# Update on United States Activities in Support of GMI



Christopher Grundler Director, Office of Atmospheric Programs US Environmental Protection Agency November 2019





# **U.S. Collaboration in Support of GMI**

- U.S. EPA serves as GMI Administrative Support Group
- Continues to provide technical assistance across sectors
- Supports collaborative efforts with other international agencies
  - UNECE Group of Experts on Coal Mine Methane
  - UNECE Group of Experts on Gas
  - Climate and Clean Air Coalition (CCAC)
  - International Energy Agency (IEA)
  - World Bank Pilot Auction Facility for Methane and Climate Change Mitigation
- Supports GMI outreach campaigns and events
  - Global Methane Challenge
  - Planning for Global Methane Forum 2020











## **Overview of Accomplishments**





Co-organized and co-hosted technical events on methane management



Conducted site visits and increased the capacity for local organizations to address methane

Supported the development of databases and prepared country profiles

Prepared feasibility studies and assessed best management practices at international sites



Led workshops and trainings; delivered technical presentations around the world



Developed outreach and tools and resources for methane mitigation



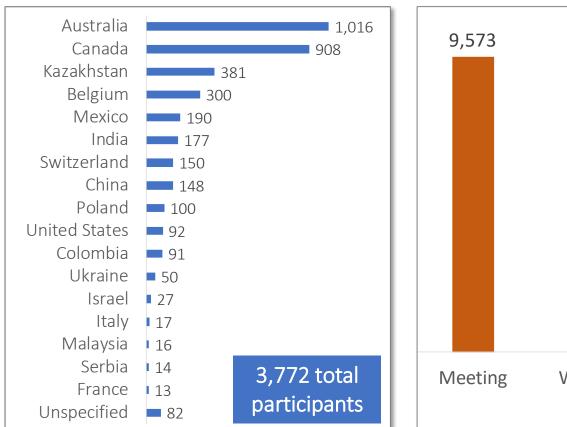
# **Training and Outreach through In-person Meetings (FY18)**

Participants by Country

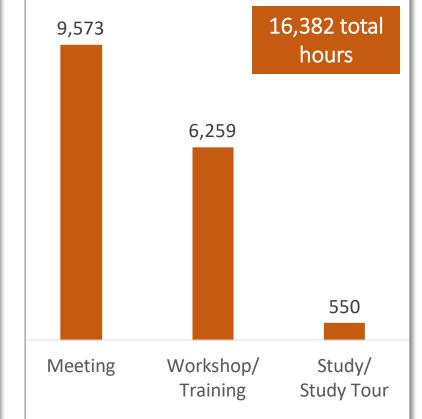


### Trips by US Staff





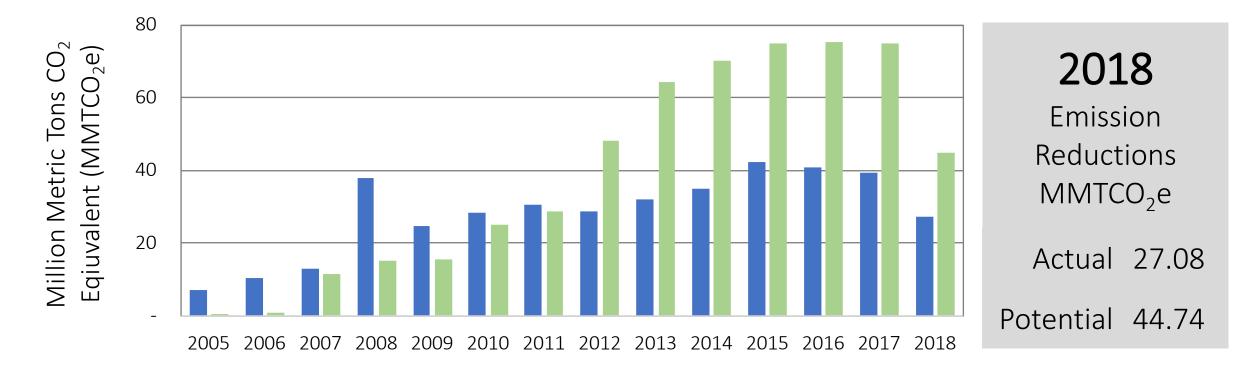
### **Total Participation Hours**





### **Methane Emission Reductions**





Actual Emission Reductions
Potential Emission Reductions



# U.S. Contributions to Biogas Sector Agriculture

#### Biogas Subcommittee



### Developed resources

- India Market Opportunity Assessment
- India Anaerobic Digestion (AD) Database (data collection, database framework)
- Risk Analysis and Technical Review Guidance and Checklist for AD
- Best Practice Guide to reduce perceived risk of developing biogas projects
- Collaborated and built capacity
  - Increased collaboration with CCAC Agriculture Initiative
  - Held two in-person workshops engaging government, private sector and investment community on biogas project support in India
  - Engaged with India on related methane mitigation work (paddy straw to biogas)
  - Assisted Indian government, project developers and investment community to better understand potential for biogas projects



# U.S. Contributions to Biogas Sector Municipal Solid Waste





- Prioritized efforts on China, India, and Mexico
  - Relaunched Best Practice Guide development with new partners China Association for Urban & Environmental Association (CAUES) and Innovative Green Development Program (iGDP)
  - Advised and trained municipal staff of Naucalpan and co-organized Biogas Conference with German aid agency (GiZ) FELICITY program
- Collaborated and built capacity
  - Provided advisory role to CCAC
  - Building capacity in key institutions so they can provide technical assistance to their networks: TERI (India), Center of Excellence (Serbia), and China Waste Association (China)
- Initiated efforts to create a Center of Excellence
  - Cooperating with GiZ, Serbian Solid Waste Association and CCAC to create Center for Circular Economy and Climate Change
  - Increasing regional capacity for improved waste management and methane mitigation in Southeastern Europe, Central Asia, and Middle East



# U.S. Contributions to Biogas Sector Wastewater



- Provided technical support to Mexico
  - Pre-feasibility studies in Monclova, Coahuila; Atapaneo, Michoacán; and Naucalpan
  - Policy workshop in Mexico City in May 2019
  - Executive Meeting in Mexico City in May 2019 to strengthen the exchange of institutional information among decision-makers about technologies, projects, and financing
- Provided technical support to Kazakhstan
  - Pre-feasibility studies in Nur-Sultan (large plant) and Taldykorgan (medium-sized plant)
  - Two short assessments based on an expert visit in Almaty and Shymken
  - Presented at a panel-of-experts at the Water Expo 2019 in Nur-Sultan
  - Conducted a technical training in Nur-Sultan in May 2019 with approximately 20 attendees
- Developed the BioWATT tool
  - Partnered with World Bank to develop the tool
  - Provides tool for wastewater treatment operators to assess energy generation and recovery potential from sludge treatment and co-digestion of organic waste



## **U.S. Contributions to Coal Mines Sector**



- Co-chair Coal Subcommittee; hosted 29th meeting with UNECE Group of Experts on Coal Mine Methane (November 2019)
- Developed resources
  - Status of Ownership and Policy Incentives in Key Countries
  - Legal and Regulatory Status of Abandoned Mine Methane (AMM) in Selected Countries
  - Expert Dialogue on Ventilation Air Methane (VAM) Meeting Report (Australia)
  - Country-specific resources (India, Colombia, 7 CMM Country Profiles)
  - Finalized GMI/UNECE Best Practice Guidance
- Participated in events
  - Supported technical workshops (Australia, China, Colombia, India, Poland, Turkey, Ukraine)
  - Presented at Pittsburgh International Coal Conference (September 2019)
- Supported CMM pre-feasibility studies
  - Completed pre-feasibility studies in Colombia, India, and China
  - Aggregated China training materials into an online training



## **U.S. Contributions to Oil & Gas Sector**



- Worked with UNECE Group of Experts on Gas to finalize Best Management Practices for methane monitoring, reporting, verification (MRV) and mitigation
- Held quarterly meetings, including joint meeting with UNECE Group of Experts on Gas in March 2019
- Collaborated with CCAC Oil & Gas Methane Partnership to revise reporting guidelines
- Led implementation of 2018 workplan (focus on barrier identification)
- Cultivated relationships with other international programs working on oil and gas methane
  - E.g., Methane Guiding Principles for World Bank Global Gas Flaring Reduction Partnership (GGFR)



# Thank you!



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