Global Methane Hub

From Super Pollutant to Super Solutions

The Power of Methane Action

January 1 - December 31, 2024



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Our Mission

Accelerate action by governments, civil society, researchers, investors, and the private sector to develop and implement strategies that will catalyze rapid systemic reductions in methane emissions in the energy, agriculture, and waste sectors.

Connect with Us

Global Methane Hub

Gratitude from Leadership

A Defining Moment for Climate Action

The world is changing faster than ever, and the challenges before us demand bold action, resilience, and unwavering urgency. In this pivotal moment, philanthropy must go beyond filling gaps—it must fuel systemic solutions and ensure that the climate crisis, particularly methane reduction, remains at the forefront of global priorities.

Thanks to visionary supporters like you, the Global Methane Hub is leading this charge.

As an early funder, I have had the privilege of witnessing the Hub's extraordinary growth. From delivering $62.6M in its first year to $100.2M in 2024, GMH has granted a total of $250M across 227 grants in just three years. These investments have built a global ecosystem for methane mitigation, leveraging every dollar to maximize our impact. The Hub now holds a vantage point on methane that no single funder or organization could achieve alone—multiplying our philanthropy and ensuring that resources flow where they are needed most.

Through an expanding coalition of funders, governments, NGOs, and multilateral organizations, we are not just keeping pace with the crisis—we are driving meaningful action.

Your commitment to the Global Methane Hub is shaping a future where decisive action triumphs over inaction. The road ahead may be uncertain, but our resolve is not.

On behalf of the Advisory Board and Steering Committee, thank you for standing with the Global Methane Hub.

Let's continue this momentum—because the time to act is now.



Marisa de Belloy
Chair of the Advisory Board
Global Methane Hub
President
High Tide Foundation

Seizing the Moment
Driving Methane Solutions in a Shifting Landscape

At the Global Methane Hub, we don't wait for opportunities—we create them. Some, like our inclusion in the 2024 Audacious Project Cohort, are transformational, allowing us to scale methane mitigation across high-emitting sectors and regions. Others emerge from today's rapidly shifting climate policy and funding landscape, where new risks threaten the pace and scale of global progress.

But momentum is on our side. As our Advisory Board member and former U.S. climate envoy Jonathan Pershing recently noted, no single administration or country can halt the transition to a cleaner economy. Europe, China, India, and other countries remain committed to green technology, and private capital continues to drive climate solutions forward.

Staying Ahead, Scaling Impact

This moment demands agility, strategy, and resilience—and thanks to your support, we are ready. We are tracking policy shifts, assessing financial risks, and ensuring that methane remains a top climate priority.

As you will read in this report, we are turning ambition into action with our partners:

- The Pathway Toward Zero Waste Initiative is helping cities—especially in the Global South—scale methane mitigation from organic waste.
- MethaneSAT and Carbon Mapper are making emissions data public, holding polluters accountable, and driving smarter solutions.
- In China, our investments are turning commitments into measurable action.
- The Dairy Methane Action Alliance is working with producers to measure, report, and reduce livestock methane emissions.
- Our European grantees are rebutting industry opposition to the EU Methane Regulation, working closely with GMH to help keep implementation on track.

The Time is Now

Methane reduction is a win-win-win—for the climate, public health, and economies worldwide. The solutions exist. The funding is mobilizing. And what we do best is deliver resources to reach the people and places that need them most.

Thanks to your support, we are prepared for the challenges ahead. This report will show you how we are delivering impact—now and for the future.

Marcelo Mena
Chief Executive Officer
Global Methane Hub



Our KPI Framework
Navigating Impact with Precision

At GMH, integrating Impact and Learning means building a living framework that evolves through collaboration, reflection, and innovation. We're using KPIs not just to track progress, but to spark deeper conversations and adapt our "emergency brake" strategies to slow climate change. In a time of global uncertainty, we're co-designing catalytic methane action to ensure every philanthropic dollar drives lasting impact.



Alexandre Sánchez
Senior Impact and Learning Officer
Global Methane Hub

At GMH, our commitment to measurable change drives everything we do, and our new Key Performance Indicators (KPIs) framework serves as a compass for tracking progress, refining strategies, and scaling impact.

2024 marked a turning point in how we measure performance, learn from experiences, and adapt our approach. Moving forward, we will integrate a KPI framework into our Impact and Learning program, reporting annually on key metrics while combining data-driven insights with real-world narratives that highlight the contributions of our funders, grantees, and partners.

Our goal is not just to track numbers but to capture the full scope of our impact. We blend quantitative measures with storytelling to foster deeper reflection, shared learning, and collective progress toward our methane mitigation goals.

Impact and Learning is GMH's approach to Monitoring, Evaluation, and Learning (MEL). In 2023, we renamed it in response to encouragement from our funders to develop a simple and more functional MEL system.

Our KPIs

The following five KPIs form the backbone of GMH's monitoring framework. We developed them to optimize reporting and to ensure accountability as we scale. More than that, they are a shared roadmap that aligns our partners, funders, and grantees around a shared vision for the world we wish to co-create.

Emissions Reduction

This is our ultimate North Star. This indicator tracks progress toward a 35% methane reduction by 2030, ensuring that all efforts are driving real mitigation.

NDC Commitments

Nationally Determined Contributions (NDCs) signal government willpower. We track how countries are integrating methane into their climate commitments at the global level, contributing to a collective target to keep warming under 1.5°C.

National Methane Action Plans (NMAPS)

These sectoral plans are where policy meets implementation. They ensure that national governments translate commitments into tangible methane reduction strategies, establishing the policies that make NDCs a local reality.

Methane Finance Flows

Today only 2% of global climate finance goes to methane mitigation—and without financing, commitments are just paper. We track whether investment flows are keeping pace with the scale of the methane challenge.

Global South Capacity

True impact requires equity, but also providing support where emissions are rising. Today more than 80% of emissions occur in the Global South. We track how we are building methane reduction capacity in the regions where finance is most needed and make sure the Global South plays a central role.

Each of these is a signal that helps us anticipate roadblocks, scale successes, and drive smarter action.

The KPIs Guiding Us

SIGNS OF PROGRESS

Increased focus on methane reduction by government leaders, business coalitions, companies and other actors (e.g., methane is part of official COP, G7, and G20 decisions; methane reduction plans are announced)

Notable advancements in technological solutions (e.g., evidence and commercialization of methane mitigation technologies in livestock and rice production; increased use of methane oxidation technologies for abandoned mines and landfills; deployment of improved logistics systems that prevent food loss and waste)

Increased financial flows from conventional technology to low-methane alternatives (e.g., shifting funding in waste sector from incineration and open landfills to waste management systems with methane capture and minimum methane mitigation targets)

Increased use of satellite data in accountability and decision-making (e.g., increased follow-up actions resulting from MARS alerts; utilization of MethaneSAT and Carbon Mapper data in national regulations like import standards)

PROJECT RESULTS

GOAL	BASELINE IN 2024	TARGET IN 2030
Reduce human-caused methane emissions to help avoid breaching 1.5°C	**372.0 million tons of methane were emitted per year in 2020, including:** • 130.2 million tons from energy (35% of human-driven emissions) • 148.8 million tons from agriculture (40% of human-driven emissions) • 74.4 million tons from waste (20% of human-driven emissions)	**214.9 million tons of methane are emitted per year, a reduction of 35%, including:** • 32.6 million tons from energy (target reduction of 75%) • 133.9 million tons from agriculture (target reduction of 10%) • 48.4 million tons from waste (target reduction of 35%)
Accelerate formal methane-related commitments at the global level	15 countries have methane-specific targets in their NDCs	150 countries have methane-specific targets in their NDCs, covering at least 80% of all global methane emissions
Support development of national methane action plans (NMAPs) and sectoral mitigation plans and policies	15 countries, including six in the Global South, have NMAPs or sectoral mitigation plans and policies	100 countries, including at least 60 in the Global South, have NMAPs or sectoral mitigation plans and policies
Steer international climate finance and additional funding sources towards methane mitigation	$1.4 billion in multilateral development bank finance dedicated to methane mitigation in 2023	$4.2 billion in multilateral development bank finance dedicated to methane mitigation annually
Build capacity in countries in the Global South to reduce methane	GMH directed 49% of funding to the Global South to date, of which $7.6 million was allocated toward capacity building efforts	GMH directs 70% of funding to the Global South and at least $10 million is allocated to capacity building

Beyond Measurement
KPIs as a Tool for Collective Action through Impact & Learning

At GMH, we believe that tracking progress can be the cornerstone to building an intelligence-gathering system that helps us look ahead. These KPIs will be embedded into our Impact and Learning framework to connect the dots across our methane mitigation efforts, ensuring that insights flow seamlessly between strategy, operations, and implementation.

We will not just measure change after the fact; instead, we will use these KPIs and our monitoring system to help us decide where to intervene, scale, and adapt. This is not about accountability alone—it is about shared learning, deep reflection, and strategic action.

This approach moves us beyond compliance-based reporting to a dynamic system of continuous reflection and collective action.

Responsiveness and adaptiveness

Our KPI framework establishes foundational indicators that measure what we initially believe is essential. However, we prioritize learning over rigid adherence to these metrics. We remain open to adjusting our KPIs as we discover what drives impact, ensuring our measurement approach evolves alongside our programs to stay relevant in changing contexts.

Connecting information

KPIs and progress indicators connect our internal systems—dashboards, Impact and Learning plans, and annual reports—with external intelligence from grantee reporting, partner conversations, and expert consultations to ensure insights flow freely and inform action.

Prioritizing reflection, learning, and adaptive strategy

KPIs will help us answer learning questions. We will actively share insights with funders, grantees, and stakeholders to create opportunities for shared learning and adaptation.

Global Methane Hub Milestones

While we introduce KPIs and establish the 2024 baseline here, early signs of progress already highlight the growing momentum behind methane mitigation. GMH's efforts have driven policy shifts, expanded global methane strategies, and strengthened monitoring systems that enhance accountability.

At COP29 and beyond, we have helped elevate methane reduction to a top-tier global priority, ensuring it remains central to climate negotiations, national commitments, and international finance. These milestones are more than just indicators of progress—they are pivotal moments shaping the future of methane action worldwide. The following sections will explore these transformative efforts, the opportunities they unlocked, and the path forward for sustaining and scaling this progress.



Global Methane Hub Milestones

2022

Global Methane Hub Established

Marcelo Mena joined as CEO, marking the operational launch of the Global Methane Hub.

Funding to CCAC & Expansion of the Global Methane Pledge

GMH allocated **$10 million** to the Climate and Clean Air Coalition (CCAC) to scale methane-cutting interventions in 30 countries. This funding helped grow the Global Methane Pledge (GMP) to 121 member nations.

2023

Launch of LOW-Methane Initiative & WasteMAP

LOW-Methane: Lowering Organic Waste Initiative aims to support 40 jurisdictions in reducing methane by one million tons annually and unlocking $10 billion in public and private investment well before 2030.

WasteMAP: Launched Waste Methane Assessment Platform, a heatmap platform for the municipal solid waste sector, to enhance waste sector transparency and mitigation efforts.

Launch of Enteric Fermentation R&D Accelerator

GMH Announced a $200 million initiative to address livestock methane. This is the largest globally coordinated investment in solutions like feed additives, vaccines, genetics, and improved measurement technologies.

Sunnylands Statement on Climate Cooperation

The United States and China issued the Sunnylands Statement, with China committing to develop methane and greenhouse gas reduction targets for 2035—an effort supported by GMH and its partners.

Multiplying Millions in Methane Finance

$3.5 million from GMH matched $3.5 million from Environment Canada to mobilize more than $350+ million by the Inter-American Development Bank's Too Good to Waste Initiative, which sets a 30% methane mitigation target for the bank's waste portfolio.

In addition, $3 million from GMH added to $1 million from the U.S. State Department, mobilizing $900 million through the International Fund for Agricultural Development to provide technical assistance supporting the integration of methane reductions in agriculture and food systems in 15 countries.

2024

$10M Sparks $13B: GMH and Hewlett Back CH4D Methane Mitigation Platform

GMH, in partnership with the Hewlett Foundation, awarded a $10 million grant to the Global Methane Reduction Platform for Development (CH4D). This funding will leverage at least $13 billion in methane-focused climate investments across Africa, Asia, and Latin America.

China's Methane Action Plan

GMH played a key role in shaping China's first methane action plan, which aligns with the GMP and introduces new emissions standards for coalbed methane.

COP29 Declaration on Reducing Methane from Organic Waste

Countries responsible for 50% of global methane from organic waste pledged to set sectoral targets and implement policies for reduction.

Satellite Monitoring & Policy Shifts in Turkmenistan & Kazakhstan

GMH's co-funding of the Methane Alert and Response System (MARS) has led to advancements:

Turkmenistan, among the top methane emitters, joined the Global Methane Pledge despite no internal pressure.

Kazakhstan committed to finalizing new regulations to curb methane venting and improve leak detection and repair in the oil & gas sector.

Cities Leading the Charge
Urban Waste Reforms as a Global Climate Solution

Cities are on the front lines of the methane challenge, and they have the power to drive solutions at scale. By transforming waste systems, we're not just cutting emissions—we're creating cleaner cities, healthier communities, and stronger local economies. But to make this transition happen, cities need sustained investment, technical support, and data-driven strategies. This is where targeted funding and collaboration can turn ambition into real impact.



