

## Agricultural Organisations Across the World Call For 'Split Gas' Reporting of Greenhouse Gas Emissions

**A joint statement by agricultural organisations from Argentina, Australia, Cambodia, Canada, Colombia, Georgia, India, Ireland, Kenya, New Zealand, the United States, the United Kingdom, Uruguay, and South Africa.**

Farmers, processors and relevant sector organisations from 14 nations have united to call for the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to follow best scientific practice and take a split gas approach when reporting long-lived and short-lived greenhouse gas emissions (GHGs). A split gas approach is needed to more accurately reflect the contribution of the agricultural sector to climate change.

UNFCCC guidelines are clear and allow national GHG inventories to report GHG emissions separately and set Nationally Determined Contributions (NDCs) in any form they wish. This can be done in parallel while also reporting using the standard GWP<sub>100</sub> metric. Uruguay has already demonstrated the best scientific practice and set a split gas NDC: other countries should follow this leadership.

In addition, the UNFCCC has committed to a first review of its modalities, procedures and guidelines, to be undertaken by the Subsidiary Body for Scientific and Technological Advice (SBSTA) no later than 2028.<sup>1</sup> This review provides an important opportunity to embed a split gas approach into future reporting frameworks, ensuring that national inventories and NDCs better reflect the distinct warming behaviours of long- and short-lived GHGs. We request that all UNFCCC parties support a split gas approach as an outcome of this review process.

Long- and short-lived GHGs behave very differently in the atmosphere. Long-lived gases, such as nitrous oxide (N<sub>2</sub>O) and carbon dioxide (CO<sub>2</sub>), are sometimes described as 'stock' gases because they accumulate over time. Short-lived gases, such as biogenic methane, are often referred to as 'flow' gases because their relatively short lifetime means the rate of their ongoing emissions determines their warming effect.

The current practice of using GWP<sub>100</sub> to report NDCs creates ambiguity by obscuring the warming impacts of the different gases. Although GWP<sub>100</sub> works well when summing or comparing the warming impact of various long-lived GHGs (such as carbon dioxide and nitrous oxide), it does not accurately represent the warming impact of short-lived GHGs (such as biogenic methane).

The science is clear: emissions of long-lived gases must reach net zero by reducing as far as possible and then balancing with carbon storage or removals to prevent further warming. In contrast, emissions of short-lived gases, like biogenic methane, only need to decline gradually to have the same effect. This fundamental difference in behaviour needs to be recognised in climate policy, and adopting a split gas approach is the most effective way to do so.

The agricultural sector is not alone in making this request and supports an earlier initiative by scientists calling for best practice reporting, by separate gases, rather than continuing to use GWP<sub>100</sub> as a combined metric.<sup>2</sup>

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<sup>1</sup>UNFCCC, 2018, *Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement*, Decision -/CMA.1, [https://unfccc.int/sites/default/files/resource/cp24\\_auv\\_transparency.pdf](https://unfccc.int/sites/default/files/resource/cp24_auv_transparency.pdf)

<sup>2</sup>Allen, M.R., Peters, G.P., Shine, K.P. *et al.* Indicate separate contributions of long-lived and short-lived greenhouse gases in emission targets. *npj Clim Atmos Sci* **5**, 5 (2022). <https://doi.org/10.1038/s41612-021-00226-2>

Communicating biogenic methane emissions using GWP<sub>100</sub>, as many NDCs, GHG inventories, and policies currently do, is generally an inaccurate reflection of warming. GWP<sub>100</sub> overstates the effect of constant methane emissions on global surface temperature by a factor of 3-4. It also understates the effect of any new methane emission source by a factor of 4-5 over the 20 years following the introduction of a new source.<sup>3</sup>

A split gas approach does not limit the options available to policymakers, as ambitious mitigation approaches for both long-lived and short-lived GHGs are possible with a split gas approach. Instead, it focuses policy on the warming impact of the GHGs and, therefore, on the warming impact between sectors.

In addition to taking a split gas approach, we also advocate the use of warming-based metrics relevant to respective long- and short-lived gases, which have already been recognised by the Intergovernmental Panel on Climate Change (IPCC) as providing better estimates of warming impact.

