THE UNIVERSITY of EDINBURGH
Finance

Update Scope 3 Emissions and Procurement Climate Action

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University of Edinburgh Scope 3 and Climate Action Procurement Update

- Scope 3 Project, led by Dr. Elizabeth Vander Meer—
  - Work internally and externally to see potential of GHG Protocol methods to account for Scope 3 embodied carbon
  - Action-oriented—looking for link to emissions reduction strategies—e.g., LCC, internal carbon pricing, carbon budgeting, etc.
  - First look at construction, catering, labs and logistics
- Current status – included new initiatives in lab procurements and results from student-led project

What are Scopes 1, 2 and 3?

Corporate emissions are emissions relating directly to the organisation's assets and activities. Many organisations already record Scope 1 and 2 emissions plus selected Scope 3 emissions.

Scope 1 (direct emissions)

Activities owned or controlled directly by an organisation that release emissions straight into the atmosphere.

Examples include emissions from combustion in owned or controlled boilers, furnaces, vehicles.

Scope 2 (energy indirect)

Emissions being released into the atmosphere associated with an organisation's consumption of purchased electricity, heat, steam and cooling but which occur at sources outside ownership or control.

Scope 3 (other indirect)

Emissions that are a consequence of the organisation's activities but which occur at sources outside ownership or control and which are not classed as Scope 2 emissions.

For example, business travel by means not owned or controlled by your organisation.

For more information on identifying and calculating emission sources, see the Greenhouse Gas Protocol: **https://ghgprotocol.org/corporate-standard**

