



Event Report

May 7 - 8, 2025

# 2025 CanCH4 Symposium



With support from the event partners:



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# Executive Summary

The 2025 CanCH4 Symposium was the second consecutive (and third since 2017) in what has now become an annual series of national, cross-sectoral, technical meetings in the field of methane measurement and mitigation. Hosted on May 7 - 8, 2025 at Carleton University, this seminal event brought together 300 attendees across the oil and gas, waste management, and agricultural sectors with the shared commitment to advancing science, policy, and action to reduce methane emissions.

With foundational support from Natural Resources Canada (NRCan) and Environment & Climate Change Canada (ECCC), the 2025 event cemented CanCH4 as the preeminent Canadian platform for methane science and knowledge exchange, highlighted by cross-sectoral collaboration among the leading experts, policy makers, analysts, technology providers, industry and non-governmental stakeholders, and academic researchers.

The CanCH4 series reflects a coordinated national effort to connect methane research activities in Canada, amplify ongoing work across jurisdictions and sectors, and encourage collaborations on measurement studies, analytics, and technology innovation. The event also facilitates open discussions on current data, technical challenges, and implications, with a focus on strategies to accelerate emissions reduction.

By targeting an in-person capacity of no more than 130, the event offered a unique opportunity for deeper engagement among various stakeholders. This created a rich environment for productive conversations, meaningful connections, and fruitful discussions, culminating in the Symposium Networking dinner at the end of Day 2.

As reflected in post-event comments and social media engagement, the 2025 Symposium extended the reputation of CanCH4 as a highly valued forum for engaged scholarship, technical discussions, active collaboration, and cross-sectoral dialogue on methane emissions and mitigation. Most importantly, CanCH4 once again filled a critical need for annual meetings to foster knowledge exchange and track progress towards achieving national and global methane emission reduction goals.



# Methane by the Numbers



The overarching theme of the CanCH4 Symposium – **Methane by the Numbers** – reflects a primary focus on measurements, analytics, technological advances, and mitigation trends, with the goal of supporting data-backed policy development that accelerates emissions reductions.

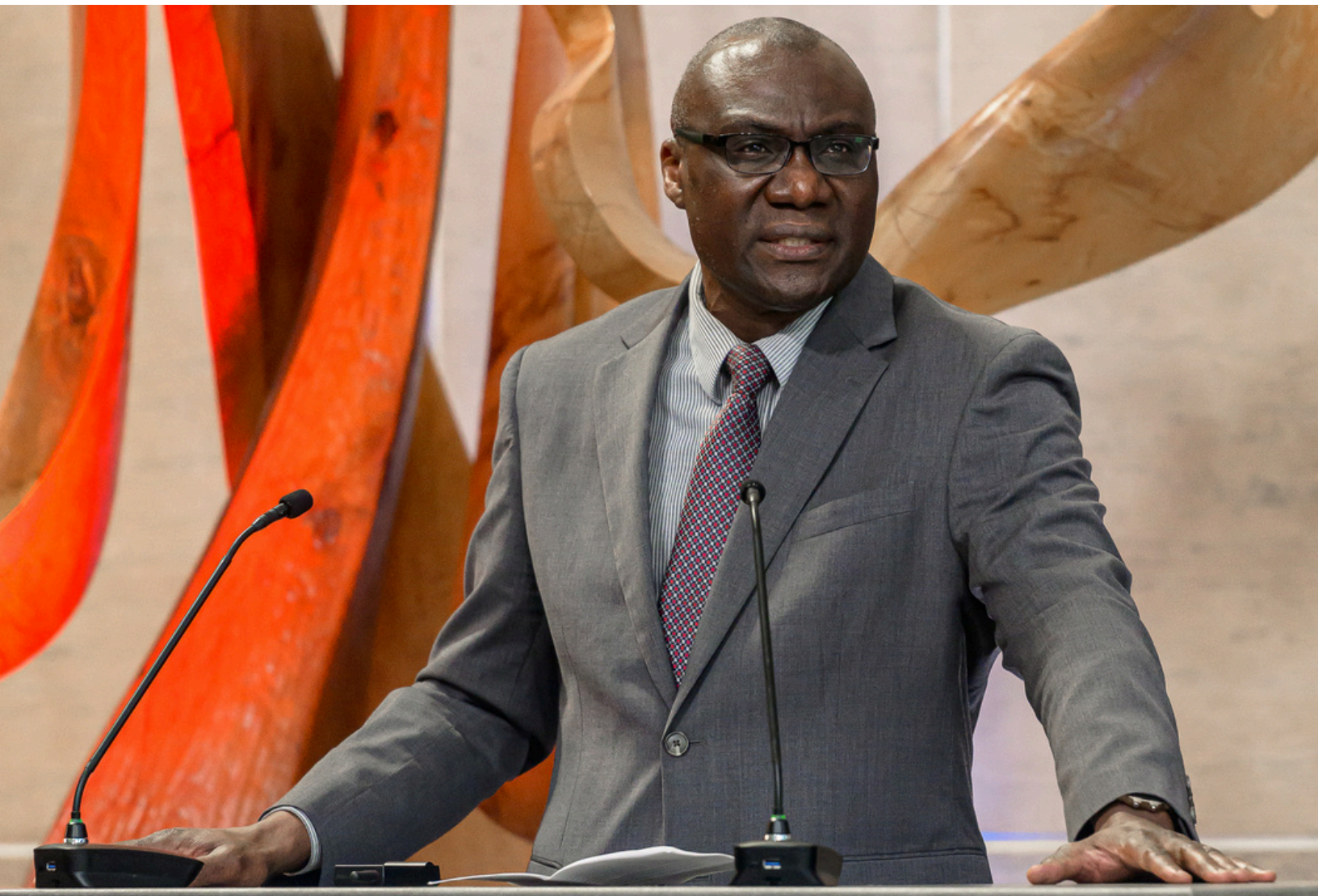
By emphasizing the importance of scientific evidence, the Symposium aims to foster a deeper understanding of methane emissions and mitigation opportunities. The theme underscores the critical role of rigorous data collection, rapidly-evolving detection technologies, and streamlined measurement approaches in tracking and mitigating methane emissions. It also highlights the necessity of collaborative action and data-sharing among scientists, engineers, policy makers, industry stakeholders, and communities to harness synergies and coordinate measurement and mitigation efforts. Through comprehensive data-driven discussions, the annual symposium series is intended to drive actionable insights and evidence-based solutions that can contribute to achieving 2030 global climate goals within the short timeframe of the next 5 years.

