Big Meat and Dairy's narratives to derail climate action

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Overview

Like many planet- and people-harming industries, Big Meat and Dairy companies are using an array of tactics to protect their businesses in the face of growing scrutiny over their climate impact. One key tactic involves deploying 'narratives' in advertising, PR campaigns and lobbying that paint the industry as greener than it really is and frame the stakes as too high to change.

These narratives are dangerous. They have enabled the industry to successfully distract, delay and derail policies that would curb the sector's climate impact. They have even infiltrated global institutions that develop guidance on food system transformation, including the United Nations' Food and Agriculture Organization.[1]

The science is clear: we cannot stay close to a 1.5°C temperature increase trajectory, as stipulated by the Paris Agreement, if we do not significantly cut methane emissions[2] and reduce consumption of animal products[3] – yet both are projected to increase. The agricultural sector is both uniquely dependent on a stable climate system and one of the biggest contributors to climate change, both directly (through methane and nitrous oxide pollution from animals) and indirectly (as one of the major drivers of deforestation and land-use change).[4] Transformative changes are both needed and possible in agriculture, particularly with regard to reducing methane emissions from livestock.

This briefing identifies, dissects and fact-checks some of the most common narratives used by Big Meat and Dairy to justify the continuation and expansion of its business model. We also explore how these narratives are shaping discussions about global meat and dairy production and consumption and the urgent need for transition to healthier and more sustainable diets.

Myth-busting industry narratives

The Big Meat and Dairy industry often weaves different narratives together in its marketing, lobbying and sustainability reports, with its arguments usually falling under one or more of the following umbrellas:

- **Food security:** policies to support more sustainable farming would jeopardise food security - particularly proposals to reduce meat and dairy production/consumption.
- **Growing demand**: continued levels of meat and dairy consumption are 'essential' for healthy diets.
- **Emissions leakage:** action on emissions will result in production moving to 'less efficient' countries.
- **Putting family farms out of business:** any environmental regulation will hurt family farms and rural communities.
- **The 'green deception':** the industry's environmental impacts can be fixed by embracing select regenerative farming practices, so there's no need to reduce livestock numbers.

The Changing Markets Foundation extensively documented these and other industry tactics in a July 2024 report, *The New Merchants of Doubt: The corporate playbook by Big Meat and Dairy to distract, delay and derail climate action*.[5]

Food security narrative: policies to support more sustainable farming would jeopardise food security.

Big Meat and Dairy companies and their allied trade groups often claim increased meat and dairy production is critical to ensuring food security for the world's growing population.[6,7] However, prioritising meat and dairy production does not guarantee food security now or in the future. Significant methane emissions from the sector are already threatening food security: cutting these could act as an emergency brake for global heating and prevent further crop loss from ground-level ozone.[8,9]

It's also a more efficient use of resources to farm plants than animals: it takes several kilograms of plant protein to produce one kilogram of animal protein,[10] and takes about 100 times more land to produce the same amount of calories or protein from beef or lamb compared with plant-based alternatives like peas or tofu.[11]

Meat and dairy production take up approximately 80% of the world's agricultural land.[12] Shifting to more plant-rich diets would drastically reduce agricultural land used for meat and dairy production, freeing up land for forests, natural vegetation and growing more crops for human consumption rather than for animal feed.[13,14] With nearly 10 billion people expected on Earth by 2050 and an expected increase in the consumption of animal products, we need to shift towards efficient farming practices and sustainable diets. Under the current population growth scenario, we would need to produce 56% more crop calories by 2050 than were produced in 2010.[15]

The growing concentration of the global food system in the hands of powerful agribusiness companies also has consequences for food security, consumer choice and for workers in food production.[16] Consolidated agribusiness giants exploit their place in the middle of the supply chain and shape regulatory frameworks via lobbying, as well as minute details like the prices they will pay farmers, who now have fewer options for buyers.[17]

Corporate concentration has also narrowed which foods farmers can grow and thus what foods are available to consumers - meaning crop failures or supply chain issues risk driving up hunger.[18] Concentration makes farmers and consumers alike dependent on far-away markets rather than local food economies, and supply chain disruptions can lead to huge inefficiencies: for example, farmers in the UK dumped millions of pints of milk down the drain during lockdowns in 2020 because demand had dropped.[19]

What about micronutrients?

This narrative is linked to food security and proposes that meat and dairy are an affordable source of micronutrients compared to other options, especially in the Global South. The common argument that meat and dairy products are the best way to provide micronutrients has been repeated at the highest levels of international governance.[20,21]

FAO chief economist Maximo Torero, who was responsible for the FAO's 2023 report *'Achieving SDG 2 without breaching the 1.5C threshold: A global roadmap'*,[22] told the *Financial Times* in December 2023 that: *"There's a need to produce more [meat and dairy] because there's an enormous amount of countries that are under-consuming those micronutrients and those products"*.[23] Torero was referring to countries largely in the Global South, which have lower rates of meat and dairy production and consumption.

Torero suggested that intensifying livestock farming in countries like the Netherlands and New Zealand could improve nutrition for people in the Global South. However, he did not mention the significant negative environmental impacts that such intensification has already had in these countries. The Netherlands has three times the nitrogen pollution rate of other European countries mostly due to ammonia from livestock,[24] and the government are introducing measures to curb this pollution in the agriculture sector.[25] In New Zealand, a single litre of dairy milk can require 11,000 litres of water to dilute the nitrogen pollution caused.[26]

Meat and dairy contain micronutrients like iron, B vitamins, zinc and others; however, they are not guaranteed to be affordable or healthy, with cheap cuts of meat often exported to countries in the Global South, impacting local communities' health (see 'growing demand' narrative section). What is missed from this narrative is that they are not the only source of micronutrients: protein and micronutrients can also be obtained from plant-based products and whole plant foods,[27] which are often cheaper, more readily available and less environmentally damaging.[28] Animal products that are highly processed have also been linked to health issues including cancer and heart disease.[29]

David Laborde, the FAO's Agrifood Economics and Policy Director and a key architect of the 2023 Global Roadmap, later stated Torero's words had been taken "out of context". Laborde noted that it is actually *"the less efficient or less productive systems, that will include the low-income countries in the global south because that's also where the demand will increase"*.[30] However, while there are opportunities to sustainably improve livestock productivity in some contexts, this agenda risks exporting and scaling up the damaging industrial-scale livestock production techniques we've seen in the Netherlands and New Zealand, in regions that are already vulnerable to the worst impacts of climate change, without necessarily addressing micronutrient deficiencies where they are most needed.[31]

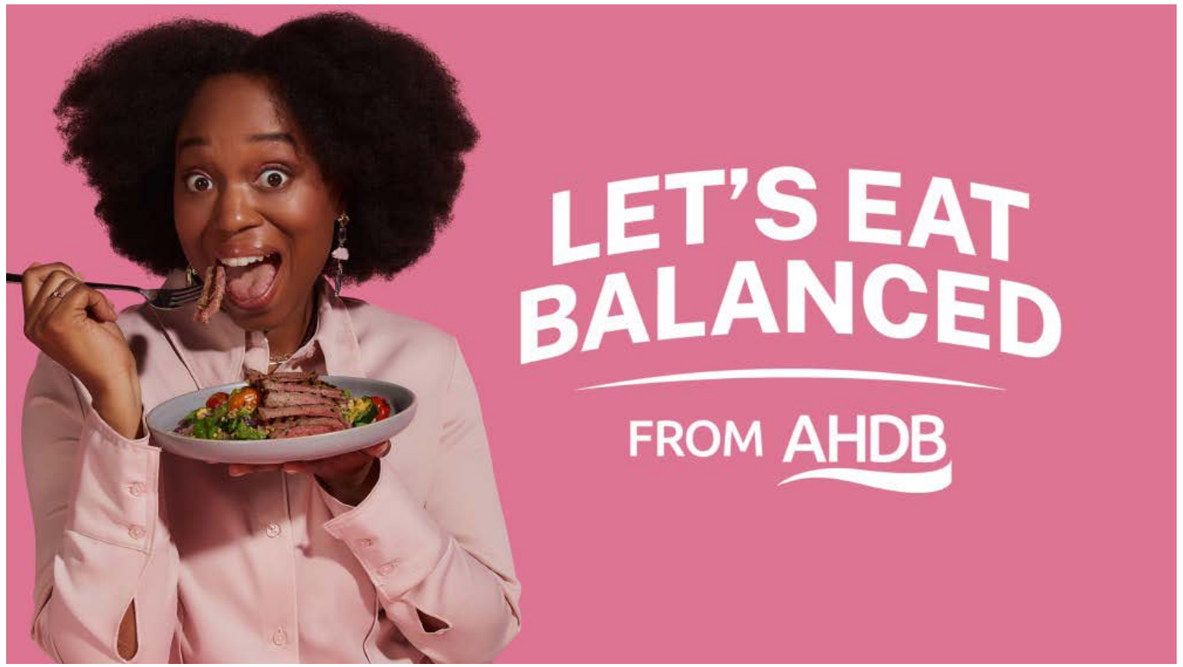
The food security and micronutrient narratives as they are presented by industry, distract from wider conversations about sustainable and equitable access to healthy and nutritious food, that doesn't come at the expense of polluting the local environment. This narrative also obscures current unsustainable trends in food production, particularly around feed for livestock. In the EU, 63% of arable land is used for feeding livestock,[32] and in countries like Brazil, significant deforestation has taken place to make way for pasture and crops for livestock feed.[33]

