

TPI publishes new methodology to assess the Carbon Performance of big global food producers

Since the food sector is one of the biggest sources of greenhouse gas emissions, investors, consumers, governments and other stakeholders are putting increasing pressure on the sector's biggest emitters to reduce their contribution to climate change. Food companies have responded by disclosing more information about their GHG footprints, and more importantly by setting emissions reduction targets. However, assessing whether these targets are consistent with international climate goals has not been possible up until now.

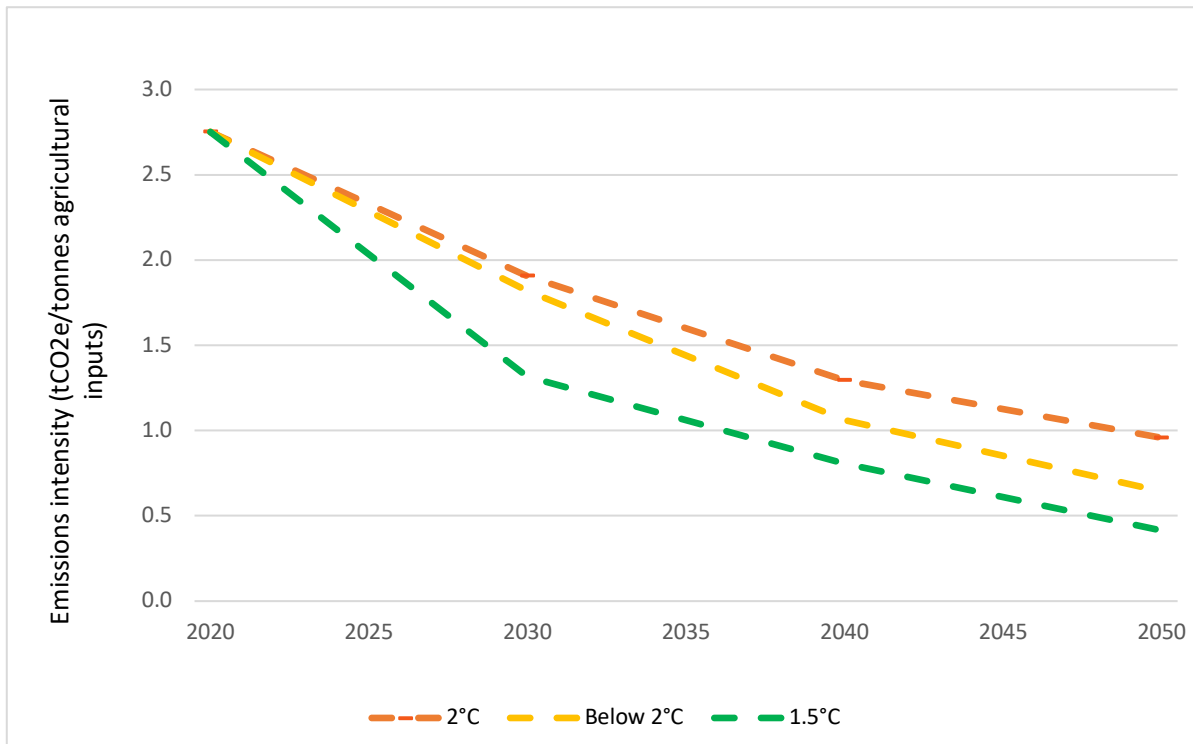
Recognising the need for greater scrutiny of corporate climate ambition in the food sector, TPI has developed a new Carbon Performance methodology for food producers, which quantifies companies' current emissions and assesses whether their targets are enough to align with low-carbon scenarios, e.g. limiting the global temperature increase to 1.5°C. We are publishing this new methodology in a Discussion paper and welcome feedback.

Development of the methodology

In developing a methodology for food producers' Carbon Performance, we have had to overcome unique challenges. The main challenge in producing low-carbon benchmark scenarios for food is that the Integrated Assessment Models (IAMs) used for food-sector emissions pathways do not provide emissions/production figures consistent with disclosure provided by food processing companies, nor do they account for the high level of product differentiation in the sector. On the company side, there are many data challenges. The food sector is complicated by a relative lack of standardised, disaggregated, and quantified disclosure of companies' raw material inputs, production in physical units, and upstream Scope 3 emissions. It is further complicated by its supply chains, with many ingredients going into diverse product portfolios.

Our low-carbon benchmarks, shown below, are calculated in two steps:

1. We determine the initial value of the food sector's emissions intensity using data on the real food system from the Food and Agriculture Organization of the United Nations (FAO), as well as academic literature, allowing us to harmonise emissions factor boundaries as well as accounting for a high degree of product differentiation.
2. We use scenario data from three leading IAMs to estimate the *change* in emissions intensity from the initial year as the sector's low-carbon transition unfolds. These models crucially include land use modules. This enables us to make detailed projections of agricultural emissions and output due to the close link between agricultural production and land use.



Note: The pathways in our analysis remain net positive by 2050 based on calculations that AFOLU CO₂ emission reach net zero in 2035 with a strong negative emissions contribution but CH₄ and N₂O do not reach net zero. Whilst these pathways are not directly comparable to output data provided by the IPCC, the detailed explanation of the calculations taken is provided in the discussion paper.

Companies' performance against the benchmarks

We applied the methodology to the world's ten largest publicly listed food producers, measured in terms of free-float market capitalisation. Of these ten companies, only three disclosed enough data on emissions and production for our analysis -- Nestlé, Mondelez and Kraft Heinz

Using the latest year of disclosure for each company, our analysis indicates that the companies' starting intensities vary greatly, reflecting differing company exposure to high-carbon agricultural inputs today, with an emissions intensity of 8.09 tCO₂e/t agricultural inputs for Mondelez (2017 data), 3.34 for Nestlé (2020 data), and 4.65 for Kraft Heinz. Each company's intensity is dominated by Scope 3 emissions from purchased goods and services.

All three companies have set a net zero target across all scopes (including upstream Scope 3 emissions). Using these targets to assess the companies against the food-sector benchmarks, we find that the three companies' targets align with the 1.5°C benchmark by 2050. However, Kraft Heinz and Nestlé differ from Mondelez in (a) having a much lower carbon footprint per unit of agricultural input at present and (b) setting more significant medium-term targets. These lead to company pathways that are more closely aligned with a 1.5°C benchmark in the short and medium terms. Nestlé aligns with the 1.5°C benchmark in 2030, but neither of the other two companies aligns with 1.5°C in the medium term (2026-2035).

