

Criteria Overview for the DSF Criteria: Greenhouse Gas Emissions (GHG)

Strategic Intent: GHG emissions across the full value chain are quantified and reduced by all economically viable mechanisms.

DSF Indicator Metric: *GHG emissions calculated using latest version of the IDF standard methodology.* Once a baseline has been calculated, subsequent calculations are undertaken at a minimum of 3-yearly intervals.

About this Criteria: Various studies have identified that food production globally represents approximately one quarter of the global GHG emissions. And that emissions from animal sourced foods equate to just under 12%. The dairy contribution of this is approximately 2.5%. Even though a relatively modest contribution, the entire dairy value chain has a responsibility to mitigate emissions.

The GHG Emissions Criteria considers all impact areas across the dairy value chain for example, deforestation from Land Use Change for the growing of feedstuffs or the methane generated through the cow's natural digestive processes.

The quantification of emissions will be undertaken by applying a Lifecycle Assessment approach using the latest version of the International Dairy Federation Lifecycle Assessment Standard Methodology or apply models that have the IDF methodology embedded. The methodology can be accessed [here](#). This document details the key parameters that are considered when calculating the Carbon Footprint across the dairy value chain.

Also relevant to this process is the sequestering potential of dairy farming systems. The methodology for quantification of sequestration in dairy production systems will apply the very latest version C-Sequ methodology accessible [here](#).

Dairy production has three gases that must be considered under these criteria:

Carbon Dioxide: From the extraction of and burning of fossil fuels to generate the energy necessary to produce dairy and dairy products.

Methane: Is generated because of ruminants' digestive processes from methanogenic bacteria in the Rumen. Enteric Methane is released via eructation (burping) and through manure breakdown post excretion by these same animals.

Nitrous Oxide: Is emitted via the application of fertilizers to both pasture and crops used to feed the dairy cow. It is also generated through ruminants' digestive processes and excreted through both the urine and manure.



DSF members will at least consider these three greenhouse gases for the areas they are able to influence e.g. sequestration and/or co-product utilization amongst others, when deciding whether to prioritise these through the materiality process.

Members may also consider other air quality challenges such as ammonia or particulates under this Criteria, though the focus for this Criteria is the Greenhouse gas emissions depending on local challenges.

Acknowledging the challenges in obtaining a representative average through aggregation of several different datasets, the DSF, is not currently requiring DSF Members to report the outcomes of Carbon Foot Printing. The DSF does reserve the right to request reporting at any time. The DSF reports the Carbon footprint of the entire global dairy sector, calculated using the United Nations Food and Agriculture Organizations GLEAM Model.

Interlinkages: This Criteria links closely with **Soil Nutrients, Soil Quality and Retention, Water, Biodiversity, Working Conditions, Animal Care, Waste, Market Development and Rural Economies.**