

# NIRAS Group climate accounting practice

For CSRD ESRS E1-5 and E1-6 reporting

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## 1 Introduction

This accounting guide describes applied methods and data for NIRAS to comply with the Corporate Sustainability Reporting Directive (CSRD) ESRS E1 Climate change (specifically E1-5 Energy consumption and mix and E1-6 Gross Scopes 1, 2, 3 and Total GHG emissions). Appendix A lists the total ESRS E1 metrics covered in this report.

## 2 Organizational boundaries

This climate account covers activities from the NIRAS Group across the world. Data is collected and results calculated for the three largest represented countries Denmark, Sweden and United Kingdom. The results are then extrapolated on to the remaining countries and companies. The extrapolation method and assumptions are documented in section 6.

For this inventory, all internal activities are included. In this context, external activities refer to those conducted on behalf of projects, for which NIRAS act as consultants. As an example, the purchases by customers for external projects, such as material for construction of roads, are excluded from the climate account. Activities related to NIRAS' services on projects are included. As an example, the business travel activities for NIRAS' employees on projects are included.

In NIRAS UK, a company handles turnkey projects where NIRAS purchases all inventory for new processing lines or factories. For these projects, NIRAS controls the selection of inventory, including machinery, materials, and consultancy services, which falls under scope 3 category 2 Capital Goods. Downstream emissions from these products' lifespans are excluded due to missing data and minimal impact on lifetime emissions. Emissions from turnkey projects are minimal compared to total emissions.

## 3 Operational boundaries

This climate account covers NIRAS' activities in the period January 1<sup>st</sup> to December 31<sup>st</sup> of the given year. The 2022 account serves as the base year. The climate account is reported annually in the annual report.

The consolidation approach applied is the operational control approach, following the GHG-Protocol.

The results of this climate account are presented in both a market based and location-based calculation approach. NIRAS has chosen the market-based approach as the primary reporting due to the purchase of Guarantees of Origin (GoO) of electricity. The method is described in section 5.

The climate account includes scope 1, 2 and 3 emissions, following the GHG protocol:

- **Scope 1** includes the direct emissions originating from the company's activities and processes, such as fuel consumption in the company's vehicles and fuel for heating and processes.
- **Scope 2** includes the indirect emissions from the production of the energy the company consumes from the collective utility grid, including electricity and district heating.

- **Scope 3** includes the indirect emissions from the supply chain, stemming from the extraction of raw materials, transportation, and the production of materials, products, and services consumed by the company as well as emissions from employee activities such as transportation.

Table 1 below shows which of the 15 scope 3 emission categories are included and which are excluded, following the GHG-Protocol. Upstream emission category 1-7 is included, and category 8-15 are excluded.

Table 1 - Overview of included and excluded scope 3 categories, following the Greenhouse Gas Protocol.

Scope 3 categories	Evaluation	Description
1. Purchased goods and services	Relevant	Largest emission category.
2. Capital goods	Relevant	Evaluated relevant and data is accessible.
3. Fuel- and energy-related activities	Relevant	Automatically included from same data as scope 1 and 2.
4. Upstream transportation and distribution	Relevant	The category is reported within category 1 and not specified separately.
5. Waste generated in operations	Relevant	All emissions are out-of-scope and therefore not presented in the results.
6. Business travel	Relevant	Relatively large emission category for service company.
7. Employee commuting	Relevant	Relatively large emission category for service company.
8. Upstream leased assets	Not relevant	Leased assets company cars are already included in Scope 1 and 2 due to operational control consolidation approach.
9. Downstream transportation and distribution	Not relevant	No sale of physical products to be transported by customers.
10. Processing of sold products	Not relevant	No sale of physical products to be further processed.
11. Use of sold products	Not relevant	No sale of physical products with use phase.
12. End-of-life treatment of sold products	Not relevant	No sale of physical products to be treated at end of life.
13. Downstream leased assets	Not relevant	Company is not lessor of assets to other companies.
14. Franchises	Not relevant	No franchises.
15. Investments	Not relevant	Evaluated not relevant.

## 4 Data

The following section describes the data collected and used in the preparation of the climate account. Data is collected for the three largest represented countries Denmark, Sweden and UK. The results are then extrapolated to the remaining countries. The extrapolation method and assumptions are described in section 7.

### 4.1 Data for scope 1 and 2

The following data in Table 2 is collected for calculating scope 1 and 2.

Table 2 - Data for scope 1 and 2.

	Activity data	Unit of data
<b>Scope 1</b>	Natural gas for heating	m <sup>3</sup> , kWh
	Fuels in company cars	Liter / monetary spend
	Wood Pellets	kWh
<b>Scope 2</b>	Electricity use in buildings	kWh
	Electricity use in company cars	kWh / monetary spend
	District heating	kWh
	District cooling	kWh

## 4.2 Data for scope 3

An overview of the data collected for the scope 3 inventory is presented in

Table 3.

Table 3 Data for scope 3.

Scope 3 categories	Unit of data	Data source and data handling
1. Purchased goods and services	Monetary; Supplier CO <sub>2</sub> report;	<p>Data is collected from NIRAS' ERP system in monetary values, mainly on account level. Some accounts are further dived into individual postings and sorted on that level.</p> <p>Each data point is managed regarding:</p> <ul style="list-style-type: none"> <li>• Evaluated relevant for emission calculation or not.</li> <li>• Categorization into scope 3 category.</li> <li>• Match with relevant emission factor.</li> </ul> <p>Additionally, primary CO<sub>2</sub> emission data is collected for the food consumption in the head quarter in Allerød, received directly from the canteen supplier.</p>
2. Capital goods	Monetary	<p>Data is collected from a separate report from NIRAS' ERP system. The report is an overview of purchases of assets in the given year of reporting. The depreciation expenses are removed from category 1 data.</p> <p>Each data point from the asset report is managed regarding:</p> <ul style="list-style-type: none"> <li>• Evaluated relevant for emission calculation or not.</li> <li>• Categorization into scope 3 category.</li> <li>• Match with relevant emission factor.</li> </ul> <p>Data from turnkey projects from the company IFPC is also categorized in this category by collecting data in monetary values which are managed following the above-mentioned bullets.</p>
3. Fuel- and energy-related activities	(see table Table 2)	Automatically included from same data as scope 1 and 2.
4. Upstream transportation and distribution	Monetary	Same data source and data handling as category 1 and not separately specified.
5. Waste generated in operations	Monetary	Data is based on monetary data. Emissions are not reported as these are all out-of-scope.
6. Business travel	Monetary; Supplier CO <sub>2</sub> report; Km;	<p>Flight data is collected in a mix of monetary spend and received CO<sub>2</sub>e reports from travel agencies.</p> <p>Data for employee transport in privately owned vehicles for business travel is collected in km, from NIRAS' ERP system.</p> <p>Data for employee business travel using public transportation is based on monetary data.</p>
7. Employee commuting	Estimated km based on questionnaire	Emissions from employee commuting are estimated based on a questionnaire survey conducted in head quarter, regarding how NIRAS' employees in Allerød commute in 2023.

## 5 Method for calculating GHG-emissions for ESRS E1-6

The following section describes the methods used in the preparation of the climate account.

The climate account follows the GHG-Protocol, an internationally recognized standard for conducting climate accounts.

Results for climate calculations are reported in CO<sub>2</sub> equivalents (CO<sub>2</sub>e) and include the following greenhouse gases, calculated in CO<sub>2</sub>e based on the Global Warming Potential for individual gases. The GWP values used are derived from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report.