Carolina Urmeneta
Program Director, Waste and Circular Economy
Global Methane Hub

Unlocking the Power of Cities to Cut Methane in the Waste Sector, Create Jobs, and Build a Sustainable Future

When it comes to cutting methane emissions, national policies alone won't be enough.

More than half of the global population lives in cities, and urban areas are responsible for the vast majority of methane emissions from waste. Cities also hold the power to dramatically reduce those emissions by enforcing regulations and reshaping waste management practices.

One organization spearheading this kind of innovation is C40 Cities (C40), a GMH grantee that brings together nearly 100 of the world's largest cities to accelerate climate action.

In 2022, C40 launched its Pathway Towards Zero Waste Initiative, supporting cities—especially in the Global South—as they transition towards sustainable waste management systems that reduce methane emissions, create jobs, and improve public health.

"Cities are already addressing their methane emissions," *says Zachary Tofias, Director of the Food and Waste Program at C40.* ***"But they need more tools, financing, and technical support to scale up solutions. That's where initiatives like Pathway Towards Zero Waste, focusing on organic waste, make a real difference."***





Where Do Urban Methane Emissions Come From?

In most cities, the waste sector is among the main sources of methane emissions.

The challenge stems primarily from organic waste: food scraps, plant matter, and other biodegradable materials that release methane as they decompose in landfills. Poorly managed dumpsites lack the infrastructure to capture and neutralize methane, while even advanced landfill gas recovery systems suffer from inefficiencies and leaks. Because food waste decays relatively quickly, its emissions often occur before landfill gas collection systems are installed or expanded. In fact, 60% of methane generated by food waste in landfills is not captured. Instead, it is released into the atmosphere.

98% ***of methane emissions in most cities come from waste including organic solid waste disposal and wastewater treatment***

Cities need to move away from just collecting and burying waste. Investing in organic waste treatment—such as composting, black soldier flies, and anaerobic digestion—prevents methane formation, ensures the reuse of nutrients and energy, and generates more jobs.



Zachary Tofias
Director of the Food and Waste Program at C40

Why Aren't Cities Moving Faster?

Despite the clear benefits, urban waste reform remains a complex challenge. Cities face:

Financial constraints

Waste management is typically funded through municipal budgets, leaving it vulnerable to political shifts and short-term planning.

Operational hurdles

The focus has long been on recycling plastics and metals rather than also addressing organic waste, even though it is the largest fraction of municipal waste.

Data gaps

Many cities lack reliable waste-composition data to guide decision-making and infrastructure investments.



A Data-Driven Solution for Cities

GMH is working with C40 and a network of other organizations to close these knowledge gaps and equip cities with actionable methane mitigation strategies.

Through its support for the Pathway Towards Zero Waste initiative, GMH is helping cities to:

Assess waste and methane generation by conducting detailed waste-composition analyses to understand the volume and type of organic waste in cities and improving access to remote methane-emissions monitoring to complement this inventory information, raise awareness, and increase transparency.

Develop methane reduction plans and create long-term strategies for waste prevention, treatment, and landfill diversion projections that are attractive for financial investments.

Implement pilot projects that deploy high-impact, scalable interventions—from composting programs to biogas production.

"The work GMH is supporting is about solving systemic waste challenges," Tofias explains. "By providing cities with data and technical expertise, we help them identify the most effective actions, then move from planning to real-world implementation."

Until recently, waste systems were designed to recover recyclables with economic value. Organic waste was ignored—even though it's the biggest source of methane emissions and the hardest to manage when left untreated.

Cities Are Leading the Way

Through this initiative, cities across Africa, India, and Latin America are transforming their waste sectors.

C40 is also leveraging cutting-edge satellite monitoring technologies, such as Carbon Mapper and WasteMAP, to provide real-time insights into landfill emissions. This data allows cities and landfill operators to detect and mitigate methane leaks faster than ever before.

Ahmedabad, India

is piloting meat waste processing solutions to prevent organic waste from being landfilled.

eThekwini, South Africa

is exploring ways to extend landfill lifespan by integrating waste reduction strategies with existing gas recovery infrastructure.

Lagos, Nigeria

is focusing on public market waste collection and biogas production to reduce methane emissions while generating energy.



A Political Shift
Organic Waste as a Climate Priority

Historically, waste management has been seen as a bureaucratic, logistical challenge rather than a climate solution. That is changing.

"The Global Methane Pledge and initiatives like the Pathway Towards Zero Waste have elevated waste to a top-tier climate issue," says Tofias.

And now that mayors have started to link waste management reforms to economic development, job creation, and public health, methane reduction is no longer just an environmental concern—it's a political and economic opportunity.

Improving waste systems doesn't just cut methane emissions. It creates cleaner cities, healthier communities, and thousands of good green jobs.



Scaling Up the Impact

GMH, C40, CCAC, and a network of other organizations are now working to expand the priority and urgency of implementing solutions in the waste sector.

At COP28, the network launched the Lowering Organic Waste Methane (LOW-Methane) national and subnational partnership. LOW-Methane aims to:

- Cut at least 1 million tons of methane annually before 2030
- Mobilize $10 billion in funding for urban methane reduction projects
- Support at least 40 jurisdictions (cities or states) in accelerating their waste sector transformations

To mobilize finance and new regulations, action at the national level is also required. So, at COP29, countries collectively responsible for nearly half of global methane emissions from organic waste pledged to establish sectoral targets for methane reduction within future NDCs, and to implement concrete policies and roadmaps to achieve these goals.



ABOVE: *Senior officials launching LOW-Methane at COP28, dramatically scaling up global action to cut methane emissions from the waste sector.*

From left to right: *Milagros De Camps, Vice Minister, Ministry of Environment and Natural Resources, Dominican Republic; Claudio Orrego, Governor of Santiago de Chile; Babajide Olusola Sanwo-Olu, Governor of Lagos; Dr. Salisu Dahiru, Director-General, National Council on Climate Change, Nigeria*

The political will is there, but we need stronger financing mechanisms to match it. That's where collaborations with partners like GMH make an enormous difference—connecting cities to the resources they need to implement their methane reduction strategies at scale.

The Road Ahead

While urban waste reform remains a massive challenge, the momentum is clear. Thanks to initiatives like the Pathway Towards Zero Waste, cities are increasingly turning climate ambition into action.

With global methane emissions needing to drop by at least 30% this decade to meet international climate goals, cities will be key players in achieving that target. And with support from GMH, C40, and a growing coalition of partners, they're more equipped than ever to deliver real change.