# Event Program

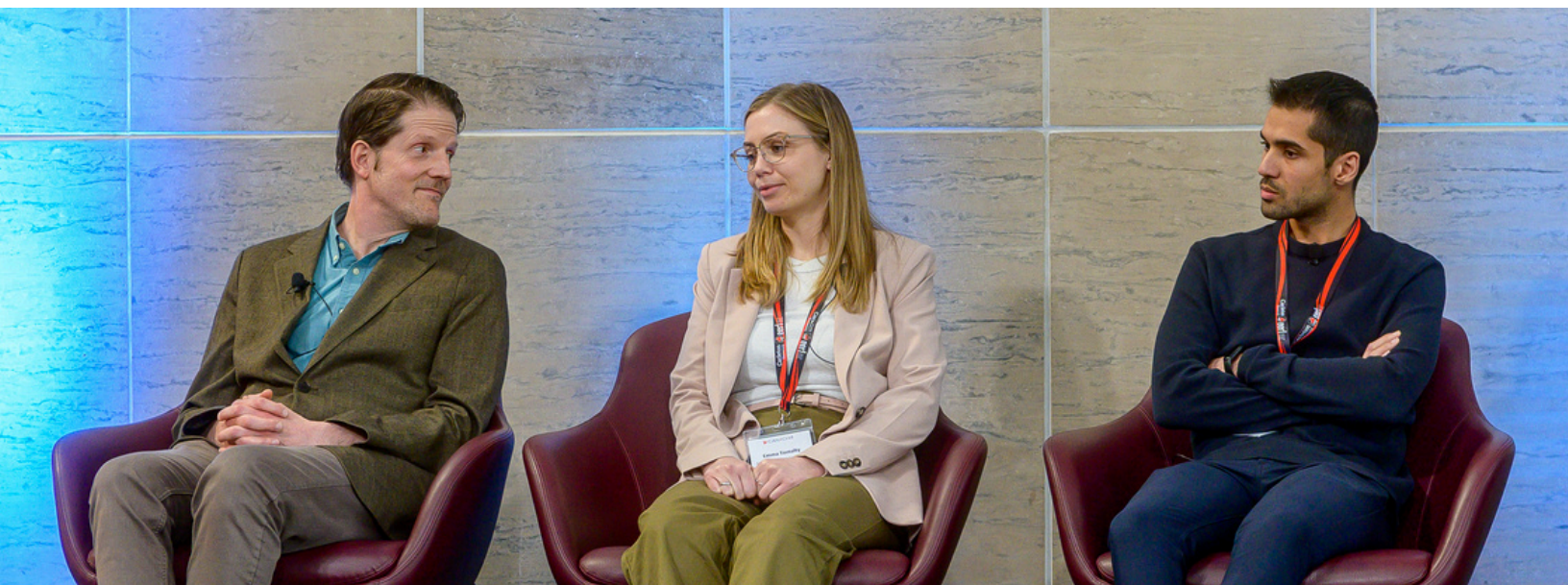
The 2025 CanCH4 Symposium began with the land acknowledgement from Prof. Matthew Johnson, who honoured the profound knowledge and stewardship that the Indigenous communities have maintained for countless generations; and expressed our commitment to reconciliation, respect, and joined efforts towards sustainability and climate action.

The event was then officially opened by Dr. Wisdom Tettey, President of Carleton University. He emphasized the cross-sectoral and collaborative nature of this event, stressed the urgency of addressing methane as one of our most urgent environmental challenges, and underscored the importance of translating scientific research into practical policies and technological applications.

James Diamond (ECCC) further set the stage by introducing the event theme "Methane by the Numbers". He presented a quantitative trajectory of methane emissions over the past three decades while highlighting ongoing mitigation potential to change this trajectory in alignment with the Global Methane Pledge and international initiatives on methane measurement, reporting, and mitigation (MRV).







**12**

cross-sectoral  
sessions

**1**

keynote  
presentation

**47**

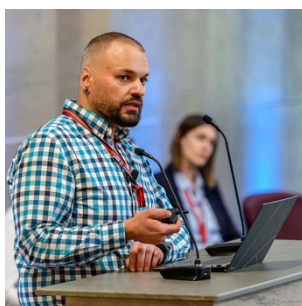
invited  
talks

**11**

panel  
discussions

**55**

poster  
presentations



Through two fast-moving days, the 2025 CanCH4 Symposium featured 47 invited talks, 11 panel discussions, 55 poster presentations, and one keynote presentation, spanning the three main sectors of anthropogenic methane emissions – oil and gas, waste management, and agriculture. Key topics included measurement methods, detection technologies, inventory development, methane policy, and regulatory development, with further presentations on wetland and permafrost emissions. The event was structured as a series of technical presentations, panel discussions, poster presentations, and networking breaks, and was moderated by James Diamond (ECCC) on Day 1 and Anna Hodshire (Colorado State University) on Day 2.



