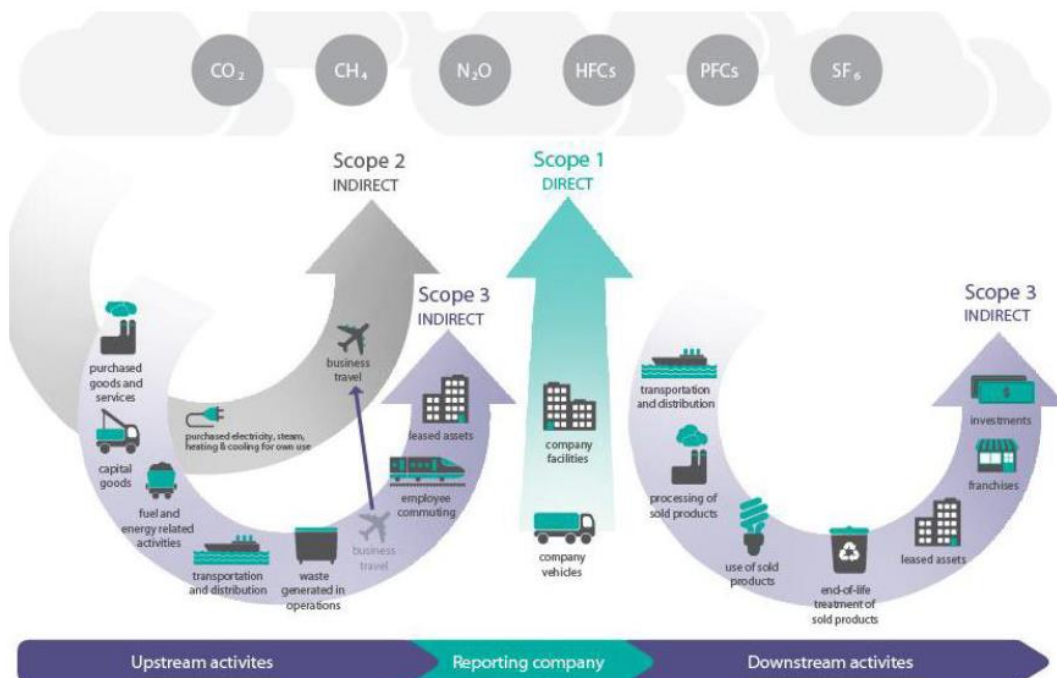
**Emission flows**



## Calculation method

### Current calculation method & conversion factors

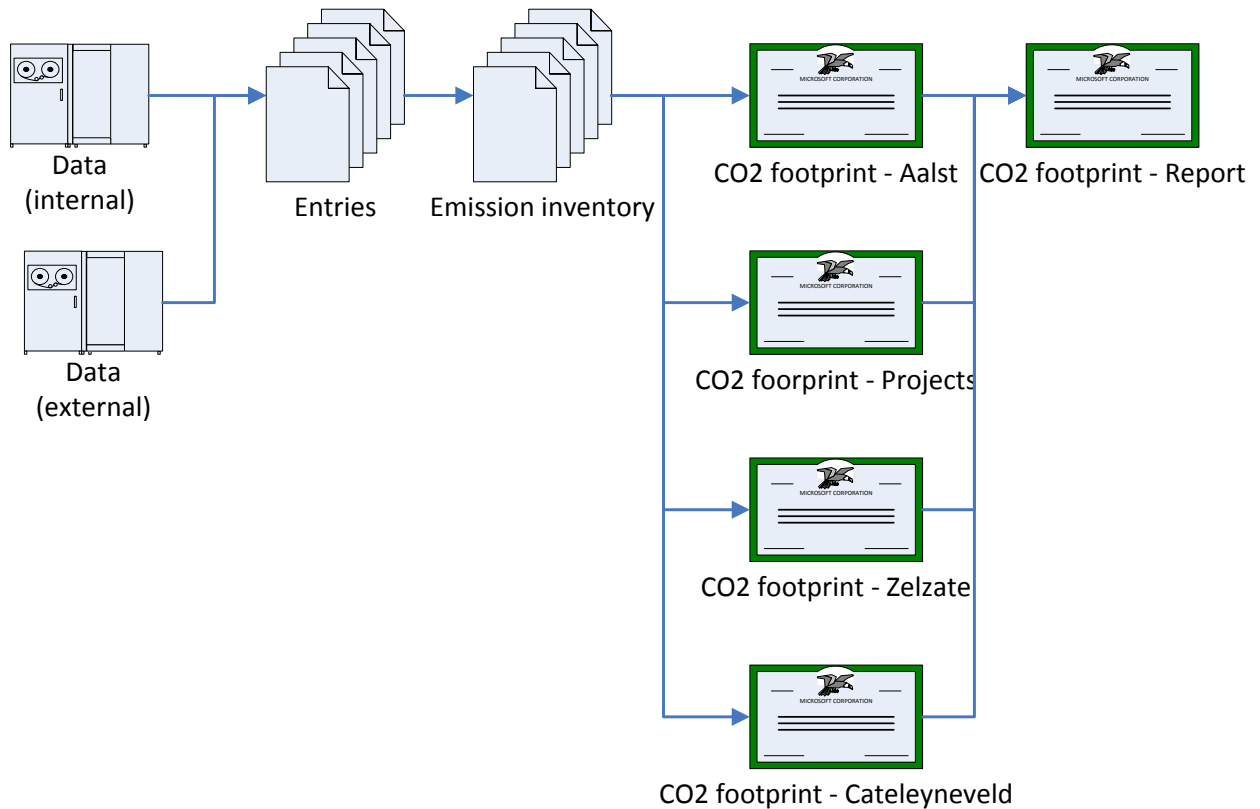
Since this periodic report is part of a CO<sub>2</sub> performance ladder certificate, the method specified in Manual 2.1 (valid from 18 July 2012) — as issued by the SKAO — has been observed. This method deviates from the GHG protocol in allocating ‘business air travel’ and ‘personal cars for business travel’ to Scope 2.



