Fast Action
Quick Results
Multiple Benefits

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

<table>
<thead>
<tr>
<th>Compound</th>
<th>Temperature Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC + CH₄</td>
<td>0.5°C</td>
</tr>
<tr>
<td>HFCs</td>
<td>0.1°C</td>
</tr>
<tr>
<td>SLCPs</td>
<td>0.6°C</td>
</tr>
</tbody>
</table>

SIMULATED TEMPERATURE CHANGE UNDER VARIOUS MITIGATION SCENARIOS
**WHAT ARE THE BENEFITS OF CUTTING SLCPs EMISSIONS?**

**ANNUAL BENEFITS**
From large-scale mitigation by 2030

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>BENEFIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIMATE</td>
<td>AVOIDED WARMING</td>
</tr>
<tr>
<td></td>
<td>REDUCED RATE OF SEA-LEVEL RISE BY ~20% BY 2050</td>
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<td></td>
<td>REDUCED RATE OF MELTING</td>
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<tr>
<td></td>
<td>REDUCED RATE OF SEA-LEVEL RISE BY ~20% BY 2050</td>
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<tr>
<td>HEALTH</td>
<td>2.4 MILLION AVOIDED PREMATURE DEATHS ANNUALLY FROM OUTDOOR AIR POLLUTION</td>
</tr>
<tr>
<td></td>
<td>REDUCED AIR POLLUTION - WORLD'S LARGEST ENVIRONMENTAL HEALTH RISK</td>
</tr>
<tr>
<td>CROPS</td>
<td>52 MILLION TONNES OF AVOIDED CROP LOSSES FROM 4 MAJOR STAPLES YEAR</td>
</tr>
</tbody>
</table>
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

- **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
- **05.** Replace traditional brick kilns with improved kilns
- **06.** Replace traditional coke ovens with modern recovery ovens
- **07.** Diesel particulate filters for road and off-road vehicles (EURO VI)
- **08.** Eliminate high-emitting diesel vehicles
MEASURES aiming at reducing Methane emissions

- **Agriculture**
  1. Ban open-field burning of agricultural waste
  2. Intermittent aeration of continuously flooded rice paddies
  3. Improve manure management and animal feed

- **Fossil Fuel**
  4. Pre-mine degasification, recovery, and oxidation of CH$_4$ from ventilation air from coal mines

- **Waste Management**
  5. Separation and treatment of biodegradable municipal waste and landfill gas collection
  6. Upgrade wastewater treatment with gas recovery and overflow control

- **+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
50 governments
16 IGOs
45 NGOs

as of July 2016
CCAC INITIATIVES

7 sectoral and 4 cross-cutting initiatives
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 2100
- We can prevent up to 2 billion tons of CO$_2$eq emissions over the next decade
- We can prevent over 100 billion tons of CO$_2$eq 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
TIME TO ACT TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS