Climate Emergency and Methane Science

Methane is the only way to slow the rate of warming in the near term and is the single most effective strategy to keep the goal of limiting warming to 1.5˚C within reach while yielding co-benefits, including improving public health and agricultural productivity. Methane mitigation is also crucial to slow down tipping points and feedback loops.

The Global Methane Assessment calculated that strategies to cut methane emissions 40–45% by 2030 could avoid nearly 0.3 °C by the 2040s, and 0.5 °C in the Arctic by 2050, 60% more than the global average consistent with 1.5 °C scenarios

(Source: United Nations Environment Programme & Climate & Clean Air Coalition (2021) GLOBAL METHANE ASSESSMENT: BENEFITS AND COSTS OF MITIGATING METHANE EMISSIONS)

The IPCC report on climate solutions by Working Group III (AR6 WGIII) reinforces that deep and rapid cuts to methane emissions are essential to limiting warming in the near-term and shaving peak warming from overshooting 1.5 °C.

Limiting warming to 1.5 °C with little or no overshot requires reducing emissions by 34% below 2019 levels in 2030 and 44% below 2019 levels in 2040.

According to the CCAC, currently available measures could reduce anthropogenic methane emissions from the energy production, waste, and agriculture sectors by 45% by 2030. Roughly 60% of the available targeted measures have low mitigation costs and just over 50% of those have negative costs, the measures pay for themselves. ($20 or $7)

Voluntary Commitments

- 187 countries mention methane in their NDCs
- The Global Methane Pledge has been signed by 155 countries, representing a little over 50% of global anthropogenic methane emissions (COP 26). Participants agree to take voluntary actions to contribute to a collective effort to reduce global methane emissions at least 30 percent from 2020 levels by 2030
- China & US China agreed to develop a “comprehensive and ambitious National Action Plan” to achieve methane emissions control and reductions in the 2020s. and “cooperate to enhance the measurement of methane emissions”. The U.S.-China Joint Glasgow Declaration on Enhancing Climate Action in the 2020s
- Oil & Gas Decarbonization Charter (COP 28) 50 companies, representing more than 40 percent of global oil production have signed on to the OGDC. Signatories have committed to net-zero operations by 2050 at the latest, and ending routine flaring by 2030, and near-zero upstream methane emissions
- The United States, European Union, Japan, Canada, Norway, Singapore, and the United Kingdom issued a *Joint Declaration from Energy Importers and Exporters on Reducing Greenhouse Gas Emissions from Fossil Fuels*, in which the signatories commit to work towards creating an international market for fossil energy that minimizes flaring, methane, and carbon dioxide emissions across the value chain to the fullest extent possible. The Joint Declaration covers over half of global gas import volumes and more than one-third of global gas production.

Regulations and National Plans

US, China, Canada, European Union, Vietnam,

Canada, Finland, Sweden, Norway, Netherlands ,UK, Brazil, Iceland, Republic of Korea.

