Overview of the CCAC & the Municipal Solid Waste Initiative

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What are Short-Lived Climate Pollutants (SLCPs)?

SLCPs
- **Black Carbon (BC)**
  - Anthropogenic Sources: Near term response to mitigation
  - Impacts/Mitigation Response: Local • Global •
  - Lifetime in Atmosphere: Days
  - Current Radiative Forcing: 0.64 Wm²

- **Methane (CH₄)**
  - Anthropogenic Sources: Near term response to mitigation
  - Impacts/Mitigation Response: Local • Global •
  - Lifetime in Atmosphere: 12 years
  - Current Radiative Forcing: 0.48 Wm²

- **Tropospheric Ozone (O₃)**
  - Anthropogenic Sources: Near term response to mitigation
  - Impacts/Mitigation Response: Local • Global •
  - Lifetime in Atmosphere: Weeks
  - Current Radiative Forcing: 0.40 Wm²

- **Hydrofluorocarbons (HFCs)**
  - Anthropogenic Sources: Near term response to mitigation
  - Impacts/Mitigation Response: Local • Global •
  - Lifetime in Atmosphere: 15 years (averaged by weight)
  - Current Radiative Forcing: 0.02 Wm²

Long-lived Pollutants
- **Carbon Dioxide (CO₂)**
  - Anthropogenic Sources: Longer term response to mitigation
  - Impacts/Mitigation Response: Local • Global •
  - Lifetime in Atmosphere: Up to 60% <100 years, Up to 25% >1,000 years
  - Current Radiative Forcing: 1.82 Wm²
  - Impacts:
    - Increases heat absorbed by the Earth
    - Harms public health
    - Harms food security
Benefits of SLCP Mitigation

Fast action to reduce SLCPs has the potential to deliver rapid multiple benefits for human well-being by improving air quality and reducing near term global warming.

2030 BENEFITS projection

<table>
<thead>
<tr>
<th>Climate</th>
<th>°C Temperature change</th>
<th>Reduced rate of melting</th>
<th>Reduced rate of circulation change</th>
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<tbody>
<tr>
<td>Health</td>
<td></td>
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<td>2.4 MILLION</td>
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<td>avoided premature deaths annually from outdoor air pollution</td>
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<td>Crops</td>
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<td>30 MILLION</td>
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<td>tonnes of avoided crop losses from 4 major staples/year</td>
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2050 temperature BENEFITS

-0.01°  -0.03°  -0.05°  -0.07°  -0.09°  -0.2°  -0.4°

FROM 16 MEASURES UP TO 0.5 °C TOTAL AVOIDED WARMING

FROM HFCs MEASURES UP TO 0.1 °C ADDITIONAL AVOIDED WARMING
Fast action on SLCPs can significantly increase public health, food and energy security, and reduce near-term climate change.
• Voluntary, partner-led (>90 partners) "Coalition of the Working" – governments, IGOs, NGOs and private sector

• First global effort to treat SLCPs as a collective challenge – based on science and initiatives – catalytic

• Complementary to global efforts to reduce CO₂ – and to improve health and crop yields
High Impact Initiatives

- Heavy Duty Diesel Vehicles and Engines
- Municipal Solid Waste Sector
- Brick Production
- Promoting HFC Alternative Technology and Standards
- Oil And Natural Gas Production
- Household Cooking and Domestic Heating
- Financing Mitigation of SLCPs
- Supporting National Planning for Action on SLCPs (SNAP)
- SLCPs Regional Assessments
- Agriculture
- Urban Health

About USD 50 million pledged and over USD 25 million already allocated to specific activities under the initiatives
SLCPs from the Solid Waste Management Sector

**Methane** (greenhouse gas)
- Degradation of organic matter under anaerobic condition (no oxygen) → open dumping, landfill – landfill gas comprises ~50% CH\(_4\) and ~50% CO\(_2\)
- Incomplete combustion of waste and fossil fuels
- Anthropogenic – formed as a result of management of waste from humans

**Black Carbon** (fine particles in aerosol form)
- Incomplete combustion (low heat) of waste under open burning and some types of incineration
- Incomplete combustion of fossil fuels
- Most strongly light-absorbing component of particulate matter
- An aerosol (not a greenhouse gas)
- Remains in the atmosphere for as little as a few days to a week before falling to the surface
Solid waste generation is increasing faster than any other pollutant, including CO₂.

Landfills are the 3rd largest anthropogenic source of methane.

Black Carbon is a primary component of particulate air pollution.

Waste management improvements offer significant co-benefits, including health, poverty reduction and job creation.

The CCAC MSW Initiative works with cities and national governments – providing technical assistance, financial strategies, information exchange, networking and training.
Objective of the CCAC MSW Initiative to move cities up the waste hierarchy through transformative, long lasting actions that can be implemented in a sustainable way, that are compatible with the local context and that are replicable through National policy support or through city to city collaboration
How Cities Participate in the MSW Initiative

• Undertake **City Waste Assessments**
• **Quantify SLCP emissions** and identify suitable sustainable alternatives for waste management – Emissions Quantification Tool
• Develop **Work Plans**
• Attend **training and capacity building** workshops targeting specific waste related themes
• Participate in **city-to-city collaboration**
• Obtain **technical and financial analysis support** in developing sustainable waste management projects
• Get access to **resources** and information on **best practices** on the CCAC MSW Initiative **Knowledge Platform**
• Get access to a world-wide **network of experts**
The CCAC MSW Initiative is working with its partner cities on the following focus areas:

- **Reduce waste** generation
- Address **open burning**
- Promote **organic diversion** programs: composting and anaerobic digestion
- Use landfills as final disposal options and enhance landfill operations - promote **landfill gas recovery**
- Institute **recycling programs**
- Improve **waste collection & handling equipment**
- **Measure and track** SLCP emissions reduction
The Road Ahead

• More cities joining
• Leverage a global city network to further drive replication through collaboration and best practices identification and sharing
• Develop partnerships with National Governments to scale up city action through enabling policy frameworks
• Further capacity building for sustainable solutions and to assist cities to collect reliable waste data and to develop financially sound projects
• Accelerate direct access to financing for faster project implementation
• Develop tools to measure emissions and reductions, to guide decision making and to evaluate project financing
• Private sector engagement to mobilise resources to accelerate implementation