The conversion factors used are from the SKAO Manual 2.1, Annex C (Conversion factors), valid from 18 July 2012.

The method for determining the emission inventory and calculating the CO<sub>2</sub> emission has been defined in working instructions.

Below is an overview of the method used for collecting the relevant information for the CO<sub>2</sub> footprint.



### Changes to the calculation method

None

### Exceptions


- Scope 3 – Emissions
- Fuel consumption during docking/maintenance
- Fuel consumption of vessel demobilisation to projects outside the scope (Benelux)

### CO<sub>2</sub> uptake

Determining the CO<sub>2</sub> footprint only takes into account the contribution from sources. The capture and storage of CO<sub>2</sub> by way of sinks and reservoirs were not applicable in 2012.

### Biomass

In 2012, Jan De Nul NV did not emit any CO<sub>2</sub> via biomass combustion.

	<b>CO<sub>2</sub> PERFORMANCE LADDER JAN DE NUL NV</b>	<b>3A1c</b> <b>Revision 04</b> <b>Page 4 of 8</b>
	<b>GHG REPORT CFR 7.3 OR ISO 14064-1 (EXTERNAL)</b>	

## Direct and indirect emissions

This chapter shows the scope 1 and 2 emissions of Jan De Nul NV and explains them for each scope. Scope 3 is not included in this report.

### Recalculation for the base year and historical data

Zero – 2012 is the base year

### Emissions in 2012 (per category)

In order to make a clear comparison between the various activities within Jan De Nul NV which emit CO<sub>2</sub>, total CO<sub>2</sub> emissions have been subdivided in this section into the following categories:

- Fuel for equipment (mainly vessels and dry earthworks equipment)
- Buildings (gas and electricity consumption of buildings used)
- Company car use (company cars and business trips with private cars)
- Aeroplane use

### Direct emissions (scope 1)

The direct emissions can be allocated to the following groups of energy flows:

- Fuel consumption for equipment
- Fuel consumption for buildings
- Privately owned cars

### Fuel for equipment


CO<sub>2</sub> emissions from equipment are determined on the basis of the equipment's fuel consumption. Fuel is calculated on the basis of weekly reports. The types of fuel used may be broken down into:

- MGO (Marine Gas Oil, i.e. diesel)
- HFO (Heavy Fuel Oil)

### Fuel consumption for buildings

Emissions due to the use of natural gas for heating buildings and preparing food are part of the direct emissions. In 2012, Jan De Nul NV used an office in Aalst (Tragel), a storage facility in Aalst (Cateleyneveld), and a storage facility in Zelzate.

Emissions due to natural gas combustion are based on energy invoices.