EU's Carbon Border Adjustment Mechanism includes methane

Monitoring Tools

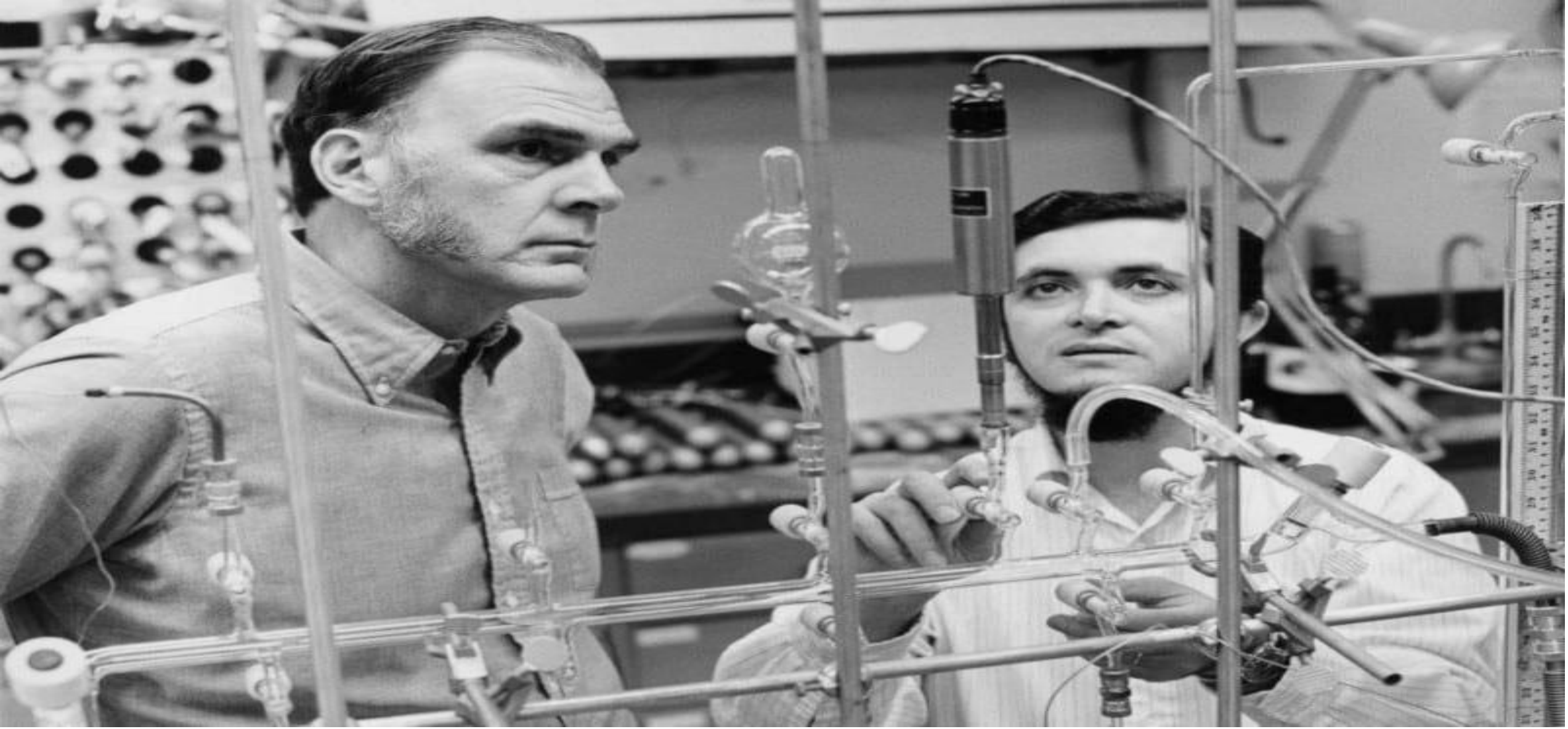
Copernicus, Carbon Mapper, IMEO, SAT EDF, Cal SAT, etc.

Elements of a Global Methane Agreement

- TEAP
- Finance
- SAP
- Governance Structure

Towards a Global Methane Mandatory Agreement

A Story



F. Sherwood Rowland (left) and Mario Molina at their UCI lab, discovered how the ozone layer was being destroyed. *UCI*

Sherwood Rowland and Mario Molina wrote a scientific article published under the journal *Nature*.
In that article, they warned that human-generated CFCs are harming the ozone layer.


1928
CFCs
1.
2.
3.
...non-toxic, non-corrosive, non-flammable, versatile, long life wonder gases!


1982
CFC FILLED SPRAY CANS
Those sprays contain CFCs
There's no proof of danger.

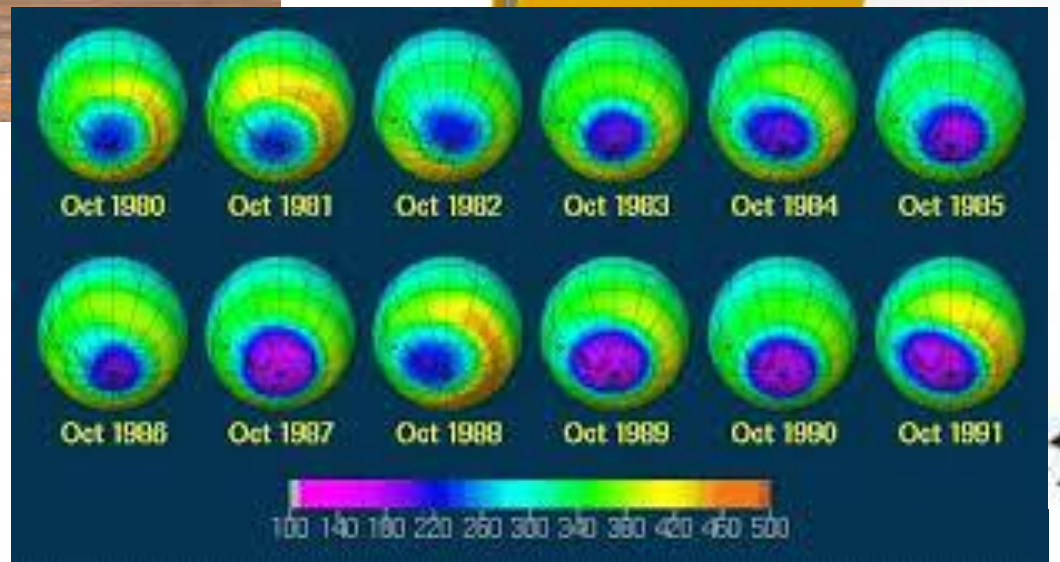

Stop?
...what do you mean?
CFC PRODUCTION INC.