In aquaculture, vast amounts of local pelagic fish are taken from countries in the Global South - like Senegal, where fish is a staple food for many - and used as animal feed in the Global North. A Changing Markets investigation with Greenpeace Africa found that over half a million tonnes of highly nutritious fish, which could be used to feed 33 million people in West Africa, was extracted to feed farmed fish and animals, primarily in Europe and Asia.[34] Yet such dynamics are conveniently overlooked by Big Meat and Dairy and institutions like the FAO, which has recommended a 75% increase in aquaculture globally by 2040.[35] While the FAO has recognised the need to reduce the use of wild fish as feed for farmed fish,[36] nutrient theft from the Global South to manage aquaculture continues to be a significant challenge and a 75% increase could further this trend.

All communities should have fair and equitable access to a healthy and nutritious diet, regardless of where they live. Food system transformation could include shifting investment and subsidies from livestock production to more plant-rich diets, to support nutrition of a growing global population.

Growing demand: continued levels of meat and dairy consumption are 'essential' for healthy diets.

Meat and dairy companies, trade associations, and their allies have increasingly invested in PR campaigns that portray meat and dairy as healthy, nutritious foods that are an essential part of people's diets.[37] These ads often target younger consumers in particular, in light of younger generations' concerns about the health impacts and environmental harms of meat and dairy.[38] At the same time, major meat and dairy companies will argue that they are simply meeting people's demand for their products, regardless of the role of marketing, subsidies, availability and other factors shaping the 'food environment' or dietary habits in a market-driven food industry.



Meat and dairy products' outsized impact on the climate and environment should not be ignored simply because of 'demand', which has been inflated with expensive advertising campaigns and products that are artificially cheap thanks to government subsidies.[39] A 2015 study found that the US government allocates $38 billion annually to subsidise the meat and dairy industries, while dedicating only 0.04% of this ($17 million) to fruits and vegetables. A $5 Big Mac would cost $13 if the retail price included hidden expenses that meat producers offload onto society.[40] These subsidies can also result in cheap meat and dairy products being exported and 'dumped' in Global South countries. Mutton flaps - a fatty cut of sheep - have been one factor in the rise of health problems like diabetes, in Tonga, which receives the cheap cuts exported from New Zealand.[41] Traditional diets, focused on fish and root vegetables, have now become expensive to consume, and international boats trawl and export their catch to other countries.[42]

Reducing meat consumption is not only crucial for meeting emission reduction targets but also for improving public health outcomes. In the US, for example, industrial-scale animal agriculture operations are more likely to be located in or near poor communities and communities of colour,[43] which then suffer public health and environmental consequences due to externalities created by these operations. These include poor air quality, water pollution and exposure to antibiotic-resistant bacteria,[44] as well as healthcare costs, pollution mitigation costs and lost productivity due to pollution.