# Technical Program Committee

The event program was carefully curated by the CanCH4 technical committee, co-chaired by Matthew Johnson (Energy & Emissions Research Lab, Carleton University), David Risk (FluxLab, St. Francis Xavier University), and Anna Hodshire (Colorado State University), all leading experts in methane research.

Following an open call for abstracts, the committee received nearly 70 quality submissions. They diligently reviewed each abstract, ensuring fit within the CanCH4 objectives, before meticulously iterating to create a comprehensive technical program that included a healthy mix of longer presentations, lightning talks, poster presentations, and panel discussions united within common themes. The final program featured 12 sessions exploring the latest advancements and key challenges in the field, including current national and international methane trends, measurement challenges, detection and mitigation technologies, and regulatory effectiveness. Most notably, the program was structured as a compounding technical forum, that built through subsequent presentations to foster collaborative discussions and information exchange, while providing technical insights on key methane emission sources across the oil and gas, waste, and agricultural sectors. The program culminated in a final policy focused panel and rich discussion among participants that explored implications of previously presented materials in the context of promoting strategies to efficiently accelerate methane reduction.





# Speaker Highlights

The symposium sessions featured a diverse array of speakers representing various research themes and sectors. Panels included policy analysts and research scientists from federal and provincial governments, academic researchers, engineers, emissions specialists, data scientists, program managers, and chief technical officers from industry, as well as representatives from environmental non-governmental organizations (NGOs). This mix of expertise fostered rich discussions and provided comprehensive insights into methane mitigation from multiple perspectives.



*"The 2025 CanCH4 Symposium exceeded my expectations with its impressive lineup of speakers. Each presentation was insightful and thought-provoking, offering valuable perspectives on methane research. The expertise and dedication of the speakers truly made this event a standout experience."*

- Symposium attendee



As further detailed on the [event agenda](#), the program featured 49 speakers from government, academia, industry, NGOs, who shared details of their ongoing work and collaborations across sectors.

### **Government Speakers**

A dozen government delegates helped guide discussions around methane policy, inventory development, and key methane sources from agriculture, wetlands, waste, and oil & gas sectors.

Notable contributions came from Environment & Climate Change Canada (ECCC), particularly the Climate Research Division, Natural Resources Canada (NRCan) and Geological Survey of Canada, Agriculture and Agri-Food Canada (AAFC) and their Science & Technology Branch. Representatives from the Alberta Energy Regulator (AER) contributed to the policy discussion and shared highlights of Alberta's methane performance and trends.

### **Non-Governmental Organizations**

Presenters from the Pembina Institute, the Environmental Defense Fund (EDF) and the Peace River Area Monitoring Program (PRAMP) Committee discussed the national and provincial context, equivalency of regulations, regulatory comparison across jurisdictions, challenges in standardizing metrics and harmonizing reporting, as well as responsible resource development, air quality, and health impacts. Their insights helped shape an engaging policy discussion within the context of Canadian and global energy markets, and global climate goals.







## Academia

Fitting with the CanCH4 theme “Methane by the Numbers”, approximately half of the speakers were from academia, including student researchers, postdoctoral fellows, research associates, and professors. These students and experts significantly enriched the discourse in each of the 12 program sessions. Prominent Canadian research labs and universities included Energy & Emissions Research Lab (Carleton University), Flux Lab (St. Francis Xavier University and Memorial University of Newfoundland), University of Calgary, University of Toronto, University of Waterloo, and McGill University. Additionally, the discussion was enriched with participation from the international researchers from Colorado State University and Southern Methodist University in Dallas (TX).

## Industry Stakeholders

CanCH4 also featured a significant number of industry speakers, with key participation from technology providers such as Bridger Photonics, Inc., Carbon Mapper, GHGSat, Process Ecology, and Apis Innovation, as well as the Petroleum Technology Alliance of Canada (PTAC). Industry contributions were especially valuable in technical sessions on detection and quantification capabilities of satellite and aircraft technologies, data analytics and reporting, measurement methods, and inventory development. Presentations and discussions revolved around the latest technological advances, the suite of available technologies, and their comparison, integration, and geographical application. Experts also discussed detection and quantification challenges, data quality, data sharing, policy relevance, and the need for technology transfer. Additionally, these discussions shared insight into industry trends, targets, and mitigation performance.





## Keynote Presentation

An event highlight was the keynote presentation by Giulia Ferrini from the United Nations Environmental Programme's International Methane Emissions Observatory (UNEP IMEO), who provided an overview of the Oil and Gas Methane Partnership (OGMP) 2.0 and its connection to European Union Methane Regulations.

Ferrini unpacked key elements of the OGMP 2.0 global measurement, monitoring, reporting, and verification (MMRV) standard including reporting levels, data requirements and timelines, noting that the partnership now includes more than 150 companies plus multiple non-industry partners and encompasses over 40% global oil and gas production. Ferrini specifically highlighted the importance of direct measurements and empirical data, data sharing, and engagement among members and scientific partners. She also explored the linkages and alignment of the OGMP 2.0, the IMEO's 'Eye on Methane' transparency database, and Methane Alert and Response System (MARS) with MMRV policies and regulations, particularly the EU Methane Regulations.

