



Unfixed Methane Leaks: COP29 Satellites Uncover 'Super-Emitters'

Description

A Closer Look at Methane Emissions

New technologies are helping to identify methane emissions, a significant contributor to global warming. Despite advances in detection methods, a recent report highlighted that when notified of large methane leaks, "super-emitters" often fail to take action promptly.

Manfredi Caltagirone, from the United Nations Environment Programme, emphasized the need for greater transparency and urgency in addressing methane emissions. Satellite data is now being used to alert emitters of leaks from various sources, including oil and gas infrastructure.

Methane ranks second after carbon dioxide in the list of greenhouse gases to tackle. Progress has been made in reducing methane emissions, with many countries committing to uphold their promises. However, the response rate to alerts about methane leaks remains low.

While the new alert system has issued numerous notifications, only a small percentage of emitters have taken corrective measures. Challenges such as technical and financial constraints, along with identifying ownership of leak sources, hinder swift action.

Efforts to address methane emissions are a key discussion point at the ongoing COP29 summit, with countries announcing initiatives to curb these emissions further.

Vocabulary List:

1. **Emissions** /ɪˈmɪʃənz/ (noun): The act of releasing something especially gas or radiation into the atmosphere.
2. **Significant** /sɪgˈnɪfɪkənt/ (adjective): Important and deserving of attention.
3. **Transparency** /trænsˈpærənsi/ (noun): The quality of being open and honest; clear and easy to understand.
4. **Urgency** /ˈɜːrdʒənsi/ (noun): The quality or state of being urgent; requiring immediate action or attention.
5. **Corrective** /kəˈrɛktɪv/ (adjective): Intended to correct or improve something.
6. **Initiatives** /ɪˈnɪʃətɪvz/ (noun): A new plan or process to achieve something or solve a problem.

Comprehension Questions

Multiple Choice

1. Which greenhouse gas is ranked second after carbon dioxide in the list of gases to tackle?
Option: Methane
Option: Nitrous oxide
Option: Carbon monoxide
Option: Sulfur dioxide
2. What new technology is being used to alert emitters of methane leaks?
Option: Satellite data
Option: Underwater sensors
Option: Thermal imaging cameras
Option: Acoustic detectors
3. Who emphasized the need for greater transparency and urgency in addressing methane emissions?
Option: Manfredi Caltagirone
Option: Greta Thunberg
Option: Elon Musk
Option: Jeff Bezos
4. What hinder swift action in addressing methane emissions?
Option: Technical and financial constraints
Option: Lack of awareness
Option: Government regulations
Option: Public indifference
5. What is a key discussion point at the ongoing COP29 summit?
Option: Efforts to address methane emissions
Option: Renewable energy sources
Option: Biodiversity conservation
Option: Plastic pollution
6. What is a significant contributor to global warming?
Option: Methane emissions
Option: Deforestation
Option: Volcanic eruptions
Option: Ozone depletion



True-False

- 7. Methane emissions have surpassed carbon dioxide emissions in recent years.
- 8. The response rate to alerts about methane leaks is high.
- 9. Ownership of leak sources is easily identified.
- 10. Super-emitters promptly take action upon notification of large methane leaks.
- 11. Countries are not announcing any initiatives to curb methane emissions at the COP29 summit.
- 12. Satellite data is not used to alert emitters of leaks from oil and gas infrastructure.

Gap-Fill

- 13. _____ is a significant contributor to global warming.
- 14. Efforts to address methane emissions are a key discussion point at the ongoing _____ summit.
- 15. Challenges such as _____ hinder swift action in addressing methane emissions.
- 16. Only a small percentage of emitters have taken _____ measures.
- 17. _____ rank second after carbon dioxide in the list of greenhouse gases to tackle.
- 18. Satellite data is now being used to alert emitters of leaks from various sources, including _____ infrastructure.

Answer

Multiple Choice: 1. Methane 2. Satellite data 3. Manfredi Caltagirone 4. Technical and financial constraints 5. Efforts to address methane emissions 6. Methane emissions

True-False: 7. False 8. False 9. False 10. False 11. False 12. False

Gap-Fill: 13. Methane emissions 14. COP29 15. technical and financial constraints 16. corrective 17. Methane 18. oil and gas



Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. Who advocates for the protection and preservation of the environment and wildlife?
Option: Accountants
Option: Conservationists
Option: Politicians
Option: Artists
2. Who studies celestial objects and phenomena?
Option: Carpenters
Option: Astronomers
Option: Chefs
Option: Athletes
3. Which term relates to the process or set of rules to be followed in calculations or other problem-solving operations?
Option: Musical
Option: Algorithmic
Option: Biological
Option: Historical
4. Which word describes something emitting or reflecting light?
Option: Opaque
Option: Dull
Option: Luminous
Option: Invisible
5. What term describes the quality of being easily seen through?
Option: Concealment
Option: Obscurity
Option: Transparency
Option: Opacity
6. What type of action is taken to correct or rectify a mistake or a problem?
Option: Destructive
Option: Corrective
Option: Acceptive



Option: Reactive

7. Which term means to increase or improve the quality value or extent of something?

Option: Diminish

Option: Reduce

Option: Enhance

Option: Deplete

8. Who or what controls or maintains parameters in a particular system or process?

Option: Disrupter

Option: Observer

Option: Regulator

Option: Assistant

9. What describes the state or quality of requiring immediate action or attention?

Option: Leisure

Option: Calmness

Option: Urgency

Option: Delay

10. Which term means important in effect or meaning?

Option: Insignificant

Option: Minor

Option: Negligible

Option: Significant

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. Cats use their _____ for sensing their environment.

12. The factory was fined for its excessive _____ of pollutants.

13. The company launched several new _____ to promote employee well-being.

14. All _____ from the charity event will go toward funding medical research.

15. The criminal was _____ to ten years in prison for his role in the robbery.

16. The investigators uncovered a complex _____ to defraud the government.

17. The police made a _____ of illegal drugs during the raid.



18. Money _____ is a serious financial crime that involves illegal proceeds.
19. The photographer managed to _____ the beauty of the landscape in a stunning image.
20. The rapid advancement of _____ has transformed how we live and work.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. Conservationists work to protect and natural habitats for future generations.
22. Astronomers study massive stars known as that exhibit extreme characteristics.
23. The of a butterfly involves stages from egg to caterpillar to butterfly.
24. The stunning photograph the essence of the city at night.
25. Leaders should be for their decisions and actions.
26. Experts provided valuable for improving the company's financial performance.
27. The discovery of a new species in the forest was a achievement for the research team.
28. Governments should prioritize in their decision-making processes.
29. The board of directors emphasized the of addressing the company's financial challenges.
30. The company implemented actions to address the product quality issues.

Answer

Multiple Choice: 1. Conservationists 2. Astronomers 3. Algorithmic 4. Luminous 5. Transparency 6. Corrective 7. Enhance 8. Regulator 9. Urgency 10. Significant

Gap-Fill: 11. Whiskers 12. Emissions 13. Initiatives 14. Proceeds 15. Sentenced 16. Conspiracy 17. Seizure 18. Laundering 19. Capture 20. Technology

Matching sentence: 1. Preserve 2. Supergiants 3. Lifecycle 4. Captured 5. Accountable 6. Recommendations 7. Significant 8. Transparency 9. Urgency 10. Corrective

CATEGORY

1. Sci/Tech - LEVEL3



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