	<b>CO<sub>2</sub> PERFORMANCE LADDER JAN DE NUL NV</b>	<b>3A1c</b> <b>Revision 04</b> <b>Page 5 of 8</b>
	<b>GHG REPORT CFR 7.3 OR ISO 14064-1 (EXTERNAL)</b>	

## Indirect emissions (scope 2)

The indirect emissions may be allocated to the following energy flows:

- Purchase of electricity
- Business use of private cars
- Aeroplane use

### Purchase of electricity

*Aalst office (including warehouse, workshops and warehouses)*

Emissions due to the purchase of electricity are based on energy invoices.

*Aalst storage facility (Cateleyneveld)*

Emissions due to the purchase of electricity are based on energy invoices.

*Zelzate storage facility*

Emissions due to the purchase of electricity are based on energy invoices.

### Business use of private cars

All employees based in Aalst who use their private car for business trips will claim expenses for said trips from the HR department.

The total amount of those expense claims is the basis for these emissions.

### Aeroplane use

Air travel is undertaken mainly by non-Benelux crew members on vessels and by travelling management staff (not project-related but for management or prospecting purposes).

### Other indirect emissions (scope 3)

Not applicable in this report.


### Emissions from projects awarded according to the CO<sub>2</sub> performance ladder

In 2012, no projects were carried out which were awarded in accordance with the CO<sub>2</sub> performance ladder.

In 2012, a project was awarded to Jan De Nul: coastline care.

However, the work on this project and associated emissions will start in 2013.

Certification requires us to give specific insight into our CO<sub>2</sub> emissions for this project.

	<b>CO<sub>2</sub> PERFORMANCE LADDER JAN DE NUL NV</b>	<b>3A1c</b> <b>Revision 04</b> <b>Page 6 of 8</b>
	<b>GHG REPORT CFR 7.3 OR ISO 14064-1 (EXTERNAL)</b>	

## Uncertainty

When interpreting the data, account should be taken of a number of factors that may affect the reliability of the generated data. These factors include the following:

1. Accuracy of the weekly manual fuel measurements
2. Errors during manual data entry in files
3. Assumptions about fuel consumption
4. Potential unmonitored supply of fuel to third parties
5. Unknown forms and ratios of home-work travel

				Fraction total
Scope 1	Diesel — Cateleyneveld	35.35	tonnes of CO <sub>2</sub> e	0.1%
	Diesel — Aalst (internal traffic/generator)	64.19	tonnes of CO <sub>2</sub> e	0.1%
	Gas — Aalst (heating)	1106.68	tonnes of CO <sub>2</sub> e	2.4%
	Diesel — Zelzate	29.77	tonnes of CO <sub>2</sub> e	0.1%
	Process gases — Aalst	122.76	tonnes of CO <sub>2</sub> e	0.3%
	Process gases — Zelzate	0.50	tonnes of CO <sub>2</sub> e	0.0%
	Coolants and refrigerants — Aalst	0.00	tonnes of CO <sub>2</sub> e	0.0%
	Fuel for private cars	754.94	tonnes of CO <sub>2</sub> e	1.6%
	Fuel for vessels	42424.76	tonnes of CO <sub>2</sub> e	90.3%
	<b>Total</b>	<b>44538.95</b>	<b>tonnes of CO<sub>2</sub>e</b>	<b>94.8%</b>

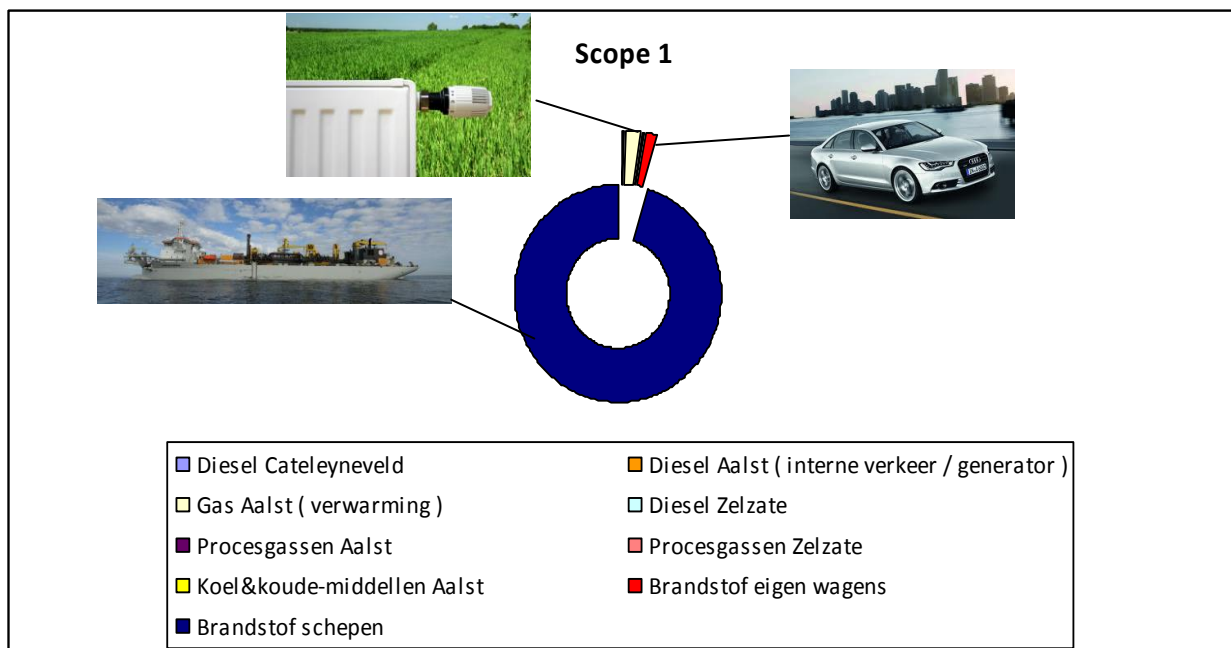
				Fraction total
Scope 2	Electricity — Aalst	641.65	tonnes of CO <sub>2</sub> e	1.4%
	Electricity — Cateleyneveld	57.72	tonnes of CO <sub>2</sub> e	0.1%
	Electricity — Zelzate	27.05	tonnes of CO <sub>2</sub> e	0.1%
	Fuel for private vehicles (employees)	40.00	tonnes of CO <sub>2</sub> e	0.1%
	Air miles (Aalst staff)	1469.60	tonnes of CO <sub>2</sub> e	3.1%
	Air miles (Benelux project team)	191.80	tonnes of CO <sub>2</sub> e	0.4%
	<b>Total</b>	<b>2427.80</b>	<b>tonnes of CO<sub>2</sub>e</b>	<b>5.2%</b>

Scope 3	Not applicable	0	tonnes of CO <sub>2</sub> e	-
---------	----------------	---	-----------------------------	---

<b>46966.74</b>	
<b>Total</b>	<b>4</b> tonnes of CO <sub>2</sub> e



				Fraction Scope 1
<b>Scope 1</b>	Diesel — Cateleyneveld	35.35	tonnes of CO <sub>2</sub> e	0.1%
	Diesel — Aalst (internal traffic/generator)	64.19	tonnes of CO <sub>2</sub> e	0.1%
	Gas — Aalst (heating)	1106.68	tonnes of CO <sub>2</sub> e	2.5%
	Diesel — Zelzate	29.77	tonnes of CO <sub>2</sub> e	0.1%
	Process gases — Aalst	122.76	tonnes of CO <sub>2</sub> e	0.3%
	Process gases — Zelzate	0.50	tonnes of CO <sub>2</sub> e	0.0%
	Coolants and refrigerants — Aalst	0.00	tonnes of CO <sub>2</sub> e	0.0%
	Fuel for private cars	754.94	tonnes of CO <sub>2</sub> e	1.7%
	Fuel for vessels	42424.76	tonnes of CO <sub>2</sub> e	95.3%
	<b>Total</b>	<b>44538.95</b>	<b>tonnes of CO<sub>2</sub>e</b>	<b>100.0%</b>





			Fraction Scope 2
Scope 2	Electricity — Aalst	641.65 tonnes of CO <sub>2</sub> e	26.4%
	Electricity — Cateleyneveld	57.72 tonnes of CO <sub>2</sub> e	2.4%
	Electricity — Zelzate	27.05 tonnes of CO <sub>2</sub> e	1.1%
	Fuel for private vehicles (employees)	40.00 tonnes of CO <sub>2</sub> e	1.6%
	Air miles (Aalst staff)	1469.60 tonnes of CO <sub>2</sub> e	60.5%
	Air miles (Benelux project team)	191.80 tonnes of CO <sub>2</sub> e	7.9%
	<b>Total</b>	<b>2427.80 tonnes of CO<sub>2</sub>e</b>	<b>100.0%</b>

