DANONE EMISSION FACTOR POLICY

A Structured Approach to Carbon Data Compliance, Traceability, and Quality

DANONE
ONE PLANET. ONE HEALTH

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1. INTRODUCTION

In its **2023 Climate Transition Plan**[1], Danone places supplier engagement at the **very core of its climate strategy**, recognizing that over half of its emissions reduction targets—particularly within Scope 3—**will depend on the transformation efforts of its supply partners**. Acknowledging that the shift to a low-carbon economy cannot be achieved in isolation, Danone has developed an ambitious approach that combines contractual levers, technical support, and strategic collaboration across its value chain.

A central enabler of this transition is the ability to measure emissions accurately which relies on the **use of robust emission factors**. Danone promotes the integration of the **most relevant emission factor[2] available** – whether supplier-specific, activity-based, or high-quality industry averages- chosen according to the context and data availability. This requires robust, **on-the-ground data collection and strengthened collaboration**, notably with suppliers to ensure data quality, traceability, and methodological consistency. Without this level of granularity, **no tracking of supplier engagement can be credibly integrated into Danone's overall climate performance.**

2. OBJECTIVES OF GUIDANCE

This guidance aims to provide **a rigorous, transparent, and harmonized methodological framework** for integrating emission factors **into corporate carbon footprint calculations** (but not limited to), in alignment with international standards such as the GHG Protocol. It seeks to **ensure high data quality by prioritizing primary[3], representative, and traceable data**, while requiring a robust assessment of uncertainties. To enhance consistency and comparability across suppliers, entities, and reporting years, **the guidance promotes a standardized and controlled approach, minimizing risks of double counting.** On an operational level, it outlines practical requirements for incorporating these factors into internal tools and processes, with clear data formats. The guidance is supported by a **structured governance** framework that **defines stakeholder roles and responsibilities**, along with validation and update procedures. Embedded in a continuous improvement logic, it establishes mechanisms for regular data review and encourages suppliers to progressively enhance the quality of their carbon reporting. Finally, **strong emphasis is placed on documentation and auditability to ensure transparency, traceability, and reliability of the results**, in preparation for external audits.

3. TYPES OF EMISSION FACTORS

As part of Carbon Corporate Reporting, Danone **uses and combines different sources of emission factors. Default Emission Factors (Type 1)** can come from **recognized databases** that apply average values across a category and are available for all relevant streams[4] / commodities / services. The

[1] **Source**: Climate Transition Plan
[2] **Definition**: Emission Factor → Ratio between the amount of greenhouse gases emitted by a product and the amount of that good
[3] **Definition**: Primary Data → Data directly measured at the source (vs "Secondary data", which stands for generic data)
[4] **Definition**: Stream → Step in Danone's carbon accounting (milk, dairy ingredients, other Raws...)

effective use of these default emission factors relies on whether Danone has available primary data or not. When Danone does, they are no longer used.

Danone recognizes different types of Supplier Emission Factors with different levels of granularity.

In some cases, **hybrid emission factors** are used that **combine general parameters—such as national database calculations or prorating—with internal assumptions**. Although these are not 100% supplier-specific, they are still considered acceptable due to **control over the calculation process**. For example, this approach is sometimes applied to transport when more tailored data isn't available. *This approach will be referred to as **"Calculated Supplier Specific" (type 2)** throughout the rest of this document.*

There are also **hybrid emission factors** that **mix default values with certain supplier-specific parameters**. For example, a supplier might use Danone's internal formula and data for transport, but have specific values for processing, and audited figures for milk. *This approach will be referred to as **"Hybrid Emission Factor" (type 3)** throughout the rest of this document.*

In more advanced cases, suppliers may recalculate all their emission factors independently, no longer using Danone's values and relying entirely on their own assumptions. These custom emission factors can be difficult to validate, as the methodology is not always transparent. As a result, they are not recommended for use when the origin or sources of the data are unclear but recommended if validated by a third party with appropriate level of transparency on data. *This approach will be referred to as **"Supplier Specific with primary data Emission Factor" (type 4)** throughout the rest of this document.*

Danone prioritizes the collection of type 2 and 3 emission factors, as these emission factors are collected directly from the supplier based on its activity data and for the sake of transparency in the calculation assumptions and methodology used. Life Cycle Assessments produced directly by the Supplier may also be used, provided they meet the same conditions in terms of scope, details of assumptions, and methodology (see the internal checklist below in this policy).

4. PROCESS FOR DEVELOPING GUIDANCE

This guidance was first **drafted by Danone Sustainable Finance department**[5], then reviewed and amended by Operation & Procurement teams, **involved in supplier specific emission factors collection**. It will be **updated as needed, in line with changes in methodology, governance and/or reporting with the support of the following teams:**

- **Cross Commodities**: Global Sustainable Sourcing Team
- **Milk**: Global Regenerative Agriculture Team
- **Dairy Ingredients**: Global Category Sourcing Team
- **Other Raw Ingredients**: ingredients team (commodities, fruits and food, specialties, biotechnologies), Global Regenerative Agriculture Team (plant-based)
- **Packaging**: Global Circular Economy Packaging Team

[5] **Definition**: Sustainable Finance → Team responsible within Danone for calculating Corporate Carbon Footprint

- **Transportation:** Global Logistics Excellence Team, and CBUs[6] when relevant

5. ROLES AND RESPONSIBILITIES

At the time of writing this policy, the RACI[7] is as follows:

Step	Responsible (R)	Accountable (A)	Consulted (C)	Informed (I)
Selection	C&P / Operations / R&I[8]	Sustainable Finance	Sustainable Finance	-
Methodological Validation	Sustainable Finance	Sustainable Finance	C&P / Operations	C&P / Operations
Collection and update	C&P / Operations	C&P / Operations	Sustainable Finance	-
Integration into Reporting	Sustainable Finance	C&P / Operations	-	-
Verification and audit of data and calculations	Sustainable Finance	Sustainable Finance	C&P / Operations	C&P / Operations
Communication and reporting	Sustainable Finance	Sustainable Finance	C&P / Operations	C&P / Operations
Continuous improvement	C&P / Operations / R&I	C&P / Operations	Sustainable Finance	Sustainable Finance

The rationale behind RACI is based on:

- The **current distribution of roles** in the company's decarbonization programs and actions
- A **strict separation** between those responsible for the action (C&P/Operations/R&I) and those who must measure the action (Sustainable Finance)

6. DEFAULT EMISSIONS FACTORS

A. GUIDING PRINCIPLES

When using default emission factors, Danone aims to apply the **GHG Protocol's**[9] five accounting principles to ensure credibility and usefulness of results:

[6] **Definition**: CBU → Local business unit, which is often composed of a category (dairy, waters, etc.) and a country (France, United States, etc.); it is also the corporate reporting level for carbon
[7] **Definition**: RACI → Framework which stands for "Responsible", "Accountable", "Consulted", "Informed"
[8] **Definition**: C&P → Cycles & Procurement; R&I → Research & Innovation; Operations→ referring to teams responsible for transportation decarbonization
[9] **Source**: GHG Protocol (« *GHG Accounting and Reporting Principles*" Section)

- **Relevance** means selecting factors that **appropriately reflect Danone's activities** and support decision-making for both internal and external stakeholders
- **Completeness** requires **accounting for all Danone's relevant GHG sources** and activities within the relevant inventory boundary, with any exclusions clearly disclosed and justified
- **Consistency** ensures that the **same methodologies are applied over time**, enabling meaningful year-to-year comparisons, with any methodological changes transparently documented
- **Transparency** calls for clear and factual reporting, including disclosure of assumptions, data sources, and calculation methods
- **Accuracy** aims to minimize over- or under-estimation of emissions and reduce uncertainties as much as practicable, so that users can rely on the reported information with reasonable confidence

It should be noted that emission factors may be used in Danone's reporting, subject to compliance with very high standards, and until better default emission factors are available (**there is no "typical" lifespan for default emission factors**).

B. CURRENT PROCESS & GOVERNANCE

Danone reports the following steps (or streams) in its corporate carbon footprint:

- **Scopes 1 & 2**
- **Scope 3**, including:
  - Milk
  - Dairy Ingredients
  - Other Raw Ingredients
  - Packaging
  - Upstream & Downstream Transportation and distribution
  - Comanufacturing
  - Fuel-and energy-related activities (not included in Scope 1 or 2)
  - Waste generated in operations
  - Use of sold products
  - End of life

Default Emission Factors are **updated as follows by stream in Greentrack**[10]:

Milk

Danone distinguishes two different types of milk, and accordingly two different types of emission factors:

- **Milk Collected from farms**: emission factors are sourced from Cool Farm Tool where available; when not available, Danone is using FAO emission factors. The **Reg Ag team (C&P)** is responsible for sourcing this data. Updates are made **annually** to ensure accuracy and relevance.
- **Externally Purchased Milk**: Danone is also using emission factors from FAO for this type of milk. The **Reg Ag team (C&P)** is responsible for sourcing this data. Please note that updates

[10] **Definition**: Greentrack → Tool used to calculate Corporate Carbon Footprint (provided by UL Company)

to these emission factors are theoretically updated every year but depending on updates to the associated FAO database.

Dairy Ingredients

The **emission factors for ingredients are "cradle to supplier's gate";** for dairy ingredients, Danone distinguishes between:

- **Milk**: updated theoretically once a year (depending on FAO updates)
- **Transportation**: updated annually, based on new emission factors calculated for transportation stream (road)
- **Process**: updated every year

The Sustainable Finance Team (SFT) manages this stream, **using milk emission factors (from Reg Ag team)** and calculating the dairy ingredient factors directly in Greentrack.

Other Raw Ingredients

The Greentrack Category classified as "Other Raw Materials" covers both the Ingredients and Plant Based scope (basically covers all ingredients that are not milk ingredients). Emission factors for other raw materials are **primarily sourced from Ecoinvent**. Consulting group oversees sourcing this data (ERM from 2018 to 2024). Updates occur **every two to three years**.

Packaging

Packaging emission factors are derived from **various Life Cycle Assessments**, including those from producer consortiums such as Plastics Europe. Consulting group oversees sourcing this data. **Updates are scheduled every two to three years**

Transportation

Transport emission factors are calculated using formulas from GaBi, GLEC and the French Ministry of the Environment, with parameters based on Danone's internal data. The formula is not planned to be updated, but the parameters are **revised annually**.

Energy (Scope 1 & 2 and DC Storage)

Emission factors for electricity, thermal energy, and refrigerants are sourced from the UL database (including IEA, BEIS, DEFRA), while biomass and on-site renewables use DEFRA data. The Sustainable Finance Team is responsible for sourcing, with updates occurring annually around October/November.

Waste in Operations

Waste-related emission factors are based on the Food Loss and Waste Protocol, Ecoinvent, and ADEME. A consulting firm handles sourcing, and updates are made every two to three years.

Comanufacturing

Emission factors for Comanufacturing are calculated internally using the previous year's category average carbon intensity on a cradle to DC gate perimeter. The Sustainable Finance Team is responsible for this stream. Updates are made annually, except for SN, which was last updated in 2022.

Use of Sold Products

This stream uses external reports (e.g., PEFCR) for parameters and applies the same emission factors as the "Energy" stream. Assumptions have not been updated since at least 2021, and emission factors follow the same update schedule as the Energy stream.