The data is better. The solutions exist. The funding is starting to flow. Now, it's about scaling up—fast.



Supercharging Initiatives Through the Subnational Methane Action Coalition (SMAC)

SMAC is a platform that helps subnational (state and regional) governments access the financial, technical, and policy resources they need to reduce methane emissions while learning from one another about what works and what doesn't. When California's EPA Secretary Yana Garcia announced the creation of the SMAC at a GMH event at the 2023 New York City Climate Week, she said:

We know very well that subnational governments have superpowers. We are supernational governments in many ways: our regulatory authority, our ability to partner directly with local and regional agencies as well, and our enforcement authority. As a regulator, I can appreciate very much the ability to not only detect methane leaks from existing equipment, but the ability to also work with operators to ensure there is accountability.

Learn More

LOW- M Partnership

Community of Practice on reduction of methane emissions from organic sources in Latin America and the Caribbean (MetLAC)

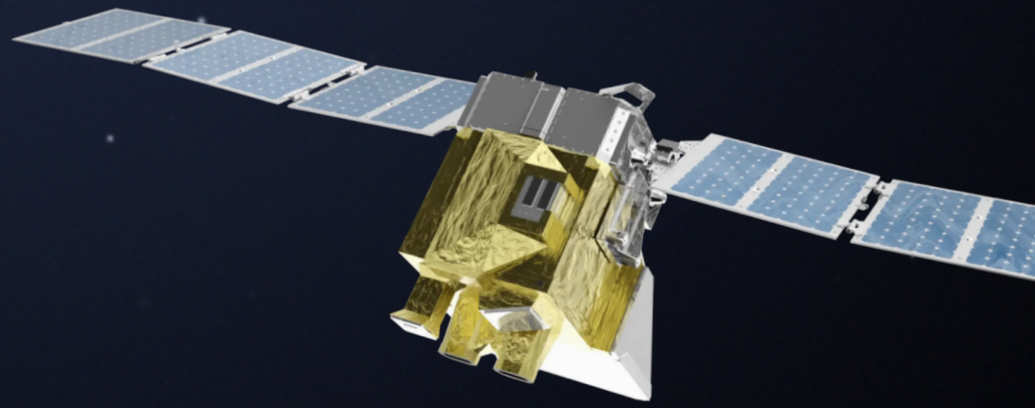
Methane Detectives
How Satellites Are Exposing the World's Hidden Emissions

For the first time, we're seeing what was invisible—real, actionable methane data at a global scale that governments and industries can no longer ignore.



Chris Konek
Lead Scientist
Global Methane Hub

New data is turning up the heat on polluters—and GMH is making sure this data leads to action



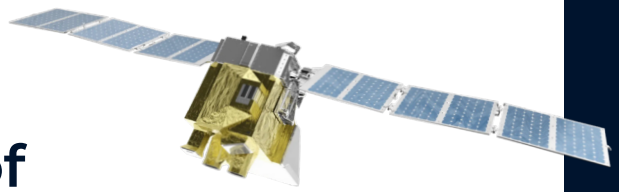
We can't reduce methane emissions if we don't know they're happening.

That's why data on methane's sources, scope, and scale is critical for policymakers, regulators, and industry leaders alike.

With methane responsible for more than 80 times the warming potential of carbon dioxide over 20 years, finding and fixing leaks and other superemitters is one of the fastest ways to slow global warming.

For years, methane monitoring has been inconsistent because it relies on voluntary industry reporting, local measurements, and scattered satellite data. But two new satellite platforms launched in 2024 are changing that with GMH support.

What We've



A New Era of Methane Detection

In 2024, MethaneSAT, developed by the Environmental Defense Fund, and the Carbon Mapper Coalition's first Tanager satellite, developed by Planet Labs with NASA's Jet Propulsion Laboratory, took flight. Together, these nonprofit satellites offer unprecedented methane tracking capabilities.

- **MethaneSAT scans large land areas, capturing methane emissions across thousands of square kilometers at a time; it also has the precision to aggregate emissions from small sources within an area.**
- **Carbon Mapper's Tanager satellite can zoom in to a 30-meter resolution, pinpointing emissions down to specific facilities or equipment. It has the capacity to quantify emissions at 100kg/hour with the ability to frequently revisit locations.**

These satellites are the first nonprofit satellite programs designed not just to detect methane, but to quantify emissions and make the data publicly available—giving scientists, journalists, and decision-makers the ability to hold polluters accountable.

"Satellites solve a lot of issues," Konek explains. "They provide frequent global coverage and don't require cooperation from those on the ground."

That last part is key. Unlike traditional monitoring, which often depends on access granted by industries or governments, these satellites operate independently—offering an unprecedented level of transparency.

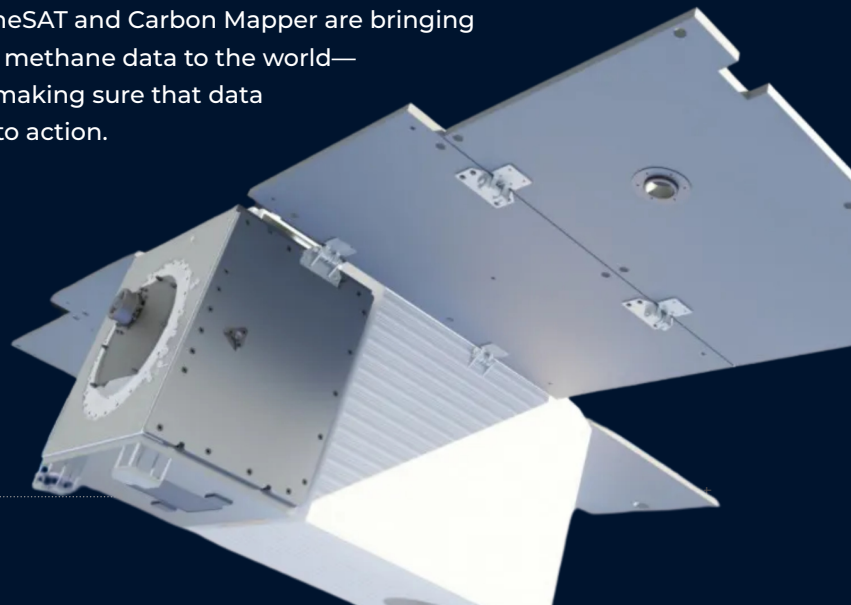
The Challenge

Currently, researchers rely on a patchwork of methods to track emissions:

- Industry-reported inventories estimate emissions based on standard calculations, but often miss major leaks and breakdowns.
- On-the-ground monitoring using methane-detecting cameras and air sampling provide snapshots of emissions, but this on-the-ground monitoring is costly, time-consuming, and limited in scope.
- Government satellites, such as the EU's Sentinel 5P and Japan's GOSAT, provide global coverage but aren't optimized for methane detection, and do not have the sensitivities required for tracking smaller, more common leaks.

The first commercial methane satellite, GHGSat-D, launched in 2016 and focused on selling emissions data to operators, NGOs, and researchers. This was an important step, but it left a lot of crucial data behind a paywall.

Now, MethaneSAT and Carbon Mapper are bringing open-access methane data to the world—and GMH is making sure that data translates into action.



GMH's Role
From Data to Action

The Global Methane Hub has invested $5 million in each satellite program, ensuring that their data isn't just collected—it's used to drive change.

This funding supports:

- Collaboration between MethaneSAT and Carbon Mapper, leveraging their complementary capabilities
- Engagement with governments, NGOs, and industry, helping them integrate satellite data into methane reduction strategies
- The development of new standards, ensuring data consistency across methane monitoring efforts
- Stakeholder listening sessions, connecting satellite teams with policymakers and regulators to translate insights into impact

GMH also funds other independent groups that are taking satellite data and turning it into action—whether that means working with governments to improve regulations, supporting journalists in investigative reporting, or equipping frontline communities with emissions data for advocacy.

We're not just gathering data. We're making sure it gets into the right hands so methane reductions happen faster and at scale.



Learned in 2024

MethaneSAT has revealed that small but frequent leaks account for a substantial portion of oil and gas emissions—insights that could reshape mitigation strategies.

Carbon Mapper successfully identified methane plumes in coastal waters, which were previously difficult for satellites to monitor.

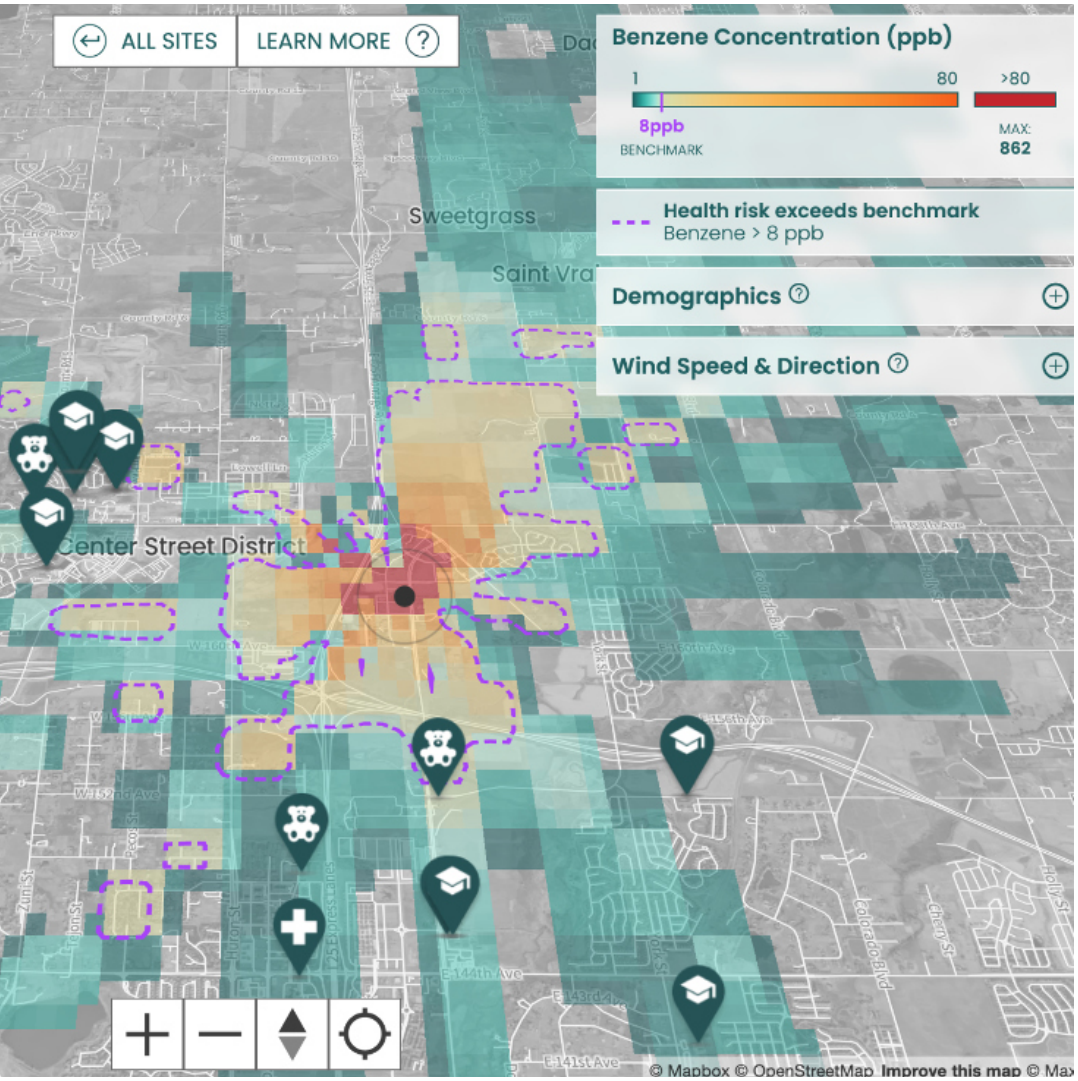
Both satellites have demonstrated their ability to track emissions in high-cloud-cover regions, another challenge for past satellite monitoring efforts.

And the data is already leading to real-world methane reductions. In October 2024, Carbon Mapper identified a leak emitting 7 kg/hour of methane. After notifying the operator, follow-up imagery confirmed that the leak had been fixed.

"The release of data at COP29 showed the power of these satellites to the broader methane and climate change community," Konek notes.

This level of transparency is forcing both governments and companies to pay attention—and act.

LEFT: *Before and after images of methane leak fix*



What's Next 2025 and Beyond

2025 will mark the transition from early data collection to full-scale monitoring and enforcement. As data becomes more frequent and widespread, we expect:

1. Stronger accountability mechanisms, as governments and companies are increasingly monitored in near real-time.
2. Support for waste sector initiatives, including projects like LOW-M and WasteMAP.
3. Deeper insights into methane "super-emitter" events, helping to drive targeted mitigation efforts.

LEFT: *While significant investments in satellite technologies are providing unprecedented visibility into methane emissions across the globe, these tools are blind to the air quality and human health risks of these events, which limits their utility outside of climate applications. PSE Healthy Energy's Methane Risk Map, funded by GMH and others and in partnership with Carbon Mapper, shows the air quality impacts and human health risks of methane emissions for a small fraction of the satellite costs. This tool is expected to be made public in July 2025.*

Challenges Ahead

While these satellites represent a major leap forward, data alone doesn't cut methane emissions—it has to be acted upon.

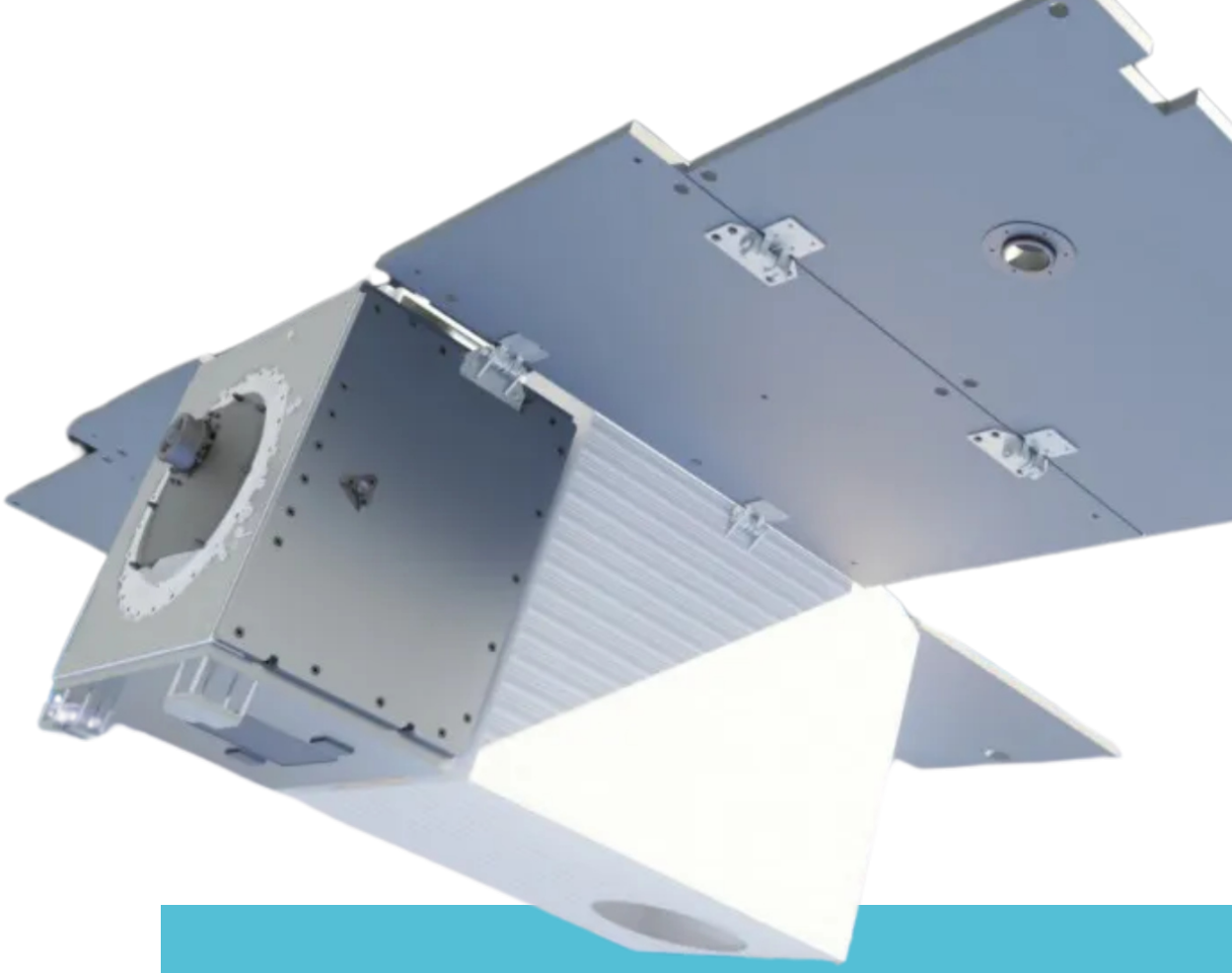
GMH's stakeholder engagement sessions have shown that many organizations still lack the tools to effectively use methane data. Whether it's community groups advocating for local action, journalists covering emissions events, or financial institutions assessing risk, more work is needed to make satellite data accessible and actionable.

That's why MethaneSAT and Carbon Mapper aren't just tracking methane—they're part of a broader movement to make emissions transparency the norm.

With more eyes on methane than ever before, the path to rapid, science-based methane reduction has never been clearer.

When emissions data is fragmented and hard to find, acting on it is a real challenge. MethaneSAT and Carbon Mapper represent a major step toward making methane data usable and accessible to stakeholders worldwide.

Chris Konek



Learn more

Click here to learn how Carbon Mapper and MethaneSAT complement each other in detecting methane leaks.

Read about how Carbon Mapper's first leak detection led to real-world reductions.

MethaneSAT Project Updates

China’s Methane Moment
A Model for Global Coordination

In China, we're supporting domestic partners and international NGOs to build the data, technical capacity, and financing infrastructure to mitigate emissions from coal-mine methane at scale—laying the groundwork for national action.



Manjyot Ahluwalia
Regional Lead, Asia
Global Methane Hub

For those deep in the climate trenches, the urgency of methane reduction is not up for debate.

We know the science. We know the stakes. What's less often discussed is the *how*—the mechanics of transforming policy ambition into sustained reductions at scale.

The challenge is especially daunting in China, the world's top methane emitter. For example, coal-mine methane alone accounts for nearly half of China's methane emissions, making it one of the single largest sources in the world. Aggressive methane reductions from this sector could deliver a climate impact on par with eliminating a mid-sized country's total greenhouse gas emissions. China committed to work on mitigation alongside the U.S. in the context of the Sunnylands Statement in 2023. And while there have been changes in geopolitics, reducing coal-mine methane in China remains one of the fastest ways to reduce warming in the short term, and as such, the imperative to act has not changed.

Taking near-term action on methane—nationally and subnationally—with the support of the GMH implementation partners is helping China become a leader in the region and globally, especially in the lead-up to COP30.





Building a Scalable Model
From Phase I to Phase II

GMH recognized early on that methane reductions in China couldn't be achieved through isolated interventions. Instead, we needed a coordinated, phased approach that aligned researchers, policymakers, and technical experts while creating the infrastructure necessary for sustained action. These are trusted advisors to the government that work on a program co-constructed by the government, hence designed for ownership and adoption.

In 2022, GMH committed $11.5 million to kickstart methane mitigation efforts in China.

This first phase was about proof of concept—laying the groundwork for national policy development, provincial pilot programs, and critical data improvements. The results were swift.

1. GMH-funded research informed China's first-ever National Methane Action Plan, reinforcing the country's commitment to methane reduction across the energy, agriculture, and waste sectors.

2. Subnational pilots in Guangdong and Shanxi tested real-world mitigation strategies, with provincial methane roadmaps and policies being implemented by local governments. Sectoral advances led to technical guidance on low-methane agriculture and strengthened methane reporting methodologies across key industries.

Scaling Up
The Next Phase of Methane Mitigation

Recognizing the need for momentum, GMH made a second, larger investment in 2024—$14.5 million with an additional grant from the Sequoia Climate Foundation to scale these efforts.

Phase II is about deepening impact: institutionalizing methane reductions in China's long-term climate policies and ensuring that successful provincial pilots evolve into national standards. What does this look like in practice?

Strengthening national methane targets

GMH-supported implementation partners are working to ensure that the methane reduction goals established under the National Methane Action Plan are more robust and quantifiable. The Methane Working Group established under the U.S.-China Sunnylands Statement has given our China partners opportunities to participate in technical dialogues and influence the ambition with relevant line ministries of the two national governments to include non-CO2 targets in their 2035 NDC, and for China to codify methane reduction goals in the 15th Five Year Plan.

Securing strong sectoral policies

China finalized national regulations for coal-mine methane emissions exceeding 8% concentration and an emissions trading approach to help address lower concentration ventilation air methane.

Expanding provincial pilots

The early success of Guangdong and Shanxi will serve as a blueprint for scaling methane roadmaps to other provinces, including Shandong and Guizhou.

Elevating technical rigor

Improved monitoring, reporting, and verification standards will ensure methane reductions are both measurable and enforceable.

Facilitating subnational and intergovernmental exchange

Under the convenings organized by our implementation partners, Chinese and U.S. subnational governments exchanged lessons and challenges on climate action, and methane was a strong focus of those conversations. This resulted in several MOUs between California and Chinese provinces, including Beijing (on wastewater), Guangdong and Shanghai (on rice methane), Jiangsu, and Hainan. In the coming months, GMH will carefully work with its partners to design how this platform can be used as an enduring space to maintain ambition through dialogues among subnational governments keeping in mind the shifts in U.S. climate leadership.

Coordination is the Essential Piece

Anyone who has worked in the climate space knows that good ideas, technical capacity, and funding are not the primary bottlenecks to progress. The key to success is coordination.

This is why GMH's model matters. Our partners in China—including Energy Foundation China (EFC), Environmental Defense Fund (EDF), the Natural Resources Defense Council (NRDC), World Resources Institute (WRI), and the Rocky Mountain Institute (RMI)—are receiving much more than grants.

They work within a deliberate, structured framework that ensures alignment with each other and international methane mitigation efforts. Our support to partners such as the California China Climate Institute (CCCI), Institute For Governance & Sustainable Development (IGSD), the University of Maryland, and Lawrence Berkeley National Lab (LBNL) brings forth rigorous analytical research and case studies that inform and raise the ambition of domestic methane policies and import standards and the implementation of technical solutions across the energy, agriculture, and waste sectors.

When We Coordinate

1. The right data reaches the right policymakers at the right time, many times at their request.
2. Technical solutions are matched with real-world implementation pathways.
3. Funded projects don't operate in silos but instead reinforce one another, creating a multiplier effect.

Beyond Grantmaking
How GMH Drives Impact

GMH isn't just a funder. We are also:

A bridge between technical expertise and policy implementation, ensuring that research institutions like Tsinghua University, Chinese Academy of Sciences, and Lawrence Berkeley National Laboratory (LBNL) provide policymakers with real-time, usable data to shape regulatory frameworks.

A convener of strategic partnerships, bringing together international and domestic stakeholders to accelerate methane reductions in coal mining, oil and gas, agriculture, and waste and creating enduring spaces and momentum for global climate leadership on methane.

An enabler of adaptive implementation, ensuring that our implementation partners are not locked into rigid, static projects, but instead have the flexibility to pivot as China's methane policy landscape evolves.



The Global Ripple Effect of European Methane Standards

As Europe tightens methane regulations on imported fossil fuels, the impact is rippling far beyond its borders. The EU Methane Regulation, which mandates stricter monitoring, reporting, and verification (MRV) for oil, gas, and coal imports and will cap allowable emissions, is already influencing how major suppliers approach methane management.

At GMH, we are working with grantees to ensure that the EU Methane Regulation is fully implemented despite pushback from industry and exporters. We are also working with fossil fuel exporters to advance domestic standards that don't just comply with European requirements but set new global benchmarks. By aligning methane reduction efforts with evolving European policies, we are:

- Supporting partners in China, Japan, and South Korea (grantee: Solutions for our Climate) and the United Kingdom (grantee: UK Green Alliance) as they consider adopting to stricter methane transparency requirements.
- Helping major exporters develop coal-mine methane and fossil gas mitigation strategies to meet EU standards.

The European model is proving that ambitious methane policies can drive market-wide shifts—nationally, regionally, and even globally. As more countries take cues from the EU, we ensure that this momentum translates into stronger, more enforceable, and more resilient methane reduction commitments worldwide—even in uncertain political moments like this one.

GMH has mobilized a diverse network of grantee partners in China and empowered us with financial support and international coordination to facilitate methane mitigation action plans. The work is vital and relevant, aligning well with China's methane commitments, including those outlined in the China-U.S. Sunnylands Statement.

Zou Ji, CEO & President of Energy Foundation China

Dairy Methane Action Alliance

How Companies Are Working Together to Mitigate Livestock Methane Emissions

In a shifting policy landscape, collaboration is more important than ever. The Dairy Methane Action Alliance is about meeting companies where they are—helping them navigate challenges, share solutions, and take meaningful steps toward reducing emissions. By focusing on practical, win-win strategies that work for farmers, businesses, and the climate, we're building momentum that can withstand policy changes and drive real, lasting progress.



Hayden Montgomery
Program Director, Agriculture
Global Methane Hub

Embracing peer-to-peer partnerships to cut methane in the agriculture sector

Scientists estimate that the global food system accounts for 60% of human-caused methane emissions. Enteric methane emissions—methane emissions from the digestive systems of livestock, such as cows, sheep, and goats—are the largest source of food system emissions.

If livestock methane were a country, it would be the world's third-largest source of methane emissions.

However, reducing methane emissions in the agriculture sector is a particular challenge. For one thing, there are more than 130 million dairy farmers worldwide, making coordinated action difficult. Even the largest dairy producers rarely report separate methane emissions or set methane reduction targets.