- Carbon dioxide (CO<sub>2</sub>) (GWP = 1 kg CO<sub>2</sub>e/kg)
- Methane (CH<sub>4</sub>) (GWP = 28 kg CO<sub>2</sub>e/kg)
- Nitrous oxide (N<sub>2</sub>O) (GWP = 265 kg CO<sub>2</sub>e/kg)

Other greenhouse gases (SF<sub>6</sub>, HFCs, PFCs) are not included due to limitations in the applied emission factors, and their contributions are not considered relevant.

### Scope 1, 2 and 3

This climate report follows the GHG protocol and CO<sub>2</sub> emissions are therefore calculated in the defined scopes:

- **Scope 1** includes the direct emissions originating from the company's activities and processes, such as fuel consumption in the company's vehicles and fuel for heating and processes.
- **Scope 2** includes the indirect emissions from the production of the energy the company consumes from the collective utility grid, including electricity and district heating.
- **Scope 3** includes the indirect emissions from the supply chain, stemming from the extraction of raw materials, transportation, and the production of materials, products, and services consumed by the company as well as emissions from employee activities such as transportation.

### 5.1 Marked based – and location based method

The emissions are calculated and reported in both a market based and location based calculation approach. NIRAS has chosen the market based approach as the primary reporting due to the purchase of GoO.

In the marked based method, the emissions from purchased electricity from the grid covered by GoO's are calculated as zero emissions in scope 2, but with upstream emissions in scope 3. The emissions from purchased electricity from the grid *not* covered by GoO's are calculated as a residual mix.

In the location based method, the emissions from purchased electricity from the grid are calculated based on the average emission per kWh in the given geography in scope 2 and 3.

### 5.2 Emissions factors

The selection of emission factors for this reporting draws from several acknowledged sources specific to each country — Denmark, Sweden, and the United Kingdom — and has been deemed representative.

The emission factors applied on most of the data are extracted from EXIOBASE, which are then applied to monetary consumption data. For physical consumption data, such as liters of diesel, kilowatt-hours of electricity, and cubic meters of natural gas, emission factor sources that are particular to each country are applied. This

approach ensures that the emission assessments are both accurate and relevant to the specific national contexts being studied.

A detailed list of reference sources can be found in appendix C.

## 6 Method and data for calculating energy metrics for ESRS E1-5

NIRAS' energy consumptions are calculated to fit the format of Table 4 below.

Table 4 – Energy consumption table

ESRS E1-5 Title	Unit
Total fossil energy consumption (e.g. fossil share in electricity mix and district heating)	MWh
Share of fossil sources in total energy consumption	%
Consumption from nuclear sources (e.g. nuclear share of imported electricity)	MWh
Share of nuclear sources in total energy consumption	%
Fuel consumption for renewable sources (e.g. renewable energy share in gas, petrol and diesel)	MWh
Consumption of purchased or acquired electricity, heat, steam and cooling from renewable energy sources	MWh
Consumption of self-generated non-fuel renewable energy	MWh
Total consumption of renewable energy	MWh
Share of renewable sources in total energy consumption	%
Total energy consumption	MWh
Renewable energy production sold to the grid	MWh

The calculation covers the energy consumption within NIRAS' own operations, specifically energy consumption that leads to emissions within scopes 1 and 2. The energy mixes are calculated using a market-based approach, which includes the purchase of GoO's.

Actual energy consumptions and mixes are calculated for NIRAS' offices in Denmark, the United Kingdom, and Sweden. Energy consumption for other offices is estimated through extrapolation as described in section 7.2. Hence, the calculations of the energy consumptions follow the same procedure as the calculations of GHG emissions.

### 6.1 Energy consumption data and energy factors

The data on energy consumption is the same as described in section 4.1 Data for scope 1 and 2. Information on energy mix (i.e., the proportion of fossil and renewable energy per energy product) is primarily sourced from the Danish Energy Agency (Energistyrelsen) and Energinet, while data on the electricity mix in the UK and Sweden are collected from the Association of Issuing Bodies (AIB).

Energy consumptions are converted into the common unit of MWh using 'energy factors'. An energy factor is the coefficient by which a specific amount of energy (e.g., 1 liter of petrol) is multiplied to convert it into MWh of consumed energy. These factors are primarily derived from density factors and lower heating values provided by the Danish Energy Agency's "Energistatistik".

## 7 Method for extrapolation

The CSRD reporting includes energy consumptions and GHG emissions representing the total NIRAS Group. However, data could not be collected for all locations as this would be a comprehensive task. Therefore, the results are calculated based on a mix of actual collected data for large entities and extrapolated data for small entities.

Table 5 List of large and small entities in NIRAS and percentage FTE of total.

NIRAS entities		% FTE of NIRAS total
<b>Large entities</b> <i>– results calculated on actual data</i>	Denmark	66%
	Sweeden	8%
	UK	8%
	<b>Total share of FTE from large entities</b>	<b>82%</b>
<b>Small entities</b> <i>– Results are extrapolated</i>	Norway, France, Belgium, Poland, Germany, Netherlands, Ireland, Finland, Philippines, Serbia, Taiwan, Kenya, Indonesia, Zambia, Colombia, Tanzania, Australia, South Africa, Switzerland, Mozambique, Malawi, Ukraine, Uganda, Tunisia. <b>Total share of FTE from small entities</b>	<b>18%</b>
<b>Total</b>		<b>100%</b>

Data for calculating emissions is only collected for the large entities. Large entities are countries that include more than 5% of total employees in NIRAS. For these entities, reported data for E1-5 and E1-6 are based on the methodology described in this document. These entities with more than 5% of total employees which constitute over 80% of the total amount of employees in NIRAS are Denmark, Sweden and United Kingdom.

For the remaining smaller entities with FTE less than 5% of total employees, data is extrapolated with the method described in section 7.1 and 7.2.

### 7.1 Extrapolating E1-6 climate emissions

The total emissions from scope 1, 2 and 3 from the three large entities are divided by the respective number of employees from all three entities to calculate an emission per employee. This figure is then multiplied by the number of employees in the small entities to estimate the remaining scope 1, 2 and 3 emissions.

### 7.2 Extrapolating E1-5 Energy mix

For calculating results on E1-5 regarding energy consumption and energy mix, firstly the key figures are calculated following the method and sources described in section 6, for Denmark, Sweeden and UK. The results from the three large entities are then divided by the respective number of employees from all three entities to calculate an emission per employee. Finally, this figure is then multiplied by the number of employees in the small entities to estimate the ESRS E1-5 results for the entire company.

The method for extrapolating E1-5 and E1-6 results does not consider the vast differences of some of the small and large entities', e.g. in relation to need for heating in warmer countries, permanent vs. temporary project offices, employees only working from home vs. having an office space, purchase of GoO's etc.

However, the method is evaluated representative due to it covering less than 20% of headcount. Meanwhile, the process of collecting actual data or multiple extrapolation criteria for alle locations would be a too resourceful task while providing very little value as data would still be based on uncertain estimates.

A full list of NIRAS entities in 2025 is available in appendix B.



## Appendix A: ESRS-E1 metrics covered in reporting

### ESRS E1-5

The following ESRS E1-5 metrics are evaluated relevant for NIRAS to report on:

*Table 6 ESRS E1-5 metrics covered by CSRD energy table reporting. NIRAS is not in a High Climate Impact Sector.*

ESRS E1-5 Title	Unit
Total fossil energy consumption (e.g. fossil share in electricity mix and district heating)	MWh
Share of fossil sources in total energy consumption	%
Consumption from nuclear sources (e.g. nuclear share of imported electricity)	MWh
Share of nuclear sources in total energy consumption	%
Fuel consumption for renewable sources (e.g. renewable energy share in gas, petrol and diesel)	MWh
Consumption of purchased or acquired electricity, heat, steam and cooling from renewable energy sources	MWh
Consumption of self-generated non-fuel renewable energy	MWh
Total consumption of renewable energy	MWh
Share of renewable sources in total energy consumption	%
<b>Total energy consumption</b>	MWh

### ESRS E1-6

The metrics listed in Table 7 are all calculated through the climate account following the GHG-Protocol and are evaluated relevant for NIRAS to report on.

