



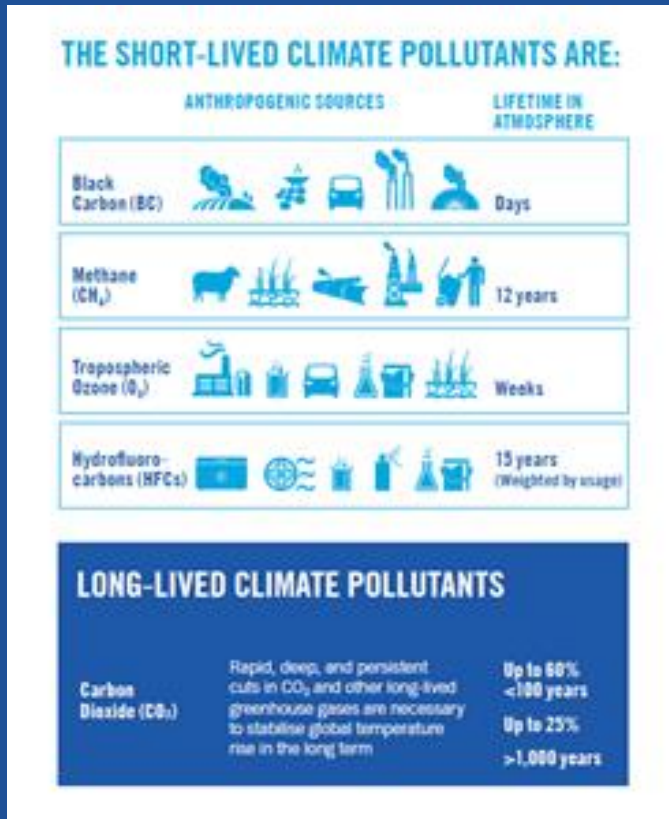
**CLIMATE &
CLEAN AIR
COALITION**

TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS

**Fast Action
Quick Results
Multiple Benefits**

Addressing Near-Term Climate Change and Air Pollution by
Reducing Short-Lived Climate Pollutants (SLCPs)

WHAT ARE SHORT-LIVED CLIMATE POLLUTANTS?



SLCPs are substances with relatively short lifetime in the atmosphere and a warming influence on near-term climate.

They are powerful climate forcers and dangerous air pollutants, detrimental to human health, agriculture and ecosystems.



WHAT ARE SLCP IMPACTS?



SLCPs have negative impacts on:

- Public health
- Food security
- Global warming
- Ice and Snow melting
- Weather patterns

Which threatens economic security of large populations throughout the world.



WHY DO WE NEED TO ACT ON SLCPS URGENTLY?

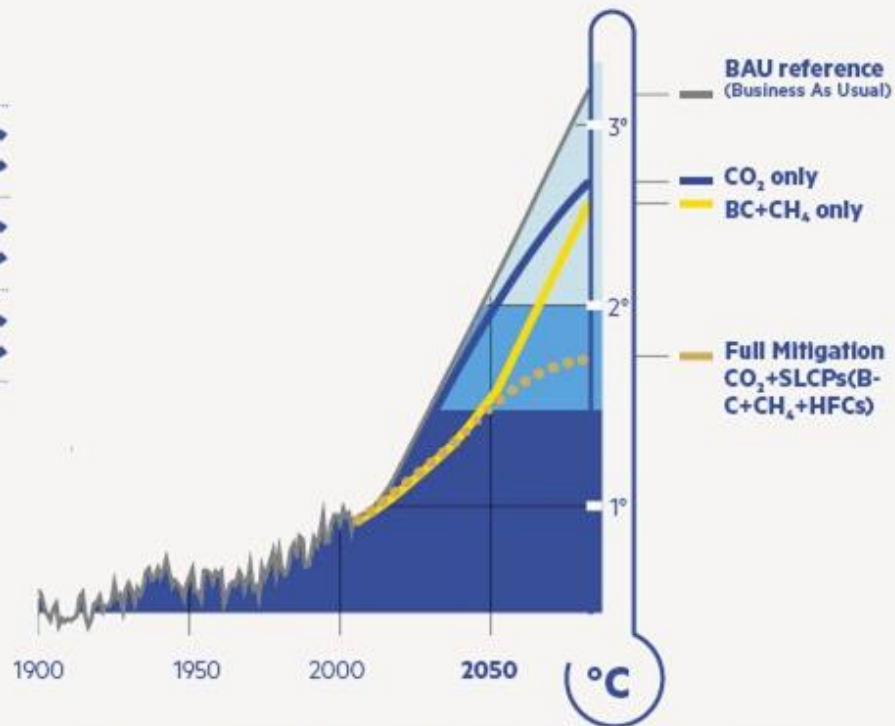
SLCP CLIMATE BENEFITS

Avoided Global Warming **by 2050**

BC + CH₄ **0.5°C**

HFCs **0.1°C**

SLCPs **0.6°C**



SIMULATED TEMPERATURE CHANGE
UNDER VARIOUS MITIGATION SCENARIOS



WHAT ARE THE BENEFITS OF CUTTING SLCPS EMISSIONS?

ANNUAL BENEFITS

From large-scale mitigation **by 2030**

CLIMATE



**AVOIDED
WARMING**


REDUCED RATE
OF SEA-LEVEL RISE
BY ~20% BY 2050


REDUCED RATE
OF MELTING


REDUCED RATE
OF SEA-LEVEL RISE
BY ~20% BY 2050

HEALTH



**2.4
MILLION**


AVOIDED PREMATURE
DEATHS ANNUALLY
FROM OUTDOOR
AIR POLLUTION

REDUCED AIR POLLUTION
- WORLD'S LARGEST
ENVIRONMENTAL HEALTH RISK

CROPS



**52
MILLION**

TONNES OF AVOIDED
CROP LOSSES FROM
4 MAJOR STAPLES YEAR



HOW CAN SLCP EMISSIONS BE REDUCED?

