THE GLOBAL CHALLENGE OF AIR POLLUTION – FINDING SOLUTIONS

Reducing short-lived climate pollutants to deliver climate and clean air benefits

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CCAC Secretariat
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### SHORT-LIVED CLIMATE POLUTANTS

Near term response to mitigation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Anthropogenic Sources</th>
<th>Lifetime in Atmosphere</th>
<th>Impacts/Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Black Carbon (BC)</strong></td>
<td><img src="image1.png" alt="Anthropogenic Sources" /></td>
<td>Days</td>
<td><img src="image2.png" alt="Local" /> <img src="image3.png" alt="Regional" /> <img src="image4.png" alt="Global" /></td>
</tr>
<tr>
<td><strong>Methane (CH₄)</strong></td>
<td><img src="image5.png" alt="Anthropogenic Sources" /></td>
<td>12 Years</td>
<td><img src="image6.png" alt="Local" /> <img src="image7.png" alt="Regional" /> <img src="image8.png" alt="Global" /></td>
</tr>
<tr>
<td><strong>Tropospheric Ozone (O₃)</strong></td>
<td><img src="image9.png" alt="Anthropogenic Sources" /></td>
<td>Weeks</td>
<td><img src="image10.png" alt="Local" /> <img src="image11.png" alt="Regional" /> <img src="image12.png" alt="Global" /></td>
</tr>
<tr>
<td><strong>Hydrofluoro-carbons (HFCs)</strong></td>
<td><img src="image13.png" alt="Anthropogenic Sources" /></td>
<td>15 Years (Weighted by usage)</td>
<td><img src="image14.png" alt="Local" /> <img src="image15.png" alt="Regional" /> <img src="image16.png" alt="Global" /></td>
</tr>
</tbody>
</table>
“…holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels…”
## Annual Benefits
From large-scale mitigation by 2030

<table>
<thead>
<tr>
<th>Category</th>
<th>Benefit Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate</td>
<td><strong>Avoided warming</strong></td>
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<td></td>
<td><strong>Reduced disruption of weather</strong></td>
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<td></td>
<td><strong>Reduced rate of melting</strong></td>
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<td></td>
<td><strong>Reduced rate of sea-level rise by ~20% by 2050</strong></td>
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<tr>
<td>Health</td>
<td><strong>2.4 million avoided premature deaths annually from outdoor air pollution</strong></td>
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<tr>
<td></td>
<td><strong>Reduced air pollution - world’s largest environmental health risk</strong></td>
</tr>
<tr>
<td>Crops</td>
<td><strong>52 million tonnes of avoided crop losses from 4 major staples year</strong></td>
</tr>
</tbody>
</table>
SLCP MITIGATION & THE SDGs

2. Zero Hunger
3. Good Health and Well-being
13. Climate Action

THE SHORT-LIVED CLIMATE POLLUTANTS

- Black Carbon (BC)
  - Days

- Methane (CH₄)
  - 12 years

- Tropospheric Ozone (O₃)
  - Weeks

- Hydrofluorocarbons (HFCs)
  - 15 years (Weighted by usage)

SDG 1: No Poverty
SDG 7: Affordable and Clean Energy
SDG 11: Sustainable Cities and Communities
SDG 12: Responsible Consumption and Production
SDG 4: Quality Education
SDG 5: Gender Equality
SDG 6: Clean Water and Sanitation
SDG 8: Decent Work and Economic Growth
SDG 9: Industry, Innovation, and Infrastructure
SDG 15: Life on Land
Abatement measures for short-lived climate pollutants are:

- **proven and often already in use,** *hence does not require significant technical innovation*
- **at little cost or no net cost,** *although initial capital investment may be needed, many will achieve cost savings over time*
- **Could also contribute to carbon dioxide mitigation**

**SOLUTIONS AVAILABLE – WHY NOT HAPPENING?**

- **ULTRA-LOW SULFUR FUEL**
- **Diesel Particulate Filter (DPF)**
SOLUTIONS AVAILABLE – WHY NOT HAPPENING?

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The Coalition

Political leadership – partners on the ground

FAST ACTION - QUICK RESULTS - MULTIPLE BENEFITS

• Voluntary, partner-led
• Catalytic actions
• First global effort to treat SLCPs as a collective challenge
• Complementary to CO2 mitigation
Now 111 Partners

50 countries

16 IGOs

45 NGOs

Many partners in the room....
5-Year Strategic Plan 2020

Key Objective

.....to assist in the development & implementation of policies, regulations and practices of Partners & stakeholders to deliver substantial SLCP reductions in the near- to medium-term.

"Partners in the CCAC demonstrate leadership by taking action on SLCPs both at home and internationally, and continuously measure and report the impact of its actions."