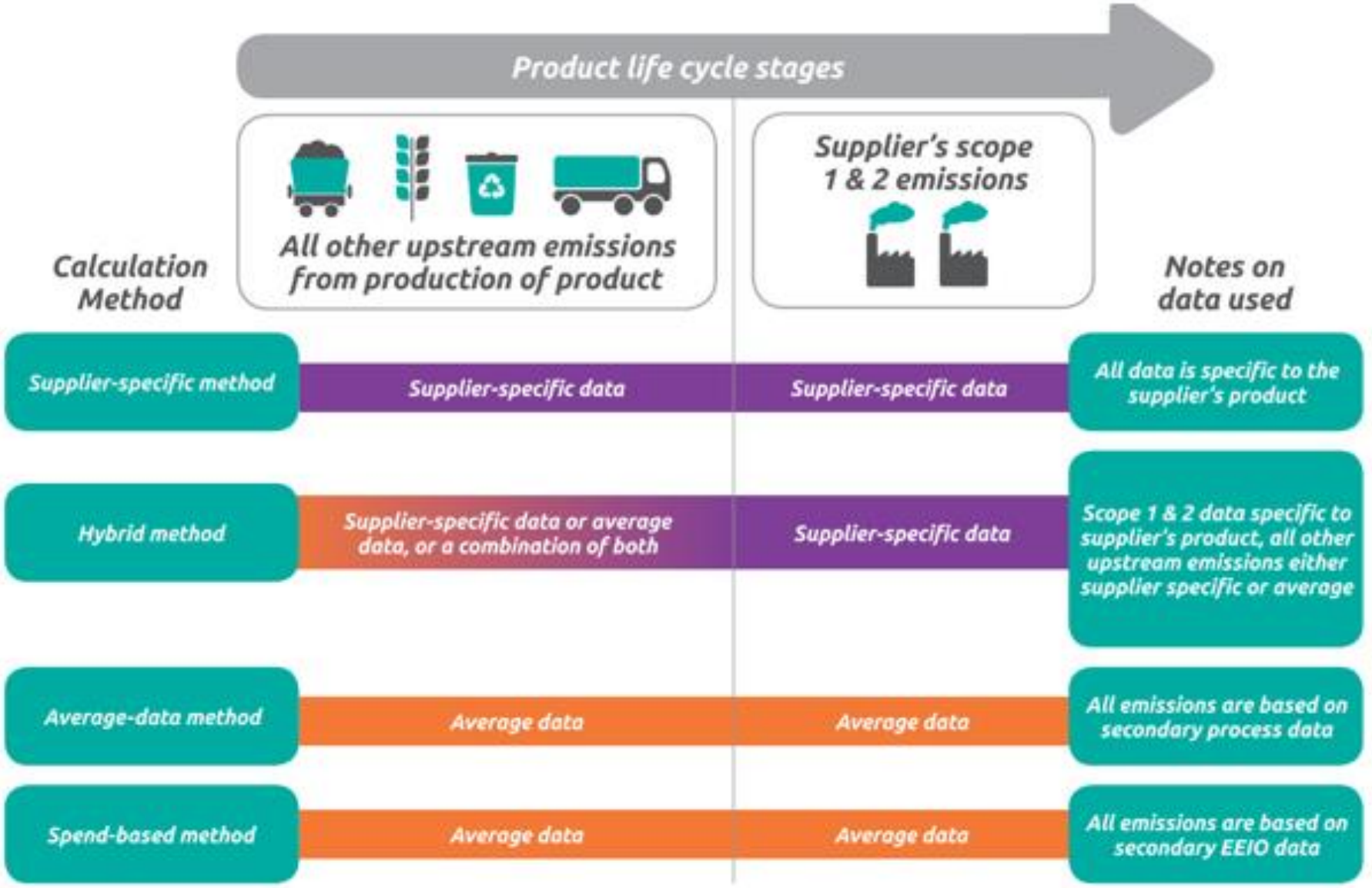

Figure 2. Different calculation methodologies and the corresponding data types

(WBCSD and WRI, 2013)

Summary of different methods for Scope 3 analysis

Student project – Business School Consultancy Course

Scope 3 reporting – examine “non-spend” or more detailed methods within protocol

Looked at construction, food and logistics

Worked with TUCO GHG Scope 3 tool: https://www.tuco.ac.uk/ghgcalculator/index.html

Construction—worked with already available documents, bills of quantities/specification in excel form

TUCO Tool, student project results

TUCO has produced a new GHG Tool

Using older version of the tool, students put spend data, converting units into KG (new version has multiple units), students were successful in using the TUCO tool

4.2.1 Food and Catering sector

Here is the table showing carbon emissions for five categories from food and catering sector.

Table 4. Total emission of CO2e from food and catering sector

Categories	Total emission of CO2 (t CO2e)
Coffee	641.7591
Diary	251.0816
Fish	138.5715
Fruit and veg	90.1767
Meat	1180.9635
Total	**2302.5524**

Student project, construction embodied emissions

Major challenge to do in-depth carbon analysis

Students were only able to analyse certain materials using currently available documentation for individual project

This however, identified some of the most carbon intensive elements, concrete and steel

Focus on carbon intensity rather than comprehensive analysis may be most useful for practical action

4.2.2 Construction sector

Here is the table showing carbon emissions for two materials from construction sector.

Table 5. Total emission of CO2e from construction sector

Material	Total emission of CO_2 (t CO2e)
Concrete	484.7157
Steel	3123.0061
Total	**3607.7218**

Climate Action in Procurement in addition to scope 3

Ensuring procurement addresses carbon impact of organisational operations, in particular in energy, heating and efficiency. Procurement decisions have a huge impact on ‘Scope 2’ and ‘Scope 1’ emissions energy and heating procurement, or switching to LED lighting, standard boiler systems with heat pump systems or district heating initiatives, and through Life Cycle Costing assessment (LCC).

Addressing the embodied or indirect carbon impact of purchases themselves. Virtually all goods and services will have embodied carbon impacts at different points in supply chains, some of which span across the globe from manufacturing, transport and materials extraction.

Signalling priorities to supplier markets and facilitating change and innovation. Engage markets to let them know emissions reductions is a high priority or support emerging low carbon markets.

Ensuring Climate Adaptation risks are addressed

Need: shared information/understanding of carbon hotspots and solutions, data that we can aggregate easily across categories and organisations

Public emissions across Scotland, Sustainable Scotland Network

- SSN produces amalgamated Climate reporting in annual summary analysis
- Through this they identify trends, e.g., strategies for better emissions reductions
- We could improve scope 3 voluntarily and subject to group reporting like this
- Analysis could be also informed by shared pipeline

- https://sustainablescotlandnetwork.org/reports/summary-analysis-report-2017-18

iii. Corporate emissions, split by source

Sector	2015/16 Emissions (tCO_2e)	2016/17 Emissions (tCO_2e)	2017/18 Emissions (tCO_2e)	2017/18 % share of emissions
Electricity	1,550,894	1,360,690	1,119,642	38.8%
Natural gas	843,615	804,047	851,158	29.5%
Other heating fuel	133,536	145,319	129,744	4.5%
Process*	47,772	48,048	28,025	1.0%
Refrigerants	620	1,129	1,056	0.0%
Waste	314,737	283,657	381,315	13.2%
Water and sewerage	13,655	17,345	15,540	0.5%
Travel	136,532	140,587	132,091	4.6%
Transport fuel	207,559	196,272	190,002	6.6%
Commuting	18,193	13,295	27,286	0.2%
Procurement*	-	5,000	5,000	0.9%
Other**	647	4,391	178	0.0%
Renewables	832	3,105	1,750	0.1%
Total	3,268,592	3,022,885	2,882,788	100%

* Only one body reported on this source in 2016/17 and 2017/18.
** No information was given on source.