

# The Global Methane Initiative

## Program Overview and Update on Serbian Activities

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# Overview

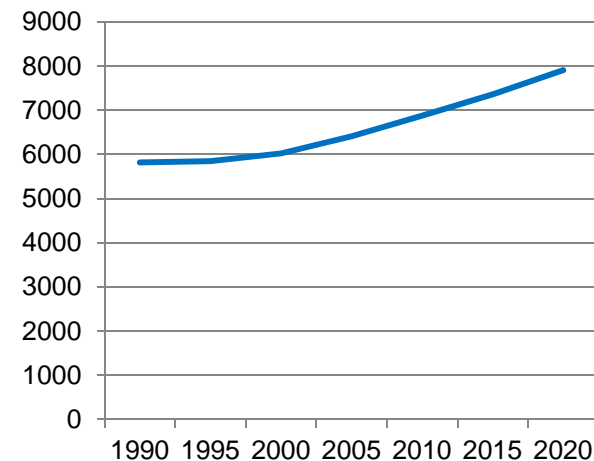
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- Why Methane?
- Global Methane Initiative Overview
- Approach to Project Development
- Serbian Activities

# Why Methane (CH<sub>4</sub>)?

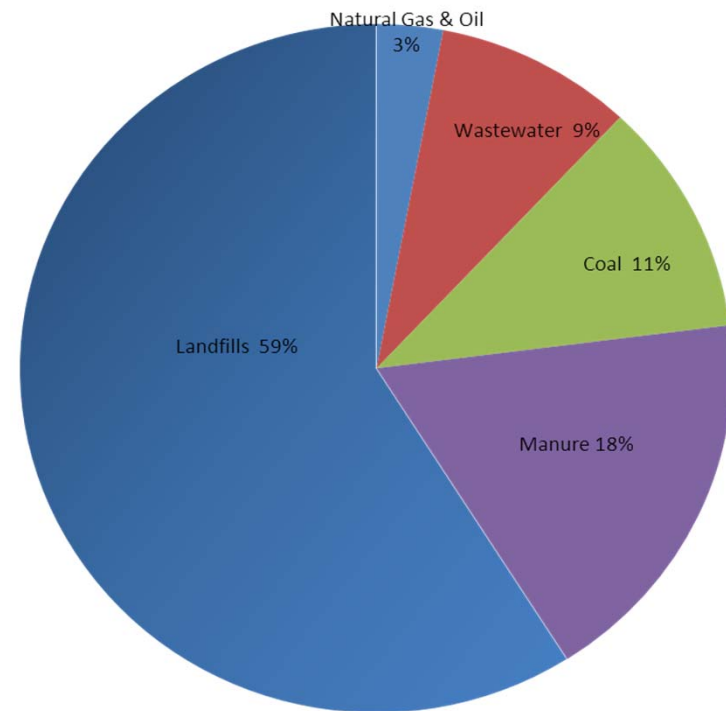
- Potent greenhouse gas
  - 100-year GWP = 25
  - Lifetime = 12 years
  - Most important short-lived forcer— based on emissions, accounts for >1/3 of current anthropogenic forcing
- Ozone precursor
  - Effects background ozone levels
- Many emission sources
  - Energy, Agriculture, and Waste Sectors
  - 50 - 70% of Emissions are Anthropogenic

Estimated Increase in Methane Emissions, 1990–2020



# Republic of Serbia - Methane Profile From GMI Sectors

- Based on 2010 Estimates
- Anthropogenic Sources
- Total Estimated Emissions of 5.6 MMTCO<sub>2</sub>e



# Methane Projects Deliver Significant Co-Benefits

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- **New Sources of Clean Energy**
  - Mitigation makes methane available for local energy purposes
- **Air Quality Improvement**
  - Decrease in background ground-level ozone – a 20% reduction in global methane emissions could avoid large Northern Hemisphere mortality (140,000 – 400,000 lives in 2030)
  - Reduction of local emissions of organic compounds and hazardous air pollutants from landfills, agriculture, and oil & gas systems
  - Odor reductions in the landfill and agriculture sectors
- **Water Quality Benefits**
  - Local water quality improvements due to improved management of agricultural wastes and leachate from landfills
- **Industrial Safety**
  - Methane is explosive - improved worker safety in the coal mining and oil & gas sectors