Key Strategies

1. Catalyse ambitious action
2. Mobilise robust support
3. Leverage finance
4. Enhance science & knowledge

Measure Impacts (indicators)
How do we deliver

7 sectoral & 4 cross-cutting initiatives

Methane, Black Carbon & HFC actions

AGRICULTURE  BRICKS  HOUSEHOLD  DIESEL  OIL & GAS  HFCs  WASTE

ASSESSMENTS  FINANCE  SNAP  URBAN HEALTH

TRUST FUND – seed funding for catalytic action

HIGH LEVEL ASSEMBLY – political leadership and buy-in

WORKING GROUP of all partners – decision making

SCIENTIFIC ADVISORY PANEL

Health Task Force
**Demonstrate Impact Framework**


**COMMON IMPACT METRICS PENDING**

**Outcomes**
- Changes in technologies & practices
- Influenced laws & regulations
- Influenced policies & plans
- Strengthened Institutions
- Training

**Outputs**
- Commitments
- MEA influenced
- Media coverage

**Outcomes**
- Political outreach

**Outcomes**
- Catalysed funding

**Outcomes**
- Co-funding

**Outcomes**
- Knowledge dissemination
- Utilisation of tools

**Outcomes**
- Knowledge resources

**Initiatives & other CCAC actions**
- Catalyse ambitious action
- Mobilise robust support
- Leverage finance at scale
- Enhance science and knowledge

**5 - YEAR STRATEGIC PLAN**
Theory of change in Initiatives

- Assessments
- Inventories
- Toolkits
- Outreach materials

Awareness raised

- Political outreach
- Advocacy
- Strategic partnerships

Political will created

- Training
- Peer to Peer
- Institutional strengthening
- Technology demonstration

Policies and practices developed

- Access to finance
- Innovative funding mechanism
- Upscaling

Policies & practices implemented

Substantial SLCP reductions
Multiple benefits
Some results...

1 Catalyze ambitious action
14 countries receiving institutional strengthening support
->10 more requesting

Knowledge resources further improved:
Guidance note on SLCPs in INDCs
SNAP LEAP-IBC toolkit
SNAP guidelines

8 SNAP countries included SLCPs in their INDCs

8 countries developing national plans on SLCPs
Training and peer-to-peer engagement

Snaps
Institutional Strengthening in 14 countries

City-to-city partnering on Waste; training workshops for 70 cities

Oil and Gas
12 webinars

Bricks
21 institutions in 9 countries

Training Nodes
400 participants
6800 h of training

HFC
10 000 h of training

Cooking
Capacity support to 4 testing centers

SNAP
Institutional Strengthening in 14 countries

Open Burning training
New: SLCP Solution Center
Support Policies & action plans

16 cities around the world with waste management plans

low sulfur fuel standards in 7 countries and sub-regionally in East Africa

emission standards for buses in Lima and Santiago

3 countries with national action plans on Paddy Rice

8 countries develop or refine a national strategy on SLCPs
Technology demonstration
Scale up of sound practices

demonstrate benefits of integrated manure management

ethanol gel and biogas cooking

19 efficient brick kiln technologies

test and validate new low-GWP HFC alternatives
Chile, Jordan, Maldives, India

test technologies to reduce emissions from oil and gas production &
Company surveys of methane leakage
Mobilize robust support
Mobilize commitment & raise awareness in:

- COP 20, 21, 22 & Lima-Paris Action Agenda
- Paris Agreement - opportunities
- Montreal Protocol – HFC amendment
- World Health Assembly
- Sustainable Development Summit - SDGs
- UN Environment Assembly
- Regional events: Better Air Quality Conference, Asia, LAC Conference on the regional air quality action plan....
- G20 & 67 – through member state partners

Breathe Life campaign with WHO
Leverage finance at scale
Finance Innovation Facility feasibility study – and several proposals underway

Black Carbon Finance Study Group report

Development of a results-based funding mechanism in Penang, Malaysia
4 Enhance science & knowledge
Tools

**SNAP** Emission Scenario and Benefit Assessment Toolkit to characterize national SLCP emissions & the potential benefits of mitigating

Standard protocol and guidelines to measure efficiency & black carbon emissions (brick kilns + cookstoves)

**Global Open Burning**
Mapping updated monthly

A policy planning decision-support tool and Emission Quantification for solid waste management
Science & knowledge

- Latin American & Caribbean Regional **assessment** close to final; Asia and the Pacific started
- Global Manure Knowledge Kiosk, Bricks Knowledge Platform, Waste Knowledge Platform up and running
- National **Inventories** & assessment of HFCs, Bricks, etc.
- Annual **Science** Update, SAP briefings, Science Policy Dialogue
What is next?
A few ideas that you may engage in
Elevate air pollution and short-lived climate pollutants on policy agendas

