

# Tackling methane

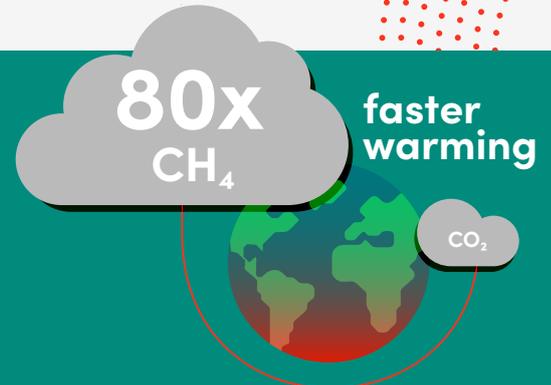
## A guide to subnational government action

Limiting global temperature rises to 1.5 degrees demands urgent action on emissions this decade. As a short-lived climate pollutant (SLCP), methane has the potential to make a huge difference to our success in tackling climate change. Solutions already exist today to tackle methane emissions quickly. State and regional governments can drive progress by working together on policies that are cutting-edge, complement existing policies at both the national and local level and fill in gaps in action.

### What is methane?

Methane is a short-lived climate pollutant (SLCP) that can warm the atmosphere over 80 times faster than longer-lived carbon dioxide over the next 20 years.

The short life cycle of methane emissions provides a golden opportunity to help limit global temperature increases now if it is acted on quickly.



### What are the main sources of methane?

#### 40% - 46% Agriculture

Agriculture and food systems contribute **40% to 46%** of global methane emissions, mainly from **enteric fermentation**, rice cultivation, manure management and food loss and waste. Due to rising food production for an increasing global population, these emissions are set to increase roughly 40% by 2050.



#### 25% Oil and gas

Fossil fuel systems are the second largest source of methane emissions in the world and are estimated to contribute around **25% of global methane emissions**. These come from leaks and routine venting during the production, processing and transportation of natural gas and from oil operations.



#### 20% Waste

Methane is generated in landfills as waste decomposes and in the treatment of wastewater. Landfills and wastewater treatment generate around **20%** of global methane emissions.



### Why does methane matter?

The latest Intergovernmental Panel on Climate Change (IPCC) **report** states that reducing SLCPs, like methane, can contribute significantly to limiting warming to 1.5°C in the short term. However, current methane concentrations are well above those needed to limit global temperature rises to even a 2°C target.

If we slash man-made methane emissions by

**50%** over the next 30 years,

we could reduce global temperature change by **0.18°C by 2050**. This represents around **a decade's worth of emissions**.



### Global Methane Pledge

In 2021, over 100 countries signed the **Global Methane Pledge** to cut methane emissions 30% by 2030.

The pledge brings together some of the highest methane-emitting nations in the world but achieving its goal will require collaboration and action at the subnational level too.



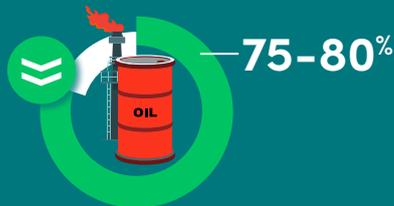
# What is the role of subnational governments?

- States and regions are uniquely positioned to implement tailored responses that address the needs of their communities and can be replicated by other governments.
- These governments are eager to learn from each other's experiences and support progress at the subnational level across the world.
- At COP26, **state and regional governments committed** to taking tangible action on a range of climate issues by 2030 in order to meet their net zero emissions targets.

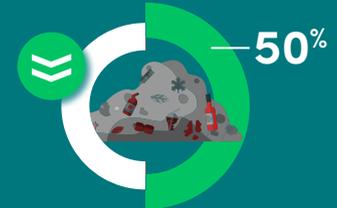
These include commitments to:



Reduce greenhouse gas emissions from livestock – including methane – by 30% by 2030



Reduce methane emissions from the oil and gas sector 75–80% by 2030



Develop circular economies that reduce organic waste going to landfills in states and regions by at least 50% by 2030 or reduce total waste flow to landfills by at least 15% by 2030

## What are the co-benefits of acting now?

### Economic

- Reducing methane emissions from the oil and gas sector can promote economic efficiency by using gas that would otherwise be vented or leaked.
- Recovered methane can be used as a source of energy.
- Mitigation options for the agriculture sector can increase productivity and food output.
- Modeling has estimated that reducing methane emissions by 45% by 2030 would avoid nearly **0.3 degrees of warming by the 2040s and avoid 26 million tonnes of crop losses**.
- Methane reduction in the agriculture sector can also control manure, reduce odours and protect local ecosystems.



### Health

- Reducing methane also reduces the release of associated hazardous air pollutants, like volatile organic compounds (VOCs) and other pollutants, which have been linked to serious negative health impacts, are potentially carcinogenic and can accumulate in communities surrounding oil and gas operations.
- Because methane also contributes to smog (ground level ozone), a reduction of 45% by 2030 could also **prevent 255,000 premature deaths and three quarters of a million hospital visits**.



### Supporting states and regions

Remote-sensing and satellite technology support efficient and fast action by identifying sources of methane emissions, promoting transparency and supporting the measurement of emissions. There is an opportunity to build capacity among state and regional governments so that they can respond to the data offered by these emerging technologies and reduce methane emissions.

All subnational governments have jurisdiction to lead action on methane from the waste and agriculture sectors and some states and regions also have jurisdiction over their oil and gas sector. The Under2 Coalition has worked with states and regions to share best practice on reducing emissions and to develop guidance on **different actions that can be taken**.

To learn more about opportunities for Climate Group to support your methane action, click [here](#) or contact Emely Anico at [eanico@theclimategroup.org](mailto:eanico@theclimategroup.org).