GMI Biogas Subcommittee Meeting

6 October 2020

Global Methane Initiative

Housekeeping – Tips for using Remo

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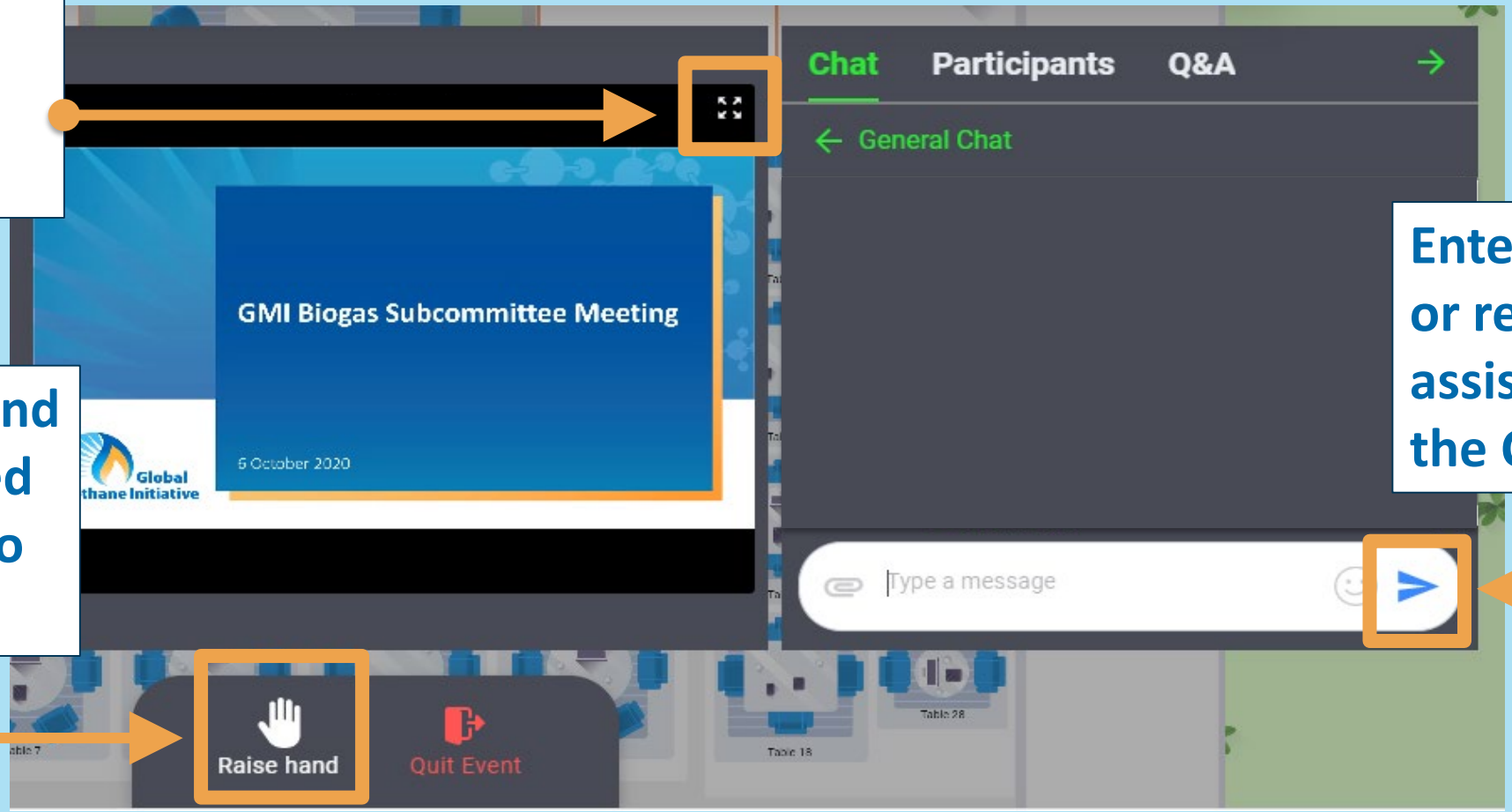

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Agenda

- Welcome
  - Biogas Subcommittee Co-Chairs:
    - Matthew Hamilton, Environment & Climate Change Canada (Canada)
    - Jorge Hilbert, National Agricultural Technology Institute (Argentina)
    - Tom Frankiewicz, U.S. Environmental Protection Agency (United States)
- Meeting Objectives; Adoption of the Agenda
  - Tom Frankiewicz
- Update on GMI Activities
  - Monica Shimamura, Director, GMI Secretariat
- Looking Beyond 2021 – GMI's Path Forward for the Biogas Subcommittee
  - Biogas Subcommittee Co-Chairs
- Project Highlights
- Wrap-up and Next Steps

Update on GMI Activities

Monica Shimamura
Director, Secretariat
6 October 2020

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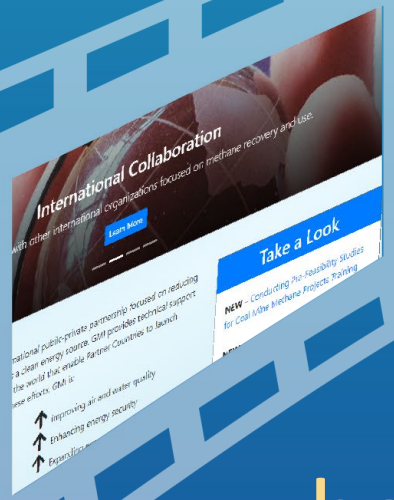
Secretariat News and Highlights

2020



has been another
very busy year

Pivoting to Virtual Meetings

- ✓ International participation
- ✓ Can “see” each other!
- ✓ Interactive discussions
- ✓ Instant polls

- 5 Executive Task Force virtual meetings
- 2 GMI Oil & Gas Subcommittee webinars
- 1 GMI Coal Subcommittee meeting
- 1 GMI Biogas Subcommittee meeting

GMI continues to engage with stakeholders to share information and identify and promote methane mitigation opportunities.

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Expanding Direct Communications and Social Media

GMI Mailing List

- 2,005 members
  - ▲ 77% growth in 2020
- 923 following biogas
- Open rate over last 3 months (July-September) averages 36.5%

Twitter

700 followers

▲ 3.6% growth in 2020

Facebook

488 followers

▲ 3.8 % growth in 2020

LinkedIn

333 followers

▲ 117% growth in 2020

▲ Growth in 2020, based on changes since November 2019

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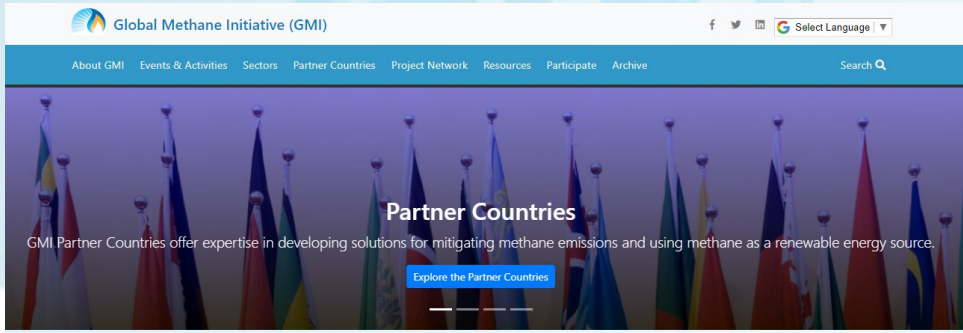
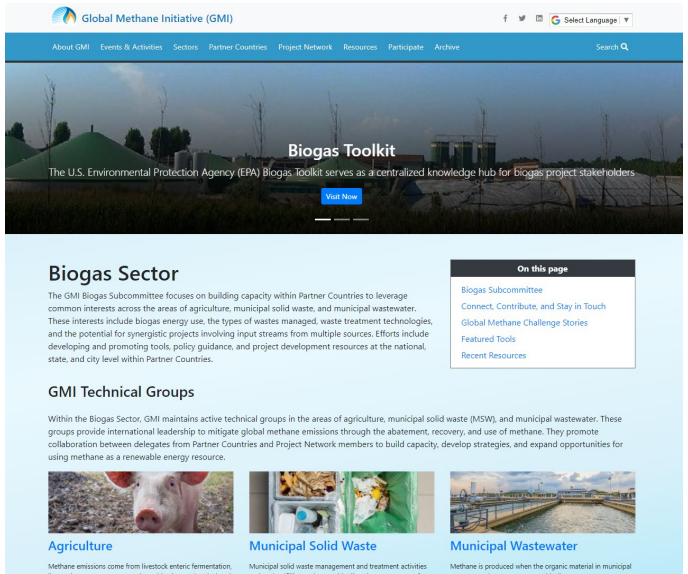
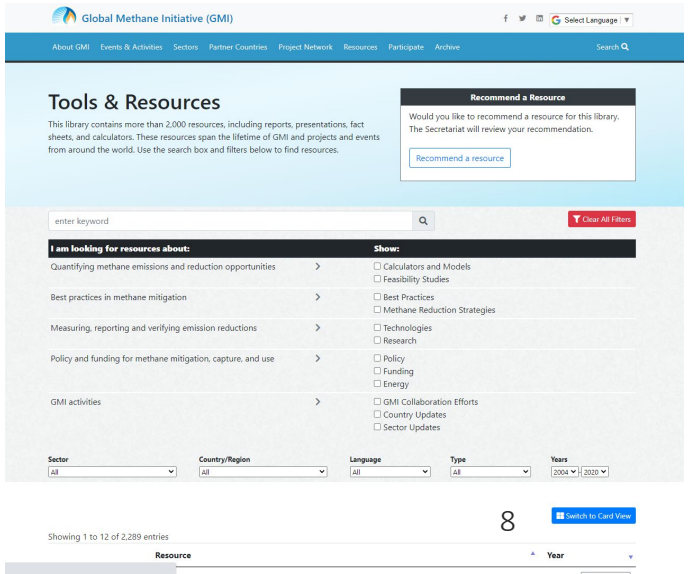
Expanding globalmethane.org to Improve Information Sharing

- Better navigation and organization
- More direct outreach to stakeholders
- Easier access to tools and resources
- Faster load times







