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Scaling Methane Mitigation in Sustainable Tropical Agrifood Systems

Brasília, Brazil | 3-5 September, 2024

Outcome Document

Background

The workshop on Scaling Methane Mitigation in Sustainable Tropical Agrifood Systems took place at the margins of the meeting of the G20 Agriculture Working Group, as a key deliverable in response to the Group's *Priority 1: Sustainability of agrifood systems in their multiple paths*. The workshop brought together over 100 key stakeholders from government, research and scientific institutions, development and climate finance, private sector, and civil society to address methane emissions in tropical agriculture. Hosted by the Ministry of Agriculture & Livestock of Brazil and the Climate & Clean Air Coalition (CCAC), in partnership with Clim-Eat and the World Bank, the workshop fostered collaboration, knowledge exchange, and shared actionable policies and strategies to scale triple wins in tropical agrifood systems to reduce methane, enhance environmental resilience and strengthen livelihoods. The workshop recognized the need for increased ambition to accelerate sustainable tropical agriculture to feed 8.6 billion people by 2030 through upscaling G20 countries' best policies and building on successful experiences.

Opportunities for G20 Action on Sustainable Tropical Agriculture

Today, 2.3 billion people already face food insecurity due to the impact of climate change. According to the World Bank, falling crop yields driven by climate change will push 43 million more people into poverty in Africa alone by 2030. Altogether, about 80% of the people most vulnerable to crop failures and hunger from climate change live in tropical countries. This makes sustainable tropical agriculture essential to feed 8.6 billion people in a healthy and nutritious manner by 2030.

Business-as-usual approaches are not sufficient to address the magnitude of this challenge. To contribute to addressing this urgent issue, Brazil, through its G20 Presidency, initiated the Global Alliance Against Hunger and Poverty with the objective of gathering funds and knowledge for the implementation of public policies and social technologies proven effective in reducing global hunger and poverty. Considering climate change will be fundamental to the success of this initiative, and reducing methane is the fastest route to achieve the triple wins of reduced emissions, enhanced environmental resilience and strengthened livelihoods, the G20 Ministers of Agriculture are uniquely positioned to realize these triple wins, in line with the G20 Agriculture Working Group Ministerial Declaration, which calls for a focus on outcomes-driven sustainable and innovative solutions.



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Urgent Action Is Required on Sustainable Tropical Agriculture

G20 leadership is crucial to protect tropical agriculture, enable sustainable pathways, and ensure global food security.

- **Agriculture production and sustainability are inextricably linked in the face of food insecurity in a climate crisis.** The future of agrifood production is through sustainability: enhancing livelihoods, resilience and global food supply today, while securing a livable planet for future generations.
- **Solutions need to be tailored to the scale and geography of production systems.** There are no “one-size-fits-all” solutions—efforts towards sustainable tropical agriculture should acknowledge the differing capacities and roles of smallholder farmers, mid-sized producers, and large agribusinesses. Simple, locally adapted and process-based innovations that enhance productivity exist and should be prioritized in scaling efforts through technical extension and financial support. Early-adopters of novel innovations should be supported through investment and incentives.
- **Reducing methane is the fastest path towards achieving a triple win** of strengthening livelihoods, enhancing environmental resilience and near-term reductions in global warming. For methane reduction in agriculture, benefits extend beyond emission reductions, offering co-benefits such as improved farm productivity, resilience to climate shocks, and reducing production costs.
- **Integrated packages of solutions will scale climate action in the agrifood system.** These solutions must encompass advisory services, policy frameworks, and financing mechanisms that work together to drive innovation and adoption. Examples of sustainable tropical agriculture policies from Brazil’s ABC Plan and Vietnam’s One Million Hectares program demonstrate that integrated and tailored, sustainable agricultural practices can effectively combine emissions reduction and productivity enhancement at scale.
- **Reliable data is fundamental to inform good policy and practices.** High-quality, standardized data is needed to inform evidence-based decision-making and policy design, strengthen accountability and support climate finance flows. The development of inventories and MRV systems adapted to tropical agriculture are urgently needed—stronger alignment between public, private and civil society actors will enhance data sharing, reduce duplication and streamline efforts in scaling sustainable tropical agriculture.



