



**Statements of support for reducing short-lived
climate pollutants—black carbon, tropospheric ozone, methane,
and HFCs—from key international, regional, and bilateral policy
institutions and meetings**

13 June 2014

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G7/G8

[The Brussels G-7 Summit Declaration](#) (Brussels, Belgium, 5 June 2014):

“We, the Leaders of Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, the President of the European Council and the President of the European Commission, met in Brussels on 4 and 5 June 2014.

...

We will work together and with others to phase down the production and consumption of hydrofluorocarbons (HFC) under the Montreal Protocol. We will also continue to take action to promote the rapid deployment of climate-friendly and safe alternatives in motor vehicle air-conditioning and we will promote public procurement of climate-friendly HFC alternatives.”

The World Bank Feature Stories, [Cutting Short-Lived Climate Pollutants: A Win-Win for Development and Climate](#) (Washington DC, U.S., 3 September 2013):

STORY HIGHLIGHTS

- *Reducing short-lived climate pollutants, such as black carbon, methane, and hydrofluorocarbons, can provide immediate benefits for health and agriculture and fight climate change.*
- *Analysis of the World Bank portfolio shows that between financial years 2007 and 2012, 7.7 percent of World Bank commitments - approximately US\$18 billion - went into "SLCP-relevant" activities.*
- *A new report identifies ways that the World Bank through its projects can further help reduce short-lived climate pollutants.*

Some of the easiest targets for lowering greenhouse gas emissions are right in front of us every day: black carbon from diesel-fueled vehicles and solid fuel cooking fires, methane from solid waste, hydrofluorocarbons from aerosols.

These are short-lived climate pollutants, named for their relatively short lifespan in the atmosphere. Reducing them now can buy time as countries work to lower their longer-lasting carbon emissions, and their reduction can provide immediate co-benefits for health and agriculture at the same time.

A new report, “[Integration of Short-Lived Climate Pollutants in World Bank Activities](#),” identifies ways that the World Bank can do more through its projects to reduce the emission of the short-lived climate pollutants (SLCPs): black carbon, methane, tropospheric ozone, and fluorinated gases known as HFCs.

The review highlights ways the Bank's investments are already reducing SLCPs and shows where potential exists for even greater reduction. It discusses a wide range of SLCP-reducing activities, including:

- *bus and rail-based transport systems, which can reduce black carbon emissions and have strong, local public health co-benefits;*
- *solid waste collection and disposal methods that can reduce methane emissions;*
- *improved cookstoves and kilns that can reduce black carbon; and*
- *rice irrigation and wastewater management that can lower methane emissions and have global benefits to agricultural productivity and health.*

From financial years 2007 to 2012, 7.7 percent of World Bank commitments – approximately US\$ 18 billion – went into “SLCP-relevant” activities in energy, transport, roads, agriculture, forestry, and urban waste and wastewater. The report suggests that more can be done.

The report, prepared at the request of the G8, was released today by World Bank Vice President for Sustainable Development Rachel Kyte at the High-Level Assembly of the [Climate and Clean Air Coalition](#)

“While we continue – and must continue – to hammer away at reducing CO₂ emissions, efforts to reduce these short-lived climate pollutants can have an immediate effect on slowing warming and the resulting consequences of more extreme weather and devastating sea-level rise,” Kyte said.

“From our perspective, aggressive action to reduce SLCPs is critically important as it provides our clients, developing countries, especially the poorest and most vulnerable, a critical opportunity to adapt to our changing climate,” she said. “At the same time, reducing these pollutants can reap huge health, agriculture and other development benefits.”

According to the [United Nations Environment Programme](#) (pdf), fast action to reduce SLCPs could avoid an estimated 2.4 million premature deaths from outdoor air pollution annually by 2030 and avoid about 32 million tons of crop loss per year. It could also have a direct impact on climate change, with the potential to reduce the warming expected by 2050 by up to 0.5 degrees Celsius.

To better integrate SLCP-reducing activities into the World Bank's day-to-day operations, the report proposes developing more comprehensive economic analysis that can account for all local and global benefits that projects could provide due to SLCP emission reductions.

“World Bank lending operations actively contribute to the sustainable development priorities of countries,” said Sameer Akbar, the lead author of the report and a senior environmental specialist at the World Bank. “Many of the activities associated with these operations also reduce SLCPs. Reduction of SLCPs can improve air quality and public health, and strengthen food security.”

“Going forward, the goal is to transform as many of the World Bank activities - with the potential to reduce emissions - into SLCP reducing activities,” said Akbar.

Projects already reducing SLCPs

The World Bank is already working on addressing some of these pollutants.

The [Mexico Sustainable Rural Development Project](#) serves as a powerful example of how SLCP reductions are already being delivered. Through a \$100 million World Bank loan, blended with a \$10.5 million GEF grant, the Government of Mexico has been able to co-fund the installation of more than [300 bio-digesters on smallholder pig and dairy farms](#), reducing manure-related methane emissions and reliance on fossil-fuel electricity while providing jobs and other economic co-benefits.

In [South Asia](#), the Bank has projects aimed at improving indoor and outdoor air quality focusing on reducing emissions from the brick making and transportation sectors.

With funding from the Montreal Protocol, [China](#) will reduce its production of hydrochlorofluorocarbons (HCFCs) by 10% between now and 2015. Overall, since 2011, [five projects that phase-out HCFCs](#) (pdf) are estimated to avoid nearly 27 million tons of CO₂ equivalent annually through alternative technology choices.

A [bus rapid transport project in Cebu, Philippines](#) (pdf), is estimated to save anywhere between US\$94 and US\$135 million in direct health costs. Additionally, [52 World Bank carbon finance projects, with an investment of US\\$543 million](#) (pdf), is estimated to avoid 150 premature deaths due to improved air quality and prevent 375,000 tons of methane emissions each year.

Earlier this year, a [report](#) by the Methane Finance Study Group (convened by the World Bank, also at the request of the G8) found that a relatively small investment could bring fast and significant reductions in the powerful greenhouse gas methane.

According to the report, reductions of as much as 8,200 million tons of CO₂ equivalent could be delivered in developing countries at less than \$10 per ton in incremental cost financing—a gap which can be closed by pay-for-performance mechanisms. Methane is over 25 times more potent than CO₂ at warming the planet.

G8 Leaders' Communiqué (Lough Erne, Northern Ireland, 17-18 June 2013):

“57. We will pursue ambitious and transparent action, both domestically and internationally, in the UNFCCC, complemented by actions addressed through other relevant fora, including but not limited to:

...

- the Climate and Clean Air Coalition which we all committed to join at our last Summit, where we will build on the eight global initiatives already begun and further develop the scientific evidence base and private sector involvement.”*

G8 Foreign Ministers' meeting statement (London, UK, 10-11 April 2013):

“The G8 remain fully committed...to increase mitigation ambition in the pre-2020 timeframe, including through international cooperative initiatives such as the Climate and Clean Air Coalition...”

G8 Camp David Declaration (Camp David, U.S., 19 May 2012):

“14. Recognizing the impact of short-lived climate pollutants on near-term climate change, agricultural productivity, and human health, we support, as a means of promoting increased ambition and complementary to other CO₂ and GHG emission reduction efforts, comprehensive actions to reduce these pollutants, which, according to UNEP and others, account for over thirty percent of near-term global warming as well as 2 million premature deaths a year. Therefore, we agree to join the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants.”

Fact Sheet: G-8 Action on Energy and Climate Change (Camp David, U.S., 19 May 2012):

“Address Climate Change, Including By Reducing Short-Lived Climate Pollutants

- *In the spirit of increasing mitigation efforts, we agree to collectively join the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, launched on February 16, 2012. This new initiative will enhance our collective ambition in addressing climate change by complementing efforts to address CO₂ emissions. By developing strategies to reduce short term pollutants – chiefly methane, black carbon, and hydrofluorocarbons – we can help reduce global warming, improve health, and increase agricultural productivity, as well as energy security.*
- *Commission the World Bank to prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms.*

In its role as 2012 Chair of the G-8, the United States intends to work with G-8 partners to develop mechanisms for following up these actions over the course of 2012.”

G8 Declaration, Responsible Leadership for a Sustainable Future (L’Aquila, Italy, 10 July 2009):

“66. We recognize that the accelerated phase-out of HCFCs mandated under the Montreal Protocol is leading to a rapid increase in the use of HFCs, many of which are very potent GHGs. Therefore we will work with our partners to ensure that HFC emissions reductions are achieved under the appropriate framework. We are also committed to taking rapid action to address other significant climate forcing agents, such as black carbon. These efforts, however, must not draw away attention from ambitious and urgent cuts in emissions from other, more long-lasting, greenhouse gases, which should remain the priority.”

Declaration of Leaders, the Major Economies Meeting on Energy Security and Climate Change (Toyako, Japan, 9 July 2008): (This Major Economies Meeting was on margins of G8.)

“10. To enable the full, effective, and sustained implementation of the Convention between now and 2012, we will: ... ·Continue to promote actions under the Montreal Protocol on Substances That Deplete the Ozone Layer for the benefit of the global climate system; ...”

G8 Declaration on Growth and Responsibility in the World Economy

(Heiligendamm, Germany, 7 June 2007):

“59. We will also endeavor under the Montreal Protocol to ensure the recovery of the ozone layer by accelerating the phase-out of HCFCs in a way that supports energy efficiency and climate change objectives. In working together toward our shared goal of speeding ozone recovery, we recognize that the Clean Development Mechanism impacts emissions of ozone-depleting substances.”

G20

G20 Leaders’ Declaration (Saint Petersburg, Russia, 6 September 2013):

“101. We are committed to support the full implementation of the agreed outcomes under the United Nations Framework Convention on Climate Change (UNFCCC) and its ongoing negotiations. We strongly welcome the efforts of the Secretary-General of the United Nations to mobilize political will through 2014 towards the successful adoption of a protocol, another legal instrument, or an agreed outcome with legal force under the convention applicable to all Parties by 2015, during COP-21 that France stands ready to host. We also support complementary initiatives, through multilateral approaches that include using the expertise and the institutions of the Montreal Protocol to phase down the production and consumption of hydrofluorocarbons (HFCs), based on the examination of economically viable and technically feasible alternatives. We will continue to include HFCs within the scope of UNFCCC and its Kyoto Protocol for accounting and reporting of emissions.”

Rio +20

Rio+20 Declaration, The Future We Want (Rio de Janeiro, Brazil, 22 June 2012):

“222. We recognize that the phase-out of ozone-depleting substances is resulting in a rapid increase in the use and release of high global-warming potential hydrofluorocarbons to the environment. We support a gradual phase-down in the consumption and production of hydrofluorocarbons.”

Plenary Remarks by Former United States Secretary of State Hillary Rodham Clinton at Rio+20 (Rio de Janeiro, Brazil, 22 June 2012):

“[E]arlier this year, I was privileged to host six countries in the United Nations Environment Program as we launched the Climate and Clean Air Coalition. The goal is to reduce short-lived climate pollutants that cause more than 30 percent of current global warming, as well as millions of premature deaths and extensive crop losses. We know we have to keep working together on CO₂, but we think that our Climate and Clean Air Coalition, to which many more countries are joining, and we welcome you, can take targeted action and produce results with respect to methane and black soot and HFCs.”

Heads of States

The Brussels G-7 Summit Declaration (Brussels, Belgium, 5 June 2014):

“We, the Leaders of Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, the President of the European Council and the President of the European Commission, met in Brussels on 4 and 5 June 2014.

...

We will work together and with others to phase down the production and consumption of hydrofluorocarbons (HFC) under the Montreal Protocol. We will also continue to take action to promote the rapid deployment of climate-friendly and safe alternatives in motor vehicle air-conditioning and we will promote public procurement of climate-friendly HFC alternatives.”

Joint Statement: Deepening the EU-China Comprehensive Strategic Partnership for mutual benefit (Brussels, Belgium, 31 March 2014):

“18. Both sides recognised the need to strengthen cooperation on climate change in preparing a protocol, another legal instrument or an agreed outcome with legal force under the United Nations Framework Convention on Climate Change applicable to all Parties to be adopted in 2015 at the Conference of Parties to the Convention (COP21) in Paris. They underlined their commitment to making significant cuts in greenhouse gas emissions through credible and verifiable domestic action. Both sides agreed on the importance of all parties presenting their contributions well in advance of the Paris meeting. The EU and China will cooperate on taking domestic action to avoid or reduce the consumption of HFCs and to work together to promote a global phase-down of these substances.”

White House Fact Sheet: Climate Action Plan - Strategy to Cut Methane Emissions (Washington DC, U.S., 28 March 2014):

With an all-of-the-above approach to develop homegrown energy and steady, responsible steps to cut carbon pollution, we can protect our kids' health and begin to slow the effects of climate change so we leave a cleaner, more stable environment for future generations. That's why last June, President Obama issued a broad-based Climate Action Plan, announcing a series of executive actions to reduce carbon pollution, prepare the U.S. for the impacts of climate change, and lead international efforts to address global climate change. Since June, the Administration has made substantial progress in meeting the ambitious goals laid out in the Climate Action Plan in a way that advances our economy, our environment, and public health. In just the last few months:

- *The Department of the Interior (DOI) announced permitting the 50th renewables-related project on federal lands during the Administration - bringing us closer to meeting the goal of siting enough wind and solar projects on public lands by 2020 to power more than 6 million homes.*
- *President Obama directed the Environmental Protection Agency (EPA) and the Department of Transportation to develop fuel economy standards for heavy-duty vehicles to save families money at the pump and further reduce reliance on foreign oil and fuel consumption.*

- *The Department of Energy (DOE) has issued two proposed energy conservation standards for appliances and equipment and finalized two energy conservation standards. That's on top of the five proposed and two final energy conservation standards DOE has already issued since June. These standards will help cut consumers' electricity bills by billions of dollars.*
- *The Department of Agriculture (USDA) announced seven new "climate hubs" to help farmers and ranchers adapt their operations to a changing climate and the President's Budget proposed a \$1 billion in new funding for new technologies and incentives to build smarter, more resilient infrastructure to help communities prepare for a changing climate.*
- *The Administration announced the Climate Data Initiative, an ambitious new effort bringing together extensive open government data and design competitions with commitments from the private and philanthropic sectors to develop data-driven planning and resilience tools for local communities. This effort will help give communities across America the information and tools they need to plan for current and future climate impacts.*
- *The Administration has continued the work of the U.S.-China Climate Change Working Group that's working to promote clean energy and transportation solutions in both countries. And we're working closely with India to accelerate its clean energy revolution and address the impacts of climate change in vulnerable communities.*

Today, the Administration is releasing another key element called for in the President's Climate Action Plan – a Strategy to Reduce Methane Emissions. The strategy summarizes the sources of methane emissions, commits to new steps to cut emissions of this potent greenhouse gas, and outlines the Administration's efforts to improve the measurement of these emissions. The strategy builds on progress to date and takes steps to further cut methane emissions from landfills, coal mining, and agriculture, and oil and gas systems through cost-effective voluntary actions and common-sense standards. Key steps include:

- ***Landfills:*** *In the summer of 2014, the EPA will propose updated standards to reduce methane from new landfills and take public comment on whether to update standards for existing landfills.*
- ***Coal Mines:*** *In April 2014, the DOI's Bureau of Land Management (BLM) will release an Advanced Notice of Proposed Rulemaking (ANPRM) to gather public input on the development of a program for the capture and sale, or disposal of waste mine methane on lands leased by the Federal government.*
- ***Agriculture:*** *In June, in partnership with the dairy industry, the USDA, EPA and DOE will jointly release a "Biogas Roadmap" outlining voluntary strategies to accelerate adoption of methane digesters and other cost-effective technologies to reduce U.S. dairy sector greenhouse gas emissions by 25 percent by 2020.*
- ***Oil and Gas:*** *Building on success in reducing methane emissions from the oil and gas sector through voluntary programs and targeted regulations, the Administration will take new actions to encourage additional cost-effective reductions. Key steps include:*
 - *In the spring of 2014, EPA will assess several potentially significant sources of methane and other emissions from the oil and gas sector. EPA will solicit input from independent experts through a series of technical white papers, and in the fall of 2014, EPA will determine how best to pursue further methane reductions*

from these sources. If EPA decides to develop additional regulations, it will complete those regulations by the end of 2016.

- *Later this year, the BLM will propose updated standards to reduce venting and flaring from oil and gas production on public lands.*
- *As part of the Quadrennial Energy Review, and through DOE-convened roundtables, the Administration will identify “downstream” methane reduction opportunities. Through the Natural Gas STAR program, EPA will work with the industry to expand voluntary efforts to reduce methane emissions.*

Taking action to curb methane waste and pollution is important because emissions of methane make up nearly 9 percent of all the greenhouse gas emitted as a result of human activity in the United States. Since 1990, methane pollution in the United States has decreased by 11 percent, even as activities that can produce methane have increased. However, methane pollution is projected to increase to a level equivalent to over 620 million tons of carbon dioxide pollution in 2030 absent additional action to reduce emissions.

Reducing methane emissions is a powerful way to take action on climate change; and putting methane to use can support local economies with a source of clean energy that generates revenue, spurs investment and jobs, improves safety, and leads to cleaner air. When fully implemented, the policies in the methane strategy will improve public health and safety while recovering otherwise wasted energy to power our communities, farms, factories, and power plants.

EU-US Summit Joint Statement (Brussels, Belgium, 26 March 2014):

“7. Sustainable economic growth will only be possible if we tackle climate change, which is also a risk to global security. We therefore reaffirm our strong determination to work towards the adoption in Paris in 2015 of a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties, to strengthen the multilateral, rules-based regime. The 2015 agreement must be consistent with science and with the goal of limiting the global temperature increase to below 2°C, and should therefore include ambitious mitigation contributions, notably from the world’s major economies and other significant emitters. We are implementing our existing pledges and preparing new mitigation contributions for the first quarter of 2015, mindful of the importance of ensuring that mitigation contributions are transparent, quantifiable, verifiable and ambitious. The EU and the United States demonstrate leadership and are intensifying their cooperation, including: phasing out fossil fuel subsidies, phasing down the production and consumption of hydrofluorocarbons (HFCs) under the Montreal Protocol, in promoting sustainable energy, energy efficiency and renewable energy, fighting deforestation, and mobilizing private and public finance. We are committed to ambitious domestic action to limit HFC use and emissions.”

White House Fact Sheet: Key Deliverables for the 2014 North American Leaders Summit (Washington DC, U.S., 19 February 2014):

“ENERGY/CLIMATE CHANGE

- *Holding a North American Energy Ministers Meeting in 2014 in order to define areas for strong trilateral cooperation on energy.*

- *Supporting efforts to reinvigorate the Commission for Environmental Cooperation.*
- *Continue trilateral work under the Montreal Protocol to phase down HFC production and consumption.*
- *Continuing trilateral coordination in the Climate and Clean Air Coalition.*
- *Declaring North American adherence to high standards in fuel quality, emissions standards, and fuel efficiency for heavy-duty vehicles.”*

Joint Statement by North American Leaders - 21st Century North America: Building the Most Competitive and Dynamic Region in the World (Washington DC, U.S., 19 February 2014):

“Our countries will continue to work together to address climate change in pursuit of an ambitious and inclusive global agreement within the U.N. Framework Convention on Climate Change, while also collaborating through complementary mechanisms like the Major Economies Forum, the Climate and Clean Air Coalition, and the Energy and Climate Partnership of the Americas. In addition, we will intensify our efforts to promote an amendment to the Montreal Protocol to phase-down production and consumption of climate-damaging hydrofluorocarbons (HFCs).”

White House Fact Sheet: U.S. Cooperation with France on Protecting the Environment, Building a Clean Energy Economy, and Addressing Climate Change (Washington DC, U.S., 11 February 2014):

“Working Together on Clean Energy and Climate Solutions

The United States partners with France on innovative and pragmatic ways to reduce global greenhouse gas emissions through other fora, including the Climate and Clean Air Coalition (CCAC) to Reduce Short-Lived Climate Pollutants, the Clean Energy Ministerial, and the Major Economies Forum (MEF). Our countries are working together to support the launch of a MEF initiative aimed at accelerating action to improve building efficiency in the major economies.

The United States also works closely with France in the context of the International Renewable Energy Agency (IRENA), the International Energy Agency (IEA), the International Partnership for Energy Efficiency Cooperation (IPEEC), the G8, and the G20 to advance the global conversation forward on climate change and clean energy solutions. France is also an important partner in the global effort to phase down production and consumption hydrofluorocarbons (HFCs) using the institutions and expertise of the Montreal Protocol.”

Joint Fact Sheet on Strengthening U.S.-China Economic Relations (Washington DC, U.S., 5 December 2013):

“To help accelerate progress on the U.S.-China Climate Change Working Group Heavy-Duty and Other Vehicles initiative, the United States and China commit to implement and enforce their current schedules for implementation of low-sulfur fuel and for motor vehicle emissions standards. Both sides also commit to work together to help China design and implement China VI vehicle emissions standards as soon as practical, strengthen communication in heavy-duty vehicle fuel efficiency standards to reduce greenhouse gas emission, promote the implementation of clean action plans for heavy-

duty diesel vehicles, and explore ways to design and implement the clean action plans for non-road motor vehicles and supporting diesel engines, which would reduce PM2.5 emissions and would have substantial air quality and climate benefits. The United States commits to provide technical assistance to achieve these goals and continue to provide technical assistance on regional air quality management and modeling, including emissions from mobile sources.

The United States and China reaffirm their commitment to implement the consensus reached by Presidents Obama and Xi Jinping on hydrofluorocarbons from June 8, 2013, and September 6, 2013.

...

The United States and China commit to undergo fossil fuel subsidy peer reviews under the G-20 process, and rationalize and phase out inefficient fossil fuel subsidies that encourage wasteful consumption over the medium term, while providing targeted support for the poorest.”

U.S. Fact Sheet on Strengthening U.S.-China Economic Relations (Washington DC, U.S., 5 December 2013):

“Today, both countries reaffirmed the agreements reached by leaders earlier this year regarding phasing down the production and consumption of the highly potent greenhouse gas hydrofluorocarbons (HFCs) using the expertise and institutions of the Montreal Protocol and to take next steps in the process, including the establishment of an open-ended contact group in the Montreal Protocol. China committed to implement aggressive low sulfur fuel and motor vehicle emissions standards and for the first time will include China VI emissions standards. These standards, when implemented, will have significant air quality and climate benefits and reduce vehicle fuel use. The United States pledged to provide technical assistance to help China achieve these goals. Furthermore, both countries have pledged to make concrete progress on initiatives in the U.S.-China Climate Change Working Group by the 2014 meeting of the S&ED. On fossil fuel subsidies, China, together with the United States, committed to undergo peer reviews under the G-20 process, and phase out inefficient fossil fuel subsidies that encourage wasteful consumption. Both countries emphasized the importance of maintaining close contact including through leader-level discussions to bring about a successful outcome in the multilateral climate change agreement that is currently being developed for completion at the Paris climate conference in 2015.”

Joint press statement, 21st EU-Japan summit (Tokyo, Japan, 19 November 2013):

“In that connection, they underlined the contribution of international cooperative initiatives to the additional mitigation effort to narrow the existing gap between emission reduction pledges and what is needed according to science. In particular, they stressed the need for rapid progress on the phase down of HFCs and for its close consideration as one of the issues to be addressed in the context of the Montreal Protocol.”

U.S.-India Joint Statement (Washington DC, U.S., 27 September 2013):

“The two leaders agreed to immediately convene the India-U.S. Task Force on hydrofluorocarbons (HFCs) to discuss, inter alia, multilateral approaches that include

using the expertise and the institutions of the Montreal Protocol to phase down the consumption and production of HFCs, based on economically viable and technically feasible alternatives, and include HFCs within the scope of the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol for accounting and reporting of emissions.

...

They also supported complementary initiatives, through multilateral approaches that include using the expertise and the institutions of the Montreal Protocol to phase down the production and the consumption of HFCs, based on the examination of economically viable and technically feasible alternatives. They will continue to include HFCs within the scope of UNFCCC and its Kyoto Protocol for accounting and reporting of emissions.”

Presidential Statement, [Micronesia’s Contributions to the World’s Most Successful Environmental Treaty](#) (September 17, 2013):

Today, on the 26th annual International Day for Preservation of the Ozone Layer, Micronesia hails the accomplishments of the Montreal Protocol in protecting the ozone layer and climate system.

In light of the recent declaration of leaders of the G-20 nations, there now appears to be overwhelming support for using the Montreal Protocol to deliver substantial additional benefits for the global climate by reducing powerful greenhouse gases called HFCs.

For Micronesians, this news should inspire renewed optimism and also considerable pride. Micronesia was the first country to propose phasing down HFCs under the Montreal Protocol in 2009.

Our proposal was ground-breaking at the time but rooted in basic common sense. The Montreal Protocol has decades of experience and expertise in phasing out manmade greenhouse gases, including CFCs and HCFCs, the predecessors of HFCs. It is the world’s most successful environmental treaty, due in large part to a governance system that treats developing countries fairly, providing them the resources and the time to undertake the measures necessary to protect the environment.

Prior to our work on HFCs, Micronesia was already driving efforts to protect the climate system with the Montreal Protocol. In 2008 we succeeded with another proposal to accelerate the phase out of HCFCs.

Now, phasing down HFCs is the next step, and there remains much work to be done. Leaders of the world’s biggest economies have sent a strong signal, and now Montreal Protocol negotiators and technical experts must design and agree to an equitable and ambitious plan to phase down HFCs. This work must commence in earnest at the Meeting of the Parties to the Montreal Protocol in Bangkok, October 21-25, 2013.

We thank and acknowledge The Kingdom of Morocco and the Republic of the Maldives for their co-sponsorship of the amendment proposal this year and for their hard work in generating support worldwide. We invite other countries to join our efforts and to work with us as we continue what will be a long and difficult but increasingly urgent effort to

secure the international cooperation necessary to protect the climate system and to ensure the sustainability and prosperity of our societies.

The White House, United States and China Reach Agreement on Phase Down of HFCs (Washington DC, U.S., 6 September 2013):

Building on their June 8 accord on hydrofluorocarbons (HFCs) in Sunnylands, President Obama and President Xi agreed at their bilateral meeting as a next step to establish a contact group under the Montreal Protocol on HFCs to consider issues related to cost-effectiveness, financial and technology support, safety, environmental benefits, and an amendment to the Montreal Protocol.

The agreement between President Obama and President Xi on HFCs reads as follows:

We reaffirm our announcement on June 8, 2013 that the United States and China agreed to work together and with other countries through multilateral approaches that include using the expertise and institutions of the Montreal Protocol to phase down the production and consumption of HFCs, while continuing to include HFCs within the scope of UNFCCC and its Kyoto Protocol provisions for accounting and reporting of emissions. We emphasize the importance of the Montreal Protocol, including as a next step through the establishment of an open-ended contact group to consider all relevant issues, including financial and technology support to Article 5 developing countries, cost effectiveness, safety of substitutes, environmental benefits, and an amendment. We reiterate our firm commitment to work together and with other countries to agree on a multilateral solution.

G20 Leaders' Declaration (Saint Petersburg, Russia, 6 September 2013):

“101. We are committed to support the full implementation of the agreed outcomes under the United Nations Framework Convention on Climate Change (UNFCCC) and its ongoing negotiations. We strongly welcome the efforts of the Secretary-General of the United Nations to mobilize political will through 2014 towards the successful adoption of a protocol, another legal instrument, or an agreed outcome with legal force under the convention applicable to all Parties by 2015, during COP-21 that France stands ready to host. We also support complementary initiatives, through multilateral approaches that include using the expertise and the institutions of the Montreal Protocol to phase down the production and consumption of hydrofluorocarbons (HFCs), based on the examination of economically viable and technically feasible alternatives. We will continue to include HFCs within the scope of UNFCCC and its Kyoto Protocol for accounting and reporting of emissions.”

Joint Statement by Kingdom of Denmark, Republic of Finland, Republic of Iceland, Kingdom of Norway, Kingdom of Sweden, and the United States of America (Stockholm, Sweden, 4 September 2013):

“Recognizing the rapid growth of the Climate and Clean Air Coalition over its first 18 months, we note the potential of the Coalition to catalyze significant global reductions of short-lived climate pollutants, which have major impacts on climate change and public health. The U.S. and Nordic members of the Coalition agree to intensify our efforts and invite others to join to take full advantage of the Coalition's potential.”

U.S.-China Strategic and Economic Dialogue Outcomes of the Strategic Track

(Washington DC, U.S., 12 July 2013):

“At the Fifth Round of the U.S.-China Strategic and Economic Dialogue (S&ED) July 10-11, 2013, in Washington, D.C., Secretary of State John Kerry, special representative of President Barack Obama, and State Councilor Yang Jiechi, special representative of President Xi Jinping, chaired the Strategic Track, which included participation from senior officials from across both governments. The two sides held in-depth discussions on major bilateral, regional, and global issues and recommitted to the S&ED’s role in deepening strategic trust and expanding practical cooperation to build a new model of relations between the United States and China. The dialogue on the Strategic Track produced the following specific outcomes and areas for further cooperation. The United States and China:

...

II. Addressing Regional and Global Challenges

...

33. Climate Change Working Group: Established the U.S.-China Climate Change Working Group in April 2013, pursuant to the Joint Statement on Climate Change by the United States and China, to develop and implement significant proposals for bilateral cooperation on climate change between the two countries. Mr. Todd Stern, U.S. Special Envoy for Climate Change, and Mr. Xie Zhenhua, Vice Chairman of the National Development and Reform Commission, jointly led the Working Group. The Working Group presented the “Report of the U.S.-China Climate Change Working Group to the Strategic and Economic Dialogue” at a special joint session of the S&ED and was mandated to implement its recommended initiatives. The two sides decided to enhance actions to combat climate change through new pragmatic cooperation on heavy-duty and other vehicles; smart grids; carbon capture, utilization, and storage; collecting and managing greenhouse gas data; and energy efficiency in buildings and industry. The Working Group will also explore other possible areas for bilateral climate change cooperation and will continue to enhance our policy dialogue on the multilateral negotiation process as well as on domestic climate policy. The Working Group will carry forward the agreement of President Obama and President Xi Jinping on hydrofluorocarbons.

...

III. Sub-national Cooperation

...

39. EcoPartnerships: Held a signing ceremony, witnessed by Deputy Secretary of State William Burns and State Councilor Yang Jiechi, during the 5th S&ED and admitted six new EcoPartnerships. The two sides held a conference in December 2012 and launched a new website in 2013 focused on improving information sharing and transparency and facilitating cooperation among EcoPartners. By bringing together U.S. and Chinese local governments, research institutions, universities, corporations, and non-governmental organizations, EcoPartnerships spur innovation, investment, and cooperation on energy and environmental issues in both countries. Critical investment by and pragmatic

cooperation among EcoPartners at the sub-national level translate the strategic goals of the Ten-Year Framework action plans into concrete achievements.

40. EcoPartnerships Workshop: Decided to hold an EcoPartnerships Workshop immediately after the 5th S&ED. The attendees will exchange experiences and practices in developing successful green cooperation projects and discuss how the EcoPartnerships program, as an effective platform of promoting pragmatic cooperation in energy and environment areas, should continue to make contributions to U.S.-China cooperation on green and low-carbon development.

41. Eco-City Project: Announced six pilot eco-cities. Based on an annex signed in 2011, DOE and the Ministry of Housing and Urban-Rural Development (MOHURD) jointly created this project to study and develop comparative eco-city guidelines and standards, determine technology and deployment needs, and assess the effects and best practices in sustainable urban development.

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IV. Cooperation on Energy

43. Energy Security: Reaffirmed the commitments made in the U.S.-China Joint Statement on Energy Security Cooperation, which noted the two countries, as the world's largest producers and consumers of energy, share common interests and responsibilities to ensure energy security and face common challenges. The United States and China discussed ways to diversify their sources of supply and further develop domestic energy resources to meet growing demand needs. Both sides recognized our shared goal of working to strengthen global energy security. The United States and China commit to continuing to discuss Chinese concerns about energy security and energy demand. The United States and China pledged to strengthen cooperation and increased dialogue and exchange of information in several areas including stabilizing international energy markets, emergency responses, ensuring diversified energy supply, and a rational and efficient use of energy.

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57. Intelligent Transportation: To support reduced emissions from vehicles, announced the commencement of an intelligent transportation system pilot project and feasibility study for Panyu District Government in Guangzhou.

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V. Cooperation on Environmental Protection

60. Air Quality Action Plan: Following up on more than a decade of collaboration on air quality, decided to cooperate to accelerate longer-term sustainable improvements in air quality. This work builds on continuing collaboration to share strategies and information on power plant technologies, practices, and incentives to cost-effectively reduce multiple air pollutants. The Environmental Protection Agency (EPA), USTDA, and Ministry of Environment Protection (MEP) are further enhancing the cooperation in regional air quality management by including treatment of Volatile Organic Compounds (VOCs) for controlling ozone and collaborating on a project to develop a model air quality plan that shares best practices of U.S. cities and states and fosters deployment of U.S. pollution

control expertise and technologies in a selected province. In addition, EPA, USTDA, and MEP can enhance cooperation in air quality monitoring, early warning and forecast development of air quality models, and quality control and assurance of related monitoring technologies.

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67. Exchanges on Heavy-Duty Vehicles: Are agreed that the USTDA is to invite a delegation of Chinese officials from the Ministry of Industry and Information Technology (MIIT) and the Ministry of Environmental Protection (MEP), among other relevant Chinese agencies, to the United States to exchange views on policies and programs that improve fuel efficiency and reduce greenhouse gas emissions from heavy-duty vehicles.

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VII. Cooperation on Health

74. Clean Cookstoves: As partners of the Global Alliance for Clean Cookstoves and pursuant to the corresponding National Development and Reform Commission (NDRC)-United Nations Foundation (UNF) MOU signed in April 2013, the two sides decided to strengthen their cooperation in this area. To support the Alliance's mission and reach its ambitious goals for large-scale global adoption of clean stoves and fuels for cooking and heating, China will further enhance its domestic efforts to adopt clean cookstoves and fuels under its current Five-Year Plan and support enterprises and institutes to develop safe, efficient, and clean products and technologies. The United States will collaborate with China via the Alliance to provide direct technical support to these activities. The two sides underline the importance of coordinating cookstoves efforts across relevant agencies on a broad set of topics and decided to discuss opportunities to coordinate research on clean cookstoves.

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VIII. Bilateral Dialogues on Energy, Environment, Science, and Technology

79. Ten-Year Framework on Energy and Environment Cooperation: Continue to promote progress of the seven action plans under the U.S.-China Ten-Year Framework (TYF) on Energy and Environment Cooperation, i.e., clean water, clean air, clean and efficient transportation, clean and efficient electricity, nature reserves/protected areas, wetlands cooperation, and energy efficiency, and to further implement the EcoPartnerships program. Both sides decided to carry out a mid-term review on the TYF, add new priority cooperation areas, and increase the participation of local governments, enterprises, research institutes, and civil society in the TYF. The 9th Joint Working Group meeting is to be held later this year. Both sides continue their cooperation in drinking water safety, ground water protection, and lake water environmental management and plan to co-host a Drinking Water Safety Round Table; will carry out various forms of cooperation in the prevention and control of air pollution; co-hosted the 8th U.S.-China Regional Air Quality Management Conference and will continue this important conference; will continue to implement the second phase of the livable transportation project; continue to implement the exchange programs of conservation managers, students, and young professionals on nature reserves and refuges between the United States and China and facilitate the joint publication of Wetlands Journal Special Feature on Asia Wetlands in

2014; and continue to conduct exchanges and cooperation on energy efficiency and electricity.

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88. *Joint Committee on Environmental Cooperation: Announced that the 4th Meeting of the Joint Committee on Environmental Cooperation is to be held in China in late 2013 by the EPA and the Ministry of Environmental Protection.*

90. *Joint Committee Meeting on Science and Technology Cooperation: Welcomed continued efforts to enhance science and technology cooperation through the Joint Committee on Science and Technology Cooperation. Bilateral cooperation facilitated by the May 2012 Joint Committee Meeting (JCM) included joint research in areas of agriculture, clean energy, nuclear safety, environmental research, measurement science, and biodiversity. Under the auspices of the JCM, OSTP and MOST chaired a meeting of the Innovation Dialogue in July 2013 and reported the results to the S&ED. The dialogue provides a framework to discuss innovation policies of the U.S. and China and includes participation from relevant ministries and agencies on both sides, nongovernmental innovation policy experts, and private-sector representatives. Also under the JCM, MOST and the U.S. Department of State are to co-chair the 2013 working-level Executive Secretaries Meeting on Science and Technology Cooperation (ESM) in the United States in October 2013.”*

U.S.-China Strategic and Economic Dialogue V Strategic Track Select Outcomes
(Washington DC, U.S., 12 July 2013):

“Combat Climate Change and Protect the Environment: *The United States and China agreed to accelerate action on climate change through five new action initiatives on heavy-duty and other vehicles; carbon capture, utilization, and storage; greenhouse gas data collection and management; smart grids; and energy efficiency in buildings and industry. These reflect the first of the recommendations made by the Climate Change Working Group that Secretary Kerry announced in April. They will also work together to implement the agreement of Presidents Obama and Xi on HFCs. The United States and China announced new efforts to share best practices in air quality planning, pollution reduction, environmental law and adjudication, and the study of greenhouse gases, as well as agreement to work together to combat wildlife trafficking.*

Support Global Energy Security: *The United States and China discussed measures to drive energy innovation and investment. They agreed to address barriers to further development of their energy production potential, including regulatory and pricing issues. Both countries agreed to cooperate on energy efficiency, renewable energy, emergency responses, phasing out fossil fuel subsidies, and sharing data on energy supply, demand, and reserves.”*

Report of the U.S.-China Climate Change Working Group to the Strategic and Economic Dialogue (Washington DC, U.S., 10 July 2013):

“The U.S.-China Climate Change Working Group (hereinafter referred to as the Working Group) submits this Report to the Special Representatives of Leaders of the United States and China for the Strategic and Economic Dialogue (hereinafter referred to as the

S&ED) pursuant to the Joint Statement on Climate Change issued by the United States and China on April 13, 2013.

Introduction

We have prepared this Report mindful of the overwhelming scientific consensus about anthropogenic climate change and its worsening impacts, as well as the urgent need to intensify global efforts to combat climate change. Rising temperatures are predicted to lead to sea level rise that could affect tens of millions of people around the world, as well as more frequent and intense heat waves, intensified urban smog, and droughts and floods in our most productive agricultural regions. Global climate change represents a grave threat to the economic livelihood and security of all nations, but it also represents a significant opportunity for sustainable development that will benefit both current and future generations. We believe that ambitious domestic action by China and the United States is more critical than ever. China has given high priority to building an “Ecological Civilization” by striving for green, circular and low-carbon development. It has adopted proactive policies and measures to mitigate and adapt to climate change. The United States is implementing robust policies to promote renewable energy, enhance energy efficiency, and reduce emissions from transportation, buildings, and the power sector. Both countries recognize the need to work together to continue and build on these important efforts.

The Joint Statement on Climate Change set in motion a process to take stock of our existing cooperative efforts as well as to identify significant new action initiatives. The United States and China established the Working Group to determine ways in which the two countries can strengthen cooperation on climate change through collaboration on technology, research, conservation, and alternative and renewable energy. The Working Group, chaired by National Development and Reform Commission Vice Chairman Xie Zhenhua and U.S. Special Envoy for Climate Change Todd Stern, met several times for in-depth discussions with the active participation of relevant government ministries on both sides.

The Working Group’s findings and outcomes are presented below. The Working Group intends to coordinate ongoing implementation of the specific areas of cooperation identified in this Report, as well as the development of additional areas of cooperation for subsequent annual meetings of the S&ED. In addition, the Working Group intends to facilitate an enhanced policy dialogue.

Both sides believe that the kind of cooperative actions outlined in this Report will have substantial benefits. First, such actions can help each country grow and develop in sustainable ways. Significant co-benefits of investing in mitigation will also include enhanced energy security, reduced air pollution, improved public health, and conservation of important natural resources. Both sides will benefit from developing and deploying new environmental and clean energy technologies that promote economic prosperity and job creation while reducing greenhouse gas emissions.

Second, both sides appreciate that advancing concrete action on climate change can serve as a pillar of our bilateral relationship, build mutual trust and respect, and pave the way for a stronger overall collaboration.

Third, we fully recognize that the United States and China play a significant role in global efforts to address climate change. Both sides agree that by enhancing our

domestic actions and our bilateral climate cooperation, we can make an important contribution to the worldwide effort to confront climate change in a manner commensurate with the growing urgency of this global challenge.

Stocktaking of existing cooperation on climate change

Pursuant to the April 13, 2013 Joint Statement, the Working Group reviewed existing bilateral programs and initiatives related to climate change. This stocktaking exercise highlighted the breadth of these cooperative efforts, including under the 2009 Memorandum of Understanding (MOU) to Enhance Cooperation on Climate Change, Energy and the Environment, as well as under the Ten Year Framework for Cooperation on Energy and Environment. In recent years, exchanges and joint projects have taken place in a wide variety of areas, including renewable energy, building and industrial energy efficiency, clean transportation and electric vehicles, green buildings, sustainable cities, land use and forestry, scientific research, and technology research and development.

Important new activities pursuant to these existing programs are being announced in the context of the Strategic Dialogue, including six new EcoPartnerships, deployment of clean cookstoves in China, strengthened cooperation on scientific research and climate observations, and a bilateral Airport Sustainability Initiative.

New action initiatives

The Working Group recognized the potential for bold, new, collaborative action to combat climate change and to promote low carbon development. Drawing on the full expertise of our government agencies, the Working Group examined a number of areas and recommended five new action initiatives as a start. Taken together, these action initiatives will address some of the key drivers of greenhouse gas emissions and air pollution in our countries, including urbanization, transportation, industrial emissions, and coal-fired power generation. These initiatives also aim to produce significant co-benefits including cleaner air, energy savings, and water recovery.

1. Emission reductions from heavy-duty and other vehicles. *The emissions from heavy-duty vehicles significantly degrade urban and regional air quality, while exacerbating global climate change. Light-duty vehicles also contribute significantly to greenhouse gas emissions, fuel use and air pollution. Efforts under this initiative will include:*

A. Enhanced heavy-duty vehicle fuel efficiency standards: Each country will work domestically to implement policies and programs to improve fuel efficiency of heavy-duty vehicles. The two countries will also deepen technical exchanges on efficiency standards for light- and heavy-duty vehicles. Relevant agencies include China's National Development and Reform Commission (NDRC), China's Ministry of Industry and Information Technology, the U.S. Department of Transportation (DOT), and the U.S. Environmental Protection Agency (EPA).

B. Clean fuels and vehicle emissions control technologies: China will expeditiously implement its new low-sulfur standards and work toward adopting emission control technologies and enhancing vehicle emissions standards. The U.S. EPA will continue to implement its heavy-duty low-sulfur fuel and diesel standards and will provide technical support as appropriate for China's domestic policies. Relevant agencies include China's NDRC and Ministry of Environmental Protection, and the U.S. EPA.

C. Promotion of efficient, clean freight: Each country will work domestically to increase efficiency of road freight transport, with the U.S. EPA providing technical assistance as appropriate for implementation of green freight policies through the China Green Freight Initiative. Relevant agencies include China's NDRC and Ministry of Transport, the U.S. EPA, and the U.S. DOT.

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4. Collecting and managing greenhouse gas emissions data. *Both countries place a high priority on comprehensive, accurate reporting of economy-wide greenhouse gas emissions data to track progress in reducing emissions and to support development and implementation of mitigation policies. The United States and China intend to work cooperatively on capacity building for collection and management of greenhouse gas emissions data, building on extensive experience in this area. Working together and with others, such as the World Bank's Partnership for Market Readiness, the United States and China can build models that may also benefit other countries. This expanded initiative will encompass two complementary activities: (a) technical and methodological assistance in data reporting and data quality management at the facility and/or enterprise level; and (b) sharing experiences in developing and maintaining an integrated system for management of such data. These activities will build upon existing cooperative work between the U.S. EPA and China's NDRC and will include support for reporting methodology development, technical training and developing data collection and management design materials.*

5. Energy efficiency in buildings and industry. *The United States and China place a high priority on improving energy efficiency across industry and buildings, and recognize that there is significant scope for reducing emissions and costs through comprehensive efforts to improve energy efficiency while fostering economic growth. Indeed, work is already underway in this area under the Energy Efficiency Action Plan of the U.S.-China Ten Year Framework for Cooperation on Energy and the Environment. Both sides commit to intensify their efforts, with an initial enhanced focus on promoting energy efficiency of buildings. We will engage the private sector and other stakeholders in both the United States and China to further enhance existing work to significantly reduce energy use in buildings and industry in each country, including through the implementation of innovative financing methods. This work will include cooperation on: energy efficiency standards and testing for commercial, residential, and manufacturing buildings; identifying the top ten energy efficient technologies and best practices for industry; and further development of energy savings performance contracting in China. This enhanced work plan will be discussed at the next U.S.-China Energy Efficiency Forum, to be held in Washington, D.C. in September 2013.*

Following the S&ED, the United States and China will cooperate through all relevant agencies to develop specific implementation plans for these five initiatives. These plans will clearly elaborate the roles of relevant agencies. The implementation plans will be completed by October 2013. Both sides will look to involve other stakeholders, where appropriate, in the development of these plans and in initiative implementation and will promptly initiate outreach to them.

The Working Group also intends to explore other possible areas for bilateral cooperation, including: (a) specific mechanisms for China and the United States to work together in assisting least developed countries, small island developing states, and

African countries to build their capacity to address climate change; and (b) supporting appropriate cooperative efforts among our states, provinces, and cities as they develop sub-national carbon markets.

Enhanced policy dialogue

The Working Group emphasizes the importance of the climate change policy dialogue established under the 2009 MOU to Enhance Cooperation on Climate Change, Energy and the Environment and the role it has played in enhancing mutual understanding and exchange of ideas at various critical moments in the multilateral negotiation process under the United Nations Framework Convention on Climate Change (UNFCCC). Recognizing the imperative of negotiating a robust and effective post-2020 climate agreement as well as the importance of our own constructive contributions for the success of such negotiations, the United States and China resolve to work closely with other countries in developing this agreement in the period prior to its scheduled completion in 2015. In this regard, we intend to enhance and deepen our policy dialogue on all aspects of this agreement through more frequent and intensified bilateral consultation at all levels.

The Working Group also recommends strengthening our bilateral dialogue related to domestic climate policy to enhance mutual understanding of each other's domestic efforts in responding to climate change and to enhance our mutual confidence. This dialogue would include topics such as the role of regulation, lessons learned from sub-national developments on carbon trading and carbon pricing programs, and various other policy instruments to help promote low-carbon growth, increase energy security, and combat climate change.

Wherever possible, our policy dialogue should seek to include expertise from all sectors of society and provide incentives for engagement at the sub-national level as well as by business, research institutions, think tanks, academia, and civil society.

Additionally, President Barack Obama and President Xi Jinping made the announcement on June 8, 2013 that the United States and China agreed to work together and with other countries through multilateral approaches that include using the expertise and institutions of the Montreal Protocol to phase down the production and consumption of HFCs, while continuing to include HFCs within the scope of UNFCCC and its Kyoto Protocol provisions for accounting and reporting of emissions. The Working Group will work effectively to carry forward this effort.

Role of the Working Group

The Working Group has already played an important role in advancing concrete collaboration and mutual trust between the two countries on climate change. The Working Group is intended to continue to serve as a high-level forum to coordinate the new action initiatives outlined in this Report, develop recommendations for new action initiatives and enhance the policy dialogue on the multilateral climate negotiations process as well as on domestic climate policy in the two countries. The Working Group will meet at least twice per year and report annually to the S&ED.

ANNEX 1

U.S.-CHINA JOINT STATEMENT ON CLIMATE CHANGE

April 13, 2013

The United States of America and the People's Republic of China recognize that the increasing dangers presented by climate change measured against the inadequacy of the global response requires a more focused and urgent initiative. The two sides have been engaged in constructive discussions through various channels over several years bilaterally and multilaterally, including the UN Framework Convention on Climate Change process and the Major Economies Forum. In addition, both sides consider that the overwhelming scientific consensus regarding climate change constitutes a compelling call to action crucial to having a global impact on climate change.

The two countries took special note of the overwhelming scientific consensus about anthropogenic climate change and its worsening impacts, including the sharp rise in global average temperatures over the past century, the alarming acidification of our oceans, the rapid loss of Arctic sea ice, and the striking incidence of extreme weather events occurring all over the world. Both sides recognize that, given the latest scientific understanding of accelerating climate change and the urgent need to intensify global efforts to reduce greenhouse gas emissions, forceful, nationally appropriate action by the United States and China – including large-scale cooperative action – is more critical than ever. Such action is crucial both to contain climate change and to set the kind of powerful example that can inspire the world.

In order to achieve this goal of elevating the climate change challenge as a higher priority, the two countries will initiate a Climate Change Working Group in anticipation of the 2013 Strategic and Economic Dialogue (S&ED). In keeping with the vision shared by the leaders of the two countries, the Working Group will begin immediately to determine and finalize ways in which they can advance cooperation on technology, research, conservation, and alternative and renewable energy. They will place this initiative on a faster track through the S&ED next slated to meet this summer. The Working Group will be led by Mr. Todd Stern, U.S. Special Envoy for Climate Change and Mr. Xie Zhenhua, Vice Chairman, the National Development and Reform Commission. The purpose of the Climate Change Working Group will be to make preparations for the S&ED by taking stock of existing cooperation related to climate change, and the potential to enhance such efforts through the appropriate ministerial channels; and by identifying new areas for concrete, cooperative action to foster green and low-carbon economic growth, including through the use of public-private partnerships, where appropriate. The Climate Change Working Group should include relevant government ministries and will present its findings to the Special Representatives of the leaders for the S&ED at their upcoming meeting.

Both sides also noted the significant and mutual benefits of intensified action and cooperation on climate change, including enhanced energy security, a cleaner environment, and more abundant natural resources. They also reaffirmed that working together both in the multilateral negotiation and to advance concrete action on climate change can serve as a pillar of the bilateral relationship, build mutual trust and respect, and pave the way for a stronger overall collaboration. Both sides noted a common interest in developing and deploying new environmental and clean energy technologies that promote economic prosperity and job creation while reducing greenhouse gas emissions.

In light of previous joint statements, existing arrangements, and ongoing work, both sides agree that it is essential to enhance the scale and impact of cooperation on climate

change, commensurate with the growing urgency to deal with our shared climate challenges.”

U.S.-China Climate Change Working Group Fact Sheet (Washington DC, U.S., July 10, 2013):

“The United States and China have agreed to five new action initiatives with the goal of reducing greenhouse gas emissions and air pollution by tackling the largest sources of emissions in both countries. These initiatives were developed by the U.S.-China Working Group on Climate Change and presented in a Report agreed to by Leaders’ Special Representatives at the Strategic and Economic Dialogue.

The Working Group was established pursuant to the Joint Statement on Climate Change issued on April 13, 2013 during Secretary Kerry’s first trip to China and is intended to spur large-scale, cooperative efforts to address the climate challenge, including deepening and expanding work already underway. The Working Group’s Report was prepared mindful of the overwhelming scientific consensus about anthropogenic climate change and its worsening impacts, as well as the urgent need to intensify global efforts to combat climate change. Ambitious domestic and cooperative action by China and the United States is more critical than ever.

Working closely with private sector and non-governmental stakeholders, the Working Group will develop implementation plans for the following initiatives by October 2013:

- *Reducing emissions from heavy-duty and other vehicles: Heavy-duty vehicles are the fastest growing source of greenhouse gas emissions from transportation in the United States and account for more than half of transportation fuel consumed in China. Light-duty vehicles also contribute significantly to greenhouse gas emissions, fuel use and air pollution. Efforts under this initiative will include advancing comprehensive policies to reduce CO₂ and black carbon emissions through: enhanced heavy-duty fuel efficiency standards; cleaner fuels and vehicle emissions control technologies; and more efficient, clean freight.*

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- *Increasing energy efficiency in buildings, industry, and transport: The United States and China recognize that there is significant scope for reducing emissions and reducing costs through comprehensive efforts to improve energy efficiency. Both sides commit to intensify their efforts, with an initial focus on promoting the energy efficiency of buildings, which account for over 30 percent of energy use in both countries, including through the use of innovative financing models.*
- *Improving greenhouse gas data collection and management: Both countries place a high priority on comprehensive, accurate reporting of economy-wide greenhouse gas emissions data to track progress in reducing emissions and to develop and implement mitigation policies. The United States will work with China to build capacity for collection and management of greenhouse gas emissions data, a critical foundation for smart climate change policies in both countries.*

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These initiatives, and others the Working Group will develop, demonstrate the commitment of both countries to combat climate change and complement domestic efforts, including President Obama's recently announced Climate Action Plan.

Enhanced Policy Dialogues

Recognizing the importance of working through the United Nations Framework Convention on Climate Change (UNFCCC), the United States and China are committed to enhancing our policy dialogue on all aspects of the future agreement.

The Working Group will work to implement the agreement on hydrofluorocarbons (HFCs) reached by President Obama and President Xi at their meeting on June 8, 2013, in Sunnylands, California.

The Working Group will also strengthen the bilateral dialogue on domestic climate policy to enhance mutual understanding of and confidence in each others' measures."

The President's Climate Action Plan (Washington DC, U.S., June 2013):

"CUT CARBON POLLUTION IN AMERICA

...

IV. Reducing Other Greenhouse Gas Emissions

Curbing Emissions of Hydrofluorocarbons: *Hydrofluorocarbons (HFCs), which are primarily used for refrigeration and air conditioning, are potent greenhouse gases. In the United States, emissions of HFCs are expected to nearly triple by 2030, and double from current levels of 1.5 percent of greenhouse gas emissions to 3 percent by 2020.*

To reduce emissions of HFCs, the United States can and will lead both through international diplomacy as well as domestic actions. In fact, the Administration has already acted by including a flexible and powerful incentive in the fuel economy and carbon pollution standards for cars and trucks to encourage automakers to reduce HFC leakage and transition away from the most potent HFCs in vehicle air conditioning systems. Moving forward, the Environmental Protection Agency will use its authority through the Significant New Alternatives Policy Program to encourage private sector investment in low-emissions technology by identifying and approving climate-friendly chemicals while prohibiting certain uses of the most harmful chemical alternatives. In addition, the President has directed his Administration to purchase cleaner alternatives to HFCs whenever feasible and transition over time to equipment that uses safer and more sustainable alternatives.

Reducing Methane Emissions: *Curbing emissions of methane is critical to our overall effort to address global climate change. Methane currently accounts for roughly 9 percent of domestic greenhouse gas emissions and has a global warming potential that is more than 20 times greater than carbon dioxide. Notably, since 1990, methane emissions in the United States have decreased by 8 percent. This has occurred in part through partnerships with industry, both at home and abroad, in which we have demonstrated that we have the technology to deliver emissions reductions that benefit both our economy and the environment. To achieve additional progress, the Administration will:*

• **Developing an Interagency Methane Strategy:** The Environmental Protection Agency and the Departments of Agriculture, Energy, Interior, Labor, and Transportation will develop a comprehensive, interagency methane strategy. The group will focus on assessing current emissions data, addressing data gaps, identifying technologies and best practices for reducing emissions, and identifying existing authorities and incentive-based opportunities to reduce methane emissions.

• **Pursuing a Collaborative Approach to Reducing Emissions:** Across the economy, there are multiple sectors in which methane emissions can be reduced, from coal mines and landfills to agriculture and oil and gas development. For example, in the agricultural sector, over the last three years, the Environmental Protection Agency and the Department of Agriculture have worked with the dairy industry to increase the adoption of methane digesters through loans, incentives, and other assistance. In addition, when it comes to the oil and gas sector, investments to build and upgrade gas pipelines will not only put more Americans to work, but also reduce emissions and enhance economic productivity. For example, as part of the Administration's effort to improve federal permitting for infrastructure projects, the interagency Bakken Federal Executive Group is working with industry, as well as state and tribal agencies, to advance the production of oil and gas in the Bakken while helping to reduce venting and flaring. Moving forward, as part of the effort to develop an interagency methane strategy, the Obama Administration will work collaboratively with state governments, as well as the private sector, to reduce emissions across multiple sectors, improve air quality, and achieve public health and economic benefits.

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LEAD INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

...

I. Working with Other Countries to Take Action to Address Climate Change

...

Expanding Bilateral Cooperation with Major Emerging Economies:

From the outset, the Obama Administration has sought to intensify bilateral climate cooperation with key major emerging economies, through initiatives like the U.S.-China Clean Energy Research Center, the U.S.-India Partnership to Advance Clean Energy, and the Strategic Energy Dialogue with Brazil.

We will be building on these successes and finding new areas for cooperation in the second term, and we are already making progress: Just this month, President Obama and President Xi Jinping of China reached an historic agreement at their first summit to work to use the expertise and institutions of the Montreal Protocol to phase down the consumption and production of HFCs, a highly potent greenhouse gas. The impact of phasing out HFCs by 2050 would be equivalent to the elimination of two years' worth of greenhouse gas emissions from all sources.

Combatting Short-Lived Climate Pollutants: Pollutants such as methane, black carbon, and many HFCs are relatively short-lived in the atmosphere, but have more potent

greenhouse effects than carbon dioxide. In February 2012, the United States launched the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollution, which has grown to include more than 30 country partners and other key partners such as the World Bank and the U.N. Environment Programme. Major efforts include reducing methane and black carbon from waste and landfills. We are also leading through the Global Methane Initiative, which works with 42 partner countries and an extensive network of over 1,100 private sector participants to reduce methane emissions.

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II. Leading Efforts to Address Climate Change through International Negotiations

At the Montreal Protocol, we are leading efforts in support of an amendment that would phase down HFCs; at the International Maritime Organization, we have agreed to and are now implementing the first-ever sector-wide, internationally applicable energy efficiency standards; and at the International Civil Aviation Organization, we have ambitious aspirational emissions and energy efficiency targets and are working towards agreement to develop a comprehensive global approach.”

Remarks by U.S. President Barack Obama on Climate Change (Washington DC, U.S., 25 June 2013):

“We’ve also intensified our climate cooperation with major emerging economies like India and Brazil, and China -- the world’s largest emitter. So, for example, earlier this month, President Xi of China and I reached an important agreement to jointly phase down our production and consumption of dangerous hydrofluorocarbons, and we intend to take more steps together in the months to come. It will make a difference. It’s a significant step in the reduction of carbon emissions. (Applause.)”

G8 Leaders' Communiqué (Lough Erne, Northern Ireland, 17-18 June 2013):

“57. We will pursue ambitious and transparent action, both domestically and internationally, in the UNFCCC, complemented by actions addressed through other relevant fora, including but not limited to:

...

- *the Climate and Clean Air Coalition which we all committed to join at our last Summit, where we will build on the eight global initiatives already begun and further develop the scientific evidence base and private sector involvement.”*

Remarks by Chinese State Councilor Yang Jiechi's on the Results of the Presidential Meeting between Xi Jinping and Obama at the Annenberg Estate (Beijing, China, 9 June 2013):

“Both sides agreed to strengthen coordination and cooperation in the area of climate change and advance practical cooperation in this area through the climate change working group of the two countries. They also vowed to work together and with other nations via multilateral mechanisms, including the use of the expertise and institution of the Montreal Protocol, to gradually reduce the production and consumption of

hydrofluorocarbons (HFCs), and continue to include HFCs within the boundary of the related emission reports and calculation clauses of the UN Framework Convention on Climate Change and the Kyoto Protocol.”

The White House, United States and China Agree to Work Together on Phase Down of HFCs (Washington DC, 8 June 2013):

Today, President Obama and President Xi agreed on an important new step to confront global climate change. For the first time, the United States and China will work together and with other countries to use the expertise and institutions of the Montreal Protocol to phase down the consumption and production of hydrofluorocarbons (HFCs), among other forms of multilateral cooperation. A global phase down of HFCs could potentially reduce some 90 gigatons of CO₂ equivalent by 2050, equal to roughly two years worth of current global greenhouse gas emissions.

The agreement between the United States and China reads as follows:

Regarding HFCs, the United States and China agreed to work together and with other countries through multilateral approaches that include using the expertise and institutions of the Montreal Protocol to phase down the production and consumption of HFCs, while continuing to include HFCs within the scope of UNFCCC and its Kyoto Protocol provisions for accounting and reporting of emissions.

HFCs are potent greenhouse gases used in refrigerators, air conditioners, and industrial applications. While they do not deplete the ozone layer, many are highly potent greenhouse gases. Their use is growing rapidly as replacements for ozone-depleting substances that are being phased out under the Montreal Protocol on Substances that Deplete the Ozone Layer. Left unabated, HFC emissions growth could grow to nearly 20 percent of carbon dioxide emissions by 2050, a serious climate mitigation concern.

The Montreal Protocol was established in 1987 to facilitate a global approach to combat depletion of the stratospheric ozone layer. Every country in the world is a party to the Protocol, and it has successfully phased out or is in the process of phasing out several key classes of chemicals, including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons. The transitions out of CFCs and HCFCs provide major ozone layer protection benefits, but the unintended consequence is the rapid current and projected future growth of climate-damaging HFCs.

For the past four years, the United States, Canada, and Mexico have proposed an amendment to the Montreal Protocol to phase down the production and consumption of HFCs. The amendment would gradually reduce consumption and production and control byproduct emissions of HFCs in all countries, and require reporting in these areas. The amendment includes a financial assistance component for countries that can already access the Protocol's Multilateral Fund, and leaves unchanged the reporting and accounting provisions of the UN Framework Convention on Climate Change and Kyoto Protocol on HFC emissions.

Rio+20 Declaration, The Future We Want (Rio de Janeiro, Brazil, 22 June 2012):

“222. We recognize that the phase-out of ozone-depleting substances is resulting in a rapid increase in the use and release of high global-warming potential

hydrofluorocarbons to the environment. We support a gradual phase-down in the consumption and production of hydrofluorocarbons.”

G8 Camp David Declaration (Camp David, U.S., 19 May 2012):

“14. Recognizing the impact of short-lived climate pollutants on near-term climate change, agricultural productivity, and human health, we support, as a means of promoting increased ambition and complementary to other CO₂ and GHG emission reduction efforts, comprehensive actions to reduce these pollutants, which, according to UNEP and others, account for over thirty percent of near-term global warming as well as 2 million premature deaths a year. Therefore, we agree to join the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants.”

Fact Sheet: G-8 Action on Energy and Climate Change (Camp David, U.S., 19 May 2012):

“Address Climate Change, Including By Reducing Short-Lived Climate Pollutants

- *In the spirit of increasing mitigation efforts, we agree to collectively join the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, launched on February 16, 2012. This new initiative will enhance our collective ambition in addressing climate change by complementing efforts to address CO₂ emissions. By developing strategies to reduce short term pollutants – chiefly methane, black carbon, and hydrofluorocarbons – we can help reduce global warming, improve health, and increase agricultural productivity, as well as energy security.*
- *Commission the World Bank to prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms.*

In its role as 2012 Chair of the G-8, the United States intends to work with G-8 partners to develop mechanisms for following up these actions over the course of 2012.”

Joint Statement by North American Leaders (Washington DC, U.S., 2 April 2012):

“We also intend to deepen our trilateral cooperation and work with other interested partners to accelerate efforts aimed at reducing emissions of “short-lived climate pollutants,” noting the recently launched Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants in which we are all actively engaged. Reducing our emissions of these substances, which include methane, black carbon, and many hydrofluorocarbons (HFCs), offers significant opportunities to reduce the rate of global warming in the near term, in the context of our broader efforts to address climate change, while also yielding many health, agricultural productivity, and energy security benefits.”

Fact Sheet: The United States and Norway - NATO Allies and Global Partners (Washington DC, U.S., 20 October 2011):

“President Obama hosted Norwegian Prime Minister Jens Stoltenberg for a meeting in the Oval Office on October 20... The leaders renewed their commitments in the following areas: ...

The Arctic: In the Arctic Council, the United States and Norway co-chair a task force examining the role of certain greenhouse gases (such as methane and hydrofluorocarbons) and aerosols (such as black carbon), known collectively as "short-lived climate forcers," in causing global climate change..."

G8 Declaration, Responsible Leadership for a Sustainable Future (L'Aquila, Italy, 10 July 2009):

"66. We recognize that the accelerated phase-out of HCFCs mandated under the Montreal Protocol is leading to a rapid increase in the use of HFCs, many of which are very potent GHGs. Therefore we will work with our partners to ensure that HFC emissions reductions are achieved under the appropriate framework. We are also committed to taking rapid action to address other significant climate forcing agents, such as black carbon. These efforts, however, must not draw away attention from ambitious and urgent cuts in emissions from other, more long-lasting, greenhouse gases, which should remain the priority."

Declaration of Leaders, the Major Economies Meeting on Energy Security and Climate Change (Toyako, Japan, 9 July 2008):

"10. To enable the full, effective, and sustained implementation of the Convention between now and 2012, we will: ... ·Continue to promote actions under the Montreal Protocol on Substances That Deplete the Ozone Layer for the benefit of the global climate system; ..."

G8 Declaration on Growth and Responsibility in the World Economy (Heiligendamm, Germany, 7 June 2007):

"59. We will also endeavor under the Montreal Protocol to ensure the recovery of the ozone layer by accelerating the phase-out of HCFCs in a way that supports energy efficiency and climate change objectives. In working together toward our shared goal of speeding ozone recovery, we recognize that the Clean Development Mechanism impacts emissions of ozone-depleting substances."

Major Economies Forum

Chair's Summary, Sixteenth Meeting of the Leaders' Representatives of the Major Economies Forum on Energy and Climate (Krakow, Poland, 18 July 2013):

"Participants broadly supported the concept of a MEF Action Agenda, which would consist of concrete efforts on a voluntary, cooperative basis to accelerate the transition to low-carbon economies. Participants generally agreed that a MEF Action initiative could focus on improving the performance and energy efficiency of buildings. The conversation built on advances made over two previous MEF Ministers meetings and two Working Group meetings.

Buildings are the largest single source of energy demand and account for approximately 40 percent of the global total of CO₂ emissions. MEF participants discussed how an initiative could best capture this opportunity. Many participants

noted that efforts will not be “one size fits all;” that countries have differences in existing energy services and building stock; and that, in many countries, a variety of building issues are administered at the sub-national level.”

Co-Chairs Summary, Thirteenth Meeting of the Leaders’ Representatives of the Major Economies Forum on Energy and Climate (Rome, Italy, 17 April 2012):

“In light of the two degree goal, participants discussed means for increasing the ambition of collective efforts, including: ... exploring pragmatic opportunities that complement the negotiations (e.g.... robust participation in the new Climate and Clean Air Coalition, and phasing out hydrofluorocarbons).”

Chair’s Summary, Eleventh Leaders’ Representative Meeting of the Major Economies Forum (Washington DC, U.S., 17 September 2011):

“[T]he Major Economies Forum should recall its dual-mandate of helping to advance the negotiations, and to facilitate concrete action to cut emissions among this group – such as the cooperation on clean technology that led to the Clean Energy Ministerial – and noted recent interest in short-lived climate forcers.”

Declaration of Leaders, the Major Economies Meeting on Energy Security and Climate Change (the predecessor to the Major Economies Forum, Toyako, Japan, 9 July 2008):

“10. To enable the full, effective, and sustained implementation of the Convention between now and 2012, we will: ... ·Continue to promote actions under the Montreal Protocol on Substances That Deplete the Ozone Layer for the benefit of the global climate system; ...”

Davos/World Economic Forum

Blog post by UNFCCC Executive Secretary Christiana Figueres, [Why Davos has left me with the feeling that 2014 is the year the world can and must rise to the climate challenge](#) (Bonn, Germany, 27 January 2014):

“Mindful of the UN Secretary General’s summit in September, Mr. Howard summed up another session saying that a global commitment to [phase out HFCs](#), powerful greenhouse gases still used in refrigeration and industrial processes, would provide a good signal at the New York summit that can in turn help achieve a meaningful global climate agreement.

Dr. Arunabha Ghosh of the New Delhi-based Council on Energy, Environment and Water pointed out that many companies in India are already acting and developing alternatives to HFCs, and that attention is being focused on the challenge at the highest level of government.”

Guardian Sustainable Business Blog post by UN Under-Secretary General and Executive Director of the UN Environment Programme Achim Steiner, [Davos 2014: Achim Steiner insider diary](#) (Nairobi, Kenya, 25 January 2014):

“Next came 'short-lived climate pollutants' - part of this years' Davos focus on climate change. After working in UNEP for five years to mature cutting edge science into options for action, one of those Davos moments happened.

Major business leaders and public officials agreed to join hands in moving on HFCs, methane and black carbon, which drive global warming but also affect our health and economies. Its like teeth wheels clicking into place - you know you have changed gears.”

Blog post by UNFCCC Executive Secretary Christiana Figueres, [Climate Change Issues Key at Annual World Economic Forum \(WEF\) in Davos](#) (Bonn, Germany, 21 January 2014):

“In Davos, I'll be taking part in discussions on many key issues. I look forward to looking at how complementary action on [short-lived climate pollutants](#) can be dramatically scaled up in developing countries including in respect to refrigerant chemicals known as HFCs.”

Arctic Council

Main documents from the Eighth Ministerial Meeting of the Arctic Council (Kiruna, Sweden, 15 May 2013):

[Kiruna Declaration](#) (Kiruna, Sweden, 15 May 2013):

“Recognize that reduction of short-lived climate forcers, could slow Arctic and global climate change, and have positive effects on health, and welcome the report on short lived climate forcers, and support its recommendations including that national black carbon emission inventories for the Arctic should continue to be developed and reported as a matter of priority,

Urge the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer to take action as soon as possible, complementary to the UNFCCC, to phase-down the production and consumption of hydrofluorocarbons, which contribute to the warming of the Arctic region,

Decide to establish a Task Force to develop arrangements on actions to achieve enhanced black carbon and methane emission reductions in the Arctic, and report at the next Ministerial meeting in 2015”

Arctic Council Secretariat, [Vision for the Arctic](#) (Kiruna, Sweden, 15 May 2013):

“We are concerned with the growing effects of climate change, and the local and global impacts of large-scale melting of the Arctic snow, ice and permafrost. We will continue to take action to reduce emissions of greenhouse gases and short-lived climate pollutants, and support action that enables adaptation.”

The Arctic Council Program during Canada's Chairmanship (2013-15):
Development for the People of the North (Kiruna, Sweden, 15 May 2013):

“Short-lived climate pollutants such as black carbon and methane contribute to Arctic climate change. Addressing short-lived climate pollutants offers the potential for health benefits as well as climate benefits as part of a comprehensive strategy to address climate change.”

Arctic Council Secretariat, Senior Arctic Officials Report to Ministers (Kiruna, Sweden, 15 May 2013):

“There is increasing awareness that addressing Short-Lived Climate Pollutants (SLCP) offers the opportunity for substantial health benefits for Northerners as well as near-term climate benefits.

Addressing SLCP is a priority for the Arctic Council and work has been proceeding under the Arctic Council to investigate opportunities for reducing emissions of black carbon, methane and tropospheric ozone in order to protect climate and public health. Under the Tromsø Declaration (April 2009), the Arctic Ministers established a Task Force on Short-Lived Climate Forcers (SLCF). The Task Force was initially asked to focus on black carbon, and it delivered its recommendations for mitigation in 2011. It received a mandate for further work under the Nuuk Declaration (May 2011) and has now completed its work on black carbon and methane, delivering its recommendations in May 2013. In addition, AMAP has provided scientific reviews on the impacts of these SLCPs, and ACAP has also done work in the area.

SAOs have considered the appropriateness of moving forward on SLCP to bolster efforts to achieve substantial SLCP emissions reductions and encourage information sharing and recommend that the Ministers establish a Task Force to develop arrangements on actions to achieve enhanced reductions of black carbon and, in some cases, methane emissions in the Arctic, and report at the next Arctic Council Ministerial meeting in 2015.

The Terms of Reference of the Task Force are as follows:

Name: Task Force for Action on Black Carbon and Methane (TFBCM)

Structure and composition: The Task Force will consist of representatives from the Arctic States and Permanent Participants. The Task Force should be administratively supported by the Arctic Council Secretariat. Experts from relevant Arctic Council working groups, (AMAP, ACAP, etc.), as well as from academia, international, or other organisations, may be invited to provide advice and guidance to the Task Force, as required. The TFBCM will have two or three co-chairs from among the countries' nominees for representatives.

Timeline: The first meeting will take place shortly after the 2013 Arctic Council Ministerial meeting. Recommendations will be reported to the Arctic Council Ministerial meeting in 2015.

Tasks: The Task Force could consider the following:

- Discussion, identification, and consideration of further coordinated efforts on science or other work that could be required and consideration of findings from current scientific work.*

- *Discussion/consideration of a common vision for emissions reductions and consideration of benchmarks or targets.*
- *Discussion/consideration of development of national action plans or mitigation strategies shared with Arctic States and ideas for what could be included as part of these plans or strategies.*
- *National emission inventories of black carbon and how such efforts would relate to and possibly leverage similar emission inventory efforts under LRTAP.*
- *Identification and sharing and promoting information and best practices (such as those related to mitigation and technologies) available for relevant pollution sources in the Arctic States and the polar region.*
- *Promotion of collaborative measures with the private sector.*
- *Discussion/consideration of recommendations from the current SLCF TF.*
- *Other forums: The Task Force should propose ways in which the Arctic States could engage in appropriate fora and initiatives to achieve black carbon reductions that benefit the Arctic climate.*
- *An international cooperative arrangement.*
- *Other areas, as deemed appropriate by the Task Force.*

SAO guidance: *The Task Force should provide regular updates to SAOs and seek guidance as needed.*

Resources and budget: *Meetings are hosted on a voluntary basis, and meeting costs are financed by the host country. Other member states may propose hosting meetings. Travel costs and accommodation will be covered by participating delegations.”*

Chair’s conclusions from the Arctic Environment Ministers Meeting, Arctic change – Global effects (Jukkasjärvi, Sweden, 5-6 February 2013):

“Reducing short lived climate pollutants

Ministers emphasized that substantial cuts in global emissions of carbon dioxide and other long-lived greenhouse gases are the backbone of any meaningful global climate change mitigation efforts, while noting that reducing short-lived climate pollutants (SLCPs) such as black carbon, methane, hydrofluorocarbons and tropospheric ozone could slow global and Arctic climate change. Intensified efforts to reduce such emissions at a global scale may reduce the increase in global mean temperature by up to 0.5°C by 2040 according to a recent UNEP report, which would be an important contribution to the achievement of the 2°C objective. Reducing emissions of, for example, black carbon would further provide positive health effects for people in the Arctic States.

Ministers stressed the need for urgent action to reduce SLCP emissions to contribute to Arctic climate change mitigation and to the preservation of the unique culture and ecosystems of the Arctic which are under threat from rapid climate changes. They also underscored the continued role of the Arctic Council and Arctic States in spearheading greater international action on SLCPs and the importance of continuously improving the scientific knowledge of SLCPs and how they impact the climate.

Ministers emphasized the importance of emission inventories for black carbon to identify emission trends and mitigation opportunities. They concurred that each Arctic State should periodically produce national emission inventories for black carbon in line with the guidelines that are to be agreed upon under the Convention on Long Range

Transboundary Air Pollution (CLRTAP). Inventories should be submitted to CLRTAP and shared within the Arctic Council, with the ambition to have submissions starting from February 15 2015.

Ministers concluded that decisive action on black carbon and other SLCPs is needed, and encouraged coordination and support for international and global efforts to address emissions. Ministers encouraged the Arctic Council to consider establishing a process at the Kiruna Ministerial meeting aiming for an instrument or other arrangements to enhance efforts to reduce emissions of black carbon from the Arctic States for review and appropriate decision at the next Ministerial meeting in 2015. Measures to address black carbon (and in some cases other SLCPs) that the Arctic States may wish to consider include: national action plans to be submitted to, and compiled by, the Arctic Council; a common vision for emission reductions; promotion of best mitigation practices and technologies available for relevant pollution sources in the Arctic States and the polar region; promotion of collaborative measures with the private sector; and consideration of benchmarks or targets.”

Nuuk Declaration, Seventh Ministerial Meeting of the Arctic Council (Nuuk, Greenland, 12 May 2011):

“Welcome the Arctic Council reports on Short-Lived Climate Forcers (SLCF), that have significantly enhanced understanding of black carbon, encourage Arctic states to implement, as appropriate in their national circumstances, relevant recommendations for reducing emissions of black carbon, and request the Task Force and the AMAP expert group to continue their work by focusing on methane and tropospheric ozone, as well as further black carbon work where necessary and provide a report to the next Ministerial meeting in 2013, ...

Decide to establish a Short-Lived Climate Forcer Contaminants project steering group that will undertake circumpolar demonstration projects to reduce black carbon and other SLCF emissions....”

Tromsø Declaration, Sixth Ministerial Meeting of the Arctic Council (Tromsø, Norway, 29 April 2009):

“Urge implementation of early actions where possible on methane and other short-lived climate forcers, and encourage collaboration with the Methane to Markets Partnership and other relevant international bodies taking action to reduce methane and other short-lived forcers,

Decide to establish a task force on short-lived climate forcers to identify existing and new measures to reduce emissions of these forcers and recommend further immediate actions that can be taken and to report on progress at the next Ministerial meeting.”

Remarks by Former United States Secretary of State Hillary Rodham Clinton, Joint Session of the Antarctic Treaty Consultative Meeting and the Arctic Council, 50th Anniversary of the Antarctic Treaty (Baltimore, U.S., 6 April 2009):

“There are also steps we must take to protect the environment. For example, we know that short-lived carbon forcers like methane, black carbon, and tropospheric ozone contributes significantly to the warming of the Arctic. And because they are short lived, they also give us an opportunity to make rapid progress if we work to limit them.”

Nordic Countries

Joint Statement by Kingdom of Denmark, Republic of Finland, Republic of Iceland, Kingdom of Norway, Kingdom of Sweden, and the United States of America (Stockholm, Sweden, 4 September 2013):

“Recognizing the rapid growth of the Climate and Clean Air Coalition over its first 18 months, we note the potential of the Coalition to catalyze significant global reductions of short-lived climate pollutants, which have major impacts on climate change and public health. The U.S. and Nordic members of the Coalition agree to intensify our efforts and invite others to join to take full advantage of the Coalition’s potential.”

Svalbard Declaration on Shortlived Climate Forcers (Svalbard, Norway, 27 March 2012):

“We, the environment ministers of Denmark, Finland, the Faroe Islands, Iceland, Norway, Sweden and Åland, discussed what we can do to cut global and Nordic emissions of short-lived climate forcers, such as black carbon and methane...”

Based on our close co-operation and shared values, we, the Nordic environment ministers, will intensify our efforts to reduce emissions of SLCFs at national, regional and global level.

We will act as a driving force and work more closely together in international fora to advocate more ambitious international regulation of emissions of greenhouse gases and SLCFs.”

Nordic Environment Finance Corporation, Carbon Finance and Funds Operational Review 2012 (Helsinki, Finland):

“5 Short-lived climate pollutants

Black carbon, tropospheric ozone and methane have increasingly been recognised as contributing to Arctic warming to a degree comparable to the impacts of carbon dioxide, and despite considerable uncertainty regarding the magnitude of their effects, financing climate action to reduce such short-lived climate pollutants. In 2009, eight member states belonging to the Arctic Council signed a declaration in Tromsø That stated that black carbon and other short-lived climate forcers (or pollutants), including methane and tropospheric ozone, may pose a particular threat to the Arctic and that reducing these forcers has the potential to slow the rate of Arctic snow, sea ice and sheet ice melting in the near term.

The Swedish Government has decided to allocate additional funds to NEFCO’s and Sweden’s joint trust fund on mitigation of short-lived climate forcers (SLCF). The SLCF Fund was established in 2010 by the Swedish Environmental Protection Agency and NEFCO. The Trust Fund, which is administered by NEFCO, gives priority to projects identified by the Arctic Council’s Steering Group on SLCF. The fund currently has access to SEK 2.55 million for environmental projects in the Russian Arctic.

The main aim of the Fund is to finance Russian projects that reduce SLCF emissions, including black carbon. Black carbon is a potent climate-forcing aerosol that remains in the atmosphere for only a few days or weeks. Black carbon is a component of soot and is a product of incomplete combustion of fuels such as oil, diesel, coals, wood, crop waste and other biomass. Estimates of the radiative black carbon of forcing indicate that it may be the second or third leading cause of global warming after CO₂ and methane.”

BASIC

Joint statement issued at the conclusion of the 16th BASIC Ministerial meeting on climate change (Foz do Iguacu, Brazil, 15-16 September 2013):

“Ministers agreed that hydrofluorocarbons (HFC) should be dealt with through relevant multilateral fora, guided by the principles and provisions of UNFCCC and its Kyoto Protocol. The availability of safe and technically and economically viable alternatives and the provision of additional financial resources by developed countries should also be taken into account.”

Joint statement issued at the conclusion of the 15th BASIC Ministerial meeting on climate change (Cape Town, South Africa, 28 June 2013):

“Ministers emphasized that HFCs are greenhouse gases covered under the UNFCCC and its Kyoto Protocol and shall accordingly be addressed in accordance with its principles and provisions. They agreed to work multilaterally to find an agreed way forward on this issue.”

Joint Statement issued at the Conclusion of the 14th BASIC Ministerial Meeting on Climate Change (Chennai, India, 16 Feb 2013):

“19. Ministers noted the recommendation of the BASIC experts to organize an international conference on scientific and technical aspects of black carbon and the need for further work for enhancement of knowledge and understanding of the potential role of black carbon in global warming, besides reduction of the extant uncertainty.”

Joint Statement issued at the conclusion of the 11th BASIC Ministerial Meeting on Climate Change (Johannesburg, South Africa, 13 July 2012):

“Ministers ... identified the need for further scientific and technical analysis by experts of relevant issues, including ... short-lived climate forcers.”

Joint Statement issued at the conclusion of the 6th BASIC Ministerial meeting on Climate Change (New Delhi, India, 27 February 2011):

“HFC gases are not ozone depleting substances but some of these have high global warming potential. The Ministers felt that the issue of phase down of HFCs with high global warming potential required in-depth examination.”

CCAC

United States Secretary of State John Kerry, [The Secretary's Policy Guidance on Elevating Climate Change Across All Our Platforms](#) (Washington DC, U.S., 7 March 2014):

“IV. Enhance multilateral engagement: Helping lead efforts including the Major Economies Forum, Clean Energy Ministerial, Montreal Protocol, and the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants.”

White House [Fact Sheet: Key Deliverables for the 2014 North American Leaders Summit](#) (Washington DC, U.S., 19 February 2014):

“ENERGY/CLIMATE CHANGE

...

- *Continuing trilateral coordination in the Climate and Clean Air Coalition.”*

[Joint Statement by North American Leaders - 21st Century North America: Building the Most Competitive and Dynamic Region in the World](#) (Washington DC, U.S., 19 February 2014):

“Our countries will continue to work together to address climate change in pursuit of an ambitious and inclusive global agreement within the U.N. Framework Convention on Climate Change, while also collaborating through complementary mechanisms like the Major Economies Forum, the Climate and Clean Air Coalition, and the Energy and Climate Partnership of the Americas. In addition, we will intensify our efforts to promote an amendment to the Montreal Protocol to phase-down production and consumption of climate-damaging hydrofluorocarbons (HFCs).”

Press Statement on CCAC Second Anniversary, [Climate and Clean Air Coalition Marks Two Years of Rapid Growth in Action on Short-Lived Climate Pollutants](#) (Paris, France, 18 February 2014):

The Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) this week celebrated two years of rapid growth, during which dozens of governments and organizations have worked together to target swift reductions in atmospheric pollutants that threaten human health and the environment.

The CCAC was originally launched as a partnership between six countries and the United Nations Environment Programme (UNEP), who all recognized that fast action to reduce short-lived climate pollutants—particularly methane and black carbon (soot)—has the potential to slow down the global warming expected by 2050 by as much as 0.5°C.

“The Coalition works on a triple-benefit agenda: better health, increased crop yields and food security, and near-term climate protection,” said Helena Molin Valdes, Head of the CCAC Secretariat. “Black carbon, methane, tropospheric ozone and hydrofluorocarbons (HFCs) are having an impact in all these fields, and we can have quick gains if we act

now. And the solutions are all available—this is what the partners in the Coalition are focusing on.”

“This year we will focus to a great degree on the health aspects of air quality and short-lived climate pollutants, together with our partner the World Health Organization, and, increasingly, with the agriculture sector,” she added. “We have some very able partners to count on. As one of our founding ministers put it, „We are a Coalition of the Working.” Anyone who is willing to act in that spirit is welcome to join us.”

The coalition has gained momentum swiftly: 36 countries and 44 institutions and organizations are now lending their weight to tackling the issue, and a \$50 million Trust Fund has been created to support and conduct emissions reduction work.

Concrete actions range from working with more than 30 cities to assess the growing problem of methane and black carbon emissions from municipal landfills to promoting more stringent vehicle emissions standards, with initial successes in Asia and Latin America.

“The Climate and Clean Air Coalition is a remarkable process of bringing science to policy, focusing on the multiple benefits of action, and creating initiatives that invite voluntary partnerships,” said UN Under-Secretary General and UNEP Executive Director Achim Steiner. “I hope that as policymakers and actors across the world look at the success story of the Climate and Clean Air Coalition, they will find the courage and optimism that we are indeed able to take science, turn it into policy recommendations, and form coalitions that are willing and able to act.”

Other accomplishments of the CCAC over the last two years include:

- *Ten transformative initiatives, including work to reduce short-lived climate pollutants in municipal solid waste, oil and gas, diesel engines, brick production, HFCs, cookstoves and agriculture, with additional progress in finance, regional SLCP assessments and national planning;*
- *Giving grants to entrepreneurs to develop cleaner cook stoves, for which capital investments are lower than for other black carbon-reduction measures;*
- *Showcasing alternative technologies to replace high-global-warming-potential HFCs;*
- *Gathering oil and gas companies under the umbrella of the CCAC Oil and Gas Methane Partnership, to be launched officially in 2014;*
- *Making tools available to national governments to assess the benefits of emission reductions and national planning;*
- *Conducting the first region-wide review of short-lived climate pollutants in Latin America;*
- *Beginning a public health campaign with the World Health Organization to make clear the connection between pollution and health. More than six million people die each year from indoor and outdoor air pollution, and many more are affected by non-communicable diseases from pollution;*
- *Helping to shape the policies and investment portfolios of the World Bank and other development banks.*

CCAC partners welcomed the work of the coalition, and called on others to join and increase the momentum of a movement that offers much promise in protecting human health and mitigating climate change.

“In the past two years the CCAC has grown into an action-oriented coalition, and I am pleased that so many countries and organizations have joined efforts with the coalition”, said Wilma Mansveld, Minister of Infrastructure and Environment for the Netherlands, one of CCAC’s partner countries.

“In addressing short-lived climate pollutants, the CCAC has a lot to offer to the climate, health and food productivity,” she added. “In our view, governments, industry, NGOs and citizens must all be part of the solution. I am enthusiastic about the cooperation of countries and institutions in concrete initiatives, complementary to our efforts under the climate regime. I look forward to continue to work with partners in progressively scaling up our activities.”

About the CCAC

The Climate and Clean Air Coalition to Reduce Short Lived Climate Pollutants is a partnership of governments, intergovernmental organizations, the private sector, the environmental community, and other members of civil society. The Coalition is government-led but is highly cooperative and voluntary. Short-lived climate pollutants are agents that have a relatively short lifetime in the atmosphere—a few days to a few decades—but also a warming influence on climate as well as, in many cases, detrimental impacts on human health, agriculture and ecosystems.

The newest partners to the Coalition include Morocco and the Russian Federation as state partners, and the Center for Sustainable Development Studies (Colombia), the GLOBE Foundation (Canada) and TERRE: Technology, Education, Research and Rehabilitation for the Environment (India) as non-state partners.

Statement by Head of CCAC Secretariat, Helena Molin Valdes, [Two Years and the Triple Imperative](#) (Paris, France, 16 February 2014):

I want to start by congratulating all the Partners, actors and associated implementers and counterparts in the Climate and Clean Air Coalition on our second birthday!

I am thrilled to work with this focused, action-oriented and enthusiastic Coalition of Partners. These are my reasons:

First, because of the triple imperative of benefits in reducing short-lived climate pollutants: *We combine objectives that are relevant to both the development agenda of bettering people’s lives, and the climate agenda of mitigating global warming. Our objectives are to:*

- *Improve public health*
- *Increase crop yields and food security*
- *Protect climate and ecosystems*

A strengthening science base helps us focus on the most policy-relevant actions for the biggest emissions reductions, building on over a decade of scientific endeavors and some

recent milestone assessments led by UNEP in 2011 (see box). The Coalition gets scientific guidance from an outstanding Scientific Advisory Panel, which provided its first Annual Science Update in September 2013.

We are gearing up to work more with the health sector in the coming years, under the leadership of our partner, the World Health Organization, and a CCAC Health Task Force co-chaired by WHO and Norway. And we are increasingly working with the agriculture sector through our newest Initiative, which focuses on livestock manure management, paddy rice alternative water and drainage production to reduce methane, and open burning practices to reduce black carbon.

Second, the Coalition is built on a strong political will with a clear structure as set out in the Coalition's comprehensive founding Framework Document. The Coalition's aspirations were well captured in the "Oslo Communiqué", which emerged from our third Ministerial High Level Assembly in September 2013, the first stand alone such meeting entirely dedicated to the priorities of the Coalition. We discussed progress to date both on science and in the initiatives of action, opportunities to scale up and future priorities, focusing on health and how to bolster financial flows. The commitments were clear:

"We, Ministers, heads of organizations, and other high-level representatives of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), came together today to reiterate our firm commitment to work together to address near-term climate change, improve air quality and public health, and strengthen food and energy security, by taking urgent action to reduce emissions of short-lived climate pollutants (SLCPs). We recognize the need for these actions to complement ambitious global reductions of long-lived greenhouse gases like carbon dioxide to fully address the issue of climate change.

. . . . In joining the Coalition, we have endorsed meaningful action to address SLCPs. We . . . will continue to ramp up our individual and collective efforts and identify opportunities for further SLCP reductions. We will work on scaled up action over the coming year, including in line with any National Action Planning processes for reducing SLCPs. We will again assess our progress at the CCAC High Level Assembly in 2014." Extracted from the Oslo Communiqué, 3 September 2013

The fourth Ministerial High Level Assembly met again in the margins of the Warsaw COP 19 climate conference in November to review progress, and there launched a Green Freight Call to Action

Third and most importantly, our focus on action: The ministers and CEOs who are deeply involved in the Coalition aren't here just to talk. This "Coalition of the Working" now has ten focused initiatives designed to provide transformative change and catalyze further action to achieve major emission reductions and the multiple benefits projected by reducing black carbon, methane, tropospheric ozone and some hydrofluorocarbons. All of the initiatives are off the ground and have started to produce results. We are mentioning some in our press statement for today. The first report was released in November, and the next will be ready for the September 2014 United Nations Secretary-General's Climate Summit in September 2014.

WHAT IS NEXT

The Coalition has several priorities and milestones already set out for the coming years, and others will be considered in the April 2014 full partnership Working Group session. I see the priorities ahead largely in the following areas:

- *Reaching out to new, critical partners to join the Coalition. Among the priority targets are key countries, financial institutions and the private sector. We are also looking to retain the strong, high-level commitments that have already been given.*
- *Launch a health and air-pollution awareness campaign*
- *Boost the capacity to share good practice through improved website and knowledge management hubs across the different initiatives*
- *Work on quantifying results and emissions reduction through the initiatives and domestic actions, and encourage more scientific research*
- *Demonstrate progress and help boost ambitions toward near-term climate change mitigation, improved health and increased crop yields, targeting milestone events such as the SG Climate Summit in September 2014, the 2015 Climate Conference in Paris, the annual World Health Assemblies, Mayors Summits, and regional air-quality forums, among others*
- *Contribute to the sustainable development agenda in terms of potential indicators and aspirational goals that take into account air-pollution from SLCPs*
- *Bolster financial flows for SLCP reduction through the CCAC Trust Fund, the World Bank methane pay-for-performance facility (under development) and in other financial instruments*
- *Engage in broader outreach through our partners and at local and national levels, to popularize the understanding of short-lived climate pollutants and what can be done to mitigate their impact, and make this issue part of local and national policy agendas.*

During the coming years I look forward to working with more countries, more cities and more partners from different sectors in a thriving Climate and Clean Air Coalition!

White House [Fact Sheet](#): U.S. Cooperation with France on Protecting the Environment, Building a Clean Energy Economy, and Addressing Climate Change (Washington DC, U.S., 11 February 2014):

“The United States partners with France on innovative and pragmatic ways to reduce global greenhouse gas emissions through other fora, including the Climate and Clean Air Coalition (CCAC) to Reduce Short-Lived Climate Pollutants, the Clean Energy Ministerial, and the Major Economies Forum (MEF). Our countries are working together to support the launch of a MEF initiative aimed at accelerating action to improve building efficiency in the major economies.”

Remarks by United States Special Envoy for Climate Change Todd Stern, [U.S. Climate Envoy Stern on a New Global Climate Agreement](#) (London, United Kingdom, 22 October 2013):

“Finally, I want to say a few words about what we can accomplish in complementary arenas that are outside the UNFCCC but serve the UNFCCC’s climate purpose. For example, the Climate and Clean Air Coalition, which has grown in 18 months from 6

countries to 33 and nearly 40 non-country members, is pursuing multiple promising initiatives to reduce the emissions of short-lived pollutants like methane and black carbon.

...

Let me sum up. Here are my watchwords:

...