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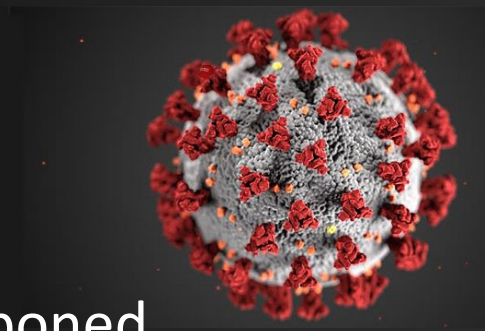
Executive Task Force

Executive Task Force Background



Postponed

- The GMI Steering Committee was scheduled to meet in person in March 2020 during the Global Methane Forum in Geneva, Switzerland
- In response to the postponement, the Secretariat took a virtual approach to facilitate discussion and decision-making regarding the future of GMI, among other issues
- GMI's charter expires in April 2021

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Goals of the Executive Task Force

- Engage a broader cross-section of the GMI community beyond Steering Committee members
- Gather information and make recommendations to the Steering Committee

Task Force Discussion Topics:

- GMI's Strategic Partners: How to Complement and Leverage Action
- The Global Methane Challenge
- Proposal for United Nations International Year or Decade of Methane Management
- Future of GMI
- Re-Charter of GMI

The Steering Committee will discuss the recommendations at its meeting in December 2020.

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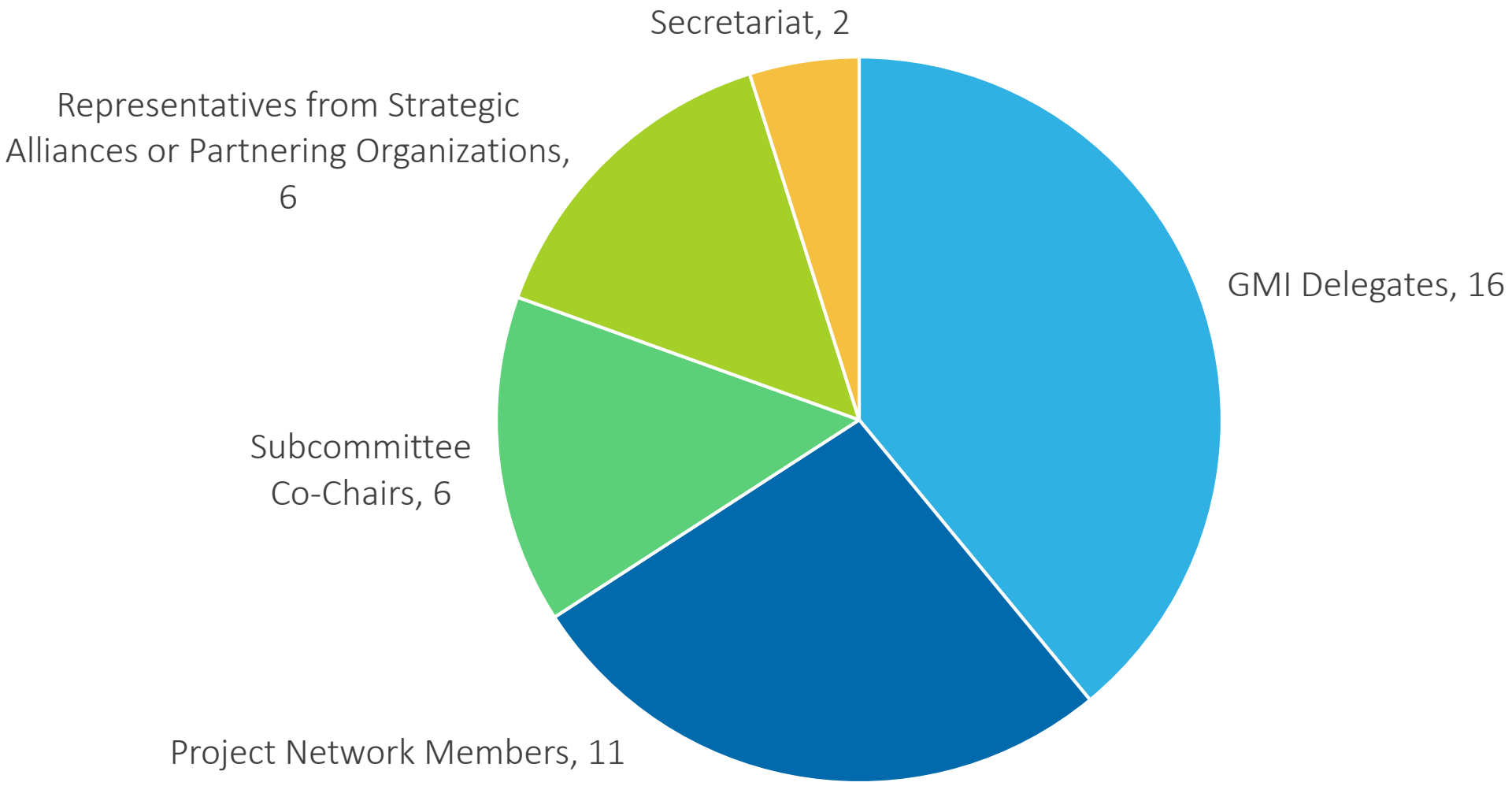
Members of the Executive Task Force by Affiliation to GMI



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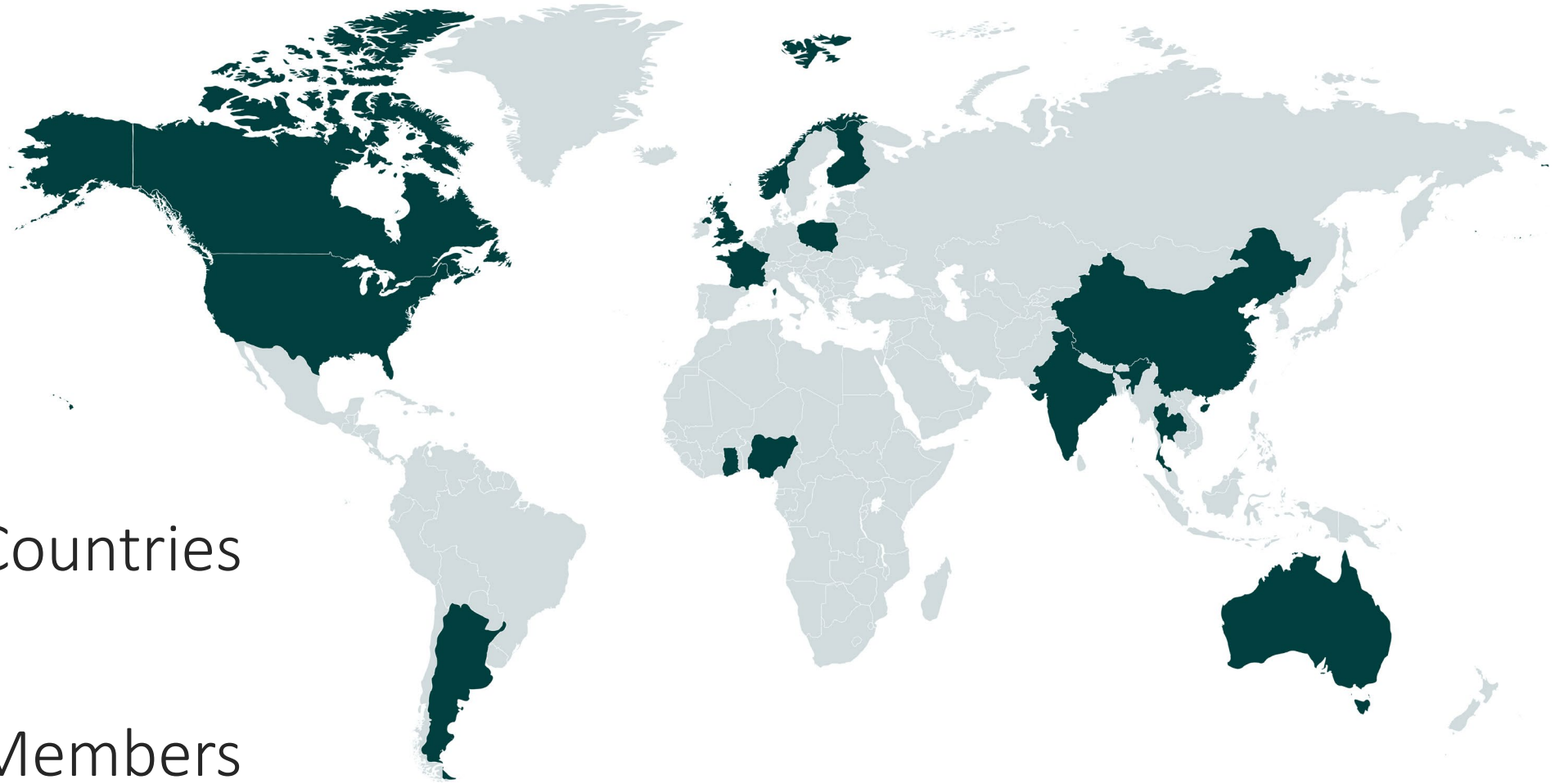
International Representation of the Executive Task Force



14 Countries

41 Members

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Key Takeaways

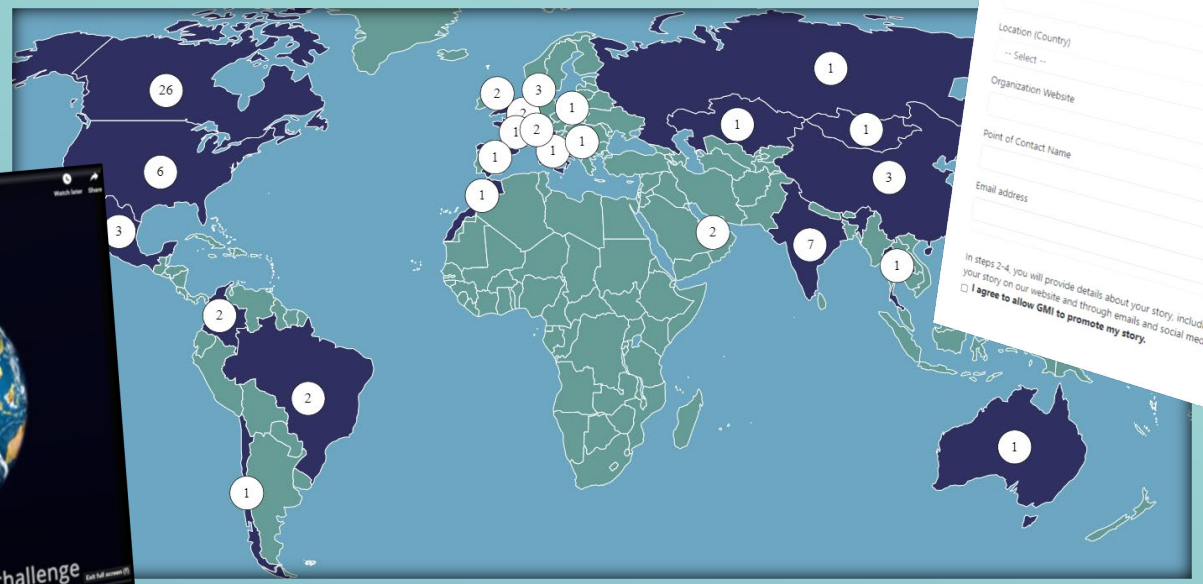
Support for extending GMI charter by 10 years to 2031; harmonizes GMI with:

- The Paris Agreement
- Re-chartering of CCAC through 2031
- United Nations (UN) Decade of Methane Management

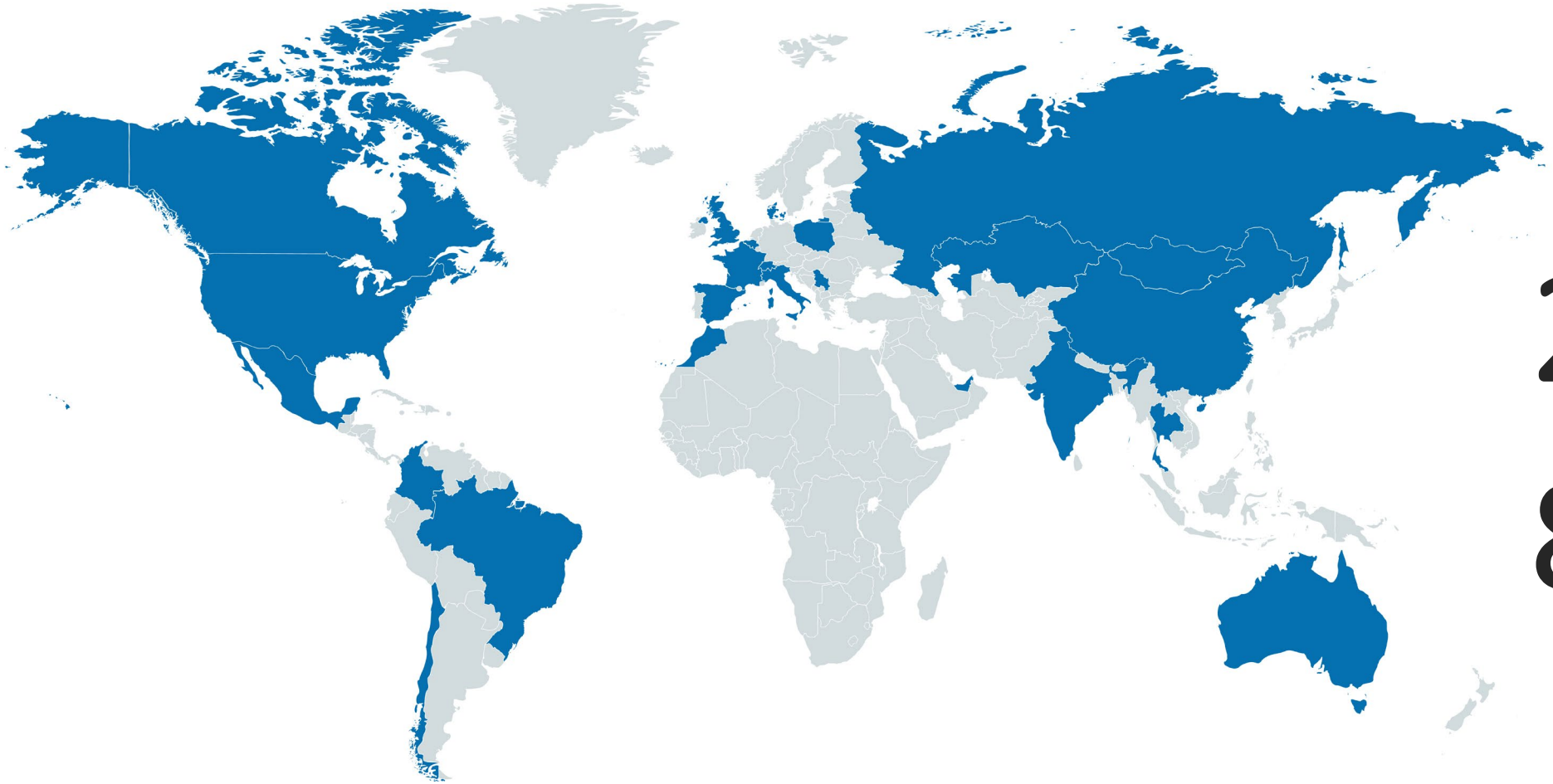
- Formalize relationships with additional partners; for example, the World Bank, IEA, and UNEP, among others
- Extend the Global Methane Challenge as part of the re-chartered GMI; explore opportunities to make it an awards-type of program
- Support UN Decade of Methane Management
- Become a "hub for all things methane"

Global Methane Challenge

Global Methane CHALLENGE



Published Submissions



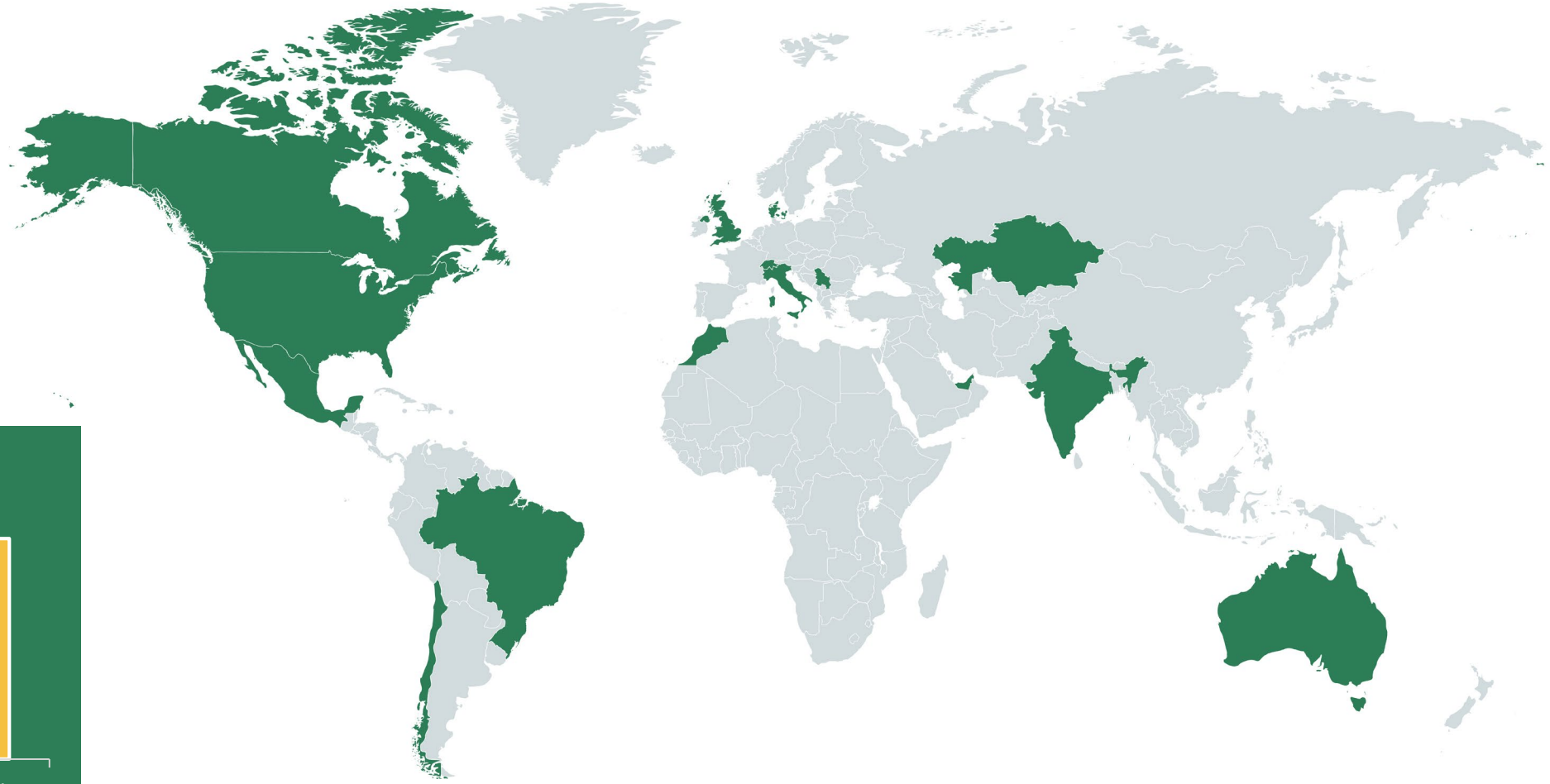
24 Countries

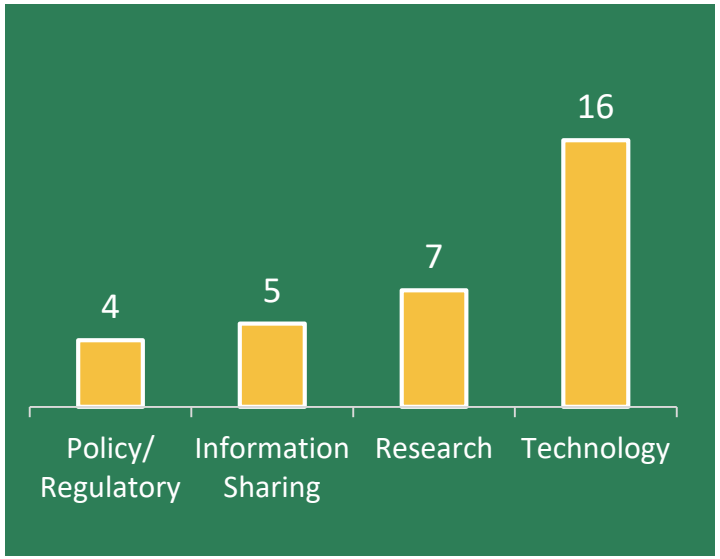
80 Stories

Biogas Sector Stories

14 Countries

32 Stories





Recognizing Global Leaders in Methane Mitigation

- Video was prepared for a recognition ceremony at the 2020 Global Methane Forum
- Features:
  - Overview of the Challenge
    by Helen Ryan, GMI Steering Committee Co-Chair
  - Importance of Collaborative Efforts to Mitigate Methane
    by Scott Foster, UNECE
  - Highlights of many submissions
  - List of all Challenge participants

View at globalmethane.org/challenge

Thank you!

Monica Shimamura
shimamura.monica@epa.gov

Looking Beyond 2021 – GMI's Path Forward for the Biogas Subcommittee

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Housekeeping – Tips for using Remo

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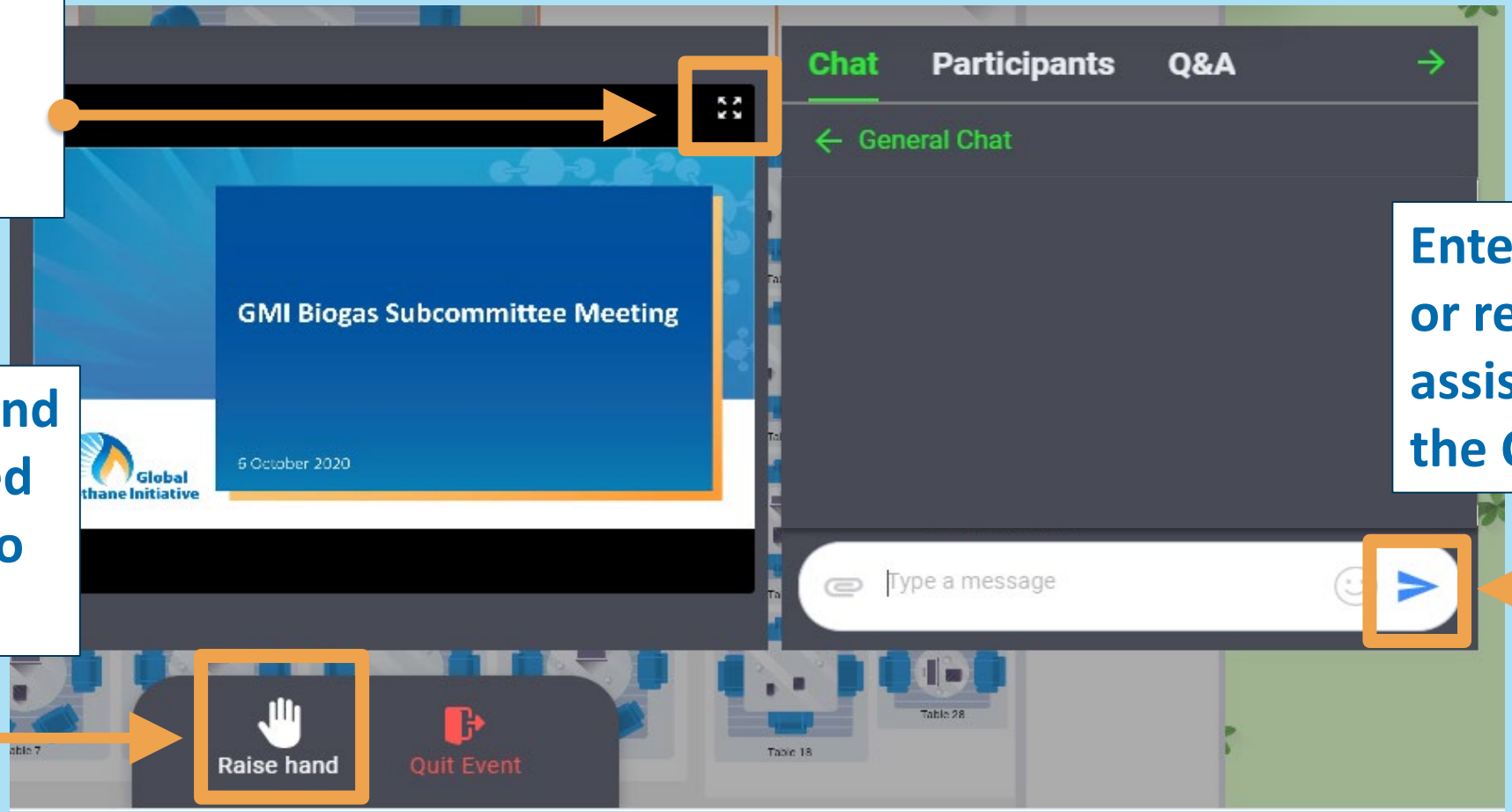

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Looking Beyond 2021

1. What should be the focus of the Biogas Subcommittee's work for the next 3 to 5 years?
2. How should the Biogas Subcommittee be organized to accomplish that work?
3. How should GMI prioritize its work to support the Biogas sector

   (and the work of the other GMI sectors)?

Looking Beyond 2021

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Looking Beyond 2021

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Looking Beyond 2021

3. How should GMI prioritize its work to support the Biogas sector (and the work of the other GMI sectors)?

Project Highlights

Global Methane Initiative

Center of Excellence for Circular Economy and Climate Change

- Based in Novi Sad, Serbia
- Established in April 2019
  - SeSWA, GIZ, USEPA
- Dr. Goran Vujic, Director

Contact:
goranvujic@uns.ac.rs www.centercecc.org

Center of Excellence for Circular Economy and Climate Change

- Mission – Introduction and implementation of CE and CC mitigation actions in the waste sector
- Services offered:
  - Education
  - Consultancy
  - Data analysis
  - Professional training

Center of Excellence for Circular Economy and Climate Change

- Previous experience:
  - USEPA grants
  - GIZ projects
  - CCAC projects
  - Local, regional and national projects

- Ongoing projects:
  - Food Shifters
  - Novi Sad Composting plant

INDIA /Ministry of New and Renewable Energy (MNRE)

Vijay K Bharti

Biogas Subcommittee Virtual Meeting

6 October 2020, 12:00-13:30 UTC

Global Methane Initiative

CONTEXT

HORTICULTURAL CROPS

(viz. fruits, vegetables, flowers, aromatic plants, and spices)

-314 Million Tonnes/year

-Ranked **2nd largest** producer globally

MILK

More than **150 Million Tonnes** of milk daily

ECONOMIC IMPORTANCE:

Around **6.5** % of GDP

Contribute **9%** of total exports

Share of **13%** of its employment

- Despite huge progress in production, **post-harvest losses of fruits and vegetables** go up to **25 to 40%** of the total annual production.
- India estimated losses at **Rs. 133 billion** mainly due to **shortfall in Pre-cooling and Cooling infrastructure** at farm level
  (According to estimates by the Central Institute of Post Harvest Engineering and Technology) (NCCD, Govt. of India)

Agriculture Waste (livestock waste, agro-residues)

•683 MT from 11 major crops & ~178 MT is surplus quantity

•192.5 million Livestock -potential to produce 224.8 million tons biogas (assuming 50% cattle waste is collected and used in biogas plants)

Municipal Solid Waste- 68.8 million tonnes per year

India Cooling Action Plan (ICAP) projected **8 times** increase in **cooling energy demand** by 2037

Providing sustainable affordable **cooling energy** through **local sources** is important strategy for reducing food loss, increased farmers income and energy security

COLD CHAIN OPPORTUNITY IN INDIA

Type	Production Million Tons (MT)	Cold Storage Facility required for MT	
Fruits	97.4	97.4	
Vegetables	187.3	164.0	Onion 23.3 MT, does not require cold storage
Flowers	2.8	2.8	
Aromatics and Medicinal	0.85	0.85	
Plantation Crops	17.7	1.8	Approximately 10% require cold storage
Spices	8.6	4.3	Approximately 50% require cold storage
Milk	176.3	88.2	Approximately 50% distributed through organized sector which has cooling facilities
Total	**491**	**359**	
Existing Cold storage capacity 2018*		39	

Need to develop sustainable cold chain development

CURRENT FOCUS TO PROMOTE BIOGAS DEVELOPMENT IN INDIA

- Focuses on energy recovery in from Industrial, Agricultural & Urban waste/effluent
- Biogas from Cattle manure and other organic waste in rural areas to establish small-scale biogas plants
- To promote Compressed Biogas(CBG), target to develop 5000 CBG plants with expected production capacity of 15 million tonnes of CBG per annum by 2023
- to improve sanitation in Indian villages by processing livestock manure and solid agricultural waste to produce bio gas.

Need to promote use of biogas for meeting growing cooling energy in rural area for agriculture value chain development and biogas market in India

KEY CONCLUSIONS AND WAY FORWARD

- Despite large production of perishables, the **cold chain potential** still remains untapped due to lack of enabling infrastructure like **reliable power, lack of demonstration and awareness.**

- The **decentralized cold chain** in India is still at a **nascent stage**

- Cold storage facilities based on **alternate energy solutions,** such as biogas has huge potential in India. This would result in **very low operating costs** in comparison to diesel or grid electricity based systems, in addition to being environmentally benign.

- A **Research study** being conducted by **TERI and GMI** for assessment of potential sectors and demand scenarios in key perishable sectors like Dairy, Fruits & Vegetables, Meat & Poultry and mapping of potential States/districts would help formulate additional policies linking biogas use for cold storage applications.

Wrap-up and Next Steps

Announcements

- Information discussed will be presented to the GMI Steering Committee on 2-3 December
- Presentation and meeting summary will be posted to the GMI website soon
- Stay tuned for details about future technical webinars!

We welcome your feedback!

We encourage you to share news, resources or suggestions for future webinar topics by emailing us at asg@globalmethane.org.

Please join us at 14:30 UTC

THE WORLD BIOGAS SUMMIT 2020

WBA – GMI panel
Carbon Neutrality – the Climate Benefits of Biogas

Stefano Bozzetto, Consorzio Italiano Biogas e Gassificazione
Bruce Dale, Michigan State University
Matt Hamilton, Environment and Climate Change Canada
Jorge Hilbert, Instituto de Ingeniería Rural (Biogas Done Right)
Thomas Minter, Malaby Biogas
Charlotte Morton, WBA
Dr. Jeremy Woods, Imperial College London (Biogas Done Right)

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