In 1985, British Antarctic Survey scientists found out about the recurring springtime ozone hole over Antarctica.


CFC
The Guardian

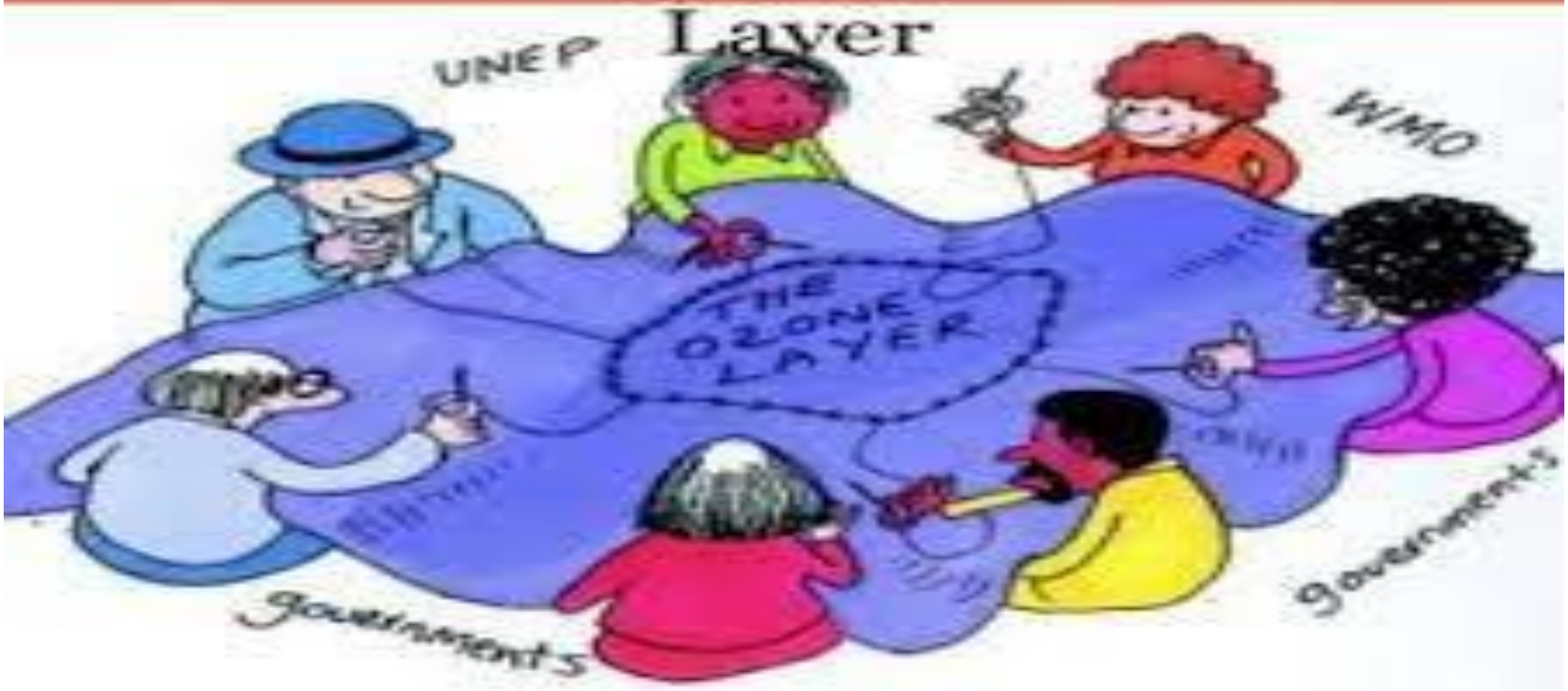

LAW
REGULATIONS
RULES
COMPLIANCE


Local Laws


Oct 1980
Oct 1981
Oct 1982
Oct 1983
Oct 1984
Oct 1985
Oct 1986
Oct 1987
Oct 1988
Oct 1989
Oct 1990
Oct 1991
100 140 180 220 260 300 340 380 420 460 500


UNEP
Coordinating Committee on
The ozone layer is getting thinner over there.

1987 Montreal Protocol on Substances that Deplete the Ozon Layer



The Nobel Prize in Chemistry 1995

Paul J. Crutzen
Prize share: 1/3

Mario J. Molina
Prize share: 1/3

F. Sherwood Rowland
Prize share: 1/3