



Lesser villains of global warming turn big

Success in reducing black carbon, methane and other climate pollutants at the global level can lessen the rate of global warming by 50% in the next 40 years

■ **Bappaditya Chatterjee**

While in Doha, negotiators pressed their country's respective interest, global warming is in no mood to negotiate humanity's fate. While the main villain of the story on global warming is the long-lived gas CO₂, short-lived pollutants (SLCPs) like methane, Nitrous oxide and black carbon which have gone beyond their sidekick status to become major villains in their own right.

SLCPs termed by United Nation Environment Programme (UNEP) are quickening the pace of temperature rise in the short term while long lived CO₂ is steadily driving up global temperature. An independent climate scientist alleged that as usual developed countries put conditions on poorer countries for arresting even short lived pollutants, the same

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ploy they opted for CO₂. In the process, they buy more time to meet CO₂ reduction target and divert attention from their so-called climate fund pledge, which is still an empty shell.

Quite rightly, Mira Mehrishi, Assistant Secretary, Union Ministry of Environment and Forest (MoEF), recalled in

Doha, "There is a crisis of confidence. Despite Cancun pledges and Kyoto Protocol commitments, we are yet to reach there. Not that we do not have a framework for it, it exists. Unfortunately, we have not implemented it. The central problem is not therefore of enhancing ambition at the global level, but of implementing commitments as per agreed principles. Availability of technologies and financial resources is key to these commitments as far as developing countries are concerned."

However, the emerging science confirms that the target of 2°C temperature rise needs to cap CO₂ at 450 ppm. World has already reached 430 ppm. If annual emissions hang about at today's level, greenhouse gas levels would be close to 550 ppm by 2050. This would mean temperature increase of 3-5°C.

What science says?

Warming depends not only on the accumulated concentration of CO₂ but also on the intensity of emissions of SLCPs with much higher warming potential. CO₂ is just like burning coal while SLCPs are like paper on fire. Both generate heat. But coal burns for a long time and accumulates if one keeps adding more. On the other hand, the paper gives an intense burst of heat but one that quickly disappears once you stop adding it. According to Health and Climate scientist Kirk Smith, "Methane is like CO₂ on steroid and black carbon is CO₂ on crack, hundreds of times worse as they add to our double burden of health and climate catastrophe."

Two of the most important short-lived gases are methane and nitrous oxide. Both are generated in huge quantities by agriculture and fossil fuel extraction. Among other sources, there are all the refrigerant gases used air conditioners, fridges and freezers while the soot generated by vehicles, industrial plants, cooking fires and even the vapour trails left by in the sky by aircraft.

Why are SLCPs important?

Fast measures on black carbon and methane have the potential to slow a global temperature rise by up to 0.5°C by 2050, reduce air pollution-related deaths by as much as 2.4 million and crop losses by around 30 million tonnes annually.

In an emailed response to BE, Romina Picolotti, former Secretary of Environment and Sustainable Development for Argentina and the first NGO representative to the Climate and Clean Air Coalition (CCAC) Steering Committee stated, "Reducing these climate pollutants not only harmonizes development and climate concerns but it is also critical for protecting the world's most vulnerable regions."

Paltry efforts

With so many warming forcers, companies and local governments, even countries, are often faced with complex and even controversial decisions about which ones to prioritise. At least, ministers met on the side of the UNFCCC negotiations in Doha, and along with representatives from UNEP the World Bank, and several NGOs, pledged to increase their scale of action to reduce short-lived climate pollutants (SLCPs).

However, R.R. Rashmi, Joint Secretary, MoEF told BE, "We have no problems if sectors like transport (a major source of black carbon), buildings are included in the mitigation strategy because we will include such in our national strategy, too. But some things which are not desirable are black carbon, hydro-fluorocarbon (HFC) and agricultural methane. If these are included, there is a problem. If asked to accept as a matter of principle, then anything can be brought into in the name of principle." Let developed countries act first to arrest short lived climate pollutants.

However, Anumita Roychowdhury, Executive Director (Research and Advocacy) of Centre for Science and Environment (CSE) said, "A group of countries have come under the newly titled Climate and Clean Air Coalition – a separate and distinct international forum, governance structure and funding mechanism that has been created to pursue short term climate forcers mitigation.

UNEP is a partner and the secretariat. But a lot will depend on the member countries that have the powers to decide. India is not a member yet. Right now it's only a workshop based approach. Most of developing world is out of it."

Rashmi added, "We need to create a regime of support which will give countries flexibility to design their strategy."

Success in reducing SLCPs including black carbon, methane and other pollutants at the global level can reduce the rate of global warming by 50% in the next 40 years and by two-thirds in the Arctic. ■

