The New Faces of GWP*

Temperature Neutrality and No Additional Warming

How new narratives are obscuring the meat and dairy industry's attempts to delay climate action

Briefing Note

This report was researched and written by the Changing Markets Foundation.

www.changingmarkets.org

Design: Pietro Bruni - www. toshi.ltd

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Background

In November, world leaders will meet in Brazil to review progress on the Paris Agreement. Before they do, every country must file its new Nationally Determined Contribution (NDC) - their climate plan for keeping global heating below 1.5°C. To stay on track, the science is clear: global emissions must fall 42% by 2030,[1] and methane by 45%.[2] Yet scientists last year warned how methane levels are still rising with no hint of decline.[3]

The meat and dairy industry are a major driver of this crisis. Researchers say high- and middle-income countries must cut livestock emissions by around 60% within the next decade,[4] led by smaller herds and lower meat consumption in the wealthier world. Scientists say without concerted action on food systems there's no way of meeting the Paris Agreement's 1.5 C commitment,[5] and the higher 2 C may also be out of sight.

But instead of acting, big producers are deploying numerous tactics to delay regulatory action.[6] This includes lobbying for GWP* - a new way of measuring emissions that would let them look climate-friendly while keeping pollution high.

In 2023, our report Seeing Stars debunked various issues with GWP* - including demonstrating how GWP* can be used by companies and countries to claim they are climate neutral or even cooling the planet while continuing to emit huge amounts of methane.[7]

This briefing represents an update based on FOI requests in Ireland, New Zealand, Europe and Northern Ireland looking at the state of play before COP30. This includes decoding the new terminologies that are being developed, like no additional warming and temperature neutrality, which are increasingly used by policymakers to obscure GWP*'s use. We also look at objections from scientists - and how countries' use of GWP* adds up concretely in terms of emissions.

What is GWP*

GWP* is a method developed by Oxford researchers in 2019 to measure methane emissions. Unlike the IPCC's standard metrics (GWP20 and GWP100), which assess the total amount of methane in the atmosphere, GWP* measures changes in methane levels over time.

While GWP* accurately reflects methane's short-lived nature, its use by major polluters has distorting effects. Researchers Joeri Rogelj and Carl Schleussner have warned that GWP* is best applied at the global level, not to individual countries or companies.[8] Because it focuses on increases and decreases rather than total emissions, large polluters can claim progress for small efficiency gains - even while maintaining high overall emissions - while smaller emitters appear worse for minor rises.

The danger is that GWP* enables false claims of "climate neutrality" simply by stabilising emissions. As University of Southampton academic Caspar Donnison has described:

"Imagine a house is on fire, and someone is actively pouring gas on the fire. They then stop pouring and want credit for doing so, despite still feeding the fire. Perhaps they claim they are now "fire neutral"." [9]

Methane does break down faster than CO_2 (after roughly 12 years), but it is still a powerful greenhouse gas - 80 times more potent than CO_2 over 20 years. Despite its short lifespan, global methane levels are now at record levels,[10] and the Intergovernmental Panel on Climate Change has confirmed they are acting increasingly like a stock gas rather than a flow gas.[11] That's why some argue GWP20 - which captures methane's intense short-term warming - is a fairer measure for driving urgent action. While GWP100 is the most established metric, there are also precedents for using GWP20 in policy - for example, the city of New York uses this metric for its official greenhouse gas reporting.[12]

As GWP20 shows - and assessments such as the Global Methane Assessment have found - methane's short-lived nature doesn't make it benign; it makes cutting it fast even more critical.[13]

The new narratives of GWP*

A growing number of new climate terms are being used to describe targets based on GWP* - a metric that lets polluters claim they are "no longer contributing to warming" by merely stabilising methane emissions. Often, these terms appear without disclosing that they rely on GWP*, obscuring what's really being measured.

Climate neutrality: In the U.S., "climate neutrality" has been popularised by industry-funded academics such as Frank Mitloehner[14] and adopted by major groups like the National Cattlemen's Beef Association.[15] It redefines neutrality to mean stabilising emissions, not eliminating them. A 2024 study called this framing misleading,[16] noting it hides the use of GWP* and falsely implies big polluters can be "neutral" while still emitting heavily.

No additional warming: New Zealand describes its methane target as "no additional warming",[17] a phrase rooted in GWP*. Yet official materials rarely mention GWP*, raising transparency concerns. This approach assumes methane doesn't build up in the atmosphere - ignoring that levels are now 262% higher than pre-industrial times and still rising.[18] It also rewards historic emitters through "grandfathering". As University of Cork scientist Hannah Daly has explained:

"Imagine a factory pouring 100 barrels of toxic waste into a river every year. One year, it cuts back to 90. Under GWP, this factory would be counted as contributing to cleaning up the river, even as it still pollutes the river. A similar factory that had created no pollution, but begins emitting 10 barrels, would be seen as far worse under this logic, despite having a much smaller impact." [19]*

Temperature neutrality / stabilisation: Ireland has adopted "temperature neutrality" to describe its GWP*-based approach.[20] Like "no additional warming", it suggests steady methane levels "stabilise" temperatures - but only at a dangerously high baseline. This contradicts the Paris Agreement principle that historic emitters must make deeper cuts, not lock in pollution. Ireland's carbon budget mentions "temperature neutrality" numerous times without ever naming GWP*.

Cooling: Advocates of GWP* claim that reducing methane causes "cooling". While global methane cuts of 45% could lower temperatures by 0.3°C by 2030,[21] this applies only at the global scale. Large polluters cutting slightly from very high baselines cannot credibly claim to "cool" the planet. Such rhetoric mirrors discredited "avoided emissions" offsets - rewarding polluters for doing less harm rather than real change in an inversion of the "polluter pays" principle.

Biogenic methane: Governments such as Ireland, and industry groups in Germany and New Zealand try to stoke confusion by emphasising "biogenic methane" as opposed to 'fossil methane' to try and differentiate emissions from livestock as part of a natural, short-lived cycle.[22] In reality, methane from agriculture warms the planet just like fossil methane - and record livestock numbers mean it's now behaving more similar to a stock gas.

Country findings

New Zealand

New Zealand is the frontrunner for applying GWP* at a national level. In November 2025, the New Zealand government set a dangerous precedent by approving targets based on GWP* into law.[23]

This process was set into motion in 2024 when the government established a panel to explore a methane target based on a "no additional warming" approach - a reference to GWP*, though the metric isn't explicitly named in public materials.[24]

That panel's report suggests reducing agricultural methane by 14-24% by 2050 (relative to 2017 levels) under a no additional warming scenario. This would be a lower ambition than New Zealand's existing legislated range of 24-47% by 2050, which was the former target enshrined under its Climate Change Response Act. The independent Climate Change Commission has recommended tightening methane reductions to 35-47% by 2050, which surpasses the lower edge of the existing range.[25]

In June 2025, over 25 international climate scientists published an open letter criticizing the "no additional warming" framing as weakening ambition and enabling large agricultural emitters to persist.[26] The panel that the government formed to look into "no additional warming" also had ties to industry, and dairy giant Fonterra.[27]

Documents obtained by Changing Markets via Freedom of Information (FOI) show in May 2025, a representative of the farmers union Federated Farmers lobbying to push for an even lower target of 14% under 'no additional warming' goals.[28] This was despite Federated Farmers in February suggesting that the government should consider the 14 - 24% target in its NDC.

New Zealand's leading farming lobbies (Federated Farmers, Beef + Lamb NZ, Dairy NZ) are also pushing[29] for GWP* to be adopted[30] in New Zealand's NDC.[31] As a briefing obtained under Freedom of Information Request [by Greenpeace New Zealand] showed, Dairy New Zealand also called on the government to use its presence in international climate negotiations to push for GWP*.[A] More recently, Beef + Lamb NZ have co-authored a letter with 30 industry organisations from 14 countries, calling for the UN to adopt a split-gas approach in international reporting.[32]

Under current UNFCCC rules, countries report their emissions using GWP100, but the metric regime is under review, with possible changes by 2028 - potentially opening a path for GWP* adoption if lobbying succeeds. Environmental advocates argue that a "split-gas" should not be a cover to weaken ambition on methane or to introduce GWP* as a way to reduce accountability. Instead, where methane is

A Dairy New Zealand, in a letter to Todd Mclay on becoming Minister on 1 December 2023 sent a letter outlining its initial asks. This included "Adjusting New Zealand's mandate to international climate negotiations to showcase New Zealand' s split gas approach and the importance of attention on warming outcomes."

reported separately it should be monitored as methane,[33] with reductions in line with a 1.5 °C trajectory, rather than in C02 equivalence, thereby avoiding the dangers of the metrics debate.

Adopting a 'no additional warming' approach using GWP*, could enable New Zealand to continue to emit the equivalent of 318 million flights from London to New York City between 2020 and 2030.

Ireland

Like New Zealand, Ireland is moving toward embedding GWP* based targets into law - and it has openly committed to promoting GWP* internationally. Unlike New Zealand's government (which has avoided public international advocacy), Ireland has shared explicit plans to push for GWP* at EU and UNFCCC levels.[34]

This shift has deep roots in domestic lobbying from powerful dairy and beef interests,[35] and the country's mainstream farmers' union, the Irish Farmers' Association.[36] Ireland first signalled its support for GWP* in 2021 (e.g. at COP26). As we revealed in *Seeing Stars,* internal emails from that time suggested it planned to promote GWP* in discussions around the Global Methane Pledge.[37]

In the past year, the Irish government has elevated its GWP* support: its advisory body, the Climate Change Advisory Council (CCAC), proposed new carbon budgets based on a "temperature neutrality" approach tied to GWP*,[38] drawing on models developed by the Irish state research agency Teagasc. However, the CCAC itself acknowledges that a temperature neutrality approach may not be compatible with the Paris Agreement's long term temperature goal to reduce. In an independent analysis of Ireland's approach, climate scientists have also found the proposals fall short of Ireland's international commitments.[39]

Ireland's new programme of government, released early this year,[40] explicitly commits to pushing for reclassification of biogenic methane under EU and global frameworks, which - if successful - would give legal weight to GWP* in future targets.

Despite modelling by Teagasc showcasing how methane emission reductions in agriculture could be achieved through ambitious measures including technical and land-use changes, the Irish Government and Climate Change Advisory Council are set to adopt a weakened biogenic methane target. FOI documents obtained by Changing Markets suggest that both DAFM (Agriculture Department) and Teagasc were aware that the proposed carbon budgets would breach Paris-aligned pathways before the carbon budget proposals were released. Another email reveals DAFM staffers pushing a "climate cooling" framing via GWP* to reduce reliance on afforestation in Ireland's upcoming land use plan. This email shows DAFM's Chief Inspector was briefed on Teagasc models using GWP*, contradicting a public claim that GWP* was "not something that is crossing my desk".[41]

Using GWP* in Ireland's emissions accounting would have huge ramifications for climate. For instance, analysis commissioned by Changing Markets found that by applying GWP* to its livestock emissions between 2020 and 2030, Ireland could justify continuing emissions equivalent to 153 million London to New York flights.

United Kingdom

The UK government has not fully embraced GWP*, but it has also not ruled out using it in the future - a notable risk given the strength of the domestic farm lobby.

In 2024, a House of Lords inquiry examined the potential use of "auxiliary metrics," including GWP*, for measuring methane emissions.[42] While the government rejected their use for national targets,[43] it left open the possibility that specific sectors or devolved administrations could adopt them in future reporting. Internationally, the UK continues to report emissions using GWP100, but has said it will revisit metric choices when the UNFCCC reviews its common accounting framework, expected in 2027.[44]

Pressure to adopt GWP* is growing within the UK. As highlighted in our Seeing Stars report, the National Farmers' Union began advocating for its application in policy in 2023,[45] supported by the Agriculture and Horticulture Development Board, a levy board with close ties to the government.[46] Myles Allen, one of GWP*'s co-creators, has also publicly encouraged its adoption by large agricultural emitters.[47,48] The NFU have recently signed onto a letter together with Beef + Lamb NZ and industry groups from 12 other countries calling for the adoption of a split-gas approach to reporting biogenic methane emissions in international reporting.[49]

In Northern Ireland, progress toward GWP* appears more advanced. Freedom of Information documents obtained by Changing Markets show that a staff member at the Department of Agriculture, Environment and Rural Affairs (DAERA) requested recalculations of emissions using GWP* to assess what the agriculture sector would need to do to achieve "climate neutrality," in anticipation of possible future legislation. The Ulster Farmers' Union has been a particularly vocal advocate for GWP* in the country.[50] Analysis commissioned by Changing Markets shows that the UK livestock sector's projected shortfall in meeting the Global Methane Pledge will be equivalent to 8.8 million London to New York flights in the year 2030 alone.

Germany

Germany has become a key focus of domestic interest in GWP*, reflecting its position as the EU's largest milk producer[51] and second-largest beef producer.[52] Several powerful industry players are actively promoting the metric. In 2023, the Deutscher Bauernverband (DBV), Germany's main farming lobby urged the government to include GWP* in its Climate Protection Act.[53] DBV has also produced other materials referencing GWP* and downplaying the climate-heating potential of methane,[54] and has promoted the work of the academic Michelle Cain - who helped develop GWP*.[55]

Lobbying records show that DBV operates at both national and EU levels. In 2024, it spent roughly €4.93 million on lobbying in Germany[56] and between €400,000 and €499,999 at the EU level,[57] holding 53 high-level meetings with European Commission officials—more than one per week on average.

The group also wields influence through representation on the European Parliament's AGRI Committee,[58] where its largest regional affiliate, the Bayerischer Bauernverband (BBV), held two seats as of September 2025.

European Union

Pressure is mounting on the European Union to open the door for the use of GWP*, driven by industry groups and member states with major livestock sectors, although so far, the bloc has remained firm in its position.

Ireland has committed, in its 2025 programme of government,[59] to push the EU toward looser obligations for setting climate targets aligned with the Paris goals.

Members of pro-GWP* lobbying groups—such as the German DBV—sit on the European Parliament's AGRI Committee,[60] which plays a key role in shaping agricultural policy. The AGRI Committee has previously shown openness to alternative methane metrics, expressing its support for them in a 2021 opinion related to the EU's Methane Strategy.[61] Others to have cited GWP* in response to proposed EU Farm to Fork policies during the last parliament,[62] including the bloc's largest farmers' union - Copa Cogeca and the European Dairy Association.[63]

On the industry side, the Animal Task Force (ATF EU)—a public-private partnership including leading agricultural and research organisations— released a 2023 policy brief on agricultural methane that discusses alternative metrics.[64] There are also signs of scientific interest within EU institutions.

A memo obtained by Changing Markets through a Freedom of Information request suggests that the Joint Research Centre (JRC) was exploring GWP* in mid-2024 and presented related work to the AGRI Directorate-General during internal meetings.

While the EU and Germany have made progress in reducing livestock methane emissions over the past decade, the sector remains a significant emitter and is not currently on track to meet the Global Methane Pledge. According to projections by Changing Markets, the EU's livestock sector is on track to miss the 30% reduction target set by the Global Methane Pledge for the end of this decade: in the year 2030, the projected excess emissions would be equivalent to an additional 54 million London - New York flights.

Brazil

Brazil, as the host of COP30 and the the world's largest beef exporter,[65] is facing mounting pressure to adopt GWP* from industry and influential researchers. Frank Mitloehner, a vocal advocate for GWP* with funding ties to major meat companies, has actively promoted the metric in South America, including Brazil.[66]

In May 2024, GWP*'s creator, Myles Allen urged Brazilian trade bodies, via virtual appearance at a conference, to push for the adoption of GWP* at COP30, through which they could 'make history'.[67]

The Brazilian agricultural lobby group CNA has previously called[68, 69] for the use of GTP—a metric similar in effect to GWP*—in its climate policy briefings. References to Brazil's use of GTP also appear in official UNFCCC inventories.[70, 71]

Mesa Brasileira da Pecuária Sustentável, affiliated with the Global Roundtable for Sustainable Beef and involving JBS, has endorsed GWP* as a more accurate methane metric within industry discourse. The group have also promoted the narrative that biogenic methane is not warming the planet.[72,73]

Within Brazil's state research system, Embrapa researchers have shown interest in alternative methane metrics. A 2022 Embrapa blog post,[74] for instance, argued in favour of GWP* over GTP.[75] Embrapa officials have also appeared at events with Mitloehner where GWP* was discussed,[76] and Embrapa recently ran a social media campaign on 'demystifying' livestock which referenced GWP*.[77]

Officials in industry, Brazil's agriculture ministry (MAPA) and Embrapa are also calling for updates on how livestock emissions are accounted for ahead of COP30.

New metrics - sneaking through the back door

Across several countries, government-linked research bodies are playing a pivotal role in normalising GWP*'s use by the agriculture sector - giving its application by industry a veneer of scientific legitimacy.

The concept was first popularised by Professor Frank Mitloehner of UC Davis's CLEAR Center,[78] whose work is heavily funded by meat and dairy interests. But promotion of GWP* has now spread to state-funded and quasi-independent bodies, raising serious concerns about corporate capture.

New Zealand offers a clear example. After its independent Climate Change Commission warned against weakening methane targets, the government established a separate,[79] industry-influenced panel to explore a "no additional warming" approach - effectively GWP* under another name.[80] The panel later proposed slashing methane cuts to 14-24% by 2050, far below existing targets, sparking condemnation from climate scientists.

In Ireland, GWP* has been quietly embedded in official modelling. The Climate Change Advisory Council, created to provide impartial advice, and the state research agency Teagasc - whose board has been criticised for being dominated by indus-

try - have both advanced GWP* based scenarios in the carbon-budget.[81] According to emails obtained under FOI, an official from the DAFM suggested Teagasc use GWP* in modelling for Ireland's land-use proposals, as this approach would help Ireland achieve its 2050 goals.

Brazil's agricultural research body Embrapa has taken a similar turn. Its staff have appeared alongside Mitloehner at regional events,[82] and in 2025 Embrapa's Beef Intelligence Center launched a campaign "demystifying" livestock emissions and promoting GWP*. Embrapa's studies are now widely cited by Brazil's beef industry to justify weaker climate claims ahead of COP 30.

In the UK, the government-backed Agriculture and Horticulture Development Board (AHDB) applied GWP* in its *Beef + Lamb Roadmap* (2025),[83] claiming it "more accurately reflects" industry warming. Yet its own data show GWP* can inflate or deflate emissions depending on the baseline - underlining how malleable the metric is.

Internationally, research networks are also getting involved. The CGIAR published a 2021 briefing note suggesting that tiny methane cuts (0.35%) could suffice under GWP*,[84] while the Global Research Alliance on Agricultural Greenhouse Gases (GRA) - chaired by Ireland and founded by New Zealand - is drafting its position on "emission-metric comparisons," signalling growing institutional interest in the new measure.[85]

Taken together, these examples show how government-linked science is functioning to soften climate ambition and legitimise industry narratives around "climate-neutral" livestock - just as deep methane cuts are urgently needed to meet the Paris Agreement and the Global Methane Pledge..

For more information on GWP* and the role of the Big Ag lobby in pushing for this, please see our *Seeing Stars: the new metric that could allow the meat and dairy industry to avoid climate action, report.*[86]

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