*Table 7 ESRS E1-6 metrics covered by GHG-results.*

ESRS E1-6 Title
Gross Scopes 1, 2, 3 and Total GHG emissions - GHG emissions per scope [table]
Gross Scopes 1, 2, 3 and Total GHG emissions - Scope 3 GHG emissions (GHG Protocol) [table]
Gross Scope 1 greenhouse gas emissions
Gross location-based Scope 2 greenhouse gas emissions
Gross market-based Scope 2 greenhouse gas emissions
Gross Scope 3 greenhouse gas emissions
Total GHG emissions location based
Total GHG emissions market based
Percentage of GHG Scope 3 calculated using primary data

The reporting narratives listed in Table 8 are all reported through this accounting guide.

*Table 8 ESRS E1-6 metrics covered by accounting guide.*

ESRS E1-6 Title
Disclosure of methodologies, significant assumptions and emissions factors used to calculate or measure GHG emissions
Disclosure of why Scope 3 GHG emissions category has been excluded
List of Scope 3 GHG emissions categories included in inventory
Disclosure of reporting boundaries considered and calculation methods for estimating Scope 3 GHG emissions

## Appendix B: Organizational boundaries – Companies

Company level			Owner-ship Pct.	Country	Data collection	
1	2	3			Actual	Extrapolated
<b>NIRAS Group</b>						
	NIRAS Gruppen A/S**		72%	Denmark	x	
	NIRAS A/S (100%)***		100%	Denmark	x	
	MULTI MEDIA CONSULTING A/S (100%)		100%	Denmark	x	
	NIRAS IPR A/S (100%)		100%	Denmark	x	
	NIR-PEN A/S (100%)		100%	Denmark	x	
	NIRAS MAPPING A/S (100%)		100%	Denmark	x	
	NIRAS Greenland A/S (100%)		100%	Greenland		x
	LIC ENGINEERING A/S (100%)***		100%	Denmark	x	
	AlfaNordic International ApS (100%)		100%	Denmark	x	
	NIRAS, INC. (100%)		100%	USA		x
	NIRAS AB (100%)		100%	Sweden	x	
	NIRAS Sweden AB (100%)		100%	Sweden	x	
	FM Konsulterna AB (100%)		100%	Sweden	x	
	HydraCon Sverige AB (100%)		100%	Sweden	x	
	Aquabiota water research ABWR AB (100%)		100%	Sweden	x	
	AquaBiota Consulting ABC AB (100%)		100%	Sweden	x	
	NIRAS Norge AS (100%)		100%	Norway		x
	NIRAS Suisse AG (100%)		100%	Switzerland		x
	NIRAS International Consulting Belgium Sprl (100%)		100%	Belgium		x
	NIRAS FRANCE (100%)		100%	France		x
	NIRAS Finland OY (100%)		100%	Finland		x
	NIRAS Germany GmbH (100%)		100%	Germany		x
	NIRAS IC Sp. Z o.o. (100%)		100%	Poland		x
	NIRAS SR D.O.O. (100%)		100%	Serbia		x
	LLC NIRAS Ukraine (100%)		100%	Ukraine		x
	NIRAS Nederland B.V. (90%)		90%	Netherlands		x
	DOLMEN LIFE SCIENCES LIMITED (100%)		100%	Ireland		x
	NIRAS LORIEN Engineering Solutions UK Ltd. (100%)		100%	UK	x	
	V M Engineering UK Ltd. (100%)		100%	UK	x	
	NIRAS Consulting Ltd. (100%)		100%	UK	x	
	NIRAS FRAENKEL LTD (100%)		100%	UK	x	
	NIRAS Group (UK) Ltd (100%)		100%	UK	x	
	PEAL MANAGEMENT HOLDINGS LIMITED (100%)		100%	UK	x	
	INTEGRATED FOOD PROJECTS LIMITED (100%)		100%	UK	x	
	STRUCTURAL DESIGN ASSOCIATES LTD (100%)		100%	UK	x	

