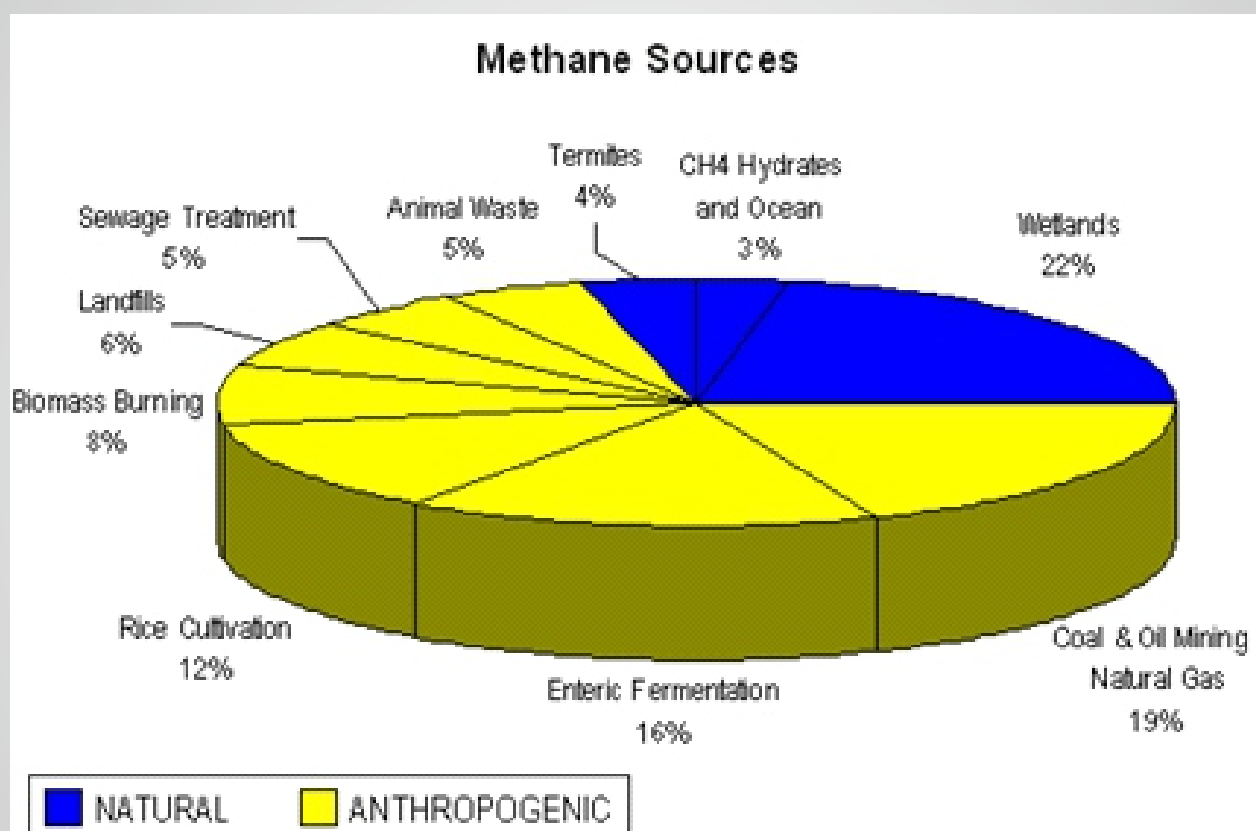


Methane Management An Economic Opportunity for Mitigation



UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

METHANE MANAGEMENT – AN ECONOMIC OPPORTUNITY FOR MITIGATION



GENEVA, 2015

Proper management of methane from source to use in extractive industries will be an effective means of reducing emissions of an intensive greenhouse gas and short lived climate pollutant. Methane is the second most important greenhouse gas. In terms of the radiative forcing, it is around 30 times more potent than CO₂. While account must be taken of the respective residence times of CO₂ and methane in determining the actual contributions to the greenhouse effect, it is generally recognised that using methane instead of emitting it into the atmosphere accrues a net actual benefit from a climate change mitigation perspective. About 60% of global methane emissions are due to human activities. The main sources of anthropogenic methane emissions are the oil and gas industries, agriculture (including fermentation, manure management, and rice cultivation), landfills, wastewater treatment, and emissions from coal mines. Fossil fuel production, distribution and use are estimated to emit 110 million tonnes of methane annually.

Reducing leaks and emissions from the gas value chain is important from both economic and environmental perspectives. In many UNECE member States there is an opportunity to improve efficiency in the gas supply chain from source to use. The differences between the volumes of gas produced at the source and the volumes delivered to end users show significant variances across UNECE member States. Reducing the differences by improving the performance among laggards will improve the overall energy efficiency, gas affordability and producers' competitiveness. It will also reduce methane emissions from leaks in the gas value chain. Since methane is a potent greenhouse gas, reducing emissions will have a significant positive impact on the environment. The UNECE Group of Experts on Gas has

established a task force to explore best practices to reduce leaks in the natural gas system from source to use.

Extraction, processing and transportation of coal releases methane. This makes the coal industry one of the largest sources of anthropogenic methane emissions. These emissions can be substantially reduced through implementation of best practices in methane management. Greater focus on best practices is needed to minimize the carbon footprint along the coal industry value chain. One of the more effective near-term options is the capture and use of methane from coal mines. This not only mitigates climate change, but delivers other important co-benefits including improvement of mine safety and productivity, localized energy production, and improvement in local/regional air quality. In addition, such projects can result in positive cash flows to the mine and serve as catalyst for investment.

Because the experiences in different countries are quite diverse, an exchange of good practices and case studies is critically important to avoid excessive methane emissions from coal mines. In 2011 the Economic and Social Council of the United Nations invited the United Nations Member States, international organizations and the regional commissions to take appropriate measures to ensure the application of the Best Practice Guidance in countries worldwide.

The UNECE Group of Experts on Coal Mine Methane (CMM) promotes the reduction of greenhouse gas emissions from coal mines. In addition to reducing the carbon footprint of an otherwise extremely carbon-intensive industry, the activities of the Group of Experts on CMM on the recovery and use of methane reduce the risks of explosions in coal mines, thus helping save lives and avoid large-scale economic losses. The

principal activity of the Group of Experts on CMM is development and dissemination of the *Best Practice Guidance for Effective Methane Drainage and Recovery in Coal Mines*. In addition, the Group of Experts on CMM prepares proposals for case studies on the application of best practice guidance in specific coal mines in different regions of the world. The Group of Experts on CMM also facilitates the establishment and work of an International Centre of Excellence in CMM that will in near future deal with practical aspects of coal mine methane abatement and utilisation and provide practical training to coal mine methane professionals.

United Nations Economic Commission for Europe

Sustainable Energy Division

UNECE's work on sustainable energy is designed to improve access to affordable and clean energy for all and help reduce greenhouse gas emissions and the carbon footprint of the energy sector in the region. It promotes international policy dialogue and cooperation among governments, energy industries and other stakeholders.

The Committee on Sustainable Energy and its six subsidiary bodies carry out concrete and results-oriented activities with the aim to achieve the specific objectives identified for each priority area:

Areas of work

- Cleaner Electricity Production
- Coal Mine Methane
- Energy Efficiency
- Natural Gas
- Renewable Energy
- Resource Classification
- Energy Security

For more information



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