- *Fourth, complementary initiatives that broaden the overall international climate system in service of the UNFCCC's central objective of avoiding dangerous climate change”*

Joint Statement by Kingdom of Denmark, Republic of Finland, Republic of Iceland, Kingdom of Norway, Kingdom of Sweden, and the United States of America (Stockholm, Sweden, 4 September 2013):

“Recognizing the rapid growth of the Climate and Clean Air Coalition over its first 18 months, we note the potential of the Coalition to catalyze significant global reductions of short-lived climate pollutants, which have major impacts on climate change and public health. The U.S. and Nordic members of the Coalition agree to intensify our efforts and invite others to join to take full advantage of the Coalition’s potential.”

Statement by Canada’s Environment Minister and Minister for the Arctic Council, Leona Aglukkaq, Canada’s Action to Reduce Short-Lived Climate Pollutants (Oslo, Norway, 3 September 2013):

“As an Arctic nation, Canada understands first-hand the importance of addressing short-lived climate pollutants, which contribute to warming temperatures and the rate of Arctic sea ice melt.

Addressing short-lived climate pollutants is an integral part of Canada’s broader climate change and clean air agenda and I am pleased to have had the opportunity to share some of Canada’s efforts in this area.

Several of the Government of Canada’s existing and forthcoming measures to address air pollution and greenhouse gas emissions also impact short-lived climate pollutants. These include vehicle and engine air pollutant regulations, sulphur in gasoline and in diesel regulations, greenhouse gas regulations for coal-fired electricity, and the national Air Quality Management System.

In addition to the climate benefits, public health is also a key driver in our need to address short-lived climate pollutants in the North and around the world. In this respect, I am encouraged by the efforts among Climate and Clean Air Coalition partners to strengthen linkages between the health and environment communities in order to maximize the health benefits of Climate and Clean Air Coalition initiatives.

As Chair of the Arctic Council, I was also pleased to highlight the important work that the Council has done to address short-lived climate pollutants. During Canada’s Arctic

Council chairmanship (2013-2015), a new Council Task Force will develop actions to address black carbon and methane emissions in the Arctic.”

Communiqué, Third Meeting of the High Level Assembly of CCAC (Oslo, Norway, 3 September 2013):

We, Ministers, heads of organizations, and other high-level representatives of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), came together today to reiterate our firm commitment to work together to address near-term climate change, improve air quality and public health, and strengthen food and energy security, by taking urgent action to reduce emissions of short-lived climate pollutants (SLCPs) like black carbon, methane, tropospheric ozone, and many hydrofluorocarbons (HFCs). We recognize the need for these actions to complement ambitious global reductions of long-lived greenhouse gases like carbon dioxide to fully address the issue of climate change.

Action based on strong science

We thank the distinguished members of the CCAC Science Advisory Panel and the scientific community for documenting the importance of reducing SLCPs as a complement to action on carbon dioxide. Recent studies have reinforced the findings of the 2011 UNEP assessments and indicate that certain benefits of reducing SLCPs may be greater than previously understood, in particular due to increased estimates of black carbon’s impact on climate and methane leakage rates. Studies have further highlighted that reducing SLCPs in the Arctic and mountain glacier regions can significantly slow the pace of warming and melting of ice and snow. Indoor and outdoor air pollution, a large proportion of which can be reduced by measures focusing on black carbon, has been estimated by the 2012 Global Burden of Disease report to cause more than six million premature deaths each year, with a disproportionate impact on women and children. Reducing SLCPs can also help rural economies, with current estimates showing the potential to save about 50 million tonnes of crops each year.

A strong start

After only 18 months, the CCAC has grown tenfold from seven Partners to 72 – 34 countries and 38 organizations. We welcome all new Partners to our voluntary and action-oriented Coalition. Partners are undertaking a variety of ambitious efforts in our own countries and organizations to reduce SLCPs.

Scaling-up global efforts

The Coalition is working to catalyze scaled up efforts on SLCPs, which has the potential to slow down global warming by up to 0.5°C by 2050 as well as improve air quality. To help achieve its objectives, the Coalition has launched 10 high-impact global initiatives, including:

- ***Oil and Natural Gas Production*** – *The oil and gas sector accounts for roughly 20 percent of global anthropogenic methane emissions and substantial amounts of black carbon. As referenced in the declaration signed by 13 CCAC ministers and building on existing initiatives, we aim to achieve substantial reductions in both methane and black carbon. We commit to enhance high-level outreach to oil and gas companies to undertake upfront, voluntary commitments to use “best-in-*

class” methane reduction methods. We will also intensify efforts with companies to reduce black carbon.

- **Municipal Solid Waste** – Landfills are the third largest source of global anthropogenic methane emissions, and open garbage burning emits black carbon and other pollutants, including dioxin emissions, a major health concern. More than 10 cities from around the world are already engaged in the initiative. We encourage additional cities to participate in this global network and to take concrete action to reduce SLCPs. We will call upon our waste experts to provide technical assistance. We will also work with domestic and international financing institutions to invest in new efforts on sustainable waste management in participating cities.
- **HFC Alternative Technology and Standards** – HFCs, potent greenhouse gases, have increased by approximately 8 percent per year from 2004 to 2008; without further action, these emissions are projected to accelerate rapidly. We will continue to promote climate-friendly alternatives and make efforts to reduce emissions of HFCs. CCAC Partner countries will adopt domestic approaches to encourage climate-friendly HFC alternative technologies and work toward a phasedown in the production and consumption of HFCs under the Montreal Protocol. We will work with international standards organizations to revise their standards to include climate-friendly HFC alternatives.
- **Heavy Duty Diesel Vehicles and Engines** – The CCAC is actively working to virtually eliminate fine particles including black carbon emissions from heavy duty diesel vehicles and engines by building an international movement to steadily reduce sulphur in diesel fuel, establishing more stringent vehicle emission standards, cleaning up fleets – especially in cities and at ports – and improving energy and environmental efficiency in the movement of global goods by developing a Green Freight initiative.
- **Supporting National Planning for Action on SLCPs (SNAP)** – The CCAC is helping Partners to integrate SLCP mitigation in their national planning, including with a new customized CCAC Emissions Scenario and Benefits Assessment toolkit (available to all countries) as well as a SNAP Guidance Document. These tools will support countries in identifying and promoting the key mitigation measures that can bring rapid climate, health and environmental benefits. The initial four national planning projects in Bangladesh, Colombia, Ghana and Mexico are demonstrating the value of the national planning approach and SNAP, and we commit to rolling it out to additional CCAC countries.
- **Brick Production** – The CCAC is promoting the worldwide modernization of brick production and kilns to reduce black carbon emissions, and lessen the number of premature deaths in nearby communities caused by air pollution through enabling policy development and supporting technology deployment. We will also encourage domestic and international financing institutions to invest in new efforts on sustainable production of bricks.
- **Household Cooking and Domestic Heating** – The CCAC is targeting a key source of harmful black carbon emissions worldwide and helping improve living standards of the most vulnerable who are usually energy poor. This initiative is supporting clean cookstove entrepreneurs with projects that can significantly reduce SLCP emissions, developing global standards and testing protocols, and raising awareness about the benefits of clean cooking.

- **Regional Assessments of SLCPs** – The CCAC is embarking on an assessment of SLCPs in Latin America and the Caribbean, building on a successful regional inter-governmental consultation in the region, providing a framework for future national action. We intend to expand to other regions, including Asia and Africa.
- **Agriculture** – We welcome the recent launch of this initiative, with its plans to target methane and black carbon emissions, including from livestock, agricultural open burning, and rice paddies.

Maximizing health benefits

We are concerned by the scale of the public health impacts from air pollution, and specifically SLCPs like black carbon and methane, which is a precursor to tropospheric ozone:

- *We welcome the World Health Organization (WHO) as a new Partner in the CCAC and its leadership in addressing SLCPs.*
- *We invite the WHO to (a) support better identification of health benefits and demonstrate how and where SLCP emissions reductions can contribute, (b) cooperate with Partners on existing efforts to estimate health benefits from CCAC initiatives and national actions, and (c) participate in the national action planning and regional assessments initiatives.*
- *We will undertake a global awareness-raising campaign on the urgent need to prevent air pollution-related diseases through action on SLCPs.*
- *We will establish a task force of CCAC Partner countries to develop a proposal for submission to the 67th World Health Assembly. We will review progress of the task force at our next meeting in Warsaw, Poland.*

Bolstering financial flows

We stress the importance of catalyzing significant global investment in SLCP reductions:

- *We thank the donors to the CCAC Trust Fund, including Canada, Denmark, European Commission, Germany, Japan, the Netherlands, Norway, Sweden and the United States, and urge all Partners to redouble efforts to meet the Coalition's goals for 2013 and beyond.*
- *We recognize other financial and in-kind contributions from Partners supporting the Coalition's goals, including through national programmes, capacity building, and international financial assistance.*
- *We commend the World Bank's efforts to integrate SLCPs into its activities and to establish a goal for securing as many SLCP reductions as possible.*
- *We invite regional development banks to join the Coalition and to identify ways of advancing the Coalition's goals by mainstreaming SLCP reducing measures.*
- *CCAC Partner countries will explore mainstreaming of SLCPs into the Global Environment Facility (GEF) sixth replenishment process on climate change mitigation, and we invite the GEF to join the CCAC as a Partner.*
- *We strongly support the initiative of interested Partners to immediately launch a broad-based consultation to carry forward the recommendations of the international Methane Finance Study Group and the piloting of a global pay-for-*

performance fund to stimulate implementation of shovel-ready methane-reducing projects, including projects with a co-benefit of reducing black carbon emissions.

- We are pleased that the World Bank has agreed to set up and manage the “pay-for-performance” fund and urge CCAC Partners to participate in the design of the fund in consultation with other stakeholders. We welcome reporting on progress at our next High Level Assembly.*
- We commission the CCAC’s Financing Mitigation of SLCPs Initiative to establish a Black Carbon Finance Study Group composed of interested Partners and other stakeholders to review potential strategies for supporting financial flows towards projects that can significantly reduce black carbon emissions. This Study Group would present its recommendations at the 2014 High Level Assembly.*

Enhancing our own action

In joining the Coalition, we have endorsed meaningful action to address SLCPs. We, the ministers, heads of organizations and other high level representatives, will continue to ramp up our individual and collective efforts and identify opportunities for further SLCP reductions. We will work on scaled up action over the coming year, including in line with any National Action Planning processes for reducing SLCPs.

We will again assess our progress at the CCAC High Level Assembly in 2014.

Blog post by World Bank Senior Carbon Finance Specialist Brice Jean Marie Quesnel, [Reducing Methane with Innovative Finance](#) (3 September 2013):

One key to addressing climate change is attracting private capital to finance low-carbon sustainable development. For 2013, the World Bank estimates over [US\\$1 trillion](#) will flow to developing countries from private sources. In order to increase capital flows to finance low-carbon investment, many forms of innovation are needed. One source of innovation could come in the shape of results-based finance (RBF). RBF, also known as pay-for-performance, was pioneered in the health sector and serves as the backbone of anticipated payments for [protecting forests](#). It is increasingly being considered as a means for financing the adoption of low-carbon development pathways and greenhouse gas (GHG) emissions abatement. RBF provides payments for success, and only upon the delivery of pre-defined, verified results.

To see how such a results-based approach to mobilizing private sector funding could work in methane reduction, the World Bank convened - at the request of the G8 - a dedicated study group which looked at the role that pay-for-performance mechanisms could play. The [resulting report from the methane finance study group](#) found that, when implemented, pay-for-performance provided by a credit-worthy third party can be a powerful catalyst for private investment. There is potentially much wider scope for the use of pay-for-performance mechanism in climate finance for its deployment to target other GHGs in addition to methane.

*However, the potential to reduce methane could be considered a 'quick-win' as the report, titled *Using Pay-for-Performance Mechanisms to Finance Methane Abatement*, found that almost 850 million tons of carbon dioxide equivalent from 1,200 not yet built or idle methane abatement projects could be mobilized quickly by a pay-for-performance facility. Beyond these already identified projects, the study group found that as much as*

8,200 million tons of carbon dioxide equivalent could be reduced from methane projects in developing countries by 2020, if a \$10-per-ton of pay-for-performance incentive could be provided.

It is also clear that such a facility could take advantage of the tools and experience that has emerged under the [Clean Development Mechanism](#) and carbon markets. The approach would build on existing infrastructure – such as auditing firms and accounting methodologies - to verify the reduction of methane, thus saving cost and time. Other innovative ways to contract for methane reductions using instruments borrowed from capital markets, such as put options, could be applied to maximize the demonstration effect of the facility. For example, auctions can allocate resources, which would guarantee that the facility would pay a fair price to achieve results.

Beyond methane, a pay-for-performance approach could be applied to abate other short-lived climate pollutants (SLCPs), such as black carbon, and find even broader applications in climate mitigation finance.

This week in Oslo, the [High Level Assembly of the Climate and Clean Air Coalition](#) (CCAC) met to discuss what can be done to reduce SLCPs. Recent estimates suggest that SLCPs contribute to between 40 and 45 percent of the total warming ([Molina et al. 2009](#); [Bond et al. 2013](#) (pdf)).

Even within the World Bank, the [potential to reduce short-lived climate pollutants exists](#) as demonstrated by a recent report. This report, titled [Integration of Short-Lived Climate Pollutants in World Bank Activities](#), reviewed the World Bank projects and has identified ways in which the World Bank Group could do more to reduce short-lived climate pollutants. The hope is that this report would lead to bigger and better things for reducing SLCPs within the World Bank projects. Here in Oslo and beyond, we are eager to sit down with our CCAC partners and others stakeholders to discuss how to practically innovate and implement new approaches to finance projects that abate critical pollutants.

The President's Climate Action Plan (Washington DC, U.S., June 2013):

“CUT CARBON POLLUTION IN AMERICA

...

IV. Reducing Other Greenhouse Gas Emissions

Curbing Emissions of Hydrofluorocarbons: Hydrofluorocarbons (HFCs), which are primarily used for refrigeration and air conditioning, are potent greenhouse gases. In the United States, emissions of HFCs are expected to nearly triple by 2030, and double from current levels of 1.5 percent of greenhouse gas emissions to 3 percent by 2020.

To reduce emissions of HFCs, the United States can and will lead both through international diplomacy as well as domestic actions. In fact, the Administration has already acted by including a flexible and powerful incentive in the fuel economy and carbon pollution standards for cars and trucks to encourage automakers to reduce HFC leakage and transition away from the most potent HFCs in vehicle air conditioning systems. Moving forward, the Environmental Protection Agency will use its authority through the Significant New Alternatives Policy Program to encourage private sector investment in low-emissions technology by identifying and approving climate-friendly

chemicals while prohibiting certain uses of the most harmful chemical alternatives. In addition, the President has directed his Administration to purchase cleaner alternatives to HFCs whenever feasible and transition over time to equipment that uses safer and more sustainable alternatives.

Reducing Methane Emissions: *Curbing emissions of methane is critical to our overall effort to address global climate change. Methane currently accounts for roughly 9 percent of domestic greenhouse gas emissions and has a global warming potential that is more than 20 times greater than carbon dioxide. Notably, since 1990, methane emissions in the United States have decreased by 8 percent. This has occurred in part through partnerships with industry, both at home and abroad, in which we have demonstrated that we have the technology to deliver emissions reductions that benefit both our economy and the environment. To achieve additional progress, the Administration will:*

- ***Developing an Interagency Methane Strategy:*** *The Environmental Protection Agency and the Departments of Agriculture, Energy, Interior, Labor, and Transportation will develop a comprehensive, interagency methane strategy. The group will focus on assessing current emissions data, addressing data gaps, identifying technologies and best practices for reducing emissions, and identifying existing authorities and incentive-based opportunities to reduce methane emissions.*

- ***Pursuing a Collaborative Approach to Reducing Emissions:*** *Across the economy, there are multiple sectors in which methane emissions can be reduced, from coal mines and landfills to agriculture and oil and gas development. For example, in the agricultural sector, over the last three years, the Environmental Protection Agency and the Department of Agriculture have worked with the dairy industry to increase the adoption of methane digesters through loans, incentives, and other assistance. In addition, when it comes to the oil and gas sector, investments to build and upgrade gas pipelines will not only put more Americans to work, but also reduce emissions and enhance economic productivity. For example, as part of the Administration's effort to improve federal permitting for infrastructure projects, the interagency Bakken Federal Executive Group is working with industry, as well as state and tribal agencies, to advance the production of oil and gas in the Bakken while helping to reduce venting and flaring. Moving forward, as part of the effort to develop an interagency methane strategy, the Obama Administration will work collaboratively with state governments, as well as the private sector, to reduce emissions across multiple sectors, improve air quality, and achieve public health and economic benefits.*

...

LEAD INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

...

III. Working with Other Countries to Take Action to Address Climate Change

...

Expanding Bilateral Cooperation with Major Emerging Economies:

From the outset, the Obama Administration has sought to intensify bilateral climate cooperation with key major emerging economies, through initiatives like the U.S.-China Clean Energy Research Center, the U.S.-India Partnership to Advance Clean Energy, and the Strategic Energy Dialogue with Brazil.

We will be building on these successes and finding new areas for cooperation in the second term, and we are already making progress: Just this month, President Obama and President Xi Jinping of China reached an historic agreement at their first summit to work to use the expertise and institutions of the Montreal Protocol to phase down the consumption and production of HFCs, a highly potent greenhouse gas. The impact of phasing out HFCs by 2050 would be equivalent to the elimination of two years' worth of greenhouse gas emissions from all sources.

Combating Short-Lived Climate Pollutants: *Pollutants such as methane, black carbon, and many HFCs are relatively short-lived in the atmosphere, but have more potent greenhouse effects than carbon dioxide. In February 2012, the United States launched the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollution, which has grown to include more than 30 country partners and other key partners such as the World Bank and the U.N. Environment Programme. Major efforts include reducing methane and black carbon from waste and landfills. We are also leading through the Global Methane Initiative, which works with 42 partner countries and an extensive network of over 1,100 private sector participants to reduce methane emissions.*

...

IV. Leading Efforts to Address Climate Change through International Negotiations

At the Montreal Protocol, we are leading efforts in support of an amendment that would phase down HFCs; at the International Maritime Organization, we have agreed to and are now implementing the first-ever sector-wide, internationally applicable energy efficiency standards; and at the International Civil Aviation Organization, we have ambitious aspirational emissions and energy efficiency targets and are working towards agreement to develop a comprehensive global approach.”

G8 Leaders' Communiqué (Lough Erne, Northern Ireland, 17-18 June 2013):

“57. We will pursue ambitious and transparent action, both domestically and internationally, in the UNFCCC, complemented by actions addressed through other relevant fora, including but not limited to:

...

- *the Climate and Clean Air Coalition which we all committed to join at our last Summit, where we will build on the eight global initiatives already begun and further develop the scientific evidence base and private sector involvement.”*

G8 Foreign Ministers' meeting statement (London, UK, 10-11 April 2013):

“The G8 remain fully committed...to increase mitigation ambition in the pre-2020 timeframe, including through international cooperative initiatives such as the Climate and Clean Air Coalition...”

Address by Canada Minister of the Environment Peter Kent at 2013 Global Methane Expo (Vancouver, Canada, 13 March 2013):

“Beyond the Global Methane Initiative, Canada is also working with the international community to address short-lived climate pollutants, including methane, hydrofluorocarbons and black carbon. It is estimated that these pollutants, whose lifetime in the atmosphere is shorter than long-lived gases like CO₂, will contribute about half of the climate warming from man-made emissions over the next couple of decades.

Short-lived climate pollutants are of particular concern to Arctic countries, like Canada, because they may be responsible for the more rapid warming we are currently experiencing in the far North, notably due to the effect of black carbon deposited on snow and ice.

We have been working to address these pollutants within the Arctic Council and as a founding member—and lead partner—in the Climate and Clean Air Coalition. Canada was the first country to provide funding for the Coalition’s work. We believe it has enormous potential to effectively address short-term climate goals and to improve the health of millions of people around the globe.

Canada’s support is helping developing countries implement actions, for example in areas such as municipal solid waste brick production and promoting alternatives to hydrofluorocarbons.

We are also working with our Partners in the Climate and Clean Air Coalition to have its activities build on and strengthen the successes of initiatives like the Global Methane Initiative.”

Policy Statement by UN Under-Secretary General and UNEP Executive Director Achim Steiner at the Opening of the First Universal Session of the Governing Council of UNEP (Nairobi, Kenya, 18 February 2013):

“KEY RESULTS AND ACCOMPLISHMENTS IN 2012

In 2012, the United Nations Environment Programme (UNEP) has confirmed its role as a convener, facilitator and provider of scientific assessments and analyses to catalyze international policy responses and action. It is also a service provider for major programmes at the national and regional levels. The growing confidence in UNEP’s capacity to deliver quality services is reflected in the number of mandates awarded to UNEP by Member States and intergovernmental bodies in 2012.

- *Within 10 months of its launch, the **Climate and Clean Air Coalition**, a global partnership to address short-lived climate pollutants, registered 49 members, secured pledges of USD 16.5 million and designated UNEP to provide the Secretariat....*

UNEP’S DELIVERY OF THE PROGRAMME OF WORK IN 2012...

The climate change sub-programme aims to strengthen the ability of countries, particularly developing nations, to integrate climate change responses into national development processes.

After more than ten years supporting the science of short-lived climate pollutants, through initiatives such as the Atmospheric Brown Cloud, UNEP and a group of governments ranging from the United States and Sweden to Bangladesh and Mexico launched the Climate and Clean Air Coalition (CCAC).

The coalition's aim is to leverage existing initiatives and launch new ones to fast track cuts in emissions of black carbon or soot, methane and a group of hydrofluorocarbons (HFCs) — it complements an opportunity to support the work of the UN Framework Convention on Climate Change (UNFCCC) while also saving over 2.5 million lives and more than 30 million tonnes of crops.

Since February 2012, the CCAC has grown to 49 government and non-governmental partners, with UNEP as the secretariat. The focus has been on developing and implementing priority action plans.”

Meeting Statement on Short-Lived Climate Pollutants in Asia, Outcomes from the Regional Intergovernmental Consultation on Near-Term Climate Protection and Clean Air Benefits in Asia and the Pacific (Bangkok, Thailand, 5 February 2013):

INTRODUCTION

High-level policy makers and government officials, representatives of international organizations, experts, practitioners, and other stakeholders from across the Asia-Pacific region and beyond met in Bangkok, Thailand, on the 4th and 5th of February, 2013, to discuss the urgency of addressing short-lived climate pollutants (SLCPs). The meeting aimed to raise awareness of SLCP issues among participating countries and organizations and explore ways to catalyse concrete measures, policies, and strategies that mitigate SLCPs in the Asia-Pacific region.

The governments of Bangladesh and Japan co-hosted the meeting under the auspices of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC). The CCAC is a voluntary, non-binding, collaborative global partnership uniting governments, inter-governmental organizations, representatives of civil society and the private sector in a shared commitment to taking action on SLCPs. The CCAC was launched in February 2012 and as of 5th February 2013 it has 51 Partners (28 State and Regional Economic Integration Organization (REIO) Partners, and 23 non-States Partners).

The 112 participants who attended the meeting included government officials and experts from the following 19 countries across the Asia-Pacific region: Australia, Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Japan, Jordan, Kyrgyz Republic, Malaysia, Myanmar, Nepal, Philippines, Republic of Korea, Republic of Maldives, Sri Lanka, Thailand and Uzbekistan. The meeting also included representatives of other CCAC Partner countries, Intergovernmental Organizations, Non-Governmental Organizations and private sectors entities (see Annex for full list of participants).

The meeting concluded that reducing SLCPs in the Asia-Pacific region provides substantial benefits for air quality, human health, food and energy security, poverty

reduction, ecosystems, and other environmental public goods. In addition, the reduction of SLCPs helps reduce near-term warming (over the next few decades) and climate impacts across the Asia-Pacific region and globally. Accelerated and scaled up mitigation of SLCPs, such as black carbon, methane, tropospheric ozone, and many hydrofluorocarbons (HFCs), is therefore a critically important complement to efforts in multilateral climate processes to mitigate carbon dioxide (CO₂) and other long-lived greenhouse gases (GHGs).

MEETING STATEMENT

Participants at the meeting appreciated the implications of the UNEP/WMO Integrated Assessment of Black Carbon and Tropospheric Ozone and the outcomes of Atmospheric Brown Clouds (ABC) programme in Asia, noting the magnitude of health, climate and agricultural impacts of SLCP emissions in the Asia-Pacific region.

Presentations and views expressed underscored the potential for heightened awareness-raising and analysis of SLCPs to inform concerted action, particularly integration of SLCP concerns into existing development agendas and programmes.

Overall, participants noted the need for more scientific advice on certain areas, including the volumes and impacts of black carbon emissions, methane emissions from agriculture and fossil fuel extraction, and technologies currently in use in various sectors. Such advice must be based on sound observations and modelling.

The importance and urgency of reducing particulate matter emissions (especially PM_{2.5} that includes black carbon) was stressed, considering the present situation of air pollution in the Asia-Pacific region, as was the importance of tackling emissions of nitrogen oxides (NO_x) and volatile organic compounds (VOCs), in addition to methane emissions, to decrease tropospheric ozone (O₃) levels.

Participants highlighted the potential of current best practices and effective initiatives underway under various national air quality and low-carbon development strategies for scaling up and accelerating the reduction of SLCPs.

Recognizing that while fast action to mitigate SLCPs could help slow the rate of climate change and improve the chances of staying below the 2°C target in the near-term, such effort should be complementary to global efforts to reduce CO₂, in particular under the United Nations Framework Convention on Climate Change (UNFCCC), as long-term climate protection will only be possible if deep and persistent cuts in CO₂ emissions are rapidly realized in the near-term.

Noting the transboundary nature of air pollution, participants recognised the importance of gathering observations on long-range transport of pollutants and information sharing among nations, international organisations and initiatives across the Asia-Pacific region, and in appropriate sub-regions of the continent, to promote the development of an efficient, rapid, scientifically-informed and sustainable response to the issue. Participants welcomed international and regional efforts, such as those of the CCAC and ABC Asia, in support of the formulation and implementation of such a response, and acknowledged Japan's financial pledge to the CCAC.

Priority measures for Asia and the Pacific

A range of priority measures and actions to reduce SLCPs across the Asia-Pacific region were identified during the meeting:

- *Raising awareness on the significance of SLCPs among key stakeholder groups and the general public, especially policymakers, at local, national and regional levels, and with international partners, including improving information and data generation and sharing, institutional and capacity building, and stakeholder engagement;*
- *Promoting cleaner and more efficient cooking, heating and lighting, and access to clean energy;*
- *Reducing emissions from transport sources, especially trucks and other heavy duty vehicles, diesel generators and other engines, and addressing the prospects for reducing emissions from international shipping and harbour activities;*
- *Reducing black carbon emissions from brick kilns and rice parboiling units;*
- *Reducing agricultural burning and agricultural methane emissions;*
- *Reducing methane emissions from coal mining;*
- *Reducing methane, black carbon and other SLCP-related emissions from waste disposal and open burning as part of environmentally sound management of municipal solid waste and waste water;*
- *Reducing methane leakage, venting and flaring from the oil and gas sectors; and*
- *Avoiding the phasing in of high - global warming potential (GWP) HFCs and promoting low-GWP alternatives, as well as improved energy efficiency in refrigeration and air conditioning.*

Recommendations

The following recommendations were identified at the meeting:

Countries and other relevant authorities in the Asia-Pacific region could:

- *consider participating in the CCAC's voluntary, non-binding, collaborative initiatives and joining the CCAC;*
- *identify key sources of SLCPs and consider integration of SLCPs into national and inter-ministerial action planning processes to support the inclusion of SLCP-targeted actions into national development programs, air quality, low-carbon and climate resilient development and green growth plans;*
- *raise awareness of the scientific aspects of SLCPs, including their potential impacts on environmental and development goals and SLCP mitigation benefits domestically and regionally;*
- *take steps to accelerate and incentivize action to reduce SLCPs, including engagement with the private sector and civil society groups;*
- *engage with other relevant networks working in Asia on issues related to SLCPs;*
- *share with other countries knowledge and experiences relating to the reduction of SLCP emissions;*
- *strengthen monitoring of air pollutants, including SLCPs, and support associated national institutions to improve understanding both of the levels of pollution and physical processes and of the effectiveness of mitigation options;*
- *consider ways of financing SLCP-relevant initiatives.*

The Association of Southeast Asia Nations (ASEAN), the South Asian Association for Regional Cooperation (SAARC), East Asia Summit and other regional intergovernmental associations are encouraged to:

- *help provide a forum for action on SLCPs, and coordinate regional responses to SLCPs consistent with existing regional agreements and initiatives on health and environment;*
- *integrate SLCPs into relevant sectoral discussions, including health, agriculture, energy, transport, development and environment, among others.*

The Climate and Clean Air Coalition (CCAC) is encouraged to:

- *assist in improving the science, understanding and awareness of SLCP issues in the Asia-Pacific region, including by undertaking a comprehensive scientific and action-oriented regional integrated assessment of emission levels and sources, scientific uncertainties of regional impacts of SLCPs and the role of black and organic carbon, impacts, mitigation strategies, costs and benefits, and current action on SLCP emissions;*
- *further promote Asia-Pacific participation and integrate Asia-Pacific priorities into CCAC actions;*
- *deepen and expand collaboration with existing air pollution networks and other relevant initiatives in Asia and the Pacific including to support integration of SLCP considerations in relevant work programs and actions.*

The World Bank Group, Asian Development Bank, other international development and finance institutions and bilateral aid agencies are encouraged to:

- *pursue integration of SLCPs into their strategies and portfolio of relevant development and investment programmes and promote financing mechanisms for SLCP reductions in the Asia-Pacific region, consistent with the G8 request to the World Bank Group¹.*

International NGOs, research institutions, and other organizations and initiatives are encouraged to:

- *promote collaboration within the Asia-Pacific region and beyond on research and development (R&D), data generation, data sharing and best practices to raise awareness of SLCP issues, emphasising available actions to reduce the emissions of SLCPs and their adverse impact on climate, air quality and livelihoods in the Asia and beyond;*
- *facilitate and support programmes and projects that implement measures to reduce SLCPs.*

The private sector is encouraged to:

- *participate as an important stakeholder in the efforts to reduce SLCPs in collaboration with local and national governments and other stakeholders.*

PROCESS

¹ At the Camp David Summit (2012), G-8 Leaders commissioned the World Bank to “prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms.” (<http://www.whitehouse.gov/the-press-office/2012/05/19/fact-sheet-g-8-action-energy-and-climate-change>)

This statement was produced during the Regional Intergovernmental Consultation on Near-Term Climate Protection and Clean Air Benefits in Asia and the Pacific held on 4 and 5 February 2013 in Bangkok, Thailand. The statement was drafted by the meeting organizers in an attempt to reflect discussions and conclusions reached during the meeting. The draft statement was circulated for review to the meeting participants and discussed and revised during a dedicated plenary on the last day of the meeting. Participants were subsequently invited to send to the meeting organizers any additional comments they had for integration into this final version of the statement. For more information on this statement, please contact the CCAC Secretariat (ccac_secretariat@unep.org).

Organization

The meeting was organised by the CCAC, the UNEP Regional Office for Asia and the Pacific (ROAP) and the Stockholm Environment Institute (SEI) in co-operation with the co-hosts, the Governments of Bangladesh and Japan, and other CCAC state and non-state partners - the Asian Co-benefits Partnership, Clean Air Asia, the Institute of Global Environmental Strategies (IGES), the International Union of Air Pollution Prevention and Environmental Protection Associations (IUAPPA) and the U.S. Department of State. The meeting was funded by the CCAC Trust Fund, the Swedish International Development Cooperation Agency (Sida) and the U.S. Department of State.

(Annex omitted)

Remarks by United States Special Envoy for Climate Change Todd Stern at Secretary Clinton's Foreign Affairs Policy Board Meeting (Washington DC, U.S., 3 January 2013):

“CCAC. Last February, Secretary Clinton announced a new effort, the Climate and Clean Air Coalition, committed to reducing non-CO₂ pollutants such as methane, black carbon and HFCs. Together, these agents account for over 30% of current global warming, millions of premature deaths, and extensive crop losses. Because these pollutants are short-lived in the atmosphere, meaningful reductions could have a real impact on the level of temperature increase in the near term.

We started with six countries and are now at 26 plus nearly 20 non-state partners, including UNEP (our Secretariat) and the World Bank. We have over \$20 million in committed funds and are working on a series of initiatives to attack large sources of emissions, such as methane from landfills and from oil and gas production; black carbon from heavy-duty diesel engines; and HFCs used in refrigeration and air conditioners. The first year has been very successful in getting the Coalition off the ground. The key now will be to build the initiatives and make them effective.”

Remarks by UN Under-Secretary General and UNEP Executive Director Achim Steiner, at the Opening of COP 4 of the Tehran Convention—the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Moscow, Russia, 12 December 2012):

“... We meet here just days after the UN Climate convention meeting in Doha. One bright spot in the meeting was a new voluntary initiative called the Coalition for Climate and Clean Air. It now totals over 50 partners since being launched in February this year with six countries plus UNEP. It aims to catalyze action on so called short lived climate pollutants including black carbon or soot and methane.

I would urge oil and gas producers within this region to see if they wish to be part-one of the Coalition's targets is fast action to cut black carbon and methane from oil and gas industry operations including flaring.

All in all, if these short lived climate pollutants can be addressed, then we could see perhaps a 0.5 degrees C temperature benefit up to 2040-as much as 0.7 degrees C in the Arctic- as well as significant health and agricultural wins."

Blog post by Vice President of Sustainable Development at the World Bank, Rachel Kyte, [Doha: Keeping Hope Alive - Just](#) (Washington DC, U.S., 12 December 2012):

"Working Coalitions

*Increasingly like-minded coalitions are forming, across dividing lines of developed and developing countries, public, private sectors and civil society, in order to get on with the business of emissions reductions. One highlight of the conference was the meeting of the **Climate and Clean Air Coalition**, a remarkable group of countries united to reduce SLCPs, short-lived climate pollutants - methane, HFCs, black carbon.*

This coalition is moving fast, driven by multiple pressing needs, including concern about the impact of black carbon on the melting of Arctic sea ice, and fast-growing countries' need to reduce methane emissions from landfills. A serious reduction in SLCPs could help avert a 4-degree world.

At the Bank, we want to expand the SLCP-relevant part of our IDA/IBRD portfolio from 12 percent in 2012 to 15 percent by 2015 and 20 percent by 2020, and will work on payment for results for methane reduction. We also plan to increase impact on SLCPs through our GEF, Carbon Finance, Global Gas Flaring, and Montreal Protocol portfolios.

In the struggle for action, the CCAC has emerged, in the words of Lena Ek, the Swedish Minister of the Environment, as the "coalition of the working."...

Reducing Gas Flaring

*Reducing gas flaring from oil fields – and their emissions – also gained traction at Doha. Qatar extended its membership in the **Global Gas Flaring Reduction Partnership**, which has helped cut gas flaring by 20 percent in the past decade, preventing some 274 million tons of CO₂ emissions, roughly equivalent to taking 52 million cars off the road.*

The World Bank, a founding member of the partnership, recently challenged oil producing countries to reduce flaring by 30 percent by 2017. We would welcome countries and companies from under represented oil rich regions of the world, as well as more of Qatar's neighbors into the partnership."

Quotes by UN Under-Secretary General and UNEP Executive Director Achim Steiner and Ministers of Nations Committed to Scaling Up Voluntary Action to Reduce Short-Lived Climate Pollutants (Doha, 6 December 2012):

Achim Steiner, UN Under-Secretary General and UNEP Executive Director:

"Fast action on SLCPs is not an alternative to urgent action under the UN Climate convention process-without serious and significant cuts in emissions of carbon dioxide (CO₂) now and in the future, the world will be unable to keep a global temperature rise this century under 2 degrees C".

"Swiftly reducing SLCPs does however represent a supportive and additional action with near term benefits that need to happen anyway-indeed for the human health and food security benefits alone, set aside the climate ones, nations need to be acting if they are serious about a transition to an inclusive Green Economy and realizing sustainable development."

Additional Quotes by Partners:

Hiroyuki Nagahama, Minister of the Environment, Japan:

"Japan fully endorses the framework for the Coalition and meaningful actions focused on SLCPs that aims to realize co-benefit between climate change and air pollution. Japan is advancing its international cooperation related to SLCPs such as through co-benefit projects in Asia which address both global warming and air pollution."

Hadiza Ibrahim Mailafia, Honourable Minister, Federal Ministry of Environment, Nigeria:

"Nigeria is focused on developing her economy with minimal ecological footprint and we are setting priorities at achieving zero flare in the oil and gas sector, reducing black carbon from cooking with wood fuels, waste burning and diesel engines as well as methane from the agricultural sector. We will reduce the emission of SLCPs from all sectors in Nigeria for the health of our people, protect the environment and create green jobs."

Todd Stern, United States Special Envoy for Climate Change:

"I'm encouraged by the strong growth of the Climate and Clean Air Coalition since our founding less than 10 months ago. We started with 6 country partners; we now have 25 plus the European Commission and key non-state partners like the UN Environmental Programme and the World Bank. Today, we gathered together to redouble our efforts to quickly reduce short-lived climate pollutants. Working together - countries, international organizations, businesses, and NGOs - we can achieve substantial near-term climate benefits, save lives, and improve crop yields, all in a way that fully complements the aggressive action we all need to take on CO₂."

Connie Hedegaard, European Commissioner for Climate Action:

"To further increase the European Union's ambition between now and 2020, and in line with the Coalition's initiative on HFCs, the European Commission recently proposed legislation that would reduce sales of these powerful greenhouse gases in the EU by almost 80%. This would save the equivalent of 625 million tonnes of CO₂ by 2030. By demonstrating that suitable, safe and energy-efficient alternatives to these pollutants are already available and affordable in many sectors, this bold step aims to encourage others to take similar measures."