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Way Forward to COP30

The UNFCCC COP30 meeting under Brazil's Presidency offers a major milestone to advance efforts to mitigate methane emissions in sustainable tropical agrifood systems. In the lead-up to this summit, there is an opportunity to develop concrete mechanisms and present results of efforts as a form of inspiration from the G20 to the rest of the world. Three critical avenues forward include:

- **Convene** high-level dialogues on sustainable tropical agriculture among G20 countries. This will include through the Agricultural Market Information System (AMIS) of the G20 and regional workshops with key partners, looking ahead toward COP30.
- **Mobilize** partners to scale simple, process-based solutions for climate action in tropical agriculture systems, that realize productivity gains, while reducing emissions and enhancing resilience. This will include the B20 group of businesses as well as relevant scientific, civil society and international organizations.
- **Facilitate** lesson learning on innovative financing mechanisms to scale solutions, drawing on examples including the ABC Plan's ten years' experience in Brazil.

Annex

Key Findings from the “Scaling Methane Mitigation in Sustainable Tropical Agrifood Systems” Workshop (3-5 September 2024 in Brasilia, Brazil)

- **Locally Adapted Solutions for Increasing Production Efficiency:** A wide range of solutions from research and innovation institutions can significantly contribute to mitigating methane emissions in agriculture by enhancing production efficiency. These include integrated crop-livestock systems, advanced breeding techniques, and dietary improvements for livestock, among others. However, scaling these innovations requires robust support in the form of funding, technical extension, knowledge exchange, and incentives for adoption. Targeted efforts are needed to overcome barriers to scaling and ensure that locally adapted solutions are accessible to producers.
- **Linking Methane Roadmaps to Climate Finance:** Mobilizing climate finance to place-based roadmaps to reduce methane will be crucial to meeting global goals around climate mitigation. Many methane abatement solutions offer co-benefits, aligning with broader climate targets such as reducing methane. Key opportunities here include aligning the methane agenda with other greenhouse gases, as well as ensuring enhanced data quality, accessibility, and integration into global and regional financing frameworks.
- **Data and MRV:** Data standardization, quality, and availability represent significant bottlenecks for unlocking investment, incentivizing methane abatement, and providing monetary value to producers. Prioritizing the improvement of baseline methane inventories and promoting data sharing are essential to enable bottom-up, context-specific prioritization of methane reduction activities. This will also provide the transparency and accountability needed to attract investments and scale methane abatement practices.
- **Incentive-based Models and Repurposing Subsidies as Key Levers for Adoption:** The successful adoption of methane-reducing technologies and efficiency-enhancing practices relies on improving both productivity and profitability for primary producers. Incentive-based models, including results-based payments and new financing models that reduce interest payments for sustainable agriculture practices, demonstrate significant potential for accelerating the uptake of these technologies across scales. In addition, repurposing existing subsidies remains a critical lever to boost adoption. Both require cross-ministerial collaboration to ensure policy coherence and alignment with (national) methane mitigation strategies.



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- **Exploring Finance Models for Scale:** Key opportunities include de-risking agricultural investments, enhancing voluntary carbon markets, and expanding payments for environmental services (PES). Success in these areas depends on improving MRV systems and fostering better coordination between public and private sector actors to streamline investment flows and align financial incentives with methane reduction goals.
- **Integrated Approaches for Differentiated Groups:** Methane abatement in tropical agricultural systems requires integrated solutions, that enable the triple win of strengthening livelihoods, enhancing resilience and supporting mitigation. These integrated approaches should address methane emissions, farm-level practices, and the profitability of farming operations. However, policies must recognize the varied needs of different producers. Early adopters should be incentivized to lead by example, while mid-size and smallholder farmers need tailored technical assistance and management support to ensure broad adoption of methane-reducing technologies.
- **Improve Collective Action by Building on Individual Strengths:** The methane challenge in agriculture necessitates a collaborative approach between public and private sectors. Enhanced public-private collaboration offers an opportunity to standardize efforts and align methane mitigation agendas. The strengths of each sector should be leveraged: private actors are well-placed to drive the scaling of input-based technologies (e.g., feed additives, breeding), while process-based innovations (e.g., integrated farming systems, herd management) require stronger public sector involvement and funding. Civil society, NGOs, and philanthropic organizations also play a crucial role by facilitating collaboration, de-risking investments, and fostering innovation ecosystems.
- **Differentiate Responsibility across Value Chains:** The responsibility for methane mitigation should be distributed across the value chain, acknowledging the differing capacities and roles of smallholder farmers, mid-sized producers, and large agribusinesses. While smallholder farmers often lack the resources and technical capacity to implement methane-reducing technologies without external support, larger actors in the value chain—such as processors, distributors, and retailers—possess greater financial and technological capabilities. Regulations around scope 3 emissions present a critical opportunity to ensure the responsibility of methane abatement in agriculture is equitable, enabling all actors to contribute according to their means, while fostering a just transition across the value chain.