



Explained: What is the Global Methane Pledge, and why is methane significant for climate change?

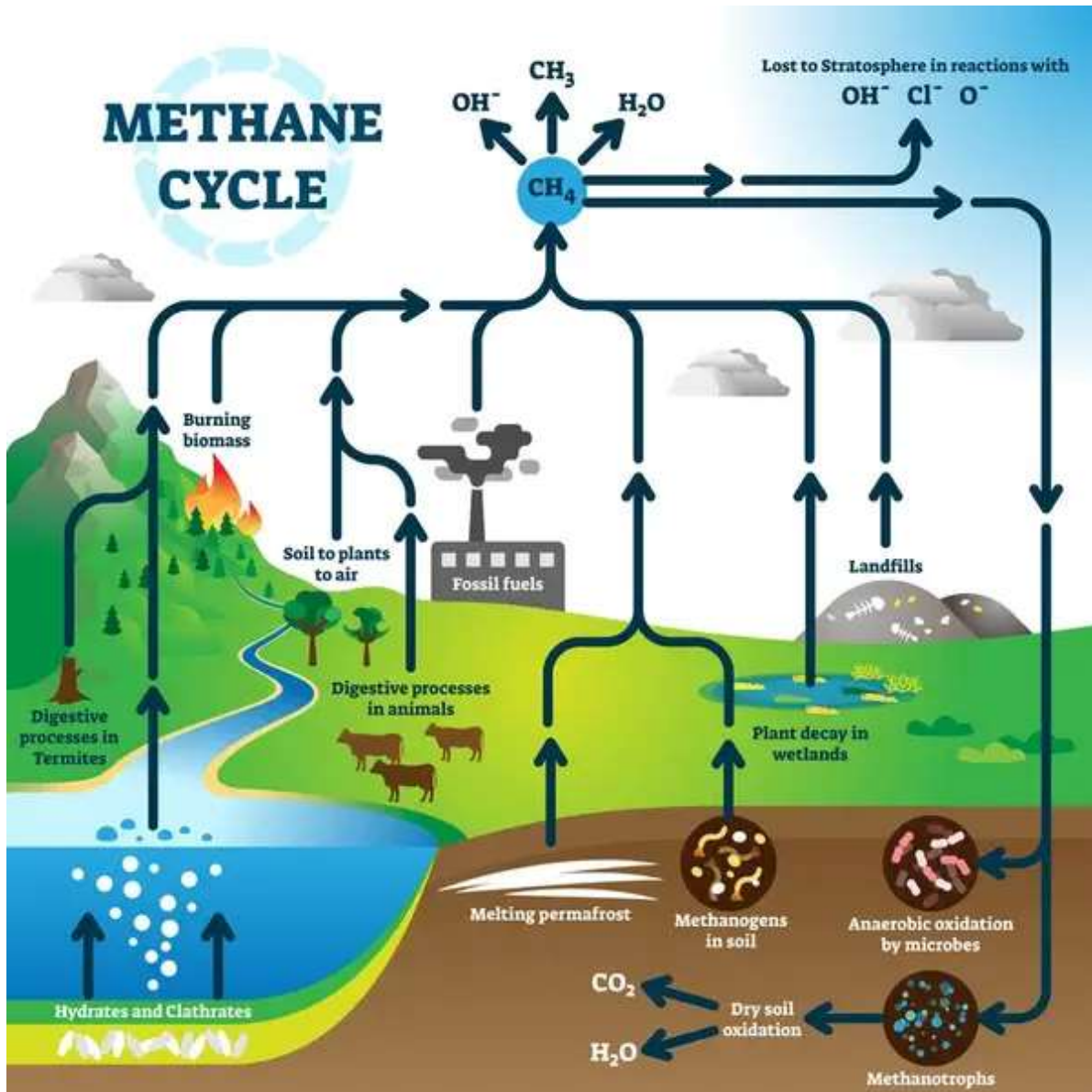
- The Global Methane Pledge was launched at the ongoing UN COP26 climate conference in Glasgow. So far, over 90 countries have signed this pledge, which is an effort led jointly by the United States and the European Union.
- Methane is the second-most abundant greenhouse gas in the atmosphere, after carbon dioxide, and, therefore, pledges related to cutting down its emissions are significant.

What is the Global Methane Pledge?

1. The pledge was first announced by the US and EU and is essentially an agreement to reduce global methane emissions. One of the central aims of this agreement is to cut down methane emissions by up to 30 per cent from 2020 levels by the year 2030.
2. According to the latest Intergovernmental Panel on Climate Change report, methane accounts for about half of the 1.0 degrees Celsius net rise in global average temperature since the pre-industrial era.
3. Rapidly reducing methane emissions is complementary to action on carbon dioxide and other greenhouse gases, and is regarded as the single most effective strategy to reduce global warming in the near term and keep the goal of limiting warming to 1.5 degrees Celsius within reach.

