Background & Resource - COP27 Climate Agreement on Food & Farming

The April 2022 IPCC report found food systems are responsible for 23-42 percent of global greenhouse gas emissions. Even if all fossil fuel emissions were eliminated, food system emissions would jeopardize the 1.5 degrees C target. The report urgently called on UN countries to enact food and agriculture policies to reduce greenhouse gas emissions, and support a shift to plant-based diets. The IPCC report also mentioned the importance of food or farm related GHG-emission taxes and lifestyle changes to eat less meat and more plant-based proteins.

The Climate Agreement on Food & Farming can address two critical issues:

CRITICAL ISSUE 1: Transformation of animal agriculture and animal protein consumption must be prioritized to avoid the worst predictions of climate change and environmental breakdown.

CRITICAL ISSUE 2: There is a glaring yet underacknowledged gap between climate/environmental commitments by leaders, and tangible solutions that can be realized and measured.

To frame the magnitude of the problem, consider:

The global livestock sector contributed 14.5% of all greenhouse gas emissions in 2015, while new science shows this is almost 20% now. CO2-taxes exist in many countries for energy, but for livestock, meat or dairy no CO2 eq. taxes exist in high meat consuming countries. Tax revenues could be used to subsidize low-carbon farming and low carbon & healthy food. Cutting methane emissions was identified at COP26 as a crucial opportunity to achieve emissions reductions. To-date, mostly energy-related methane has been considered even though animal agriculture contributes nearly a 44% of global methane, according to FAO. Animal agriculture (livestock grazing and feed crops) is the leading cause of deforestation worldwide (FAO: 75% in S-America), endangering biodiversity and increasing CO2-emissions.
In 2022, the IPCC's AR6 UN Climate report recognized the role of CO2-taxes on meat and dairy, and the high mitigation potential of reduced meat consumption in many countries.
The COP27 Climate Agreement on Food & Farming is an essential tool to help country leaders transform intentions into real-world action, while simultaneously setting examples for others and igniting a just transformation of our food systems.

Climate impact

If people in 85 countries on average would eat according to EAT-Lancet Planetary Health dietary guidelines by 2030, global food-related GHG-emissions would be reduced by 42 percent: 1,8 Gton CO2e (giga tonnes of carbon dioxide equivalent), mostly through reduced red meat consumption and higher intake of plant-based proteins. If 85 countries would encourage consumers to eat conforming to WHO food recommendations, global GHG-emissions would be reduced by 0,52 Gton CO2. (Springmann et al., 2020).

In the European Union, meat and dairy consumption contribute to 80% of all food related greenhouse gas emissions according to a report of the European Court of Auditors, see p. 28 https://www.eca.europa.eu/Lists/ECADocuments/SR21_16/SR_CAP-and-Climate_EN.pdf.

Meat contributes to 55% of all food related GHG emissions, so policies to reduce meat consumption would be most efficient to reduce food related GHG emissions.

In 2018, the IPCC special report on climate change and land was published, indicating about 21–37% of total greenhouse gas (GHG) emissions are attributable to the food system. (See IPCC Food Security Report, chapter 5). The report also wrote: "Consumption of healthy and sustainable diets presents major opportunities for reducing GHG emissions from food systems and improving health outcomes. Examples of healthy and sustainable diets are high in coarse grains, pulses, fruits and vegetables, and nuts and seeds. Total technical mitigation potential of dietary changes is estimated as 0.7–8.0 GtCO2-eq per year by 2050 (medium confidence)". The technical mitigation potential of different dietary changes are for flexitarian diets 5.1 GtCO2-eq per year by 20250 and 4.5 GtCO2-eq reduction for the healthy diet.

In April 2022 the IPCC published a new report (AR6III), asking government to start food policies that help to reduce GHG-emissions (eg. encouraging consumers to eat more plant based proteins and less meat). GHG taxes on foods are mentioned as a powerful tool in achieving the objectives of the Paris Agreement. The authors who worked on the report state that taxing GHG emitting foods, such as meat and dairy, would be 'low in cost, feasible, environmentally effective and have great ''transformational potential'' (p 157).

In 2021 at the COP26 over 100 countries signed the Global Methane Pledge to reduce methane emissions with 30 percent by 2030(see The Global Methane Pledge) and the Zero Deforestation Plegde for 2030 (see Glasgow Leaders declaration on Forests and Land Use) 42 percent of global methane emissions is from livestock. According to WWF meat and dairy are a major driver of deforestation and biodiversity loss because of the increasing land use needed for animal feed and more livestock. See article, *What are the biggest drivers of tropical deforestation?* , and *Appetite for Destruction?*. Global meat consumption and production is expected to grow 14% from 2020 to 2030, according to FAO study. This means: 14% more animal feed is needed too, which often means more forests are cut to produce more animal feed. A list of 50 countries with the highest meat consumption per capita levels can be found here: Future Food Price – Open Letter. By signing the Sustainable Food Pledge UN member states change diets and also reduce deforestation and methane emissions.

Global policies aiming for a 'healthy diet' or a 'flexitarian diet', to replace 75 percent of meat and dairy by plant based diets have a mitigation potential of 4,5 to 5 Gton CO2 eq/year by 2050 (IPCC, 2018). Such diets are consistent with the 1,5 °C scenario and are needed before 2030 to reduce the ambition gap of 19-23 GtCO2 eq. Meat and dairy account for 57 percent of food production related GHG-emissions, an Illinois University study found: Meat Greenhouses and Gases from Food Production. In the EU-27, 80 percent of food related GHG-emissions is from meat and dairy, according to a EU Court of Auditors report.

Health benefits

Overconsumption of meat is leading to increased risks for non-communicable diseases like stroke, type 2 diabetes, cancer and higher risks for obesity. To reduce such risks and reduce healthcare costs related to unhealthy diets, WHO and World Bank advised all nations to tax unhealthy food products like sugar and processed meat.See our report on the World Banks proposal asking governments to introduce taxes on unhealthy foods like processed meats here.

Around 50 countries now have implemented 'sugar taxes' on beverages. See the study Countries that have implemented taxes on unhealthy foods including sugar taxes and the investigation by the TAPP Coalition into an increasing number of countries who are starting to tax meat and dairy, which shows that 7 countries (and the EU) considered taxes on meat.

Economic impact

Policies aiming at low-meat diets are a very cheap policy option for GHG-emission reduction, compared to CO2-reduction policies in other sectors. According to the Dutch government institute PBL global mitigation costs can be reduced by 50% compared with a reference model without low-meat diet policies, to achieve a 450 ppm CO2-eq stabilization target (1,5 C goal). See (Vleesconsumptie en klimaatbeleid). One of the co-authors is Bas Eickhout, now a leading climate expert in the EU Parliament. The plant-based protein sector is a growth sector, generating many new jobs and economic growth. Plant-based meat is by far the best climate investment, a **report** says.

Reducing meat consumption in the EU reduces healthcare costs with 9 billion euro/year (report 'Aligning European food prices with the Green Deal, 2020).

Impact meat and dairy consumption on biodiversity loss and deforestation

According to FAO, livestock (and animal feed) are the major source of biodiversity loss; according to WWF UK, meat and dairy based diets cause 60% of global biodiversity loss. http://www.cbcgdf.org/English/NewsShow/5008/19608.html

Scientific articles about true pricing food products:

A Sustainability Charge on Meat (2020) (CE Delft Commissioned by the TAPP Coalition)

Funke, F., Mattauch, L., van den Bijgaart, I., Godfray, C., Hepburn, C. J., Klenert, D., ... & Treich, N. (2021). Is meat too cheap? Towards optimal meat taxation. Jarka, C., Tinggaard, S. G., & Tomas, Z. (2018). A global meat tax: from big data to a double dividend. Agricultural Economics, 64(6), 256-264.

Springmann, M., Spajic, L., Clark, A., Poore, J., Herforth, A., Webb, P., & Scarborough, P., (2020). The healthiness and sustainability of national and global food based dietary guidelines: a modelling study. bmj 370

Tandon, A. (2022, January 10). 'Rich Nations could see Double Climate Dividend by Switching to Plant Based Foods'. Carbon Brief: Clear on Climate. https://www.carbonbrief.org/rich-nations-could-see-double-climate-dividend-by-switching-to-plant-based-foods

COP25 Presentation by Marco Springman. Global GHG-emissions taxes on meat (e.g. 0,28 USD/100 gram beef) have a mitigation potential of 0,67 GtonCO2eq (Oxford University study)