FDT Consulting Engineers and Project Managers Ltd. (100%)	100%	Ireland		x
Brewconnect Tech Placements Ltd. (100%)	100%	Ireland		x
IFP CONSTRUCTION LIMITED (100%)	100%	UK	x	
NIRAS Australia Pty Ltd (100%)	100%	Australia		x
NIRAS AMERICA LATINA S.A.S (100%)	100%	Colombia		x
NIRAS Taiwan Ltd. (100%)	100%	Taiwan		x
NIRAS Asia Manila Inc. (100%)	100%	Philippines		x
RCEE-NIRAS JSC. (50%)	50%	Vietnam		x
PT NIRAS INTERNATIONAL CONSULTING INDONESIA (100%)	100%	Indonesia		x
NIRAS SOUTH AFRICA (PTY) LTD (100%)	100%	South Africa		x
NIRAS Africa Ltd. (100%)	100%	Kenya		x
NIRAS LIMITED (Malawi) (100%)	100%	Malawi		x
NIRAS Zambia Ltd. (100%)	100%	Zambia		x
NIRAS Tanzania Ltd. (100%)	100%	Tanzania		x
La société de gestion PACT (100%)	100%	Tunisia		x
NIRAS INTERNATIONAL CONSULTING UGANDA LIMITED (100%)	100%	Uganda		x
ONWater Sdn. Bhd. (25%)	25%	Malaysia		x
NIRAS Egypt Ltd. (70%)	70%	Egypt		x
NIRAS Mocambique Lda. (100%)	100%	Mozambique		x

## Appendix C: Emission factor sources

Country	Data	Kg CO <sub>2</sub> e per unit	Source
<b>Purchase</b>			
DK, SE, UK	Purchase of goods and services	DKK/SEK/GBP	EXIOBASE v3.3.16b2
<b>Energy</b>			
DK	Electricity	kWh	Danish Energy Agency and IPCC.
DK	District heating	kWh	Danish Energy Agency, 125% method.
DK	Natural gas from grid	M3	Danish Energy Agency and DEFRA UK Government Conversion Factors
SE	Electricity	kWh	Swedish Energy Agency and IPCC and Association of Issuing Bodies (AIB).
SE	District heating/cooling	kWh	Data from Stockholm Exergi, Göteborg Energi AB and Tekniska Verken, Linköping
UK	Electricity	kWh	DEFRA UK Government Conversion Factors and Association of Issuing Bodies (AIB).
UK	Natural gas from grid	kWh	DEFRA, UK Government Conversion Factors
UK	Wood Pellets	M3	DEFRA, UK Government Conversion Factors
<b>Transport</b>			
DK	Diesel/Petrol in company cars	Liter	Danish Energy Agency, DEFRA UK Government Conversion Factors and IPCC
UK	Diesel/Petrol in company cars	Liter	DEFRA UK Government Conversion Factors
SE	Diesel/Petrol in company cars	Liter	Swedish Energy Agency, DEFRA UK Government Conversion Factors and IPCC
DK	Milage in privately owned vehicles	km	Danish Energy Agency
UK	Milage in privately owned vehicles	km	Danish Energy Agency
SE	Milage in privately owned vehicles	km	Danish Energy Agency

DK	Employee commuting	Headcount FTE	Calculated from questionnaire from Danish headquarter on commuting.
UK	Employee commuting	Headcount FTE	Calculated from questionnaire from Danish headquarter on commuting.
SE	Employee commuting	Headcount FTE	Calculated from questionnaire from Danish headquarter on commuting.