# Global Methane Initiative (GMI)

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- **Mission**

Global effort to reduce methane emissions through cost-effective abatement, recovery, and use projects

- Five Sector-Specific Areas:

- Landfills, Coal Mines, Agricultural, Oil & Gas systems, and Municipal Wastewater

- **Membership**

- Began in 2004 as a public-private partnership. Has expanded to 40 Partner countries, ADB, IDB, and over 1000 public and private organizations

- **Impact**

- Covers nearly 70% of global methane emissions
- GMI has leveraged more than \$480 million USD of private financing since 2004

# Strategic Approach to Sector Work and Project Development

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- Conduct capacity building and outreach efforts with all Partner countries in relevant sectors
- Develop sector and country specific strategies to identify and overcome barriers to projects
- Assessing resources by performing initial gas generation and feasibility studies
- Technology transfer through demonstration, training, and workshops
- Creating an environment for sound investment

# Sector Work and Project Development

- Elements of Sector Work
  - Technical Assistance
    - Pre-feasibility Assessments
    - Engineering Assistance
    - Investment Assistance
  - Capacity Building and Training
    - Landfill Biogas Basics
    - Operations and Management Training
  - Outreach, Publications and Resources
    - International Best Practices Guide
    - Multiple Country/Region-specific Models



**OVERVIEW OF LANDFILL BIOGAS PROJECT OPPORTUNITY**

Bahia Blanca's existing Landfill is owned by the Municipality of Bahia Blanca and has been visited by UNEP, UNEP/WHO, domestic and commercial waste from Bahia Blanca and the surrounding area.

- The site opened in 1967 and currently accommodates 75,000 tonnes of waste annually.
- Currently, the site has approximately 1.4 million tonnes of waste in place.
- The landfill is expected to close in 2025, with an estimated capacity of 2.8 million tonnes of waste.
- Preliminary biogas modeling estimates that 200 m<sup>3</sup> of biogas at 50% methane with 77% collection efficiency can be recovered for export and use in 2015.
- Biogas recovery is estimated to decrease to a peak of approximately 1,500 m<sup>3</sup> per day in 2020.

The City of Bahia Blanca seeks specific cooperation to advance the development of this project:

- The City seeks technical assistance.
- The project is willing to consider carbon financing.
- The project owner does not have a contract to sell its carbon credits.

**ENVIRONMENTAL BENEFITS**

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimated Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Carbon reduction from biogas activities. Data last updated December 2018





# Landfills Sector Work: Serbia

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- Hosted Regional Workshop in Serbia
  - December 2010
- U.S. EPA Awarded Grant to University of Novi Sad, Faculty of Technical Sciences
  - Development of landfill inventory, training, pre-feasibility study (2011-2012)
- U.S. EPA Landfill Biogas Preliminary Assessment Report

# Next Steps - Opportunities for Future Participation

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- Upcoming partnership meeting in Krakow, Poland
- 3<sup>rd</sup> Partnership Expo in late 2012
- Preparation of Methane Action Plan for Serbia
- Assessment and Promotion of Landfill Biogas Energy Project Opportunities at Major Municipal Centers in Serbia
- Promotion of Landfill Biogas Capture and Utilization as part of National Solid Waste Management Program
- Development of Regional Assessment Tools



# *Partnership-Wide Meeting*

*12-14 October 2011 – Krakow, Poland*

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- Plenary Sessions Focusing on the Reduction and Capture of Methane Emissions
- Sector-Specific Site Tours
- Technical and Policy Sessions
- Steering Committee Meeting
- Networking Functions, Including a Special Tour and Dinner at the Wieliczka Salt Mine, a World Heritage Site
- For More Information, Please Visit [www.globalmethane.org/krakow](http://www.globalmethane.org/krakow)



# Thank You

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