But in 2023, with the support of GMH, the Environmental Defense Fund (EDF) mobilized six of the world's largest dairy producers to launch the Dairy Methane Action Alliance (DMAA): a global initiative in which participants agree to account for and publicly disclose methane emissions within their dairy supply chains. Then they will create a comprehensive plan for mitigating those emissions. Today, there are eight companies in DMAA, including Danone, General Mills, KraftHeinz, Lactalis USA, Nestle, Bel Group, Clover Sonoma, and Starbucks.

This ambitious climate action in the dairy sector can be a win-win-win for farmers' livelihoods, food security, and the climate.



Q&A

We talked to **Hayden Montgomery**, GMH's Program Director for Agriculture, and **Katie Anderson**, EDF's Senior Director of Business, Food and Forests, to learn more about the Dairy Methane Action Alliance (DMAA).

Q What's new about DMAA?

A **Hayden Montgomery, GMH:** The Dairy Methane Action Alliance isn't the first corporate action on climate change, but the first one focused on agricultural methane. It also unites different companies representing different parts of the dairy value chain. It's a peer-to-peer partnership in which companies can learn from each other's experiences and share guidance on estimating and reporting their emissions in a way that will stand up to public scrutiny down the line.

> ***Most of all, partners benefit from learning from one another.***

Q Why are global dairy supply chain companies willing to join this effort?

A **HM, GMH:** We've heard from the companies that the value for them is the guidance and support the alliance offers—they can share resources like templates and methodologies. And before they go public with their emissions data, they can be confident that it's been reviewed and informed by experts.

Most of all, partners benefit from learning from one another. Some companies might be implementing specific interventions to reduce methane emissions—anything from innovation and R&D to demonstration farming or incentivizing suppliers to reduce their emissions—and those actions might inspire their peers to do something similar in their own value chains.

But the benefits go beyond individual companies.



Hayden Montgomery
Program Director, Agriculture
Global Methane Hub



Katie Anderson
Senior Director of Business, Food and Forests
Environmental Defense Fund



Q How so?

A **Katie Anderson, EDF:** The food system is a major driver of methane emissions, but it is a complex challenge with real technical, financial, and social barriers to action. Partnership is how we break down these barriers and deliver scale.

HM, GMH: Some of the companies involved in the DMAA, like Danone, are among the largest dairy producers in the world. They can serve as a model for their peers. But we can't do this with only the biggest companies. Many smaller and medium-sized dairy companies and cooperatives within dairy value chains also need to take action. DMAA provides examples and sets the momentum that can push the whole industry toward progress.

Q It sounds like partnerships can accomplish things that even the most committed individual action can't. Is that true?

A **KA, EDF:** Through partnerships like DMAA, we can demonstrate to the private sector what's possible. Before DMAA, few companies were delivering methane-specific actions and emissions disclosures. Now, through DMAA, we show the dairy sector that creating specific methane disclosures and action plans is possible. This will create a flywheel of action to deliver scaled methane emissions reductions over time.

Q What roles do EDF and GMH play in the DMAA?

A KA, EDF: EDF is the founder of DMAA. We lead corporate recruitment, drive the development of technical guidance to help companies meet the methane disclosure and methane action plan milestones, and facilitate group discussion so that companies can share best practices and challenges to support collaboration. However, we can't do this alone! We also partner with other non-profit organizations, such as Ceres and Sustainable Food Labs, to co-create technical guidance and facilitate the group. Global Methane Hub is also a critical funder and thought partner on this work.

HM, GMH: GMH provides the resources to grantees to coordinate the work and to provide the technical support to the companies involved.

Obviously, the actions that companies will take are theirs, and the bulk of the investment will come from them. But we're also very interested in supporting companies' ambitious actions.

So, where we are working to provide, let's say, decision-support tools to improve animal husbandry or animal health and feeding, we are very interested in seeing how companies who are members of DMAA might partner with us in implementing those activities within their value chain.

> *DMAA is about meeting companies where they are—helping them navigate challenges, share solutions, and take meaningful steps toward reducing emissions.*

Q What have we learned from DMAA so far?

A KA, EDF: Accounting for and disclosing dairy methane emissions data is critical for identifying hotspots and intervention opportunities in dairy supply chains. It has been exciting to see companies setting plans to engage more deeply with dairy farmers and other supply chain stakeholders to implement methane-abating practices on the ground.

HM, GMH: Some signatory companies have already disclosed their dairy methane emissions. Since its launch, we've also seen more companies join the initiative, which is great, and we anticipate more joining in 2025.

In the not-too-distant future, we're also anticipating the release of the methane abatement plans the companies are now working on based on what they've learned so far.



Q What key challenges have we encountered in this effort this year? How might we resolve them going forward?

AKA, EDF: EDF often works in this tricky space, and we have deep experience finding pragmatic solutions to advance progress in the face of political headwinds. To continue making the case to companies that they should prioritize climate action, we emphasize that climate risk is a business risk. Food companies are seeing these impacts, as climate-linked floods, droughts, and other extreme weather events already impact the farmers in their supply chains.

Prioritizing climate action makes good business sense. DMAA is about action, and we will remain focused on this in executing the work.

Q What's the key takeaway from all this?

AKA, EDF: The ultimate goal of the Dairy Methane Action Alliance is to transform the dairy industry and make dairy methane mitigation business as usual for all players across the global dairy supply chain. We will do this by working with DMAA members—who span the global supply chain—to demonstrate new models of what is possible. And we will work to integrate these best practices into other key industry reporting and standards to accelerate and scale action across the sector.



Advisory Board and Philanthropic Partners

Global Methane Hub
Advisory Board

GMH is grateful to rely on a dedicated group of distinguished leaders to provide strategic oversight and accountability to ensure GMH's mission is fulfilled.

Marisa de Belloy
GMH Advisory Board Chair
High Tide Foundation

Ed Hogg
GMH Governance Committee Chair
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Ranping Song
Sequoia Climate Foundation

Jonathan Pershing
William and Flora Hewlett Foundation

Louise Olivier
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as of December 31, 2024

At the Global Methane Hub, we're honored to be backed by an expanding network of visionary philanthropies and global leaders who recognize methane mitigation as essential to curbing climate change.

Our funders are more than supporters—they're collaborators and catalysts. Their partnership powers our mission and drives forward a bold, coordinated movement for lasting climate impact.

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AKO Foundation

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The Audacious Project

We're honored to be part of the 2024 Audacious Project cohort and deeply grateful to TED CEO Chris Anderson and The Audacious Project team for their bold vision and steadfast support.



Generosity starts with gratitude. When we pause for a moment, we can remember countless things we can be grateful for.

Chris Anderson
Infectious Generosity

Thank you!
We are Grateful.

For more information, please contact:

Kimberly Karol, APR, CFRE, IPA
Director of Development and Impact
Global Methane Hub
kimberly.karol@globalmethanehub.org

globalmethanehub.org

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