Control measures that involve already existing technologies and practices could significantly reduce SLCPs emissions if implemented around the world.

- 40% of methane emissions
- 80% of black carbon emissions

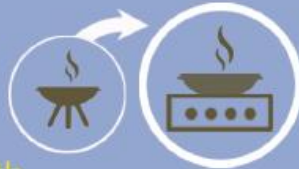


MEASURES aiming at reducing Black Carbon

BC

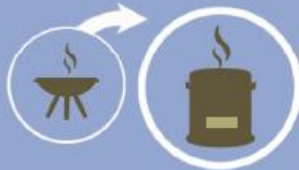
01.

Replace traditional biomass cookstoves with **modern fuel cookstoves**



02.

Replace traditional cooking and heating with **clean-burning biomass stoves**



03.

Replace wood stoves and burners with **pellet stoves**



04.

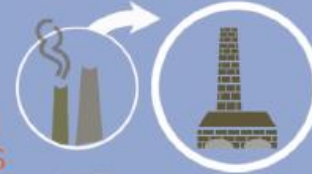
Replace lump coal with **coal briquettes** for cooking and heating



Industry

05.

Replace traditional brick kilns with **improved kilns**



06.

Replace traditional coke ovens with **modern recovery ovens**



Transport

07.

Diesel particulate filters for road and off-road vehicles (EURO VI)



08.

Eliminate **high-emitting diesel vehicles**



Residential Sector



MEASURES aiming at reducing Methane emissions

Agriculture

09.

Ban **open-field burning** of agricultural waste



CH₄

10.

Intermittent aeration of continuously **flooded rice paddies**



11.

Improve **manure management** and **animal feed**



Fossil Fuel

12.

Pre-mine degasification, recovery, and oxidation of CH₄ from ventilation air from **coal mines**



13.

Recovery and utilization of gas and **fugitive emissions** from oil and **natural gas** production



14.

Reduce **leakage from long-distance gas transmission** pipelines



15.

Separation and treatment of **biodegradable municipal waste** and **landfill gas** collection



16.

Upgrade **wastewater treatment** with gas recovery and overflow control



Waste Management



HFCs

+HFC measures

Replacement of high climate impact HFCs with **low impact alternatives**



The Climate and Clean Air Coalition (CCAC)

is the only global forum whose mission is to support the fight against SLCPs.

It is a partnership between States, international organizations and NGOs.



111 PARTNERS

as of July 2016

50 governments

16 IGOs

45 NGOs



CCAC INITIATIVES



AGRICULTURE



BRICKS



COOKSTOVES &
HEATSTOVES



DIESEL



OIL & GAS



HFCs



WASTE



ASSESSMENTS



FINANCE



SNAP



URBAN HEALTH

7 sectoral and 4 cross-cutting initiatives





**CLIMATE &
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HFC Initiative

*Promoting HFC Alternative
Technology and Standards*

Why HFCs?

- HFCs are short-lived climate pollutants (SLCPs)
- HFCs could contribute up to 0.1°C warming by 2050 and up to 0.5°C warming by 2100¹
- We can prevent up to 2 billion tons of CO₂eq emissions over the next decade
- We can prevent over 100 billion tons of CO₂eq emissions by 2050

1) Xu Y, et al. 2013



The CCAC HFC Initiative

Promoting HFC Alternative Technology and Standards

Goal: To significantly reduce the projected growth in the use and emissions of high-GWP HFCs in coming decades relative to business as usual scenarios

Specific objectives are to mobilize efforts of the private sector, civil society, international organizations, and governments to:

- Promote the development, commercialization, and adoption of climate-friendly alternatives to high-GWP HFCs;
- Encourage the uptake of climate-friendly alternatives that could support national, regional and global policies or approaches to reduce reliance on high-GWP HFCs;
- Overcome barriers that limit the widespread introduction of these climate friendly technologies, including those related to the establishment of standards; and
- Encourage the responsible management of existing equipment and better designs for future equipment in order to minimize leaks.

#Time to Act: CCAC Actions

The CCAC HFC initiative provide many opportunities:

- **HFC Inventories**

Bahamas, Bangladesh, Cambodia, Chile, Colombia, Ghana, Indonesia, Jordan, Kyrgyzstan, Maldives, Mongolia, Nigeria, South Africa, Vietnam

- **Capacity building activities:** Technology workshops since 2012, Case studies reporting on cost-effective HFC-alternatives & HFC-Ville

- **Communications and outreach**

- **Policy and Standards**

- **Technology demonstration projects,** including low-GWP, leak-tight, energy efficient automobile AC in hot ambient climates

(Chile, Jordan, India and Maldives)

CCAC: District Cooling in Maldives Feasibility Study supported by CCAC (w/UNDP)



- Study expected to inspire other SIDs and LVCs
- Final Report to be available in 3rd Quarter 2016

Technology Demonstration Projects

Approved by WG in 2014, these projects will demonstrate and promote the deployment of low-GWP climate-friendly alternatives in key sectors

- Chile: Supermarket
- Jordan: Commercial Refrigeration
- India: MAC system



HFCs in the Climate Regime

The **CCAC partners** championed statements and commitments supporting a global phasedown of HFCs (under the MP):

- UN Climate Summit, New York, Sep 2014
- Lima-Paris Action Agenda and COP21



LEARN MORE:



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TIME TO ACT TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS