



We are **kiwa**

The Journey to Carbon Verification

Stephen Burt & Busra Sahin, September 2025

creating
trust
***driving
progress***

Webinar Series Overview: The Journey to Carbon Verification

Part 1, 01/09/2025, Carbon Quantification, Mitigation and Reporting:

- Introduction, overview and context
- Drivers
- Options for standards and methodologies to use

Part 2, 18/09/2025, Getting Started on your GHG Reporting:

- Defining your organisational and reporting boundaries
- Selecting and using appropriate standards and methodologies
- Using Conversion Factors
- Establishing baselines
- Calculating your Scope 1, 2 and 3 GHG Emissions
- Preparing a GHG Inventory
- Determining Materiality

Part 3, 24/10/2025, GHG Mitigation, Reporting, Removals and Offsets:

- Planning for reductions
- Options for removals and offset – pros and cons
- Preparing your GHG Report and other documentation requirements
- Verification options and case studies

14.00 GMT

15.00 CET

16.00 EET



Introduction To Stephen Burt

Stephen Burt

Carbon & Sustainability Services Director, NQA

- Over 25 years' experience in carbon, energy and environmental management
- 15 years at NQA
- Chartered Environmentalist; BSc; MSc; PhD (net zero related, in progress)
- Lead GHG Verifier (ISO 14064-1, ISO 14068-1, PAS 2060, PAS 2080)
- Lead Auditor (ISO 20121, ISO 14001, ISO 50001, ISO 9001, ISO 45001)
- Member of SES/1/1 and SES/1/7, developing ISO standards for GHG and environmental schemes



Introduction To Busra Sahin

Busra Sahin

Product Manager ESG Services & GHG Verification

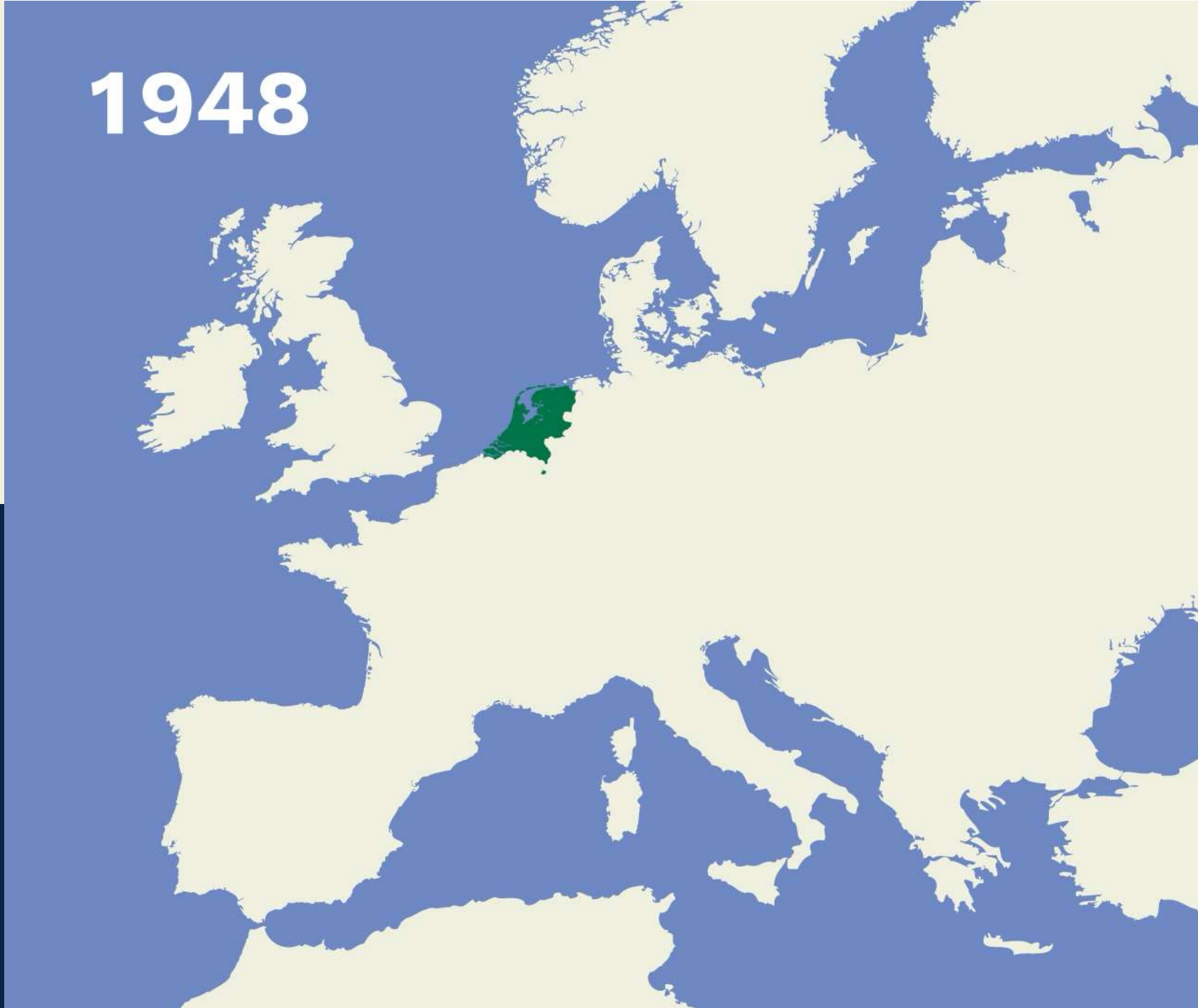
- Over 8 years' experience in Sustainability, Supply chain due diligence and ESG
- 2 years at Kiwa Berlin
- BSc Food Engineering, MSc Applied Natural Science
- Lead Auditor (EU Conflict Mineral Regulation, EU Battery Regulation Due Diligence, Kiwa Sustainability Standard, Solar Stewardship Initiative ESG Standard)



Kiwa's global
operations and
employees

~12.000
employees in
35 countries

1948



Sustainability services with Kiwa



Life Cycle
Assessment



Corporate
Carbon
Footprint



ESG
Certification



Supply Chain
Due Diligence
(SCDD)



ESG
Reporting

Sustainability services with Kiwa

Our ISO Certification and Verification Services:

13 CLIMATE ACTION



ENVIRONMENTAL

13. Climate Action

- ISO 14064-1 Verification - GHG Quantification and Reporting
- ISO14068-1 / PAS 2060 Verification - Carbon Neutrality
- PAS 2080 Certification - Carbon Management in Buildings and Infrastructure
- ISO 20121 – Sustainable Events
- ISO 14001 - Environmental
- ISO 50001 – Energy
- Environmental Product Declarations (EPD)
- ISO 14060 – Net Zero

3 GOOD HEALTH AND WELL-BEING



SOCIAL

3. Good Health and Wellbeing

- ISO 53001 – UN SDGs
- ISO 45001 – H&S
- ISO 45003 – Mental Health
- ISO 44001 – Collaborative Working
- ISO 37001 – Anti-bribery
- ISO 26000 – Social Responsibility
- FSC / PEFC
- RSPO

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



GOVERNANCE

9. Industry, Innovation and Infrastructure

- ISO 9001 – Quality
- ISO 22301 – BCMS
- ISO 27001 / 27701 / 27017 / 27018 – Info Sec
- ISO 55001 – Asset Management
- ISO 44001 – Collaborative Working
- ISO 41001 – Facilities Management
- Industry specifics
 - Aerospace
 - Medical
 - Food

R<THINK: web-based environmental software



A software with three solutions:

- R<THINK LCA (Life Cycle Assessment)
- R<THINK Share
- R<THINK CCF (Corporate Carbon Footprint)

PART 2: LEARNING OBJECTIVES

1. Understand your options for which standards and methodologies are most appropriate for your needs
2. Gain an *overview* of how to define your organisational and reporting boundaries
3. Gain an *overview* of how to calculate your Scope 1, 2 and 3 GHG Emissions, including where to find and which Conversion Factors to use
4. Gain an *overview of* how to prepare a GHG Inventory
5. Understand how to establish a base year, and when it's appropriate to change that

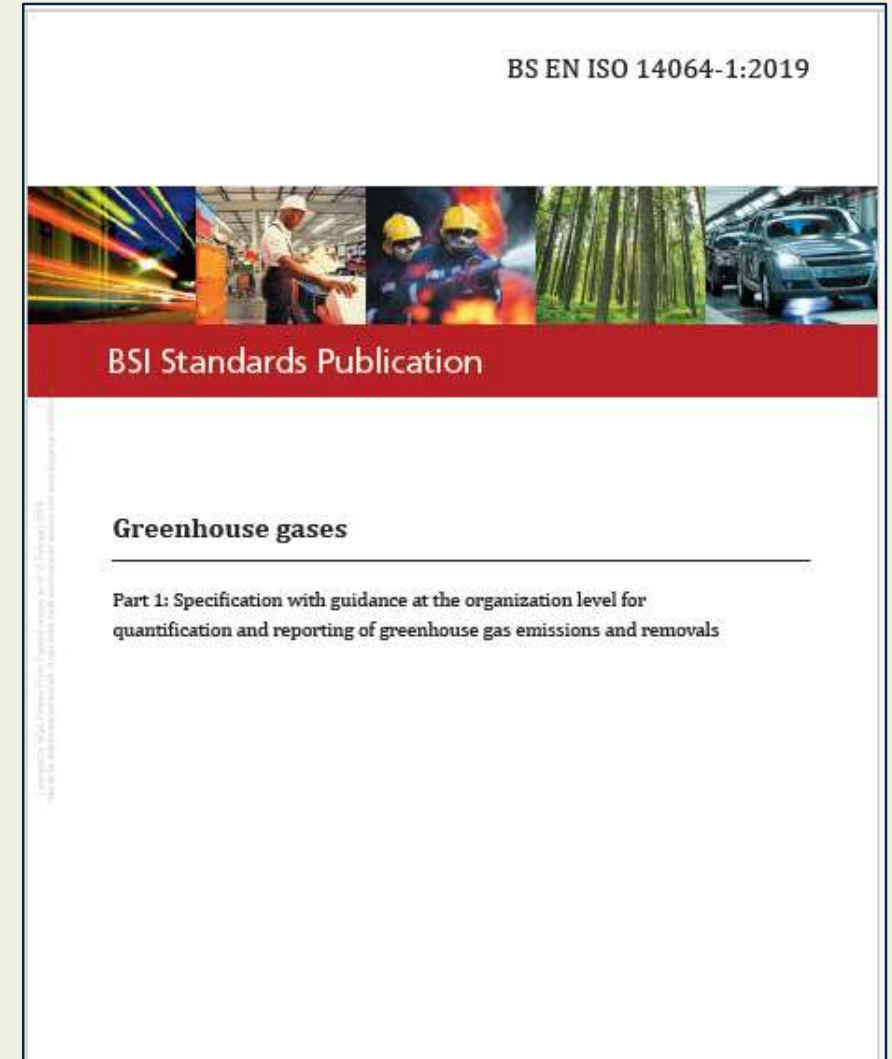


Note that we'll focus on GHG *emissions* only. We won't cover GHG *removals*.

Selecting and using appropriate standards and methodologies

SELECTING AND USING APPROPRIATE STANDARDS AND METHODOLOGIES

- There are various sources of *standards & specifications* for quantifying, mitigating and reporting GHG emissions, depending on your needs:
 - ISO 14064-1:specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals
 - Internationally recognised, highest tier of standards (ISO)
 - Provides a framework for quantifying (not calculating) and reporting GHG emissions and removals
 - Intended to be used at *organisational* level
 - Includes optional GHG mitigation framework
 - Allows for external, third party, Verification via Verification Bodies, providing for credibility and assurance

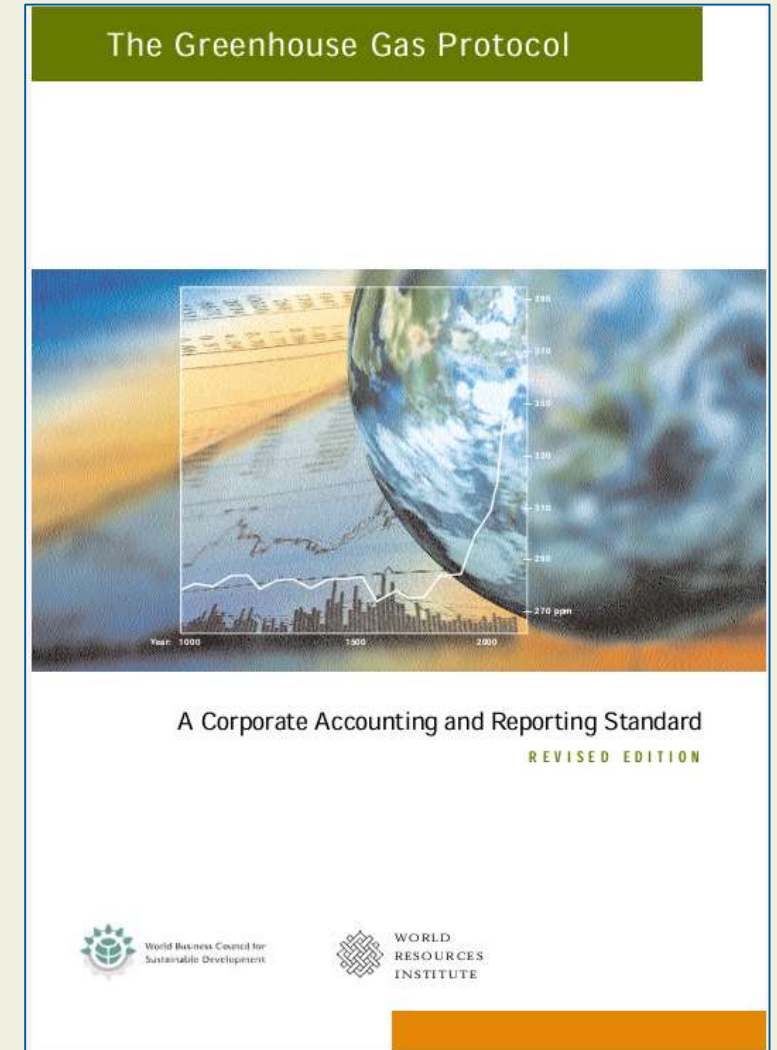


SELECTING AND USING APPROPRIATE STANDARDS AND METHODOLOGIES

- There are various sources of methodologies for calculating and quantifying GHG emissions, depending on your needs:
- GHG Protocol: Corporate Accounting and Reporting Standard
 - Provides comprehensive guidance on categorising and calculating Scope 1, 2 and 3 activities
 - Does not provide conversion factors
 - Does not provide for external, third party, Verification
 - <https://ghgprotocol.org/>

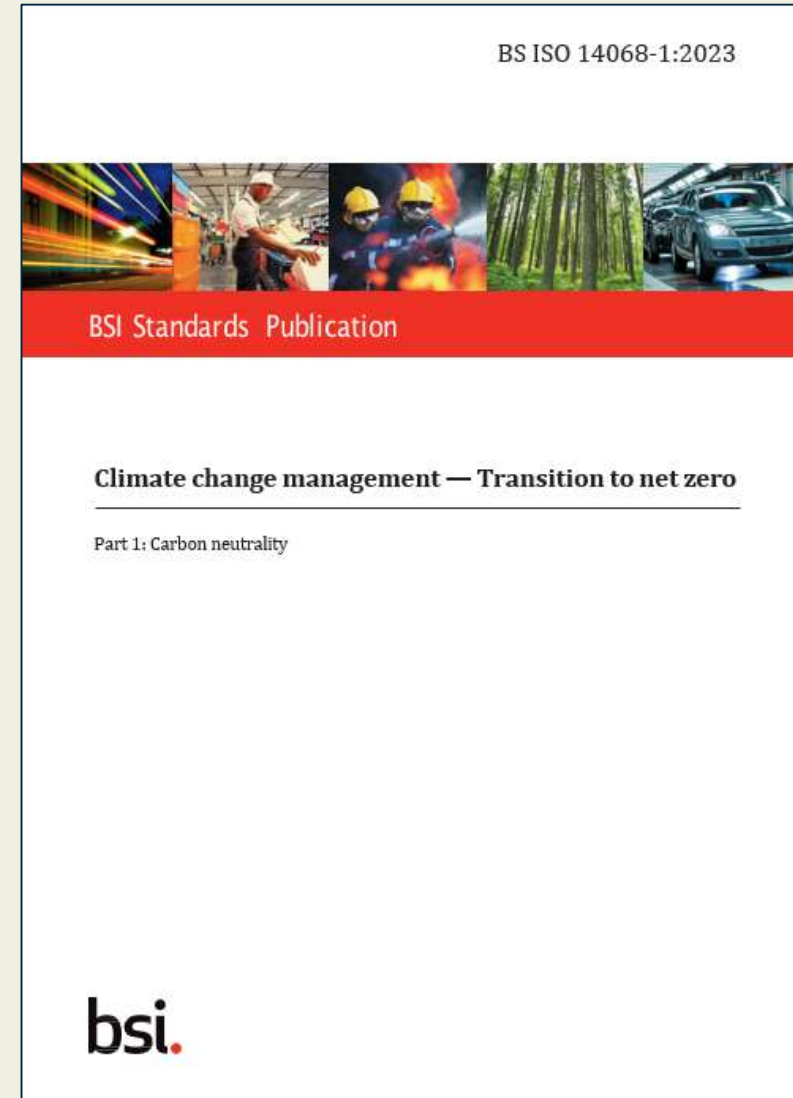


ISO and the WRI are now working together to harmonise ISO 14064-1 and the GHG Protocol



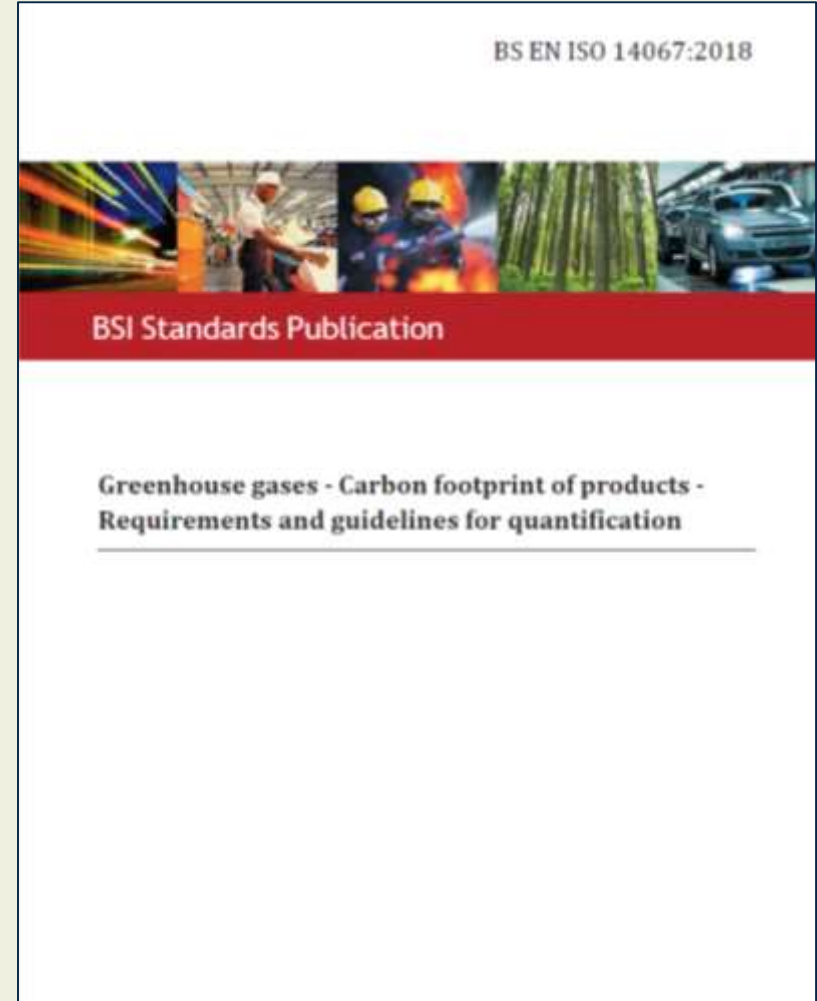
SELECTING AND USING APPROPRIATE STANDARDS AND METHODOLOGIES

- There are various sources of *standards / specifications* for quantifying, mitigating and reporting GHG emissions, depending on your needs:
 - ISO 14068-1: specifications for demonstrating ***carbon neutrality***
 - Internationally recognised, highest tier of standards (ISO)
 - Provides a framework for quantifying (not calculating), reducing, removing, offsetting and reporting GHG emissions
 - Intended to be used for *organisations, products & services, buildings and events*
 - ISO 14064-1 is a recognised basis as a step towards this
 - Allows for external, third party, Verification via Verification Bodies, providing for credibility and assurance



SELECTING AND USING APPROPRIATE STANDARDS AND METHODOLOGIES

- There are various sources of *standards / specifications* for quantifying, mitigating and reporting GHG emissions, depending on your needs:
 - ISO 14067: Carbon footprint of products – Requirements and guidelines for quantification
 - Internationally recognised, highest tier of standards (ISO)
 - Provides a framework for quantifying (not calculating) and reporting product carbon footprints
 - Intended to be used at *product* level
 - Allows for external, third party, Verification via Verification Bodies such as Kiwa, providing for credibility and assurance



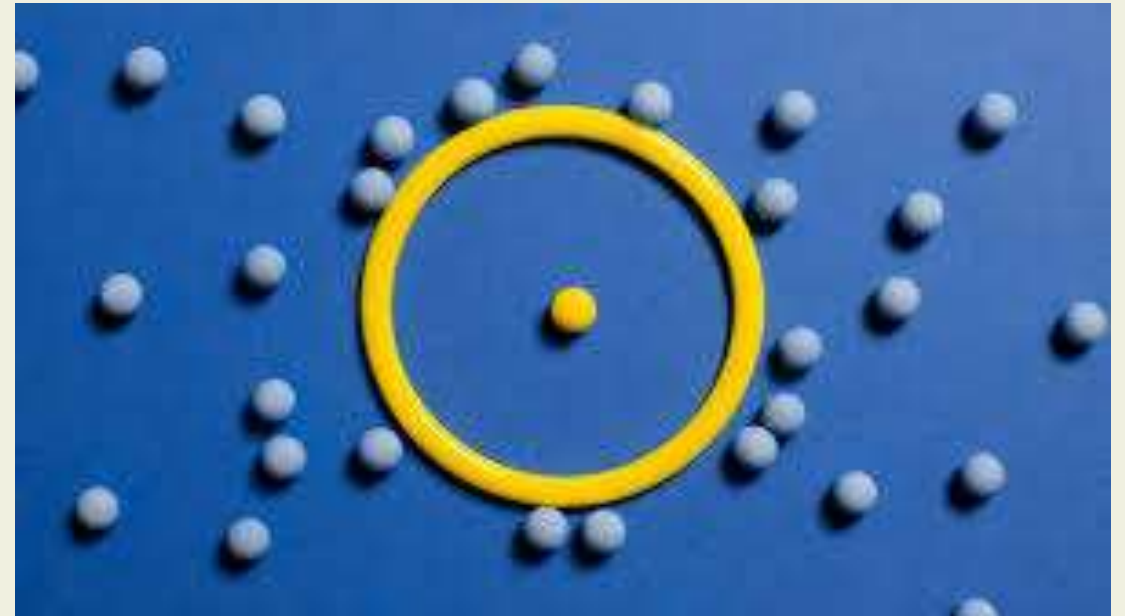
Defining your organisational and reporting boundaries

DEFINING YOUR ORGANISATIONAL AND REPORTING BOUNDARIES

This is the first step and is critical. It provides absolute clarity on what is covered by / included in your GHG calculations, and what is not.

Organisational Boundaries relate to which company, sites, facilities are included in your GHG calculations.

Reporting Boundaries relate to which Direct (scope 1) and Indirect (scopes 2 and 3) GHG emissions are included / excluded in your GHG calculations, with explanation and justification.



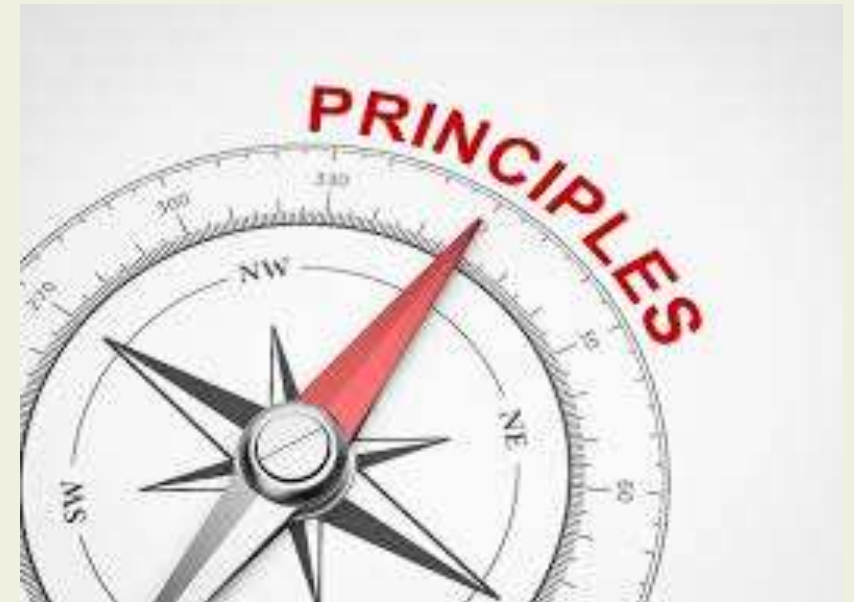
DEFINING YOUR ORGANISATIONAL AND REPORTING BOUNDARIES

Within your boundaries, you should include:

- All Direct (scope 1) GHG emissions
- All Energy Indirect (scope 2) GHG emissions
- All *significant* Indirect (scope 3) GHG emissions
 - Any exclusions should be justified and documented
 - Criteria for significance evaluation might include the scale of the emissions, the levels of influence, the availability of information and the accuracy of associated data

ISO 14064-1 provides some relevant *principles*:

- Completeness (clause 4.3)
 - Include **all relevant** GHG emissions and removals
- Consistency (clause 4.4)
 - Enable **meaningful comparisons** in GHG-related information
- Transparency (clause 4.6)
 - **Disclose sufficient and appropriate GHG-related information** to allow intended users to make decisions with reasonable **confidence**



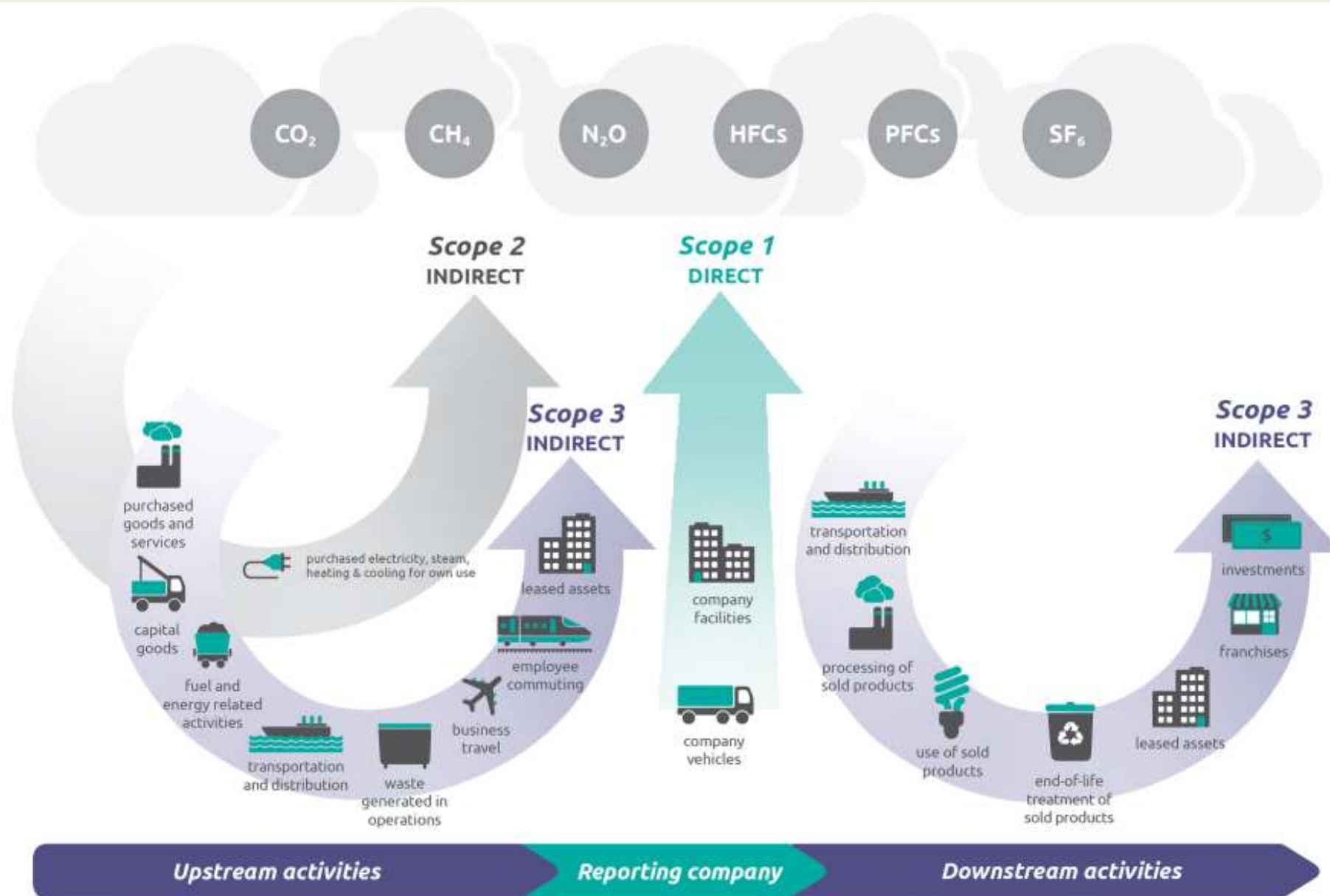
Quantifying and Calculating your scope 1, 2 and 3 GHG Emissions

QUANTFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS

- Now that you have established your organisational and reporting boundaries, the next step is to identify and to categorise your GHG emission sources.
- The 'Scope 1, 2 and 3' emission categories are very commonly used, for example in the GHG Protocol. They are not used in ISO 14064-1 however.....

GHG Protocol Categories	ISO 14064-1 Categories	Examples
Scope 1	Direct GHG Emissions	Natural gas, petrol and diesel, LPG, heating oil, FGas losses, process emissions
Scope 2	Indirect GHG emissions (from imported energy)	Electricity, purchased heat and steam
Scope 3 (15 sub-categories)	Indirect GHG emissions (4 categories, 14 sub-categories)	See next slides

QUANTIFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS



QUANTFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS

GHG Protocol Scope 3 Categories (15 of)	ISO 14064-1 Indirect Emission Categories (4 of)	ISO 14064-1 Indirect Emission Sub-Categories (14 of)
Category 1- Purchased good and services	Indirect from products used by an organisation	Emissions from purchased goods
Category 2 - Capital goods	Indirect from products used by an organisation	Emissions from capital goods
Category 3 - Fuel and energy related emissions not included in scope 1 and 2	Indirect from products used by an organisation	Indirect GHG emissions from services used
Category 4 - Upstream transportation and distribution	Indirect from transportation	Emissions from upstream transport and distribution for goods
Category 5 - Waste generated in operations	Indirect from products used by an organisation	Emissions from the disposal of solid and liquid waste
Category 6 - Business travel	Indirect from transportation	Emissions from business travel
Category 7 - Employee commuting	Indirect from transportation	Emissions from employee commuting
Category 8 - Upstream leased assets	Indirect from products used by an organisation	Emissions from the use of upstream leased assets
Category 9 - Downstream transportation and distribution	Indirect from transportation	Emissions from downstream transport and distribution for goods
Category 10 - Processing of sold products	Indirect from the use of products from the organisation	Emissions or removals from the use stage of the product
Category 11 - Use of sold products	Indirect from the use of products from the organisation	Emissions or removals from the use stage of the product
Category 12 - End-of-life treatment of sold products	Indirect from the use of products from the organisation	Emissions from end of life stage of the product
Category 13 - Downstream leased assets	Indirect from the use of products from the organisation	Emissions from downstream leased assets
Category 14 - Franchises	Indirect from the use of products from the organisation	Emissions from investments? (Franchises not mentioned)
Category 15 - Investments	Indirect from the use of products from the organisation	Emissions from investments

QUANTFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS

GHG Protocol Scope 3 Categories (15 of)	Examples
Category 1- Purchased good and services	Raw materials, consumables, maintenance
Category 2 - Capital goods	Machinery, plant
Category 3 - Fuel and energy related emissions not included in scope 1 and 2	T&D losses, Well to Tank
Category 4 - Upstream transportation and distribution	Delivery vehicles, sea and air transport of raw materials
Category 5 - Waste generated in operations	Waste, wastewater / trade effluent
Category 6 - Business travel	Flights, trains, hotels, cars
Category 7 - Employee commuting	Cars, trains, buses, homeworking
Category 8 - Upstream leased assets	Material receipt and storage warehouses
Category 9 - Downstream transportation and distribution	Delivery vehicles, sea and air transport of products
Category 10 - Processing of sold products	Downstream value chain partners
Category 11 - Use of sold products	Energy consumption during use
Category 12 - End-of-life treatment of sold products	Final disposal
Category 13 - Downstream leased assets	Product storage warehouses
Category 14 - Franchises	Franchise operations
Category 15 - Investments	Investors and financial services only

QUANTIFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS

How it feels while Calculating
different Carbon Emissions

Scope 1 & 2

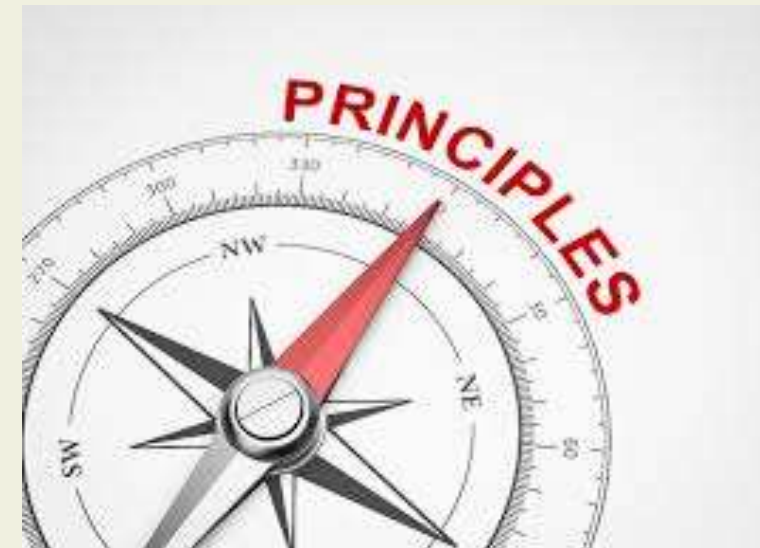
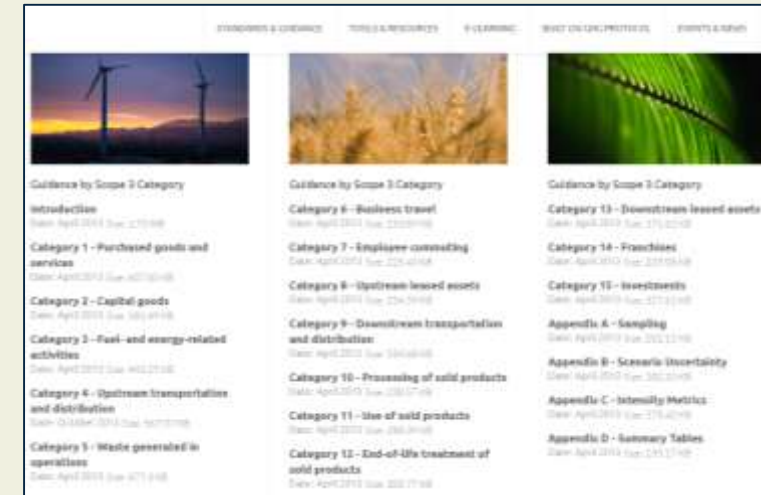


Scope 3



QUANTIFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS

- There is a wealth of excellent Guidance available for all these categories: <https://ghgprotocol.org/scope-3-calculation-guidance-2>
- ISO 14064-1 again provides some relevant *principles*:
 - Relevance (clause 4.2)
 - Include **all relevant** GHG emissions Select the GHG sources, GHG sinks, GHG reservoirs, data and methodologies appropriate to the needs of the intended user removals
 - Consistency (clause 4.4)
 - Enable **meaningful comparisons** in GHG-related information
 - Accuracy (clause 4.5)
 - **Reduce bias and uncertainties** as far as is practical



QUANTIFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS

- Quantifying Scope 1 and 2 Emissions for a specific data period, eg 2024:

GHG Protocol Categories	Typical Record Sources	Typical data to gather for conversion to tCO ₂ e
Scope 1	Natural gas invoices / meter readings / supplier portal. Petrol and diesel invoices / delivery records / expenses claims. LPG and heating oil invoices / meter readings / delivery records. FGas maintenance records.	kWh used. Litres used / km driven. Litres / kg / kWh used. kg and types of FGas lost from systems.
Scope 2	Electricity invoices / meter readings / supplier portal. Purchased heat and steam invoices / meter readings. Purchased cooling invoices / meter readings.	kWh used. Litres / cubic metres / therms / kWh used. Litres / cubic metres used.

QUANTIFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS

- Quantifying *Common* Scope 3 Emissions for a specific data period, eg 2024:

GHG Protocol Scope 3 Categories	Typical Record Sources	Typical data to gather for conversion to tCO ₂ e
Cat 1, Purchased Goods and Services Cat 2, Capital Goods	Purchase Orders / Delivery Notes / Invoices AND / OR Financial systems: spend	Quantity / Weight / Type of Materials. Spend.
Cat 3 - Fuel and energy related emissions not included in scope 1 and 2	Natural gas invoices / meter readings / supplier portal. Petrol and diesel invoices / delivery records / expenses claims. LPG and heating oil invoices / meter readings / delivery records	kWh used. Litres used / km driven. Litres / kg / kWh used.
Cat 4 & Cat 9 - Upstream / Downstream transportation and distribution	Delivery Notes / Invoices / Supplier Reports. Zip code analysis databases. Air miles calculators. Sea miles calculators.	Air / sea / road miles. Weights of goods shipped.

QUANTIFYING AND CALCULATING YOUR SCOPE 1, 2 AND 3 GHG EMISSIONS

- Quantifying *Common* Scope 3 Emissions for a specific data period, eg 2024:

GHG Protocol Scope 3 Categories	Typical Record Sources	Typical data to gather for conversion to tCO ₂ e
Cat 5 - Waste generated in operations	Waste Transfer Notes. Waste management contractor reports. Internal weighing scales (calibrated).	Tonnes of waste by material. Tonnes of waste by destination.
Cat 6 - Business travel	Company car / van / truck fuel cards data reports. Expenses claims. Travel agency reports.	Litres used / km driven. Road / ferry / air / taxi / rail / bus miles.
Cat 7 - Employee commuting, often including homeworking	Staff surveys.	Road / rail / bus km.
Cat 11 - Use of sold products	Product design specifications / Life Cycle Assessments. Assumptions on typical customer usage patterns. Assumptions on typical product lifespan.	kWh used. Hours operational. Years operational.
Cat 12 - End-of-life treatment of sold products	Customer assumptions on typical lifespan. Customer assumptions on likely disposal routes.	Tonnes of waste by material. Tonnes of waste by destination.

Sources of Carbon Emission Factors

STANDARDS AND METHODOLOGIES: OPTIONS

There are various sources of emission factors for quantifying GHG emissions, depending on your needs, for example:

- Country specific (almost all countries) EFs are available for electricity and heat from: <https://www.iea.org/data-and-statistics/data-product/emissions-factors-2024#emission-factors>; <https://www.trackingstandard.org/i-rece-residual-mix/>; <https://www.aib-net.org/facts/european-residual-mix/2024>
- EU specific EFs are available from the European Environment Agency for electricity only: <https://www.eea.europa.eu/en/analysis/indicators/greenhouse-gas-emission-intensity-of-1>
- US specific (by state) EFs for electricity only: <https://www.epa.gov/eGRID>
- Republic of Ireland specific EFs for electricity only: <https://www.seai.ie/data-and-insights/seai-statistics>
- France specific EFs: <https://www.rte-france.com/>; <https://bilans-ges.ademe.fr/>
- Netherlands specific EFs: <https://english.rvo.nl/sites/default/files/2024-07/The-Netherlands-list-of-fuels-January-2024.pdf>
- Germany specific EFs: [Emissionsbilanz erneuerbarer Energieträger](#)

STANDARDS AND METHODOLOGIES: OPTIONS

There are various sources of methodologies for calculating and quantifying GHG emissions, depending on your needs, for example:

- UK Government (DESNZ) Carbon Conversion Factors and UK Environmental Reporting Guidelines:
 - Scope 1, 2 and 3 activities, <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2025>
 - It is rare for Scope 3 EFs to be available internationally. Many companies will use the UK Government ones
- Scope 2 Conversion Factors are widely available for many countries and differ hugely as fuel mix for electricity generation varies, eg:
 - France (primarily nuclear); UAE (primarily oil); Norway (primarily hydro); USA / Australia (continue to use coal)

SOURCES OF CARBON CONVERSION FACTORS

- UK Government (DESNZ) Carbon Conversion Factors and UK Environmental Reporting Guidelines

Scope	Conversion Factors Available	Examples for Conversion to tCO ₂ e
Scope 1	Gaseous, liquid, solid and bio fuels FGases Passenger and Delivery Vehicles	Natural gas, LPG, diesel, petrol (litres, kWh etc). HFCs, PFCs, HCFCs (kgs). Cars, vans, HGVs (litres, km)
Scope 2	Electricity Heat and steam	Grid, EVs (kWh). Onsite and district systems (kWh).
Scope 3, Cat 1 & 2	Water supply Material use	Mains water (litres) Metals, plastics, electricals, construction (tonnes)
Scope 3, Cat 3	Transmission and Distribution losses Well-to-Tank	Grid electricity, district heat and steam (kWh). Gaseous & liquid fuels; electricity; heat and steam; road, sea and air travel (litres, kWh, km etc).
Scope 3, Cats 4 and 9	Freighting goods	Vans, HGVs, air, sea, rail (km, tonnes).

SOURCES OF CARBON CONVERSION FACTORS

- UK Government (DESNZ) Carbon Conversion Factors and UK Environmental Reporting Guidelines

Scope	Conversion Factors Available	Examples for Conversion to tCO ₂ e
Scope 3, Cat 5	Waste water treatment Waste	Waste water and trade effluent (litres). Metals, plastics, electricals, construction by destination (tonnes).
Scope 3, Cat 6	Business travel	Air, land, sea, hotels (miles, km, nights).
Scope 3, Cat 7	Commuting (and homeworking)	Road, rail, bus, taxi, motorbike (km). Homeworking (hours).
Scope 3, Cat 11	Electricity Gaseous, liquid, solid and bio fuels	Grid (kWh). Natural gas, LPG, diesel, petrol (litres, kWh etc).
Scope 3, Cat 12	End-of-Life Waste	Metals, plastics, electricals by final destination (tonnes).

STANDARDS AND METHODOLOGIES: OPTIONS

There are various sources of methodologies for calculating and quantifying GHG emissions, depending on your needs:

- Other sources, for example:
 - Conversion factors by SIC code: GHG emission intensity by SIC - CO₂e/£ - enabling a spend based approach
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1085190/Table_13_2019.ods
 - Office for National Statistics: GHG emission intensity by economic sector CO₂e/£ - enabling a spend based approach
<https://www.ons.gov.uk/economy/environmentalaccounts/datasets/ukenvironmentalaccountsatmosphericemissionsgreenhousegasemissionsintensitybyeconomicsectorunitedkingdom>

Spend based EFs are widely available from government websites, eg China, USA, EU, UK - but should be used only as a last resort

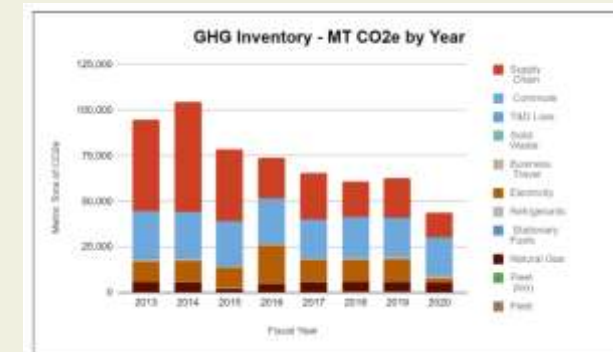
The screenshot shows the ONS website interface. The main heading is 'Atmospheric emissions: greenhouse gas emissions intensity by industry'. Below this, it indicates the release date as '05 June 2020' and the next release as 'To be announced'. There is a link to 'View all data related to environmental accounts'.

	GHG (kgCO ₂ e per £)	CO ₂ (kgCO ₂ per £)
01 Products of agriculture, hunting and related services	1.974	0.459
02 Products of forestry, logging and related services	0.279	0.138
03 Fish and other fishing products; aquaculture products; support services to fishing	0.523	0.390
05 Coal and lignite	1.117	0.349
06 Crude petroleum and natural gas	0.690	0.511
08 Other mining and quarrying products	0.534	0.407
09 Mining support services	0.345	0.236
10.1 Preserved meat and meat products	0.772	0.316
10.2-3 Processed and preserved fish, crustaceans, molluscs, fruit and vegetables	0.721	0.300
10.4 Vegetable and animal oils and fats	0.976	0.437
10.5 Dairy products	0.962	0.394
10.6 Grain mill products, starches and starch products	0.755	0.441
10.7 Bakery and fermented products	0.401	0.251
10.8 Other food products	0.663	0.295
10.9 Prepared animal feeds	0.912	0.391
11.01-6 Alcoholic beverages	0.707	0.343
11.07 Soft drinks	0.334	0.188
12 Tobacco products	0.203	0.096
13 Textiles	0.771	0.556
14 Wearing apparel	0.791	0.582
15 Leather and related products	0.734	0.481
16 Wood and of products of wood and cork, except furniture; articles of straw and plating materials	0.675	0.394
17 Paper and paper products	0.707	0.531
18 Printing and recording services	0.382	0.287
19 Coke and refined petroleum products	1.930	1.180
20.3 Paints, varnishes and similar coatings, printing ink and mastics	1.321	0.873
20.4 Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	0.719	0.484
Other chemical products	1.581	0.913

Preparing a GHG Inventory

PREPARING A GHG INVENTORY

- ISO 14064-1 defines a GHG Inventory as:
 - A list of GHG sources and GHG sinks, and their quantified GHG emissions
- Often this is presented in an Excel Workbook format. There are many off-the-shelf software packages which also provide for the same.
- Typical contents:
 - A tab / page presenting the quantified activity totals (usually one tab / page for Scope 1, one for Scope 2 and one for each of the applicable sub-categories of Scope 3), the EFs used, and the calculation of total tCO₂e
 - Graphs displaying totals by Scope, by category and an overall summary.
- It is a very good idea, for Verification purposes, to establish folders for each GHG source to accompany the GHG Inventory, containing the necessary records to evidence the GHG emission source quantification.



PREPARING A GHG INVENTORY

- A typical example:

kiwa

SharePoint

Search this library

DS

Document Store NQA

Home

Management

Public

Operations

COMMERCIAL

BMTrada

E Shared

Recycle bin

+ New

Upload

Edit in grid view

Share

Copy link

Download

Export to Excel

Automate

Public > Carbon Footprint - NQA I > NQA Carbon Calcs and Reporting > 2024 > 2024 Carbon Calcs

Name	Modified	Modified By
GHG Inventory	August 9	NT AUTHORITY\system
Scope 1 Fleet	August 8	NT AUTHORITY\system
Scope 1 Grey Fleet	August 9	NT AUTHORITY\system
Scope 1 Natural Gas	August 9	NT AUTHORITY\system
Scope 2 Electricity	August 9	NT AUTHORITY\system
Scope 3 Cat 1 Purchased Goods and Services	August 8	NT AUTHORITY\system
Scope 3 Cat 2 Capital Goods	August 9	NT AUTHORITY\system
Scope 3 Cat 3 FERA	August 9	NT AUTHORITY\system
Scope 3 Cat 4 and Cat 9 Upstream and Downstream Transport and Distribution	August 8	NT AUTHORITY\system
Scope 3 Cat 5 Waste	August 9	NT AUTHORITY\system
Scope 3 Cat 6 Business Travel	August 8	NT AUTHORITY\system
Scope 3 Cat 7 Commuting	August 9	NT AUTHORITY\system
GHG Protocol Category Applicability 2024.docx	April 20, 2023	NT AUTHORITY\system
ghg-conversion-factors-2024-full_set_for_advanced_users_v1_1 (8).xlsx	January 28	NT AUTHORITY\system

Return to classic SharePoint

PREPARING A GHG INVENTORY

- A typical example:

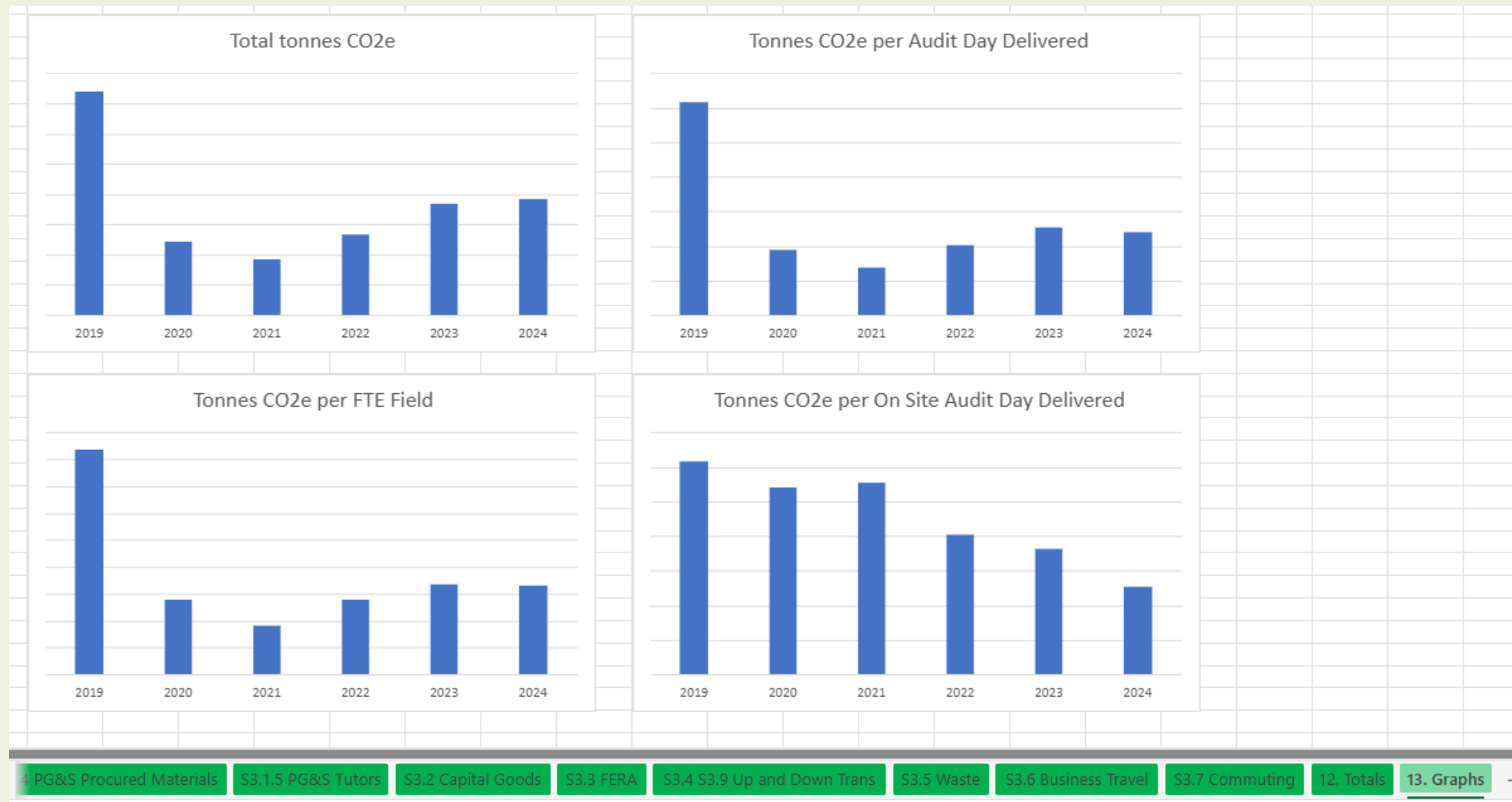
[illegible]

- A typical example:

S3.1.2 PG&S Associates	S3.1.3 PG&S Hotels	S3.1.4 PG&S Procured Materials	S3.1.5 PG&S Tutors	S3.2 Capital Goods	S3.3 FERA	S3.4 S3.9 Up and Down Trans	S3.5 Waste	S3.6 Business	+
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PREPARING A GHG INVENTORY

- A typical example:



Establishing and reviewing base years

ESTABLISHING AND REVIEWING BASELINES

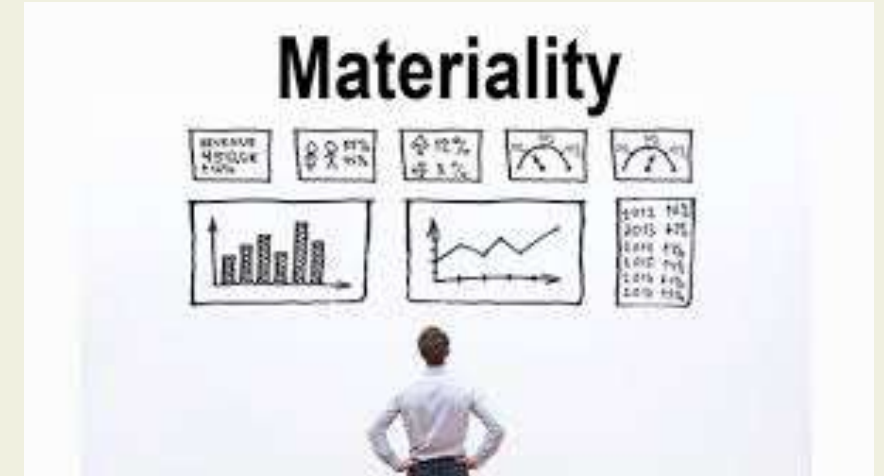
- Your first year's calculation and quantification will usually provide you with a base-year:
 - Allows for year-on-year comparison, to demonstrate improvement (or otherwise)
 - The base-year may require to be reviewed and / or re-set, as a result of:
 - An organisational boundary or reporting boundary change
 - A change in the quantification process
 - A change in the conversion factors available
 - The discovery of a previous error
 - Any change must be justified
 - Any change should be applied to previous years' data too, to allow continued meaningful like-for-like comparison.



Materiality

MATERIALITY

- ISO 14064-1 does not use the term ‘material’ or ‘immaterial’
- This is however required in ISO 14064-3 (the standard which we, as GHG Verifiers, must work to, and therefore we must evaluate materiality):
 - This is important, and you will encounter this term during external, third-party Verifications.
 - PAS 2060 defines ‘material’ as: ‘making a significant contribution to the outcome’.
 - Most GHG Inventories will state a ‘materiality’ level, usually between 1% and 5%, accounting for uncertainty in the data.



NEXT TIME

➤ **Part 3, 24/10/2025, GHG Mitigation, Reporting, Offsetting and Removals:**

- Planning for reductions
- Options for offsetting and removals
- Preparing your GHG Report and other documentation requirements
- Verification options and case studies

Scan the QR code to register:



FURTHER TRAINING OPPORTUNITIES

STANDARD	TRAINING
ISO 14064-1	Lead Verifier Training (4 days) Carbon Calculation and Verification Training (1 day) Introduction to ISO 14064-1 (E Learning)
ISO 14068-1	Understanding and Achieving Carbon Neutrality (2 days)
PAS 2060 to ISO 14068-1	Migrating to the New ISO for Carbon Neutrality (1 day)
https://www.nqa.com/en-gb/training/sustainability	

THANK YOU!



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Q&A