Far from being essential for healthy diets, overconsumption of meat and dairy products leads to detrimental health outcomes like coronary heart disease,[45] which accounts for one in eight deaths among men and one in 14 deaths among women in the UK.[46] Red and processed meat is also classified as 'probable carginogenic' by the World Health Organization.[47] In 2018, every dollar spent on food globally

incurred approximately $2 in costs to address health and environmental issues stemming from food production, totalling $14.0 trillion globally. Transitioning to a diet limiting the overconsumption of meat and dairy could save up to $7.3 trillion by mitigating these hidden costs and lowering emissions.[48]

Without massive reductions in high-income, high-consuming countries - predominantly in the Global North - we are on a dangerous trajectory. A recent survey of over 200 climate scientists has shown that they believe that the emissions from livestock must peak by 2025 in high- and middle-income countries and be cut globally by 50% by 2030.[49] The US leads in needing the most significant reduction at 82%, followed by Australia (80%), Argentina (80%), Israel (78%) and Spain (78%). For dairy, top priorities for reduction include Finland (74%), Montenegro (74%), Albania (71%), Netherlands (69%) and Switzerland (68%).[50]

Lobbying by the food and agriculture industry and food marketing and media are among the factors that influence consumers' food choices and can present barriers to making healthy food choices.[51] The Beef Checkoff programme in the US is a notable example. The programme, which is funded by a mandatory $1-per-head fee on cattle production, invests heavily ($39 million in 2023 alone) in marketing campaigns to promote beef consumption and research that downplays the impact of cattle production on climate change.[52,53] These types of campaigns significantly influence consumer perceptions, sway purchasing decisions away from plant-based options, and contribute to the normalisation of high meat consumption.[54]

Food choices

A 2017 study of the role of meat eating in Western culture found that eating meat has long been associated with ideas about wealth, religion, gender, community, national identity and other elements of social status.[55] The industry has capitalised on these longstanding associations to advertise meat and dairy as an essential part of culture. A 2021 poll by US firm Ipsos, for example, found that '*a majority of respondents agreed that 'eating red meat is part of the American way of life, and that those pushing to take red meat off the menu are trying to control what Americans eat'*.[56, 57] This messaging has also cropped up in Europe and been adopted by animal farming lobby groups like European Livestock Voice.[58]

As incomes increase, demand is on the rise in countries that have not traditionally overconsumed meat and dairy – and established meat and dairy companies are eager to fill this demand. New Zealand sheep and dairy farmers, for example, have been told to increase efforts to market products in countries like China,[59] Malaysia, Vietnam and the Philippines, which have historically lower meat and dairy consumption.[60]

Despite the industry's spending to spread pro-meat messaging, market trends show that there is a huge appetite for plant-based foods. In 2022, a survey covering 31 countries found a global average of 44% of consumers who were 'likely to eat less meat or replace it with alternatives to limit their contribution to climate change'.[61] More than one-fifth (22%) of the world's population is vegetarian.[62] Millennials are also more likely than older generations to try not to eat meat,[63] while actions like Veganuary have been increasing year on year, with an estimated 25 million people taking part in January 2024.[64]

Emissions leakage: action on emissions will result in production moving to 'less efficient' countries.

Big Meat and Dairy have pushed a narrative that stricter regulations will push production - and emissions - to countries with weaker or no regulations, a concept known as 'emissions leakage' or 'leaky emissions'. Industrial agriculture lobby group Copa-Cogeca has argued that methane's inclusion in the EU's National Emissions Ceiling (NEC) Directive (now called the Natioanl Emissions reduction Commitments Directive), for example, would lead to production loss and emissions leakage outside of Europe. By claiming that imports from regions with less environmentally friendly livestock farming would replace EU production, they successfully argued that methane should be removed from the NEC Directive and excused from tighter regulation.[65, 66] Nestlé has also used this narrative to argue that it should not and will

not diversify away from dairy production because the market would be captured by companies that produce milk in a less environmentally friendly way.[67] Many of these arguments rest on the assumption that meat and dairy consumption is a growing constant, even in places that have reached 'peak meat', such as the EU.

These industry claims inevitably downplay the full impact of livestock production. For example, half of US agricultural emissions are from nitrous oxide emitted when fertilisers are applied to crops, and 40% of the US's largest crop, fertiliser-intensive corn, is grown as feed for livestock.[68] In other words, greenhouse emissions from livestock production, in addition to methane, are even higher.

'More efficient' production thanks to techno-fixes

The industry likes to argue that meat and dairy production is getting more efficient and sustainable thanks to technologies that allow as much or more to be produced with fewer inputs/resources ('sustainable intensification'). These gains in efficiency may include techno-fixes like methane-suppressing feed additives or methane biodigesters, which capture some methane from manure lagoons on farms to turn into a fuel akin to fossil gas. However, biodigesters only address a small fraction of methane emissions from livestock production, may be subject to leaks and are only feasible on large farms, driving incentives to scale up production.[69] In the EU, enteric fermentation accounts for 80% of methane emissions, while manure accounts for 17%.[70]

But livestock production is already running up against the limit of how 'efficient' it can become. Henning Steinfeld, one of the authors of the FAO's landmark 2006 report *Livestock's Long Shadow* - which estimated livestock's global greenhouse gas emissions for the first time and stated that animal agriculture was *'one of the top two or three most significant contributors to the most serious environmental problems, at every scale from local to global'*[71] - has said assumptions in the FAO's 2023 Global Roadmap about improved productivity are unrealistic, since livestock productivity growth is notoriously low and would require *'massive investment to help reduce animal numbers while increasing average productivity'*.[A, 72] Academics whose work was cited in the FAO Pathways report have also been critical, suggesting that the report significantly downplayed the potential of dietary shift for emissions reduction.[73] Global institutions like the FAO appear to have been influenced by the industry into championing industry-friendly techno-fixes that support this misleading narrative.[74]

Companies are also frequently overstating how much they are willing to invest in these techno-fixes, which are often expensive, not yet proven and difficult to scale up. Companies often publicise pilot projects but - even if these projects are successful - do not actually scale them up across their operations, and often request public money to fund these solutions instead of investing their own resources.[75]

Putting family farms out of business: any environmental regulation will hurt family farms and rural communities.

While animal agriculture can be a source of income for farmers and pastoralists in rural communities, industrial-scale livestock farming is more likely to endanger communities' economic potential and output due to its high health, environmental and social costs. The industry has argued that introducing more stringent environmental regulations on meat and dairy production will put farmers out of business, particularly those with small family farms.

A The Global Roadmap suggests that a 25% cut in livestock methane emissions by 2030 could be achieved without reducing herd sizes.

Agribusiness and meat groups used misleading rhetoric about 'small family farms' and insisted that farms shouldn't be regulated under 'industrial' regulation to successfully lobby against the EU's Industrial Emissions Directive (IED), which would have regulated emissions-intensive animal farming. The industry managed to have cattle removed from the modified IED completely, and bumped up the minimum number of livestock a farm would have to have to be eligible - essentially making the IED applicable only to very large industrial farms, for example, with more than 350 pigs or 300 adult poultry.[76]

This narrative also ignores the negative impact industrialised animal farming has already had on small farmers and rural communities, including eroding their economic and social fabric.[77] A 2022 review of 40 empirical studies on industrialised farming in the US found that small farmers are often forced to contract with large corporations and adopt intensive models to remain afloat economically.[78] Farmers operating in this model report feelings of 'uselessness', and communities in which the small farms that have been forced to consolidate and contract with industrialised corporations end up with lower wages, a lack of social services, and other negative economic and social consequences.[79]

Extending industrial-scale animal farming practices to the Global South to increase production risks replicating these issues: putting smallholder farmers out of business or forcing them to work for highly consolidated, distant corporate agribusinesses. Smallholder dairy farmers in India are a good example: a 2020 report by the Institute for Agriculture and Trade Policy found that farmers connected with state-supported dairy cooperative Amul - many of them women - have been squeezed out of the market by India's embrace of industrial dairying. Over 5.2 million households with one or two cows stopped dairying in part due to the dumping of cheap milk powder products facilitated by the government - which tanked prices - and expensive feed, which is 60-70% of the cost of Indian dairying.[80] Pastoralists in the Global South, who raise around a billion animals in the world's drylands, rangelands and other areas where crop production is difficult,[81] are also at risk from climate change driven in part by emissions from industrialised animal agriculture.[82]

The 'green deception': selective regenerative farming practices will solve emissions from the livestock sector.

Big Meat and Dairy companies argue that regulating the industry is unnecessary because they are already reducing emissions and their environmental impact through voluntary means, including embracing 'regenerative agriculture' practices. This is supposed to signal to policymakers and the public that these companies can be trusted to reduce their carbon footprints and regulate themselves.

The narrative that cows - or animal agriculture more broadly - can help sequester a meaningful amount of carbon in soils was popularised in part by rancher Allan

Savory, who claimed that grazing cows could help restore landscapes.[83,84] The industry has embraced the term 'regenerative agriculture', likely because it does not have universally agreed definitions and principles, rather than adopting the more well-defined term 'agroecology'.[85,86]

Some of the industry's favoured 'regenerative agriculture' interventions include 'regenerative grazing', which proponents argue can help sequester carbon in agricultural soils. However, in 2023, a paper published in *Nature Communications* showed that relying on carbon sequestration in soil as a way to mitigate emissions from ruminant animals, is not realistic. It found that 135 gigatonnes - 135 billion tonnes - of carbon would need to be returned to soils to balance out the amount of methane emitted annually by grazing animals like cattle, sheep, bison and goats. This is roughly equal to all the carbon lost due to agriculture over the past 12,000 years.[87]

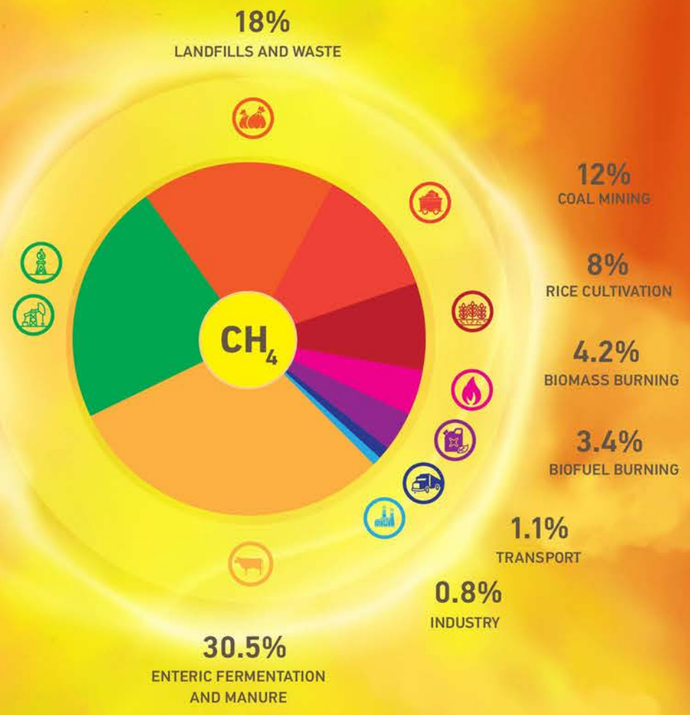
While some practices associated with regenerative agriculture can be good for the environment, current evidence suggests its role in emissions reduction may be limited.[88] Regenerative agriculture practices simply cannot keep up with the scale of industrialised animal farming for meat and dairy products. A shift to grass-fed beef in the US for example, would increase beef's methane emissions by 43% .[89] For grass-fed beef to be sustainable, herd numbers and thus consumption of beef products would have to be drastically reduced.

Nevertheless, companies are jumping on the regenerative agriculture bandwagon, and using regenerative grazing used to make bold claims to the public, investors and regulators - often with little evidence. Documents reveal that the industry has pushed regenerative agriculture directly to policymakers: for example, Nestlé[90] and Danone[91] have both individually met with the European Commission to make their case for 'regen ag'. In January 2021, Nestlé presented numerous 'regen ag' case studies, including a UK project in which Nestlé offers 'long-term guaranties' to purchase a set quantity of product from dairy farmers who embed regenerative agriculture practices, regardless of the implications this might have for maintaining the current unsustainable levels of consumption of dairy.[92]

Biogenic methane

Methane emissions play their own role in this 'regenerative' narrative, with meat and dairy producers arguing that emissions from cows are part of the 'natural biogenic carbon cycle'. Meat and Livestock Australia - a levy-funded group - has argued on a blog on its 'Good Meat' platform that: *'Methane emitted by ruminants like cattle, sheep and goats is recycled into carbon in plants and soil, in a process known as the biogenic carbon cycle,'* adding *'It's an important natural cycle that's been happening since the beginning of life.'*[93]

Biogenic methane



METHANE 80x

WARMS THE PLANET

MORE THAN CARBON DIOXIDE (CO_2)

OVER **20 YEARS**

AND **HAS CAUSED 0.5 °C OF WARMING**

SINCE PRE-INDUSTRIAL TIME

Cows and other ruminants belch methane after their digestion through a process called enteric fermentation, where microbes in their stomachs break down food and release methane gas. A smaller share of methane is also emitted from animal manure.

FOSSIL VS. BIOGENIC METHANE

The only difference with fossil sources of methane is that the leftover CO_2 portion comes from ancient stored sources adding to an additional small amount of warming (~3% more over 20 years) where the leftover biogenic sources of CO_2 was from recently drawn down CO_2 (2). Biogenic & fossil methane still warm the atmosphere equally and must be reduced[1].

Troposphere

OH

(Hydroxyl Oxidation)

CH_4	N_2O	CO_2
METHANE (CH_4)	NITROUS OXIDE (N_2O)	CARBON DIOXIDE (C_2O)
262%	**124%**	**149%**

Total concentration of GHGs in the atmosphere in 2021[2]

ABOVE PRE-INDUSTRIAL LEVELS

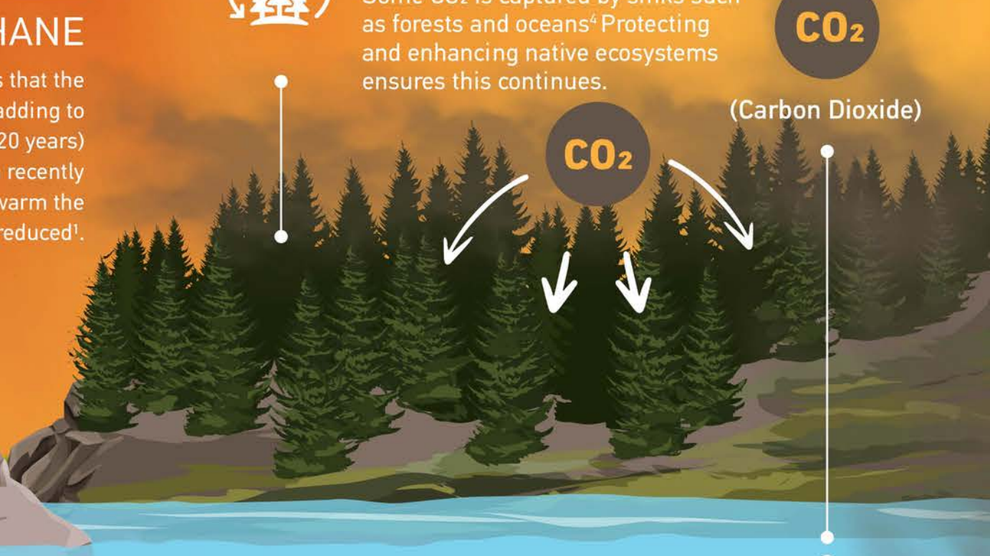
OH DETERGENT OF THE ATMOSPHERE:

90% of methane is removed from the atmosphere through chemical reactions[3]

Photosynthesis

Some CO_2 is captured by sinks such as forests and oceans[4] Protecting and enhancing native ecosystems ensures this continues.

CO_2 (Carbon Dioxide)



1. IPCC AR6 WGI Ch 7 Figure 7.15
2. World Meteorological Organization (2022). Greenhouse Gas Bulletin: Another Year Another Record
3. Saunois et al. 2020, ESSD (Fig. 6)
4. Gruber et al. 2019

This argument ignores the fact that meat and dairy companies have added more methane than ever to the carbon cycle by increasing their herd sizes over the last few decades - the concentration of methane in the atmosphere in 2021 was 262% higher than pre-industrial levels.[94] This amount has increased far faster than nature, technology or sustainable farming practices can absorb it.

Discounting methane with GWP*

Big Meat and Dairy has also sought to downplay the impact of methane by promoting the Global Warming Potential Star (GWP*) metric. Methane persists in the atmosphere for around a decade, but despite its relatively short lifespan, it is a potent greenhouse gas - around 80 times more powerful than CO_2 over 20 years[95] and responsible for an estimated 30% of global heating experienced today.[96]

GWP* measures the changes in emissions over decadal timescales, rather than absolute emissions. This is scientifically sound when applied at a global level and used alongside other metrics. However, when it is applied at country or company level and used as the primary way of measuring methane emissions, it can obscure the significant benefits of rapid methane reductions.

Industry-friendly scientists, trade groups, and the meat and dairy industry itself are pushing for GWP* to be used in this way on at least four continents. Climate scientists Dr Joeri Rogelj and Carl Schleussner authored a paper on how the use of GWP* *'would put most developing countries at a disadvantage compared to developed countries'* because countries with higher emissions (and which rely less on meat for nutritional purposes) can be rewarded for keeping emissions stable, while much smaller producers would be punished by GWP* for even small increases.[97, 98]

Embracing carbon offsets and 'insets'

Meat and dairy companies should be focused on reducing absolute emissions but have instead embraced offsetting as a means of appearing to reduce their climate footprints. Buying carbon offsets was until recently a favoured way for companies to reduce their carbon footprint, but recent reporting has revealed that the impact of carbon offsetting schemes - for example, planting trees or paying to 'protect' forested areas - has been overstated.[99,100] Many of these projects have historically been based in the Global South, and concerns have been raised about, for example, infringing on the rights of Indigenous peoples,[101] land rights in Sierra Leone,[102] and land grabs in Zambia, Tanzania, Liberia and Zimbabwe.[103]

Companies are also arguing for - and beginning to practise - 'insetting', which involves claiming carbon has been removed from the livestock farming process through soil carbon sequestration within the company's own value chain. The science remains unclear on how livestock emissions are absorbed by soil and plants, leading to controversy around insetting, which now operates essentially as an internal carbon offset,[104] without any external accountability on actual emission reductions that are made. Several meat and dairy firms including Dairy Farmers of America, Cargill and Nestlé are already engaging in the practice, including by buying credits.[105] [106] [107]

Conclusion

The climate science is clear: actions that we take in this decade will define temperatures and the world we live in for the decades to come. The livestock sector is both a significant source of greenhouse gas emissions and uniquely vulnerable to the impacts of climate change that are already being felt by farmers and ordinary people everywhere. As temperatures increase further, climate impacts will only get worse, with significant financial implications for the sector, as well as potential catastrophic food security implications across the world, impacting the most vulnerable the most.

Despite this, Big Meat and Dairy continue to resist climate regulation and seek to maintain the status quo by investing in narratives embedded in our everyday discourse. These narratives serve different purposes, including:

- Fearmongering that we cannot change the food system and protect food security
- Shifting the blame to the individual consumer by claiming that companies are only 'keeping up with demand'
- Suggesting that any action in one part of the world will only lead to more emissions in another
- Further concentrating the sector in the hands of Big Meat and Dairy companies
- Spreading the idea that family farms - many of whom Big Meat and Dairy has put out of business - will be at risk if any action is taken to improve the climate impact of the sector.

However, there are many positive actions that can be taken immediately to reduce the environmental and climate impact of the agricultural sector and in particular from livestock. Methane emissions must be urgently reduced this decade to avoid climate tipping points. Contrary to the green deception, to do so will involve reducing herd sizes and increasing plant-rich diets, alongside implementing other available measures to ensure we meet the Paris Agreement goals.

To do this, governments can develop and implement ambitious national methane action plans and include food system transformation in their nationally determined contributions, expected by COP30 in Brazil. They can regulate Big Meat and Dairy and oblige companies to establish science-based emission reduction targets, aligned with the 1.5°C trajectory and including scope 3 in their regular reporting. And they can support farmers to move to more sustainable practices like agroecology and organic farming. To do this, governments must crack down on greenwashing, including through clear guidelines on how green claims can be formulated and by enforcing penalties on greenwashing companies.

Among other recommendations, companies should develop climate target plans that focus on absolute emissions reductions as a priority. Carbon insetting, such as carbon sequestration, should play a limited role in the accounting of their emissions focusing on absolute emission reductions, and carbon offsetting should not be included as part of meeting climate targets. Big Meat and Dairy need to urgently set and regularly report on methane reduction targets (of at least 30% by 2030), and present concrete plans on how they will reduce emissions from their supply chains. Companies should set clear trajectories that include reductions of livestock numbers and shift to less and better meat and dairy as well as more plant-based products.

For a full list of recommendations, see section 4., 'Conclusion and recommendations', in Changing Markets' July 2024 report, *The New Merchants of Doubt*.

For more on how the industry uses the term regenerative agriculture to appear 'green' or 'climate friendly', see section 1.4.2., 'Regenerative agriculture - context and background', in *The New Merchants of Doubt*.[108]

For more on GWP*, see section 1.4.3., 'GWP*: A new climate metric to downplay methane emissions', *The New Merchants of Doubt*.[109]

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