End-of-Life Treatment of Sold Products

As a reminder, end-of-life incorporates two calculation parameters: destination emission factors (landfill, incineration, and recycling) and the fate of waste, depending on the country in question. Emission factors for end-of-life treatment are based on various databases for waste fate percentages and primarily on Ecoinvent for end-of-life factors. Fate of waste data is managed by the central C&P Packaging team, while a consulting firm handles the emission factors. Waste fate data is updated annually, and emission factors every two to three years.

The Sustainable Finance team is responsible for deciding on the **most relevant sources of default emission factors** to use for corporate reporting **while consulting other relevant central teams** (e.g. C&P, R&I), and with the **aim of moving towards more specific data**. All tools linked to carbon calculation and using default emission factors **must use default emission factors used in company reporting, unless validated by Sustainable Finance Team.**

7. SUPPLIER SPECIFIC EMISSIONS FACTORS

A. CONTEXT

i. Definition(s)

Supplier Specific Emission Factors are emission factors calculated directly by a supplier for a specific product, service or activity. Unlike default factors derived from national, regional or international / sectoral specific databases (e.g. ADEME, Ecoinvent), these factors are based on primary data measured or modeled from the supplier's actual processes and claims. They therefore reflect the actual carbon footprint of a supplied good or service, in its own production context (materials, energy, location, processes, etc.).

The GHG Protocol[11] explicitly recognizes hybrid supplier specific or supplier specific with primary data emission factors as the **most accurate source of data for estimating upstream indirect emissions**. It places them at the **top of the data hierarchy**, ahead of specific data derived from internal calculations or default emission factors. The GHG Protocol encourages their use, provided that:

- The data is **specific to the supplier and the product**
- The factor covers **all relevant emissions** (considering the supplier's internal supply chain)
- The calculation method is **documented, consistent and verifiable**

ISO 14064-1[12] go in the same direction, valuing **primary and specific data if they are traceable and comply with the principles of relevance, consistency and accuracy**. Similarly, frameworks for

[11] **Source**: GHG Protocol (« *Introduction* » Section)
[12] **Source**: ISO 14064-1 ("*Terms and definitions*" Section)

defining climate objectives, such as SBTi[13], recommend the use of specific data to improve the robustness of balances and better manage decarbonization.

There is also an important principle that Danone wishes to incorporate into the objectives of this guidance: once a supplier specific emission factor has been collected and deemed methodologically valid, it must be used in reporting (under the conditions set out in this guidance). Supplier Specific Emission Factors should not be selected on the sole basis of being "suitable". The selection process must prioritize data quality and robustness. Therefore, when a new supplier specific emission factor exceeds the previous emission factor value and has successfully passed the validation checklist, it should be retained. This approach ensures that the most precise and scientifically justified value is applied, rather than defaulting to a potentially less representative estimate.

ii. Importance in the context of carbon reporting & planning

There are several reasons why these emissions factors are so important for reporting purposes:

- **More credible management and reporting in line with standards**, improvement of the traceability and quality of external audits
- **Go beyond sector averages** to better reflect current and future best practices of Danone's suppliers **as a measurement of the performance of its supplier engagement programs**
- **Better capacity for action**, to direct its business policies towards more virtuous suppliers, or launch co-improvement initiatives

B. INTERNAL PLANNING PRIOR TO ENGAGING WITH SUPPLIERS

i. Responsibility for data collection

Several of Danone's reporting streams are given priority for the collection of specific emissions factors, depending on their weight in their total emissions:

- **Purchased Goods & Services** (including Milk, Dairy Ingredients, Other Raws, Packaging)
- **Upstream & Downstream Transportation**
- **Comanufactoring purchases are currently excluded**

Teams responsible for managing supplier-specific vary depending on the category of Danone's emissions. In this sense, Danone distinguishes different types of reportings and governance:

- A **centrally managed** part of reporting (Dairy Ingredients & Other Raws, Milk)
- **Part of the reporting is managed locally, by zones or CBUs** (downstream & upstream transport)
- And finally, **the last part of reporting is managed in a hybrid way** (Packaging), between local and global teams

As far as ingredients are concerned, global C&P teams are responsible for defining, specifying and monitoring specific emission factors with Danone's global suppliers at the granularity they deem necessary *(e.g. they can collect supplier specific emission factors at production country level)*. More particularly, as Sustainable Finance team is redacting this policy, the teams responsible are:

[13] **Definition**: SBTi → Science Based Targets Initiative, global framework that helps companies set greenhouse gas emission reduction targets in line with climate science and the goals of the Paris Agreement

- **Milk**: Global Regenerative Agriculture Team
- **Dairy Ingredients**: Global Category Sourcing Team (validated by Global Regenerative Agriculture Team)
- **Other Raws**: Global Ingredients Team
- **Packaging**: Global Circular Economy Packaging Team

Some local teams may wish to add local supplier specific emission factors for some purchased goods. If this is the case, the following principle applies:

- **In the case where the supplier specific emission factors are globally managed**: **Danone cannot have two specific supplier emission factors for the same CBU**, the same ingredient or material, the same supplier; if for this granularity, a local team proposes an emission factor different from the one that exists globally, then it must contact the global team to ask if it is possible to use it (and validate its calculation, its source, why it is different with the supplier…)
- **In the case where the supplier specific emission factors are not globally managed**: the local entity must use global guidelines to validate the calculation of its emission factor, and validate with global teams its final use in reporting

The transportation part is slightly different, as it is managed locally directly by the CBUs, who are closest to the data and suppliers. The CBUs are responsible for having Sustainable Finance validate the calculation of their emission factors, using the same tools as for Purchased Goods (check list, etc.) and the guidelines specific to transportation.

ii. Selection of suppliers

The aim of this section is not to list the criteria specific to the work of C&P functions (state of the relationship with the supplier, its ability to respond on time…).

Among the main criteria for selecting a supplier to be included in the reporting process are:

- Its **carbon footprint** (if it publishes its carbon footprint, etc.)
- Its **share of Danone own carbon footprint** (in CO2e, and in activity data when relevant)
- **Ability to measure, report and reduce emissions** (with relevant availability, granularity and quality of data)
- **Possible commitments to science-based targets**

All supplier specific emission factors used in the reporting must be included, **provided that the supplier is properly informed** of the use of its data for Danone's own decarbonization needs. On the other hand, Danone **must give preference to suppliers who have the necessary maturity** (in terms of organization and resources) to be able to track data and actions over time.[14]

The final selection and coverage rate of the suppliers concerned by supplier specific remains the **responsibility of the teams in charge of decarbonization performance** and is not the responsibility of Sustainable Finance.

[14] **Source:** GHG Protocol Scope 3 Standard ("*Collecting data*" Section)

iii. Methodology for managing supplier data

Collecting and organizing supplier-specific data is crucial to the preparation of reporting and the **associated audit period**.

There are **two crucial issues surrounding this data**:

- **Credible validation of the calculation/data provided by the supplier**
- **Linking the data supplied with Danone information systems**

For the first point, Sustainable Finance provides the teams in charge of collecting supplier specific emission factors data with a checklist, which explains the main guidelines involved in the methodological validation:

- **Details of this checklist**, and the guidelines it contains, are presented in the last section of this document ("*Supplier Specific Emission Factor Validation Check List*")
- This checklist contains the **following elements**:
  - Type of check to be carried out
  - Questions to ask the supplier / to ask at the time of validation
  - Description
  - Streams of applications: milk (collected from farms or purchased), dairy ingredients, other Raws, packaging
  - Minimum threshold to pass check list

This document is accompanied by a checklist for standardization purposes (available in the last section of this document). If a global team wishes to add additional quality criteria (for example through the additional of a data collection section), it shall be validated by Sustainable Finance.

The proposed format of the checklist is indicative. If a team in charge of collecting supplier specific emission factors refers to using its own check list, it may be allowed on a case-by-case approach. However, all check lists used must contain the questions contained in this official check list of this policy and comply with the related thresholds.

The following principles should be observed:

- All data used **internally** to calculate product carbon footprint at supplier level must be properly sourced and be the subject of clear data ownership from the information systems
- Teams responsible for Supplier Specific Emission Factors are also responsible for linking activity data to these same supplier specific emission factors (via SAP or other IDs, depending on reporting requirements) - *E.g.: volumes purchased, mapping with SAP materials, mapping with SAP vendor hierarchy, etc.*
- Supplier Specific data must be consistent over time
  - Supplier names must not change over time
  - Consistent data format
- Obviously, Danone wants to give priority to automatic data collection, if possible, even if the use of Excel is authorized in the meantime to achieve this

C. WORKING WITH SUPPLIERS TO COLLECT DATA

The following section takes up elements of the GHG Supplier Engagement Guidance, focusing on aspects relevant to Sustainable Finance, without being exhaustive on all aspects related to C&P or operations work.

Among the crucial points for proper reporting, teams in charge of collecting supplier specific emission factors must share a clear schedule with deadlines (collection, validation, integration): this must be integrated into the reporting schedule shared by the Sustainable Finance team.

The teams in charge of collecting supplier specific emission factors are responsible for dialogue with the supplier to obtain answers on any thresholds not reached and/or to ask contextual questions on externalities linked to the supplier.

The thresholds defined by Sustainable Finance in the checklist are minimums to be reached to be reported and are also there to ensure the quality of the data entered in the reporting (to pass audits); of course, the teams in charge are free to define stricter levels to be reached.

As already explained previously, Danone must not select supplier specific emission factors that are "suitable" (because they are weaker than average and/or because they are declining). If a specific emission factor > default emission factor has passed the checklist, then keep the specific value (as it is the most precise).

The final responsibility for data quality lies with Sustainable finance, which is responsible for inputting the data into the reporting system.

D. INTEGRATION OF SUPPLIER SPECIFIC WITHIN CORPORATE REPORTING

i. Requirements for input in the reporting

The main criteria for using supplier specific emission factors in corporate reporting are as follows:

- Passage of minimum thresholds: the calculation and/or data supplied by the supplier must meet the minimum requirements for Danone's reporting
- Storage & traceability: the completed checklist, together with the various associated documents, must be stored on a drive accessible to Sustainable Finance should the need arise.
- Good data granularity and link with activity data: the data collected must correspond to the minimum level of granularity required by Danone corporate reporting, and where applicable the person collecting the data must also link the emission factor to the business data (according to Sustainable Finance guidance)

➔ If a supplier specific emission factor is provided at an aggregated level, it must be broken down according to the reporting scope and constraints, otherwise it cannot be applied; this desegregation process must be consistent with CO2e knowledge

It is important to anticipate the use of data, and the reporting structure. The people responsible for data collection are invited to attend the various training sessions offered by the Sustainable Finance team, and/or to ask questions outside these training periods, to fully understand how corporate reporting works. They can also request access to the Greentrack platform to familiarize themselves with the format of the extractions and the tool used to calculate the carbon footprint.

Sustainable Finance reserves the right to refuse supplier-specific emission factors whose calculation and/or materiality do not fall within the scope of corporate reporting. Priority will be given to supplier-specific emission factors whose actions can be tracked in the report. Furthermore, no supplier-specific emission factors will be added to corporate reporting without prior validation by Sustainable Finance four weeks before the audit starts date (see current year's reporting schedule).

ii. Required Documentation

Each supplier specific emission factors used must be linked to a proof of origin (supplier document, certified database, audit, etc.), and all necessary documents (including the complete Check List) must be archived and accessible to Sustainable Finance, particularly during the audit.

Any assumptions made “by hand” to adjust / recalculate / aggregate a supplier specific emission factor to the corporate reporting method must be documented and kept as an appendix to the calculation. The use of weighted average emission factors is permitted, provided it is justified/documented (in the same drive than all other documents).

For the calculation of emission factors from activity data (or using a “calculator” as provided for the transport part), the calculation files must also be archived in the same place.

When it comes to Purchased goods, it is the responsibility of the global C&P teams to define the list of global suppliers with whom they work, and to keep this list up to date and available to Sustainable Finance so that the latter can properly inform the CBUs. This list must be available in Excel format upon request and contains the following information:

- Name of the supplier engaged
- Country of the supplier engaged
- Year in question
- Where relevant: ingredient or material concerned
- Where relevant: CBU concerned by the supplier in question

iii. Frequency of update

The teams in charge of data collection are free to ask the supplier in question to update their emission factors every year and/or to recalculate it with new activity data. If there are carbon reduction claims associated with Danone suppliers' activities, the associated EF is expected to be recalculated accordingly.

If there is no:

- Contextual change (industrial process modification, adoption of RE, etc.)
- Portfolio evolution
- Methodological improvements

the EF is not expected to be recalculated. A supplier specific emission factor is recommended to be recalculated at least every three years.

iv. Process to integrate supplier specific data in the reporting

Please refer to Table 2 in the appendices.

v. Specific case of Comanufacturing

As mentioned, Danone also reports part of its emissions relating to products manufactured on its behalf by other companies (known as “co-manufacturing”). To report the supplier-specific emission factors for these products, we will report cradle-to-DC gate carbon footprints.

To achieve this, Danone authorizes the use of LCAs produced externally by the suppliers of these Coman (type 4); however, we would prefer to use calculations made using our own internal product carbon footprint calculation tools, which are certified by the Carbon Trust.

The same methodological rules also apply to this stream, with appropriate granularity, and based on the same checklist cited below in this document.

E. REUSE OF SUPPLIER SPECIFIC WITHIN CORPORATE REPORTING

i. Priorization default vs specific

A supplier specific emission factor is always given priority in the calculation vs. a default, whether in reporting calculations or in the calculation of decarbonization projects, as it is the most granular and precise data.

ii. Data controlling

The Sustainable Finance team is responsible for checking the values included in the reporting, but it remains the responsibility of the teams in charge of data collection to verify that the integration of local specific supplier emission factors has been carried out (especially when these are local, since global values are processed directly by mass import into Greentrack by Sustainable Finance).

Among the elements verified by the Sustainable Finance team, in particular supplier-specific data, but also default data by stream (milk, dairy ingredients, other Raws, packaging, transportation), by ingredient or transport stage, and by supplier:

- Evolution of tons of CO2e
- Evolution of tons of raw materials purchased or tons.km
- Evolution of emissions breakdown
- Link between trends in emissions and production/sales
- Verification of average km transported upstream
- Verification of parameters entered for supplier specific (Dry Matter Content, distance, country, etc.)
- Check supplier specific emission factor status (is it a new emission factor, an existing one, etc.)
- Verification of emission factors entered (do they correspond to the official value for the supplier specified)

The Sustainable Finance team reserves the right not to include a supplier-specific emission factor in case of uncertainty regarding its quality level, even if it passes the checklist, particularly during its first year of inclusion. In the case of a supplier-specific emission factor that has already been included in the past, the same emission factor is expected to be maintained in the reporting with a consistent level of quality. The decision to revert an emission factor that has already been integrated as supplier specific to default status should be considered an exception.

iii. Managing suppliers' data[15]

When collecting emissions data from suppliers, Danone may encounter situations where certain data are considered confidential or proprietary by the supplier. While some companies may provide data without any use restrictions, others may require that the data provided be protected from disclosure and not used for any purpose other than the purpose specified by the data provider.

To allow use of data considered confidential, Danone may add "confidentiality" or "non-disclosure" agreements that define terms of data use and disclosure. Such agreements protect data since violating use and disclosure provisions in legally binding documents have legal consequences, particularly if harm to the data provider can be demonstrated because of unauthorized disclosure.

In certain exceptional cases, suppliers may be unwilling to share primary data. While there is currently no established protocol for situations where a supplier refuses to disclose any carbon-related information, one possible approach is to propose the signing of a non-disclosure agreement (NDA), particularly when the supplier expresses interest but has not had its calculations verified by an independent third party—in which case full transparency may not be required. However, suppliers who provide carbon data without disclosing the underlying methodologies or assumptions should be prepared to address potential audit queries during the reporting period (typically from December of year A to January/February of year A+1).

Whenever data representing a specific organization is used to calculate a GHG inventory, companies should consult with the data provider to determine if there are any restrictions regarding data use and disclosure. Companies should also inform the data provider regarding how data will be used and ask for written permission to use the data for that purpose. Companies should also be aware of legal regimes concerning anti-competitiveness. A company may have multiple suppliers for similar components of products and similar services. Each supplier's data should be given the applicable standard of protection.

Both the reporting company and the value chain partner should have in place and enforce:

- Applicable standards of data protection for their information assets
- Sound privacy practices that protect the data of its employees, customers, suppliers, and others
- Applicable standards that enable compliance with anti-competitiveness laws in the relevant countries

Regarding the use of supplier specific data in software other than Greentrack, which Danone uses for Danone corporate reporting and to track its progress in decarbonization, the message could be as follows (for the calculation of products in How Good).

- Danone collects supplier specific emission factors from its supplier to confirm they are executing their decarbonization roadmap
- Danone then aggregates the emission factors in Greentrack platform to measure Danone company footprint
- At some point, supplier specific emission factors used in Greentrack could be connected to How Good to calculate or generate product carbon footprint

[15] **Source**: GHG Supplier Engagement Guidance ("*Managing Confidential and proprietary data*" Section)

In this matter:

- Danone is NOT referring to specific supplier sourcing on its product recipe
- Danone is NOT disclosing to customers the split of raw material that makes the end products.
- Danone does not use specific supplier emission factors in claims (B2B, B2C, product claim), or for commercial purposes
- Danone is making its OWN calculations with its own tools

iv. Recognition of performance

Performance recognition always remains at the discretion of Sustainable Finance team in conjunction with global teams responsible for decarbonization programs.

In principle however, a supplier-specific emission factor entered only in year A will be considered as generating a methodological change (if there remains a default in year A-1); to obtain a change & an organic performance, it is necessary to obtain a supplier-specific emission factor in year A and in year A-1, with a constant methodology. Updating A-1 reported data in Greentrack can only be made by Sustainable Finance.

If the new supplier specific emission factor was recorded in year A, then a post-closing adjustment can be recorded in year A-1, and the new one in year A, to reflect reality.

8. APPENDIXES

A. TABLE 1 – TYPES OF EMISSION FACTORS

Type	Category	EF	Principle	*Example*
1	Default	International Defaults / National – Regional averages	As more accurate data is not available, internationally recognized averages or national / regional averages are used	*E.g. Use of an international default value for eggs: regardless of the country of origin, production, or sale, a single average emission factor will be used* *E.g. Use of a national emission factor for the end of life of packaging, depending on the country in question (to correctly consider recycling rates, landfill rates, etc.)*
2	Supplier Specific	Calculated Supplier Specific	Danone applies suppliers' claims to its own assumptions and calculations[16]	*E.g. Danone applies a percentage of biofuel for a supplier in the calculation of its transport carbon footprint, using its own formula and assumptions for the remaining parameters*
3	Supplier Specific	Hybrid Supplier-specific	All or part of the data is supplier data, applied to Danone's own assumptions	*E.g. A dairy ingredient supplier provides Danone with a milk EF, but Danone applies internal calculations on process and transport emission factors*
4	Supplier Specific	Supplier Specific with primary data	100% of data and assumptions are controlled by the supplier	*E.g. a supplier provides us with a Life Cycle Assessment*

[16] In the case of transportation, it's made by Danone; in the case of purchased goods, it should be done primarily by Danone. If a supplier does it on Danone's behalf, Danone should be able to access the calculations & hypothesis' details behind the calculation (the important part is the transparency on the "how")

B. TABLE 2 – PROCESS FOR COLLECTING SUPPLIER SPECIFIC EFS

Type	Information Collected	Collection/Assessment Process	Frequency of Data Update	In Charge of Input in GT?	Process Ongoing Since	Main Point of Contact
Milk collected from farms	Milk used (kgCO2e/kg FPCM), DMC, % protein / fat	Cool Farm tool	Yearly (retroactive correction of Y-1 data if needed)	Sustainable Finance Team	2020	Climate & Agriculture manager
Milk externally purchased	Milk used (kgCO2e/kg FPCM), DMC, % protein / fat	FAO, Based on Sustainable Dairy Partnership (SDP) and supplier-specific checklists	Yearly (retroactive correction of Y-1 data if needed)	Sustainable Finance Team	2020	Climate & Agriculture manager
Dairy ingredients	Milk quantity used, DMC, supplier name and country	Follows SDP and supplier-specific checklists for dairy ingredients	Yearly (retroactive correction of Y-1 data if needed)	Sustainable Finance Team	2021	Dairy Ingredients Sustainability Senior Manager
Other raw materials	Emission factor of purchased commodity (kgCO2e/kg), supplier name	Supplier-specific checklists	Yearly (retroactive correction of Y-1 data if needed)	Sustainable Finance Team	2025 (expected)	Senior Category Sustainability Manager
Packaging	Emission factor of packaging material (kgCO2e/kg), supplier name	Supplier-specific checklists	Yearly (retroactive correction of Y-1 data if needed)	CBUs	First year in 2024	Circular Economy Manager
Downstream logistics	Transport emission factor (kgCO2e/tkm)	Road emission factor calculator and supplier data (e.g., Eco Transit for Europe)	Annually	CBUs	Irrelevant (depending for each CBU)	Carbon Masters of each CBU

C. TABLE 3 – VALIDATION CHECK LIST

The checklist that Danone is proposing to use to validate supplier specific emission factors is made up of around twenty questions (five quantitative questions, and fourteen qualitative questions), dealing with different themes, with minimum thresholds of acceptability. All questions are considered mandatory, except when notified.

Type	Explanation
Topic	Subject addressed by the question asked; the comprehensiveness of the questions has been reviewed considering the existing checklists on the C&P side
Question	Questions that teams wishing to validate supplier specific emission factors must ask before any integration into corporate reporting
Description	Description and/or examples related to the question asked
Concerned	Carbon streams are affected by the issue (milk, dairy ingredients, other raw materials, packaging, transportation)
Passing Threshold	Minimum level of acceptability for inclusion in corporate reporting

To date, Danone does not require additional certification of supplier specific emission factors. If all the items on the checklist meet the minimum requirements and provided that the principles of this guidance are respected, Danone considers that the risk levels are sufficiently low for the use of these emission factors in corporate reporting notably.

Quantitative Questions

The following questions are designed to capture the value of the emission factor itself; importance is attached to capturing last year's emission factor (provided with the same calculation methodology is used) to be able to measure its performance.

- **Question #1**
  - *Topic*: emission factor value
  - ***Question: What is the value of the emission factor?***
  - *Description*: Danone needs the total value of the emission factor with the correct perimeter (as described in the methodological section below); obviously, in addition to this emission factor, Danone needs to obtain the name of the associated supplier.
  - *Concerned*: all
  - *Passing threshold*: the supplier must provide a number with a maximum of 3 decimal places & it must be positive

- **Question #2**
  - *Topic*: emission factor value
  - ***Question: Is a former version of the emission factor measured with the same and consistent methodology available?***
  - *Description*: to measure performance, Danone needs to input two values: one for the current year, and one for the previous year (using the same methodology). In some cases, global or local teams must also provide activity data linked to these emission factors.

- *Concerned*: all
- *Passing threshold*: it must be measured with the same methodology than for question #1; the supplier may not have any value available, but the question remains mandatory

The following questions are intended to measure the consistency of emission factors supplied by comparing them to various quantitative points (over time, vs. its default equivalent, vs. its category). If an emission factor does not meet the minimum thresholds defined below, then the person responsible for harvesting emission factors must justify the difference to Sustainable Finance. In the other direction, the teams concerned are free to set stricter thresholds than those shown below. This data does not need to be filled in by the supplier, but by the team responsible for data collection.

Questions 3 and 4 are mandatory for a first year of integration within corporate reporting; once the supplier specific emission factor has been integrated, and its new values are passing question #5, questions #3 and #4 are no longer mandatory but recommended.

- **Question #3**
  - *Topic*: Consistency
  - ***Question: Is the emission factor provided consistent with default equivalent?***
  - *Description:* the aim here is to measure the consistency of the emissions factors collected, by comparing them with sector averages / default equivalents; for example, if Danone collects an emission factor for chocolate, then Danone needs to compare the emission factor of this chocolate supplier with the default value of chocolate; in the event that the default equivalent does not exist (because the emission factor would be totally new, then Danone can compare it with a close ingredient or simply withdraw this question in consultation with Sustainable Finance).
  - *Concerned*: all except milk collected from farms
  - *Passing threshold:* supplier specific emission factor / Default emission factor should ϵ [0.5;1]. Any value falling outside this range must be justified with at least a qualitative explanation by the team in charge of reporting supplier specific emission factors and provided to Sustainable Finance

- **Question #4**
  - *Topic*: Consistency
  - ***Question: Is the emission factor provided consistent with the category average?***
  - *Description:* Idem than question #3, but Danone wants to adapt the analysis vs. the macro category to which the emission factor in question belongs; For example, Danone may want to compare a whey powder concentrate with the average emission factor applied to whey available in its ingredient portfolio. The Sustainable Finance team can provide the macro-categories and categories available for each year.
  - *Concerned*: all
  - *Passing threshold:* supplier specific emission factor (Material A) / Average emission factor (Macro-category for Material A) should ϵ [0.5;1.5]. Any value falling outside this range must be justified with at least a qualitative explanation by the team in charge of reporting supplier specific emission factors and provided to Sustainable Finance
  - Status: optional question

Question #5

- *Topic*: Consistency
- ***Question: Is the emission factor provided consistent over time?***
- *Description:* This question assesses whether the emission factor remains consistent over time, as significant year-to-year fluctuations may indicate issues such as data inconsistency, methodological changes, or a lack of robust emission estimation processes
- *Concerned*: all
  Passing threshold: The absolute % difference between Supplier Specific emission factor (year A) and Supplier Specific emission factor (year A-1) should remain <5%. Any value falling outside this range must be justified with at least a qualitative explanation by the team in charge of reporting supplier specific emission factors and provided to Sustainable Finance.

Qualitative Questions

The following questions concern the link between the supplier-specific data collected and the information systems Danone uses to collect activity data. Without a link between activity data and supplier specific emission factors, it is not possible to take them into account in reporting. This data does not need to be filled in by the supplier, but by the team responsible for data collection.

- **Question #6**
  - *Topic*: Link to Danone systems
  - ***Question: What is the description related to the emission factor (ie. Mapping to its Category)?***
  - *Description*: Danone needs to make the link between the emission factor requested from the supplier and its internal emission factor categories, Sustainable Finance can provide a list of available categories so that this categorization can be carried out (to be completed internally, not by the supplier)
  - *Concerned*: all except Milk Collected from farms
  - *Passing threshold:* Must be selected from a predefined list provided by Sustainable Finance and may apply to several Greentrack categories at once (all of them must be mapped)

- **Question #7**
  - *Topic*: Link to Danone systems
  - ***Question: For Purchased Goods (except milk), what are the MAT_COD / VDR_COD[17] related to the emission factor?***
  - *Description:* Danone needs to "link" the emission factors collected to its business data, which in the case of purchased goods (excluding milk) is sourced from SAP data. This SAP data includes information on the nature of the ingredients or materials purchased (MAT_COD / MAT_DSC), and information on the supplier (VDR_COD / VDR_DSC).

[17] **Definition**: MAT_COD / VDR_COD → Internal naming for SAP data on "Material codes" (material = commodity) and "Vendor codes" (vendor = supplier)

- *Concerned*: Purchased goods (including dairy ingredients, other Raws, packaging)
- *Passing threshold: Must be selected from a predefined list provided by Sustainable Finance (from SAP)*

The following questions focus on the methodology used for the calculation and/or the study provided by the supplier, to ensure good comparability between emission factors, as well as to ensure no double counting.

- **Question #8**
  - *Topic*: Functional Unit
  - ***Question: Does the emission factor only cover the material / product purchased by Danone and no other products or co-products[18]?***
  - *Description:* this question checks whether the emission factor exclusively covers the specific material or product purchased by Danone, without including emissions from other products or co-products that may result from the same production process. A co-product refers to a secondary output that is generated alongside the main product, sharing part of the environmental impacts of the process.
  - *Concerned*: all
  - *Passing threshold: Must be "Yes"*

- **Question #9**
  - *Topic*: Functional Unit
  - ***Question: Is the measurement of the functional unit consistent with the material / product?***
  - *Description:* This question verifies whether the unit used for the functional unit (e.g. kg, liter, unit) is appropriate and consistent with the physical nature of the material or product purchased, ensuring accurate emission calculations
  - *Concerned*: all
  - *Passing threshold: Must be "Yes"*

- **Question #10**
  - *Topic*: Methodology
  - ***Question: Does the study follow a recognized product's LCA / carbon footprint methodology?***
  - *Description:* Danone needs to assess whether the study used to calculate the emission factor follows a recognized product life cycle assessment (LCA) or carbon footprint methodology, such as ISO 14040/14044, ISO 14067, the GHG Protocol Product Standard, or the EU Product Environmental Footprint (PEF), ensuring methodological robustness and comparability
  - *Concerned*: all
  - *Passing threshold: can be "yes" or "no", if no must be commented*

- **Question #11**
  - *Topic*: Methodology

[18] **Definition**: Co-product → one of two or more products that are generated simultaneously from the same process, each having economic value and intended for use or sale

- ***Question: Does the study refer to CO2 equivalent and consider all relevant GHGs?***
- *Description:* this question verifies whether the emission factor is expressed in CO_2-equivalent (CO_2e), using appropriate characterization of all relevant greenhouse gases (GHGs) such as CH_4, N_2O, and HFCs. This ensures that the full climate impact is accounted for in line with ISO 14067 and the GHG Protocol
- *Concerned*: all
- *Passing threshold: must be* Yes, suppliers may optionally specify which gases are included in the total

- **Question #12**
  - *Topic*: Methodology
  - ***Question: Does the study use Global Warming Potentials from the latest IPPC Assessment Report (consistent with GWP100)?***
  - *Description:* This question assesses whether the Global Warming Potentials (GWPs) used to convert GHGs into CO_2-equivalents are based on the latest available IPCC Assessment Report (today: AR6). Using outdated GWP values can significantly impact the comparability and credibility of results.
  - *Concerned*: all
  - *Passing threshold: must be* yes

- **Question #13**
  - *Topic*: Methodology
  - ***Question: If allocation is needed in the LCA evaluation, does the study mention the allocation method(s) applied? Is the emission factor provided consistent with the allocation method applied?***
  - *Description:* this question checks whether allocation between co-products or processes is transparently addressed in the LCA, and whether the emission factor delivered is consistent with the method applied (e.g. mass, economic, energy content, system expansion). Clear allocation practices are essential for methodological transparency and comparability across suppliers.
  - *Concerned*: all
  - *Passing threshold: must be yes*

- **Question #14**
  - *Topic*: Methodology
  - ***Question: Are removals excluded from the emission factor presented and well explained on the side?***
  - *Description*: *This question evaluates whether carbon removals (e.g. biogenic uptake, offsets, or soil carbon sequestration) are excluded from the emission factor calculation or clearly documented and reported separately. The goal is to ensure that emission factor values represent gross emissions, in line with robust carbon accounting principles*[19].

[19] Applicable Standards : ISO 14067:2018, GHG Protocol

- *Concerned*: all
- *Passing threshold: must be yes*

The following questions deal with the scope for calculating the emission factor and ensuring that it complies with the standards Danone applies to its own default emission factors.

- **Question #15**
  - *Topic*: Scope & Boundaries
  - ***Question: Is the emission factor provided representative of a cradle-to-supplier gate approach or boundaries?***
  - *Description:* a cradle-to-supplier gate approach covers all emissions from raw material extraction (the "cradle") up to the supplier's facility ("gate"), including the ingredient / material, upstream transportation to the supplier's plant and process at supplier's place (it's then excluding downstream processes like transportation or product use)
  - *Concerned*: purchased goods (milk, dairy ingredients, other Raws, packaging)
  - *Passing threshold:* needs to be "yes"

- **Question #16**
  - *Topic*: Scope & Boundaries
  - ***Question: Does the emission factor provided not consider avoided emissions and offsets?***
  - *Description*: only direct emissions from the process should be considered, excluding avoided emissions (e.g., from energy recovery) and offsets (e.g., carbon credits), to ensure consistency and comparability
  - *Concerned*: all
  - *Passing threshold:* needs to be "yes"

- **Question #17**
  - *Topic*: Time
  - ***Question: Is the emission factor provided consistent with the time interval of Danone reporting (e.g., use of the most recent available data, frequency of emission factor update)?***
  - *Description:* temporal alignment ensures that the emission factor reflects recent performance and supports consistency across reporting periods; using outdated or inconsistent data introduces temporal mismatches and reduces the accuracy of footprint calculations
  - Concerned: all
  - *Passing threshold:* emission factors cannot be older or built on data older than one year

- **Question #18**
  - *Topic*: Future change
  - ***Question: Do you expect to change your calculation tool or methodology within the next 3 years?***
  - *Description:* knowing about upcoming changes helps anticipate shifts in emission factor values, data continuity, and potential recalibration needs
  - *Concerned*: all

- *Passing threshold:* can be "Yes" or "No"; if "Yes", warning mandatory to Sustainable Finance
- Status: optional question

It's important to know whether a supplier has scientifically validated targets, as this can help prioritize which suppliers are most “motivated” to decarbonize.

- **Question #19**
  - *Topic*: Climate Targets
  - ***Question: Does the supplier have SBTi validated targets?***
  - *Description:* suppliers with SBTi-approved targets demonstrate commitment to science-based decarbonization, aligning with corporate climate strategies. This can enable Danone to better identify suppliers with real decarbonization potential in its own reporting
  - *Concerned*: all except Milk Collected from farms
  - *Passing threshold*: needs to be answered (can be "yes" or "no")