What is methane?

1. According to the UN, 25 per cent of the warming that the world is experiencing today is because of methane, a greenhouse gas, which is also a component of natural gas. Because it is a greenhouse gas, its presence in the atmosphere increases Earth's temperature.
2. There are various sources of methane including human and natural sources. Human sources of methane include landfills, oil and natural gas systems, agricultural activities, coal mining, wastewater treatment, and certain industrial processes.
3. The oil and gas sectors are among the largest contributors to human sources of methane. NASA notes that human sources (also referred to as anthropogenic sources) of methane are responsible for 60 per cent of global methane emissions. These emissions come primarily from the burning of fossil fuels, decomposition in landfills and the agriculture sector.



Why is dealing with methane important for climate change?

1. According to the International Energy Agency (IEA), while methane has a much shorter atmospheric lifetime (12 years as compared to centuries for CO₂), it is a much more potent greenhouse gas simply because it absorbs more energy while it is in the atmosphere.
2. In its factsheet on methane, the UN notes that methane is a powerful pollutant and has a global warming potential that is 80 times greater than carbon dioxide, about 20 years after it has been released into the

03.11.2021

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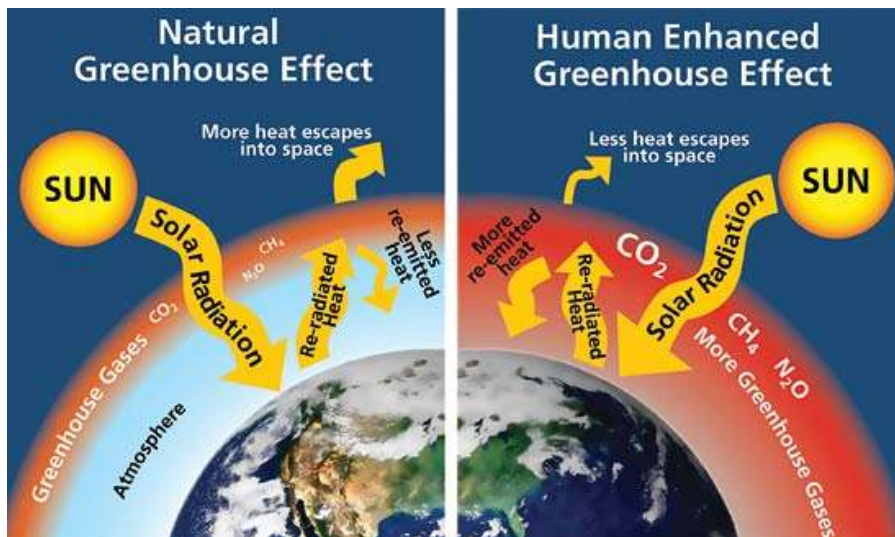


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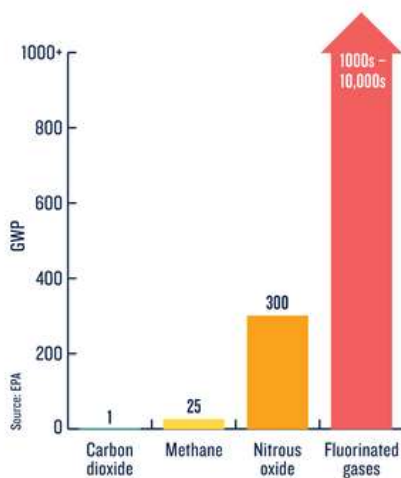
atmosphere. Significantly, the average methane leak rate of 2.3 per cent “erodes much of the climate advantage gas has over coal”, the UN notes.

- The IEA has also said that more than 75 percent of methane emissions can be mitigated with the technology that exists today and that up to 40 per cent of this can be done at no additional costs.

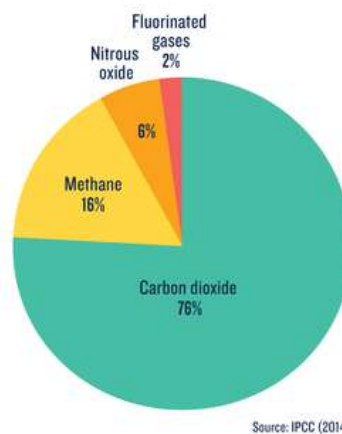
Greenhouse effect mechanism and Prominent gases:



HOW GREENHOUSE GASES WARM OUR PLANET



The global warming potential (GWP) of human-generated greenhouse gases is a measure of how much heat each gas traps in the atmosphere, relative to carbon dioxide.



How much each human-caused greenhouse gas contributes to total emissions around the globe.