This presentation offered a crucial global policy perspective, providing valuable insights on the regulatory framework to Canadian regulators as well as clear direction for industry in the context of the global energy market, specifically on the reporting of emissions to meet and exceed upcoming methane intensity limits, and to demonstrate MRV equivalence.





## Attendees

The 2025 CanCH4 Symposium attracted over 300 registrations from around the world, showcasing its increasing international appeal. On the first day of the symposium, nearly all registered participants attended (97% in-person, 82% online), which showed strong engagement and interest in the event. Attendees also included a healthy mix of returning participants from the successful 2024 symposium and first-time attendees, highlighting the event's growing reputation and the value it provides to its audience.

**311**

registrations

**133**

in-person attendees

**143**

online participants

**82**

returning attendees

**12**

countries



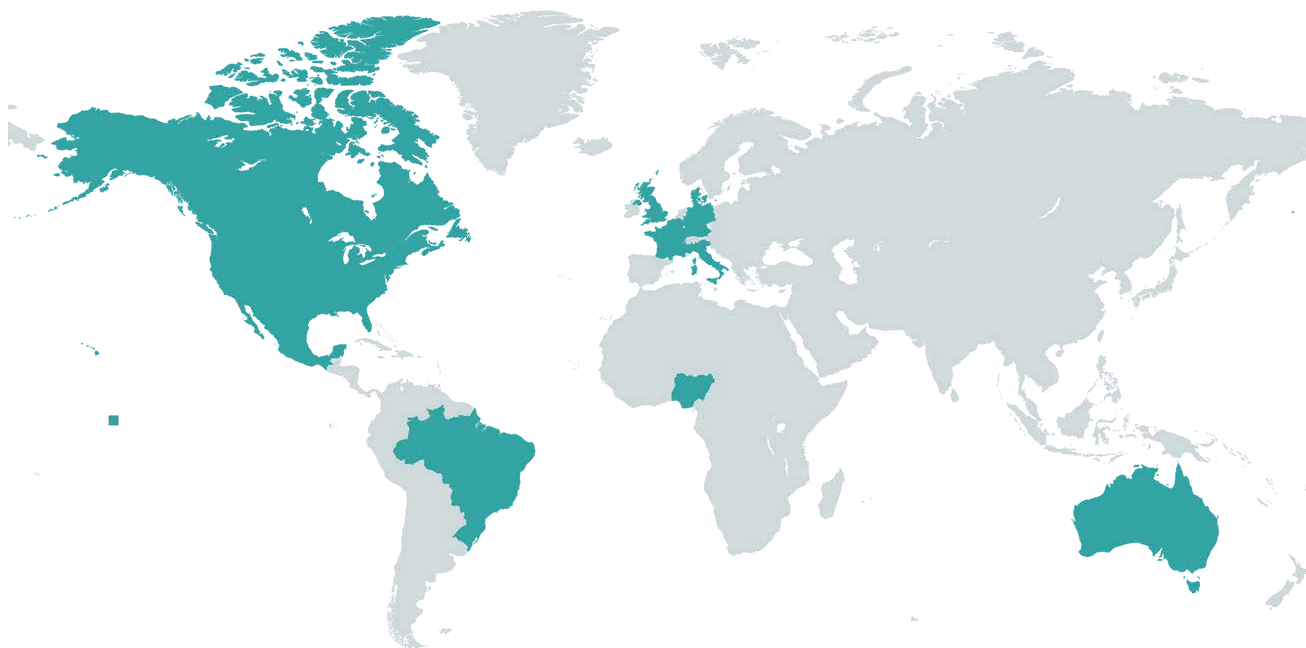


Figure 1: Event attendees by country:  
Canada, USA, Mexico, Brazil, Australia, Nigeria, UK, France, Germany, Italy, Belgium, Denmark

Similar to the 2024 event format, the capacity for in-person participation was capped at 130 attendees per day to facilitate meaningful engagement and communication among various stakeholders. This ensured attendees had more opportunities to make new connections, reconnect with collaborators, and engage in productive conversations. The event reached its capacity within a few weeks of opening registration, with a waitlist and continuing registration for virtual attendance. In total, 133 people attended in person over 2 days, while 143 unique accounts from 12 countries joined online.

Following the event, all registered participants were granted early access to event recordings and poster presentations. This not only maintained engagement within the methane research community but also reinforced the symposium's commitment to the continued dissemination of knowledge.



As a central part of its vision, CanCH4 serves as a forum for a diverse range of stakeholders. The 2025 edition attracted participants from various levels of the Canadian Government, including federal government employees (27%) and provincial representatives (7.5%) as well as foreign governments (4.5%), including Australia, Mexico and the United States. Attendees from the industry were strongly represented (29%), followed by academic researchers (26%), delegates from environmental NGO (4.5%), and other sectors (2%).

This diverse representation at the symposium underscores its role as a critical platform for cross-sectoral dialogue and collaboration.

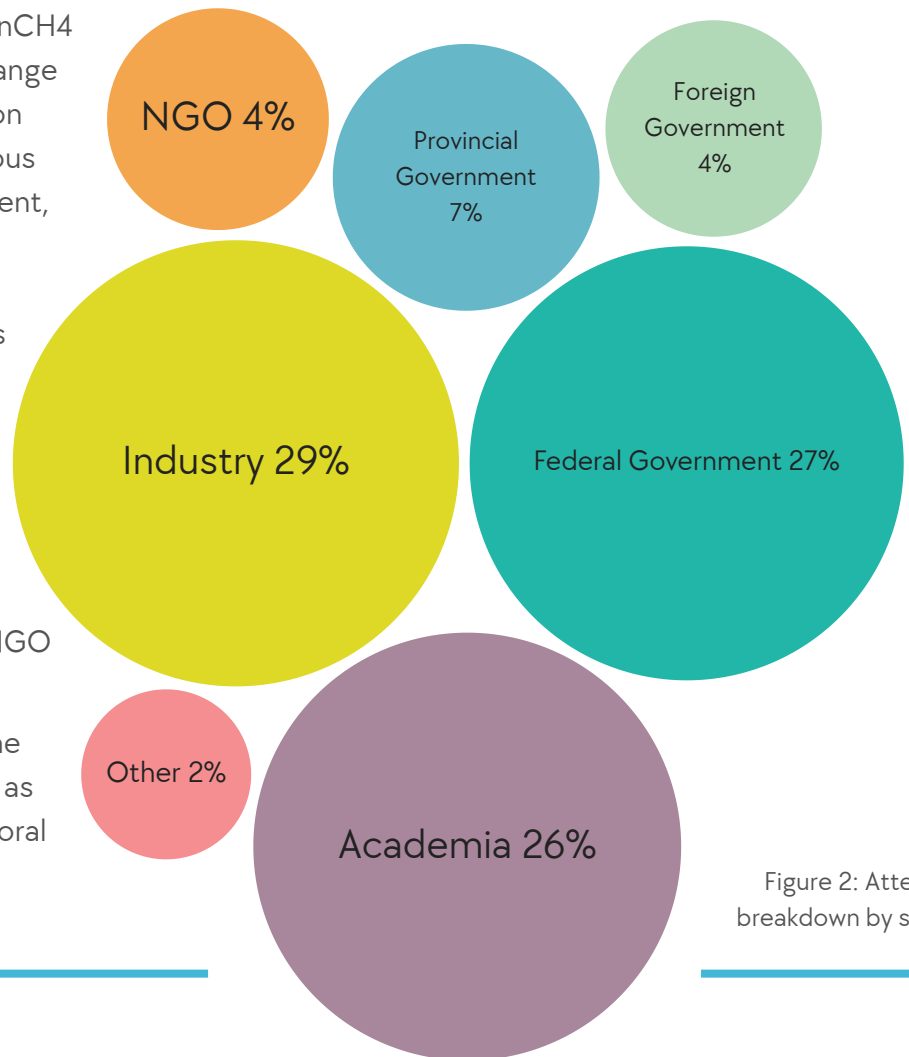


Figure 2: Attendee breakdown by sector

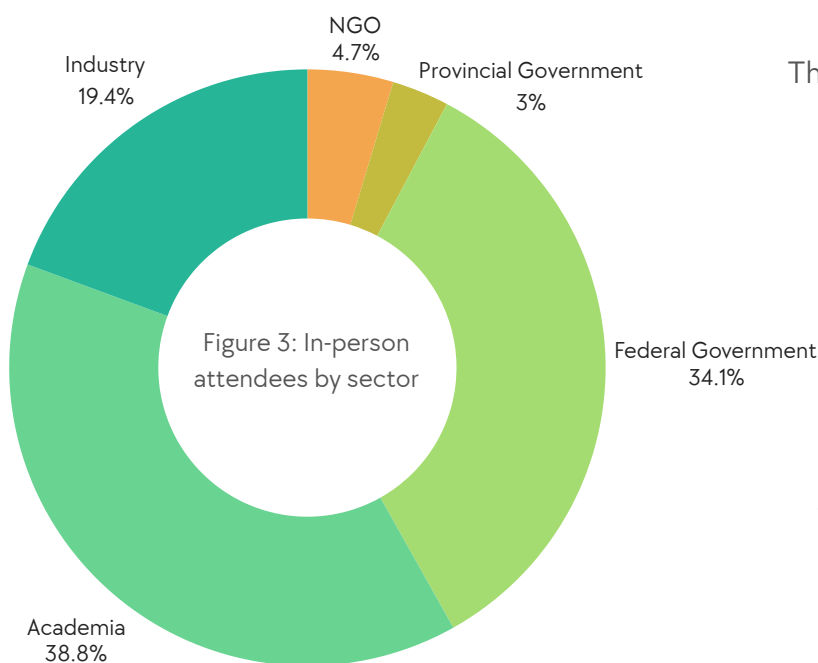


Figure 3: In-person attendees by sector

The mix of in-person attendees tracked the overall attendee breakdown, but with a slightly smaller portion of industry (19.4%) and provincial government participants (3%) and a higher ratio of academics (38.8%).

This difference is indicative of the time and travel challenges for out of province government and industry personnel and highlights the value and importance of hybrid event delivery, which ensured maximum possible participation from across Canada and internationally.



## Event Engagement

To facilitate cross-sectoral interactions and active engagement, the event included multi-sectoral panels, full-day poster discussions, frequent scheduled coffee breaks, and networking lunches as well as a networking dinner at the end of Day 2. These aspects allowed participants to engage with peers in formal and informal settings, make connections, and share insights.

**Multi-sectoral Discussion Panels** at the end of each session brought together experts from government, industry, academia, and NGOs to discuss key issues, challenges, and opportunities for action. The diverse perspectives enriched the discussions and created an open forum for debate. **Poster Discussions** were intentionally spread over two days, maximizing exposure and opportunities for review. Individual posters were also placed in groupings around common themes to encourage detailed, interactive discussions and feedback from a broad audience. **Networking Lunch & Breaks** were scheduled throughout the day, providing attendees with opportunities to build professional connections and spark new collaborations, while offering additional space to ask questions outside of allotted Q&A time. The **Networking Dinner** offered a relaxed environment for attendees to continue their conversations in a more informal setting, helping strengthen connections and build a sense of community among participants. Cumulatively, these efforts enhanced the symposium's collaborative atmosphere, ensuring that attendees could maximize their engagement and derive significant value from the event.



The 2025 CanCH4 Symposium was offered as a **hybrid event**, expertly supported by Carleton University Media Production team. This format widened the event's reach across the globe, enhanced its accessibility and inclusivity, and offered attendees the convenience of interacting with the speakers, poster presenters, and fellow attendees, regardless of their location.

The 2-day event was simultaneously broadcast online via a dedicated Zoom link, with the video stream featuring the speakers, presenters' slides, views of the audience, and Q&A prompts, offering an immersive event experience. This seamless and engaging setup ensured that virtual attendees and speakers could fully participate in the symposium, and feel as part of the live audience.

Additionally, a separate online poster session was created for virtual attendees, which could be accessed with a code at any time during and after the event. This allowed the online participants to browse posters at their own pace and connect with the authors offline.

*"The virtual experience was very well executed. The multiple camera angles gave us a sense of what was happening in the room, and we were able to follow the presentations and panel discussions easily. Also, I like that we were all able to participate in the question period, and priority wasn't given to questions from the room, as is sometimes the case with hybrid events"*

- Symposium attendee





**12**

Q&A  
sessions

**259**

Slido questions  
received

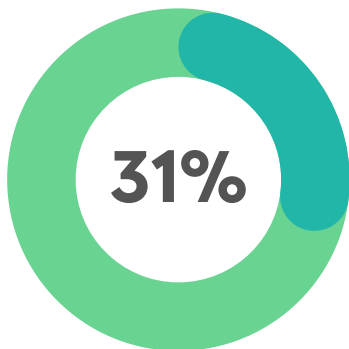
**124**

Slido questions  
answered

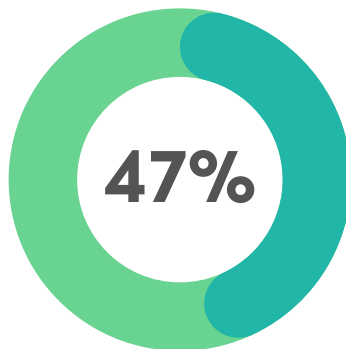
**799**

Slido  
votes

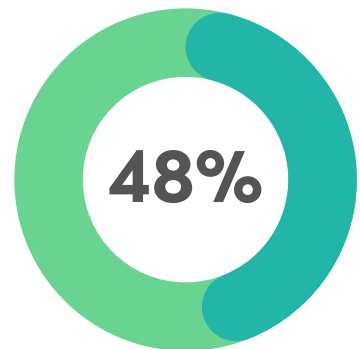
An interactive online Slido platform was the key tool to equally engage both in-person and virtual attendees in discussions and Q&A periods. By scanning the event's QR code, the audience submitted questions in real-time and further engaged by viewing and voting for most relevant questions. The session moderators guided the discussion with the expert panel, based on the top-voted questions. The interactive nature of Slido created an engaging and participatory environment while also allowing anonymity to foster inclusive dialogue.



Active attendees  
on Slido



Direct questions  
to speakers



Response rate  
on Slido

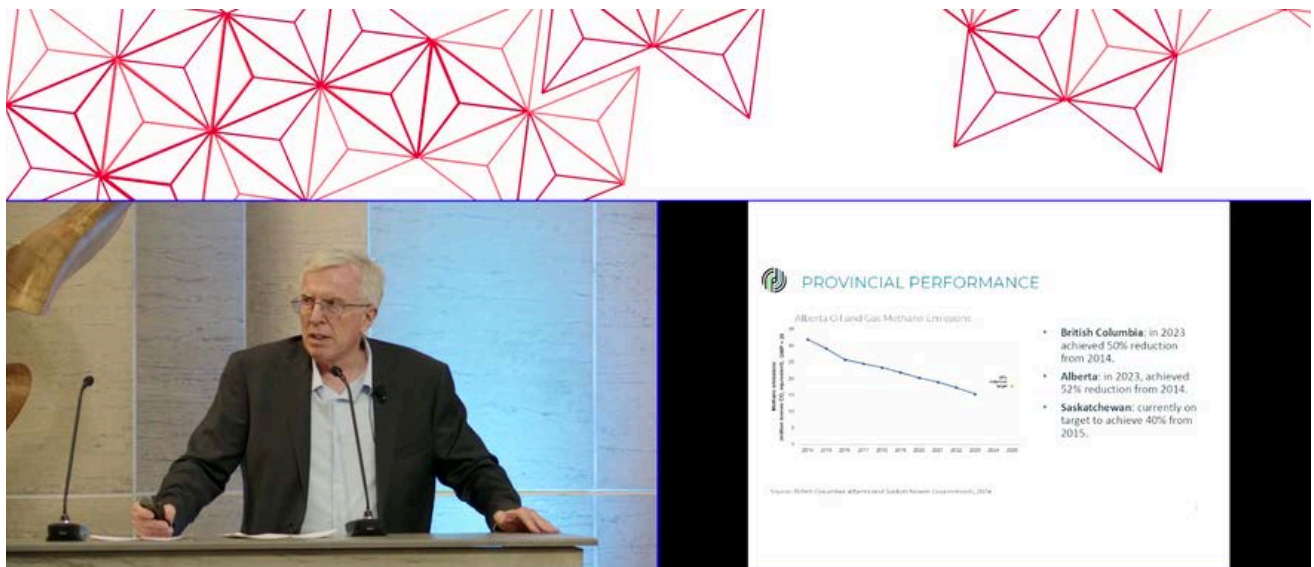


The success of this hybrid format was made possible by the exceptional support from the Carleton University Media Production team. Their expertise in managing the complexity and technical aspects of the event ensured a smooth flow of all interactions between the audience, moderators, and speakers. It also ensured seamless integration of virtual and in-person experiences.



Feedback from virtual attendees was overwhelmingly positive, with many highlighting the excellent quality of the broadcast and the level of involvement they felt. Similar to in-person attendees, who observed the speakers while following the slides, the online attendees had a dual-screen view and the option of enabling captions. The media support team updated the screens in real-time, following Q&A prompts from moderators and displaying the Slido QR codes, switching the view to the audience, individual speakers, moderators, or full panels for question periods for a more immersive experience.

Ultimately, the hybrid format demonstrated that this inclusive event model can effectively connect our methane community across Canada, and worldwide, bridging gaps of geography, increasing participation and engagement, and bringing more global experts to the table.



# Post-Event Engagement

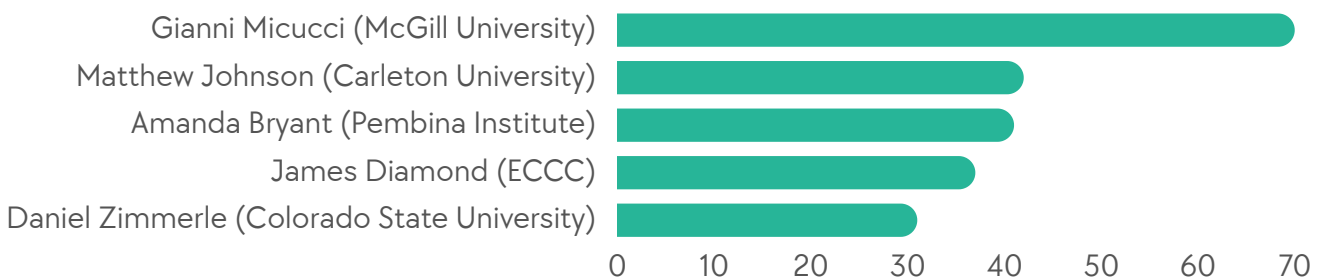
Following the event, speaker presentations and panel discussions were shared online with the authors' permission. This provided an opportunity for speakers to further disseminate their work by sharing with their networks and on social media platforms, for attendees to revisit their favourite talks, and for a broader audience to experience the full event. By making these resources available online, the symposium extended its reach beyond the registered attendees, allowing more people to benefit from the valuable insights shared.

This initial post-event engagement has attracted over 1,000 additional views and a total of 63 hours of watch time within just a few weeks following the event. This further boosts the dissemination of knowledge, while promoting engagement within the methane community online and amplifying the event's continued impact and outreach.

Several presentations (Fig. 4) notably resonated with the audience, bringing viewers back to rewatch, dive into data, graphs and trends, and unpack key messages.



Figure 4: Top 5 presentations by number of views following the event







## Event Highlights

In addition to the direct feedback received by the organizers through conversations during the event, email and LinkedIn correspondences, over 20% of attendees anonymously shared feedback and comments via the post-event survey. The survey was conducted from May 14 to May 31, 2025, and the questionnaire included 13 questions to gather feedback, insights, and comments. Overall, the attendees expressed high satisfaction with the symposium experience, providing an average 4.83 rating on a scale of 5. They especially highlighted the convenient location, relevance of the event, excellent line-up of speakers, valuable networking opportunities, and overall organization.

*"I sincerely thank you for organizing such a well-run and engaging conference. The sessions, networking opportunities, and overall atmosphere made it a truly valuable experience, and I appreciated the opportunity to present and connect with others in the methane research community. I learned a lot!"*

- Symposium attendee

4.83

average rating



Overall, the survey responses reflected the symposium's vision and impact in advancing methane science, policy, and action. They also provided a deeper insight into the value the event provided, with attendees specifically highlighting:

## Event Format and Organization

- Accessibility and convenience of the hybrid format;
- Overall organization, clear communication, and ease of navigation online;
- Free virtual attendance, high audio-visual quality, technical support, and interactive features like Slido;
- Convenient location of the symposium venue, catering, hospitality, and overall friendly atmosphere.

## Networking Opportunities

- Networking dinner on the last day in an informal environment;
- Casual networking opportunities at poster sessions, at lunch and between presentations;
- New connections and potential for future collaborations.

## Presentations and Content

- The diverse expert speaker line-up;
- Lightning talks format, time limit, and concise overview;
- Specific 'highlight' presentations, including Daniel Zimmerle, Matthew Johnson, David Risk, Amanda Bryant, and Felix Vogel;
- Sector coverage of all sectors (oil and gas, waste, agriculture), with strong posters and presentations in each area;
- Panel discussions, especially on detection technology.

## Learning and Insights

- Opportunities to engage with policymakers and gain valuable insights into policy directions and regulatory development;
- Insight into ongoing research, new technologies, and different methods for methane detection and measurement;
- Sector-specific insights, particularly in agriculture and waste.





Over 90% of attendees responded that they are highly likely to attend future events. This speaks to the quality of the event and the value that it brings to the participants. The attendees were overall highly satisfied with all the aspects of the event organization, including speaker and poster presentations, panel discussions and their moderation, networking opportunities, event location and venue, and both in-person and virtual experience.

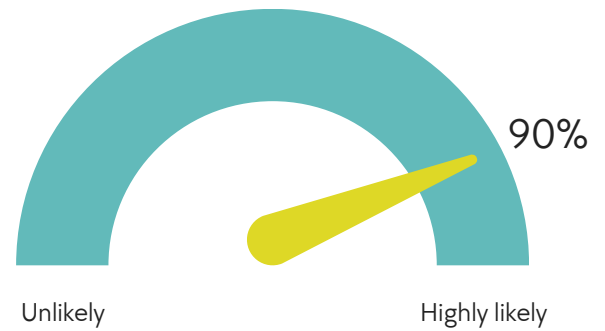


Figure 5: Likelihood of attending future events, based on the post-event survey responses



Figure 6: Event satisfaction rating from the post-event survey

*"Thank you for an excellent event. It was even better than last year, and last year was already fantastic. This was such a useful and informative event. I could never have learned so much just from reading papers (never would have been granted the time for it anyways) and the dynamic, in-person value of the event cannot be beat".*

- Symposium attendee

## Event Themes

CanCH4 participants recognized the breadth of topics covered during the event, which included all relevant sectors and addressed the current challenges and opportunities in methane research, measurement, and mitigation. Overall, the event focus, program structure, and duration of sessions were well-aligned with the interests and expectations of the attendees, based on their rating of each theme (Fig. 6). This allowed participants to actively engage with the content and meaningfully contribute to poster and panel discussions.

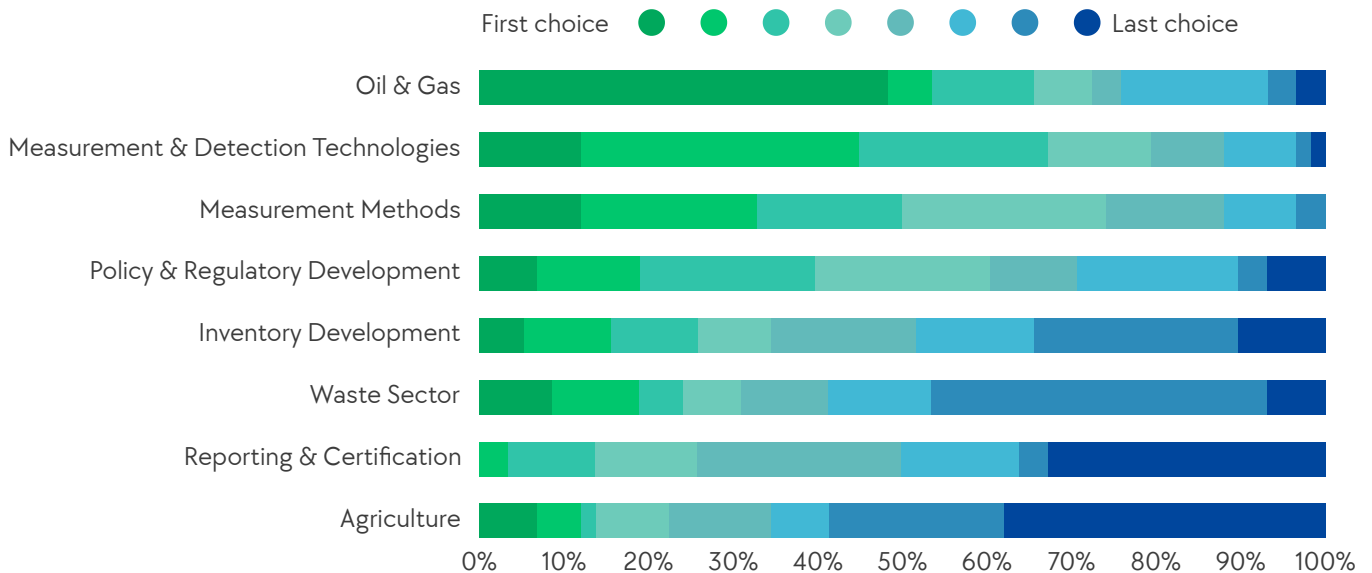


Figure 7: Attendee rating of themes based on the interest

As part of the suggestions section of the survey, attendees also offered feedback on the themes, topics and sessions for inclusion in future events. Some of the recurring themes included:

- **Broader policy discussion:** federal government input on the panels, regulatory development in different sectors, and regulatory compliance case studies;
- **International perspective:** increased participation of international partners, researchers, and companies, providing global perspectives on methane emissions, MRV, and mitigation efforts;
- **Collaboration sessions:** longer scheduled networking and poster sessions to foster collaboration efforts, including suggestions for increased industry participation and multi-stakeholder case studies;
- **Sector-specific sessions:** discussion of relevant measurement and mitigation technologies and inventory development for the agriculture and waste sectors;
- **Technology focus:** development, remediation, utilization, data handling, and AI.



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