GLOBAL

…for policy makers from both climate change and air pollution control – linkages

- focus now on HFC amendment in the Montreal Protocol
- support Action Agenda and implementation of Paris Agreement

GLOBAL ➔ National

- next High Level Assembly in Marrakesh, November (COP22) focus on **black carbon and methane**
- commitments to clean up diesel fleet (transport) and methane (oil and gas production)
- promote and support all countries **prepare inventories** on short-lived climate pollutants (black carbon, methane....) and report (NDCs)
Cleaning Up the Global On-Road Diesel Fleet: A Global Strategy to Introduce Low-Sulfur Fuels and Cleaner Diesel Vehicles

Goal: Eliminate fine particle & BC from new and existing heavy-duty diesel vehicles and engines by

1. Low sulfur fuels
2. Vehicle emission standards
3. Measures for existing vehicles

CCAC Partners developed a Global Strategy based on analysis of oil and fuel flows worldwide, a refinery study, and health modeling:

- 158 countries
- 246 refineries

Strategic Action for:
Importers, Refiners, Vehicle Standards, City First
## Table A: Priority countries for action, by region and strategic category

<table>
<thead>
<tr>
<th>Region</th>
<th>Category 1: Importers</th>
<th>Category 2: Refiners</th>
<th>Category 3: Vehicle Standards</th>
<th>Category 4: City First</th>
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</thead>
<tbody>
<tr>
<td><strong>Sub-Saharan Africa</strong></td>
<td>Ethiopia</td>
<td>Cote d'Ivoire</td>
<td><em>East Africa region: Kenya, Uganda, Tanzania, Rwanda and Burundi</em></td>
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<td>Mozambique</td>
<td>Ghana</td>
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<td>Nigeria</td>
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<td>South Africa</td>
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<td><strong>Asia</strong></td>
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<td>Brunei</td>
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<td>Bangladesh</td>
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<td>India</td>
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<tr>
<td><strong>Latin America &amp; the Caribbean</strong></td>
<td><em>Central America region: El Salvador, Guatemala, Nicaragua and Honduras</em></td>
<td><em>Venezuela</em></td>
<td><em>Panama</em></td>
<td><em>Argentina</em></td>
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<td><em>Barbados</em></td>
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<td><em>Peru</em></td>
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<td><strong>East Europe</strong></td>
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<td>Moldova</td>
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<td><strong>Middle East and North Africa</strong></td>
<td>Lebanon</td>
<td>United Arab Emirates</td>
<td>Oman</td>
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<td>Tunisia</td>
<td>Kuwait</td>
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<td>Bahrain</td>
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Raise awareness…Breathe Life

Oil & Gas Methane Partnership

Reduce methane emissions from oil and gas production, processing and distribution.

Develop and implement national methane detection and repair strategies for oil and gas production, processing and distribution, and to cooperate with those countries that would benefit from assistance.”
City Action

Breathe Life – Urban Health

‘City package – of tools’

Solid Waste Management

Soot Free buses - & ports

Bricks Production

Household cooking, heating, lighting
In rich and poor cities alike, air pollution is the single largest environmental health risk and is lowering our life expectancy.

BreatheLife
A global campaign to protect our health and climate by improving air quality
A DIFFERENT KIND OF CAMPAIGN

OUR THEORY OF CHANGE

**General public track**

**PARTICIPANT**

Mobilize everyday citizens, young urban parents,...

**ACTION**

...to call for & adopt solutions that help reduce air pollution, in their homes and cities...

**OUTCOME**

...so that city and national leaders have the political will and legitimacy to commit to meeting WHO air quality guidelines by 2030...

**IMPACT**

...to reduce the contribution to climate change and the number of deaths related to air pollution by half

**Institutional track**

**PARTICIPANT**

Engage organizations in public health climate community...

**ACTION**

...to advance the 19 solutions that to reduce SLCPs

**OUTCOME**

...so that city and national leaders have the political will and legitimacy to commit to meeting WHO air quality guidelines by 2030...
TYPES OF CHANGE

Building awareness to drive enthusiasm and commitment towards goals

**EXAMPLE:** Putting air pollution on the map as a public health crisis

Changing or developing new systems, approaches and processes

**EXAMPLE:** Implementing new monitoring systems

Compelling individuals to take action towards new laws and policies.

**EXAMPLE:** Becoming a BreatheLife city

Individuals change day-to-day actions or habits

**EXAMPLE:** Biking to work

BREATHE ACCRA.

BREATHE PARIS.

BREATHE SANTIAGO.
Breathe Life will be launched at Habitat III in October with a Breathe Life City Network

BreatheLife2030.org

Interested cities should contact CCAC or WHO
Thank you!

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@CCACoalition