

Sodexo Sustainability Paper: Low-carbon Meals

September 2024

Committed to reducing the pressure on the planet, Sodexo is mobilizing its entire ecosystem to achieve its Net Zero objectives through four key initiatives: responsible sourcing, sustainable and delicious meals, responsible energy and the fight against food waste.

Today, a universal, tangible definition for a “low-carbon meal” doesn’t exist. Therefore, with guidance from **WWF**, its technical partner, **Sodexo has developed a reference, based on existing research.**

It is undeniable that sustainable ways of eating are emerging as a **critical lever** to reducing the impact on the environment (Greenhouse gas emissions, Deforestation, Freshwater usage, etc.). For details, consult the [**Living Planet Report 2020 - WWF**](#) or [**WRI’s Sustainable Food Future Report**](#).

How was the definition of low-carbon meals set?

IPCC (Intergovernmental Panel on Climate Change) reports (AR5 and AR6) have been the principal foundation for this research. They have set the 2050 food related emission levels to align with a 1.5°C or 2°C temperature increase by the end of the century.

Considering both the evolution of the population and the global food-related emissions predicted in 2050, various studies have allocated food emissions by different categories: per year, week, day or per person.

Consequently, an average carbon footprint per meal can be projected for 2030 and 2050, both at global and regional levels. The same methodology can be used with today’s emissions to achieve a baseline per meal per person to date.

To achieve this, arbitration between the studies based on objective criteria was required to set a robust methodology. Emissions allocated to each meal varied significantly as did the scope (some include snacks and drinks, for instance).

That’s why the first step was to properly identify the scope of emissions for each source, to ensure comparability, by:

- taking into account all greenhouse gases of Kyoto Protocol, the most significant being carbon dioxide (CO₂), methane (CH₄, mostly from cattle) and nitrous

oxide (N₂O, mostly from fertilizers). Impact associated to land-use-change and deforestation are also included.

- including all cradle-to-gate emissions, both agriculture and non-agriculture emissions (transportation, distribution, processing, packaging and losses).

In addition, for its definition, Sodexo chose to focus at first on main dishes given that they typically have the highest impact.

Sodexo's Definition of a Low Carbon Main Dish:

A low carbon main dish¹ is defined as having a carbon footprint of below or equal to 0.9 kg CO₂e.

While this conclusion is based on the best available research, environmental science is constantly evolving. Therefore, regular reviews and updates will be necessary to ensure the continued accuracy and relevance of this definition.

Sodexo will continue to refine and improve its approach with its partners: WWF, Klimato and Eaternity (partners that were consulted while setting the original definition).

Sodexo recognizes that ultimately the world needs to reach an average of 0.5 kgCO₂e per meal progressively and at the latest by 2050² in order to limit warming to 1.5° C.

Globally, Sodexo views the definition of a low-carbon as 0.9 kgCO₂e per main dish by 2030 as an important milestone towards 0.5 kgCO₂e.

For context, here is a sampling of main dishes with carbon scoring:



Source: CO₂e values calculated by Eaternity using Sodexo USA recipes and ingredients

Sodexo's key principles:

- Align with the IPCC 1.5°C global warming scenario.
- Focus on main dishes given that they have the highest share of impact.
- Target 70% low-carbon main dishes in centrally planned menus by 2030.

¹ A main dish is a center of the plate protein dish, including sauces and sides

² According to the best available data and covering the perimeter introduced above

- Positively and sustainably influence clients and consumers as adoption is essential to driving reduction and impact in our ambition to reach Net Zero by 2040.
- Recognize the importance of local contexts and environments. Food habits vary significantly across cultures, so achieving this target will require appropriate approaches for different regions.
- Embed carbon measurement tools into our regional Food Management Systems which will allow baselining and the development of region-specific roadmaps to ensure alignment with our Net Zero trajectory.

A Holistic Approach to Sustainable Eating

Sodexo has been a pioneer in the sustainable food transition for a number of years, partnering with WWF on sustainable food since 2010 and continually increasing its ambition, as demonstrated by its climate ambition to reach Net Zero by 2040.

Sodexo will make delicious, low-carbon meals available to consumers at scale – a crucial first step in enabling the wide adoption of low-carbon food choices.

The first steps include: training and engaging the teams (especially chefs, marketing and sales), embedding carbon measurement tools into food management systems, identifying and creating more low-carbon recipes and engaging Sodexo consumers.

Sodexo's commitment to low-carbon meals is part of its **Love of Food** menu strategy and supports existing strategies on **Healthy and Sustainable Eating**, **Responsible Sourcing** and **Biodiversity**.

- Sodexo is committed to a **global deforestation and conversion free supply chain** by 2030
- Sodexo is committed to sourcing **100% sustainable fish and seafood** by 2025
- Sodexo is committed to increasing the proportion of plant-based main dish recipes in its centrally planned menus to 33% by 2025
- Sodexo is committed to **reducing food waste by 50%** globally by 2025
- Sodexo is committed to improved **animal welfare**

Appendix

Research References:

The following reports and partners were deemed relevant to include as reference points to define low-carbon meals at Sodexo:

- World Resource Institute (WRI) research paper “**Identifying Cool Food Meals: 2022 Update**” by Richard Waite and Stacy Blondin
- WWF “**One Planet Plate 2021**” criteria
- Eat Lancet “**Food Planet Health**” report
- Research Institute of Sweden (RISE) “**Underlag till RISE klimatskala för måltider**”
- Sodexo & Foodchéri recipes’ carbon footprints
- The methodologies of recipe labelling partners were also included: **Eaternity**, **Klimato** and **Eco Score**

Definition of key terms:

- **Low Carbon Main Dish:** Center of the plate protein dish, including sauces and sides, that is responsible for less than 0.9 kgCO₂e.
- **Plant-based:** Plant-based recipes are made up of 100% plant-based ingredients such as fruits, vegetables, whole grains, beans, other legumes, soy foods, nuts, seeds, plant oils, herbs and spices. May also contain sugar and/or honey. Used to refer to ingredients and foods themselves
- **Vegan:** Dishes that do not contain any ingredients that came from animals, or individuals who do not eat any ingredients that came from animals.
- **Vegetarian:** Dishes that do not contain meat or fish but may, or may not, contain dairy, eggs, and/or honey, and individuals who do not eat meat or fish but may, or may not, eat dairy, eggs, and/or honey.
- **Plant-forward:** Plant forward recipes (Main dishes) are made up of at least 75% plant-based ingredients fruits, vegetables, whole grains, beans, other legumes, soy foods, nuts, seeds, plant oils, herbs and spices. Animal protein (seafood, dairy, eggs) accounts for no more than 25% of the volume of raw ingredients on each dish.