We ask that all UNFCCC parties:

1. Communicate their NDCs using a split gas approach;
2. Complement split gas NDCs with split gas GHG inventories, split gas GHG budgets, split gas product life cycle assessments and take a split gas approach to all climate policies;
3. Support the use of a split gas approach as an outcome of the first review of UNFCCC modalities, procedures, and guidelines;
4. Use, where appropriate, warming based metrics that have been recognised by the IPCC to better compare the warming impact of long and short lived GHGs relative to GWP<sub>100</sub>; and
5. Support robust discussion on the balance between biogenic methane management within the agricultural sectors and the need for food security under a changing climate.



<sup>3</sup>IPCC, 2021, *Climate Change 2021: The Physical Science Basis*, Working Group I Contribution to the Sixth Assessment Report, Chapter 7, Section 7.6.2, p. 1080, <https://doi.org/10.1017/9781009157896>



National Cattlemen's Beef Association



National Sheep Association  
www.nationalsheep.org.uk



Federación Rural  
Con el campo, para el Uruguay.



The joint statement represents: **Argentina** – Mesa Argentina de Carne Sustentable; **Cambodia** – Cambodian Farmer Federation; **Australia** – Australian Wool Innovation Ltd, Cattle Australia, Sheep Producers Australia; National Farmers Federation; **Canada** – Canadian Cattle Association, Canadian Federation of Agriculture, Canadian Sheep Federation; **Colombia** – Federacion Colombiana de Ganaderos; **Georgia** – Georgian Farmers Association; **India** – United Farmers Front; **Ireland** – Irish Farmers Association, Meat Industry Ireland; **Kenya** – Kenya National Farmers Federation; **New Zealand** – Beef + Lamb New Zealand, DairyNZ, Federated Farmers of New Zealand; **South Africa** – Red Meat Industry Services, Southern African Agri Initiative, TLU SA; **United Kingdom** – British Meat Processors Association, National Farmers Union, National Sheep Association, Quality Meat Scotland; **United States** – Meat Institute, National Cattlemen’s Beef Association, US Roundtable for Sustainable Beef; **Uruguay** – Asociacion Rural, Cooperativas Agrarias Federadas, Federación Rural; and **Global/International** – Global Roundtable for Sustainable Beef, International Wool Textile Organisation

## Q&A

### What we're calling for:

A split gas approach to emissions reduction targets. This would create separate emissions reduction targets for different types of GHGs that warm our atmosphere in different ways.

### Why we're calling for it:

Separate targets help focus attention on each type of GHG reduction needed to keep our climate within liveable boundaries.

Currently most countries do not make a distinction between emissions reductions from short-lived pollutants and long-lived pollutants in their net zero goals. This means the real-time impact of planned reductions cannot be properly understood and may or may not constrain climate change within liveable boundaries.

Expressing methane emissions as carbon dioxide equivalent emissions using GWP<sub>100</sub> (as most NDCs do) overstates the effect of constant methane emissions on global surface temperature by a factor of 3-4. It also understates the effect of any new methane emission source by a factor of 4-5 over the 20 years following the introduction of the new source.

### Further work on metrics

The future warming of our atmosphere depends on our current temperature and emissions, and future emissions (and removals), but different combinations of short and long-lived emissions will produce very different futures. The use of the current single-basket approach does not adequately capture this reality.

The IPCC AR6 pathways show when the world could 'tip' into a warmer state based on the emissions trajectory. They do this by combining methane emissions and carbon dioxide emissions in a way that averages methane's impacts over 100yrs (hence GWP<sub>100</sub>). This means that over a 100yr period, methane emissions are estimated to be 28 times more powerful than carbon dioxide emissions in terms of temperature impact. But, as highlighted above, the current modelling overstates the effect of constant methane emissions on global temperature by a factor of 3-4 while understating the effect of increased methane emissions by a factor of 4-5.

Climate policy is fundamentally about reducing atmospheric warming. A split gas approach would be a more accurate way of reporting to ensure that agricultural climate policy is on the right track.

### How to do it?

We request that countries set NDCs that do not bundle methane and carbon dioxide together. Separate contributions from short-lived and long-lived GHGs can be reported by countries. This does not necessarily have to affect any existing or planned NDCs or long-term net zero strategies reported using aggregate CO<sub>2</sub>-e GWP<sub>100</sub>.

### So what next?

We believe the extra transparency of a split gas approach will over time produce policy shifts which better protect our future climate and more accurately reflect the contribution of the beef and dairy sectors.

Uruguay has already started to develop separate future emissions pathways for short and long-lived GHGs. The conversation needs to shift from reducing emissions to also reducing warming impacts.

Establishing a separate pathway for short-lived emissions opens up a new conversation about what is a 'fair and achievable' emissions reduction target for global agriculture.