United Nations Development Programme Administrator Helen Clark:

"To tackle climate change, the whole world must develop differently and that requires engaged citizens and bold leadership, willing and able to take on entrenched interests and leave behind failed models. As the actions of the Climate and Clean Air Coalition build momentum, UNDP looks forward to being part of the united effort with the Coalition partners to try new approaches and achieve widespread benefits for sustainable human development."

Lena Ek, Minister for the Environment, Sweden:

"The best researchers in the field have joined our Scientific Advisory Panel whose task is to ensure that what we do has a scientific basis."

Peter Kent, Minister of the Environment, Canada:

"Taking action to reduce short-lived climate pollutants strengthens the global effort to make near-term progress on climate change and reduce greenhouse gas emissions and other pollutants. By extending our efforts in complementary fora such as the Climate and Clean Air Coalition (CCAC), we are tackling global climate goals that can improve the health of millions of citizens around the world. Canada is proud to be a founding member of the CCAC and is encouraged by today's announcement of six additional country partners."

Mark Dreyfus QC, Australia's Vice Minister, Ministry of Climate Change and Energy Efficiency:

"Australia is committed to taking action to reduce short lived climate pollution. The science suggests that acting quickly to reduce SLCPs, which have a strong warming impact, has the potential to slow down warming by 2050. Tackling these pollutants is also beneficial to human health, air quality, crop yields and ecosystems."

Jochen Flasbarth, President of the Federal Environment Agency, Germany:

"Germany fully supports the CCAC and the common target to reduce significantly short lived climate pollutants. We believe that activities under the CCAC can play an important role by helping increase mitigation ambition before 2020 on our way to a new climate treaty under the UNFCCC."

Report By Co-Chairs, Inter-Governmental Consultation on Near-term Climate Protection and Clean Air Benefits for Latin America and the Caribbean (Bogota, Colombia, 31 October – 2 November 2012):

As Chairs of the Inter-Governmental Consultation on Short-Lived Climate Pollutants (SLCPs) in Latin America and the Caribbean, we would like first to record our appreciation to the 20 governments who sent official representatives to the meeting in Bogota from October 31st – November 2nd. Such effective and diverse representation promoted an open discussion, broadly reflecting the opinions and circumstances in the region, particularly as all sub-regions were well represented.

As Chairs of the Meeting, we would also like to take the opportunity to record our main comments on the outcomes of the meeting in relation to its objectives. First, the response of representatives clearly indicated that the meeting offered a useful role in promoting awareness of SLCP issues. This was particularly important for the smaller States and Small Island Developing States in the region who often do not have the resources to monitor issues of this kind or share experiences with neighbouring countries. It seems important for the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (the Coalition) to consider how to service and sustain information flows to these governments. For the larger countries – and for the Coalition generally – the presentations clarified the diverse and cross-cutting regional and sub-regional factors that must be addressed to achieve the Coalition’s goals.

While the meeting was designed primarily to promote awareness of the issues, it also reaffirmed the interest among current Coalition partners, and generated a number of indications from additional countries and organisations that were interested in becoming partners. These could be followed up on by the Coalition’s Secretariat in consultation with the meeting organisers.

On substantive outcomes, we consider that several points should be recognised. First, the presentations and discussions qualified in important ways the regional picture on SLCPs that emerged from the UNEP/WMO Integrated Assessment of Black Carbon and Tropospheric Ozone at global level. It seems clear that in certain areas, specifically the extent of biomass burning and technologies currently in use in various sectors, more information is needed. We strongly suggest that the Coalition consider the merits of sponsoring a fuller and more detailed Regional Assessment.

Second, best practices and concrete initiatives, currently underway under various national low carbon development and air quality strategies, were highlighted as effective regional initiatives that can also contribute to the reduction of SLCPs. The Coalition could disseminate such best practices widely, offering value to Coalition partners and interested parties by making such practices available and visible, and offering guidance as to how to integrate these into a wider SLCP strategy and action plan.

Third, presentations and discussions set the basis towards developing an SLCP strategy for the region. The Coalition and its partners could consider how developing and implementing such a strategy might best be carried forward.

Another relevant issue to highlight was the linkage between action on SLCPs in the region and the work of the Regional Air Pollution Network in developing the Regional Action Plan on Air Pollution. Representatives at the separate meeting of the Regional Network clearly hoped this link could be sustained. Whether or not this is carried out

through a formal process, as was suggested by some representatives, we recommend that both processes be carried forward in close consultation. Initiatives supported by the Coalition, in such areas as brick-making and oil and gas, could clearly make an important contribution to the Regional Action Plan.

Finally, while the meeting was mainly concerned with identifying policies to mitigate emissions in particular sectors, discussion moved into the area of national action planning. The region is well represented, by Mexico and Colombia, in the Coalition's fast-start programme on this issue. However, it would be useful to consider how to capitalise on interest garnered during the meeting to facilitate extending this programme in due course to potential new partners and other interested countries in the Latin America and the Caribbean region.

Attached to this note is the Summary Meeting Report, which we commend. The contributions from invited experts from across the region have led in our view to important conclusions and implications for how this key issue is carried forward. We invite Ministers of the Host Countries formally to submit it to the next meeting of the Forum of Environment Ministers of Latin America and the Caribbean.

In addition we hope that UNEP and the Coalition can ensure that meeting reports are widely circulated among stakeholders in the region. In particular, we ask that Coalition partners follow up with those countries that were not represented, so that all countries can be effectively engaged as the SLCP process gathers momentum in the region. One recommended course of action is for the report to be formally submitted to those Ministers from countries that were not represented at the meeting, with the Coalition and UNEP following up with consultations on an individual basis.

Mara Murillo, Deputy Director, UNEP Regional Office for Latin America and the Caribbean

Alejandra Torres, Head, International Affairs Office, Ministry for the Environment and Sustainable Development, Colombia

(Annex omitted)

Meeting Statement on Short-Lived Climate Pollutants, Outcomes of the Intergovernmental Consultation on Clean Air Benefits and Near-term Climate Protection in Africa (Accra, Ghana, 21 September 2012):

Introduction

High-level government officials, policy-makers, practitioners, environmental experts and industrial stakeholders from across Africa and around the world met in Accra, Ghana, 19th - 21st September 2012, to discuss the relevance of short-lived climate pollutants (SLCPs) to the African continent, including strategies for reducing emissions.

The meeting was held under the auspices of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), and hosted by the Governments of Ghana and Nigeria, which are Partners of the CCAC. It aimed at raising awareness of SLCP issues among participating countries and exploring with policy-makers and other stakeholders effective action to be taken at national and regional levels to reduce the emission of SLCPs and their adverse impacts on health, food security, human security, and climate on the African Continent as a whole.

The meeting included high-level government participation from the following nine African Countries: Benin, Côte d'Ivoire, Ethiopia, Gabon, Ghana, Malawi, Nigeria, Senegal and Togo. Also in attendance were representatives from the CCAC Secretariat, the African Climate Policy Centre, UNDP, UNEP, the World Bank, C40 in Partnership with the Clinton Climate Initiative (C40/CCI), and other experts from African and global non-governmental organizations as well as partners of the CCAC.

Other participants at the meeting expressed the interest of their country in supporting the CCAC and the commitment to tackling the issue of SLCPs in Africa.

Tackling SLCPs, such as black carbon, methane, tropospheric ozone, and many hydrofluorocarbons (HFCs), would contribute to the delivery of Africa's Millennium Development Goals (MDGs). By complementing other existing multilateral actions on environmental and development issues, tackling SLCPs would prevent premature deaths and provide substantial and immediate health, human and food security, poverty-reduction, crop yield and other environmental benefits. In addition, their reduction would help reduce near-term warming and climate impacts across Africa and globally over the next few decades.

Meeting Statement

We, the participants to this meeting, recognize that action to reduce emissions of SLCPs is critical to delivering MDGs and health, human security, food security, and regional and global climate benefits. By working with the support of the CCAC, the African Union, and Regional Economic Communities (RECs), we wish to undertake action at local, inter-ministry, national, regional and international levels to reduce SLCP emissions across Africa and deliver rapid human development and environment benefits to the continent.

We recognise the importance of information sharing among African nations across the whole of Africa and in appropriate sub-regions of the continent, and propose that a coordinated and open platform is developed to raise awareness, exchange knowledge and case study information, existing data and analysis, and experience on financing options so that all African nations can benefit from existing efforts related to SLCP mitigation. This will ensure that efforts are not duplicated but are instead directed efficiently and with consideration of knowledge and implementation gaps, to develop a rapid and sustainable response to the issue.

We commit to promoting the following to reduce SLCP emissions:

- Development of cleaner and more efficient cooking fuels and stoves;*
- Action on reducing emissions from transport sources and diesel engines.*
- Reducing agricultural burning and agricultural methane emissions by promoting sustainable agricultural production;*
- Clean development of the oil and gas sector, including reducing methane leakage, venting and flaring;*
- Reducing methane, black carbon and other SLCP emissions from waste as part of enhanced municipal waste management;*
- Reducing SLCP emissions from other relevant SLCP sectors, such as brick manufacture and air conditioning and refrigeration (using HFCs);*

- *Information and data generation and sharing, infrastructure development, and stakeholder engagement to promote education and awareness across the African community at local, national and regional scales, and with international partners.*

We recommend:

To all countries, other national parliaments and relevant authorities of Africa:

- *To consider participating in the CCAC's initiatives and joining the CCAC.*
- *To identify key sources of SLCPs and consider National Action Planning for SLCP emissions reductions, with integration of actions into national development priorities and low-carbon and climate resilient development or green growth plans.*
- *To keep raising awareness of SLCPs and SLCP mitigation nationally and sub-regionally.*
- *To take steps to accelerate and incentivize action to reduce SLCPs, including via engagement of the private sector and civil society groups.*
- *To engage with other relevant networks working in Africa on issues related to SLCPs, such as C40/CCI.*

To the African Union:

- *To help create a forum for action on SLCPs, and coordinate an African regional response to SLCPs consistent with the Libreville Declaration, Luanda Commitment, and other relevant ministerial agreements; .*
- *To integrate SLCPs into relevant sectoral discussions, including health, energy, development and environment, among others.*

To the Climate and Clean Air Coalition (CCAC):

- *To commission an African regional assessment on SLCPs to enhance understanding of emission levels and sources, impacts, mitigation strategies, costs and benefits, and current action on SLCP emissions. This will build on the UNEP/WMO Integrated Assessment on Black Carbon and Tropospheric Ozone and the UNEP synthesis report on Near-Term Climate Protection and Clean Air Benefits;*
- *To integrate African participation and priorities into CCAC actions;*
- *To better understand and educate on financing for SLCP reductions, and build capacity for nations to access these financing options to address SLCPs in Africa;*
- *To support the creation of a platform dedicate to sharing knowledge, experience and best practices on SLCP reduction relevant to Africa;*
- *To promote institutional innovation, capacity building and capacity to deploy technology;*

To the World Bank Group, African Development Bank, and other finance institutions:

- *To pursue integration of SLCPs into development and investment programs in Africa, consistent with the G8 request to the World Bank Group;*
- *To promote financing mechanisms for SLCP reductions, consistent with the G8 directive and the objectives of the CCAC finance initiative.*

To international NGOs and research institutions and organizations:

- *To promote collaboration within Africa and beyond on R&D, data generation, data sharing and best practices to raise awareness of SLCP issues and available concrete actions to reduce the emissions of SLCPs and their adverse impact on climate and livelihoods on the African continent and beyond.*

(Annex omitted)

Blog post by Vice President of Sustainable Development at the World Bank, Rachel Kyte, [Celebrating 25 Years of the Montreal Protocol - and Looking Ahead](#) (Washington DC, U.S., 19 September 2012):

“The Climate and Clean Air Coalition, launched earlier this year, tries to build on the success of the Montreal Protocol. It targets short-lived climate pollutants - black carbon, methane and HFCs - which accelerate climate change. These are areas where we can make real progress for the environment and for human health while we move slowly forward on CO₂. With the support of the World Bank, UNEP, and other organizations, 17 countries and the European Union have committed to reducing short-live climate pollutants in places where it’s technically and economically feasible at home and helping other countries take similar action.”

[Remarks](#) by US Special Envoy for Climate Change Todd Stern at Dartmouth College (Hanover, New Hampshire, U.S., 2 August 2012):

“In February, Secretary Clinton announced a new effort, the Climate and Clean Air Coalition, committed to reducing so-called “short-lived climate pollutants,” such as methane, black carbon and HFCs. Together, these agents account for over 30% of current global warming, millions of premature deaths, and extensive crop losses. We started with six countries and have already grown to some twenty countries and ten non-state partners. We have created a Science Advisory Panel, brought on other key players like the World Bank, and so far have \$20 million in committed funds. We are implementing scaled-up, real-world initiatives to attack large sources of emissions, such as methane from landfills and from oil and gas production; black carbon from heavy-duty diesel engines; and HFCs used in refrigeration and air conditioners.”

Blog post by the Director of the Climate Policy and Finance Department at the World Bank, Mary Barton-Dock, [Buying Time as the Climate Clock Ticks on](#) (Washington DC, U.S., 19 July 2012):

“We’ve all had our moments of frustration with the unending negotiations on mechanisms to control carbon dioxide emissions. In the last Conference of Parties held at Durban in 2011, it was decided that the global deal for the post Kyoto framework will only be reached by 2015.

Meanwhile, the climate clock is ticking: countries continue to face the impacts of climate change with the poorest being hardest hit. Science has shed the spotlight on a “parallel track” which could help us deal with part of the climate change problem in a faster, cheaper way – it is tackling short-lived climate pollutants (SLCPs), primarily black carbon, methane, and hydrofluorocarbons (HFCs).

These pollutants, while being extremely potent in terms of their global warming potential are short-lived in the atmosphere. For example, black carbon persists in the atmosphere for about two weeks (compared to CO₂ that lives for up to 100 years) and is 917 times more warming than CO₂ over a 100 year timeframe (and 3,320 times over 20 years). So, action on SCLPs can help buy time in addressing the more important and longer-term greenhouse gas (GHG) emissions.

The World Bank works in sectors that emit SLCPs. For example black carbon (BC) is a component of “soot”, consisting of darkly colored, fine airborne particles (aerosols) produced during incomplete combustion of fossil fuels or biomass by power utilities, waste operations, households, industry and transport. It is not a greenhouse gas but contributes to global warming by absorbing visible solar radiation in the atmosphere. As a result, when it settles on ice or snow, it leads to faster melting. [Click here to read the World Bank report on black carbon and climate change considerations.](#)

There have been a number of studies (Methane Emission Reduction Potential (pdf), Simultaneously Mitigating Near-Term Climate Change and Improving Human Health and Food Security) that show that SLCPs are harmful to health and the local environment while also having a significant impact on global climate change. The United Nations Environment Programme has recently undertaken one of the most comprehensive reports focusing on actions to address SLCPs. The findings have galvanized several global initiatives in the last few months, including several events at the recent Rio+20 conference. One of those saw participation from President Clinton, Mayor Bloomberg, and our own Vice President Rachel Kyte. (See the amateur video posted on Youtube)

The biggest intergovernmental effort initiated recently to address SLCPs is the Climate and Clean Air Coalition that aims to support countries to reduce the impacts of these pollutants. The United States along with the Governments of Bangladesh, Canada, Ghana, Mexico, and Sweden launched the coalition in February 2012. The launch meeting was organized by the US State Department in Washington DC with Secretary of State Hillary Clinton announcing the coalition.

The CCAC has since grown to almost 20 members, with all the G8 countries joining the CCAC during the last summit at Camp David. The coalition commissioned the World Bank “...to prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms.”

The World Bank Group has numerous projects that we implement that help reduce SLCPs. For example, a back of the envelope analysis for methane and black carbon showed about \$12 billion of investments, or 140 projects, approved between 2006-11 support SLCP reductions. These include investment in everything from cleaner fuels, better urban landfill management and cleaner cookstoves. We also support important partnerships to reduce SLCPs, such as the Global Gas Flaring Reduction Partnership (GGFR) which works with governments and companies in reducing the flaring and

venting of associated gas. The Montreal Protocol, for which the World Bank serves as an implementing agency, is now actively promoting alternatives to HFCs where available. HFCs are human-created gases used to replace ozone depleting substances but which are strong, short-lived global warmers by themselves.

World-wide gas flaring and venting activities add about 350 million tons of CO₂ equivalent; while venting is a major source of methane, flaring is a significant source of black carbon, though volumes in both cases (at the global level) are still unknown. A field study in Uzbekistan showed that one flare stack emitted as much black carbon per second as about 500 diesel buses. GGFR is currently funding cutting-edge research into methodologies that will help quantify and identify the black carbon – invisible to the naked eye – so that it can be tackled. (Watch this demo on a new tool that quantifies black carbon emissions from a gas flare in Mexico.)

I think dealing with SLCPs is a very good example of a triple win. These are good development solutions that reduce local pollution and its impacts on health and agricultural production, and help address the global challenge of climate change without getting mired in controversy over global commitments.

Slowing climate change, improving health outcomes and improving food production – not a bad day's work!

As part of our contribution to the Climate and Clean Air Coalition, we will be zooming into these issues and gathering more evidence on the nature and impact of SLCPs through our portfolio, and what we can do to improve the evidence and analysis around them, and address them, including through innovative financing mechanisms.”

Remarks by Former United States Secretary of State Hillary Rodham Clinton at the Climate Clean Air Coalition and Green Embassy Event (Helsinki, Finland, 27 June 2012):

“And last week, at the sustainability conference, Rio+20, the coalition launched a new initiative to reduce methane and other pollutants from landfills. We have encouraged and enlisted mayors from several major world cities. We also have the World Bank on board, and other countries are joining. In fact, all of the G-8 countries recently signed up to the coalition at the last meeting.

But we're not stopping there, because we formed this coalition for the purpose of taking action, and demonstrating globally that we can actually do things, that we can translate our concerns and our words into actions and results. In partnership with the UN Environment and Development Programmes, the European Commission, and key private sector companies, we are co-hosting a conference in Bangkok this July to showcase new technologies that can drastically reduce the need for HFCs in refrigeration and air conditioning.

Here is a perfect example of the problem: As you have a growing middle class in countries like India and China, where the climate can often get very, very hot, you have an increasing demand for air conditioning. The increasing demand for air conditioning in turn puts more HFCs into the air, thereby creating more of a problem from the short-lived pollutants. So what we want to do is try to get ahead of this, not to tell people – certainly, we in the United States are in no position to tell people, “Look, you've lived without air conditioning for thousands of years; you can keep doing it for the sake of the climate.”

No, instead we want to say, “Look, as you have developed, as your incomes have risen, we know that you want to take advantage of air conditioning, but let’s see if we can find a way to do that that is more climate-friendly.” And that is part of the mission that we have in this new coalition.”

Plenary Remarks by Former United States Secretary of State Hillary Rodham Clinton at Rio+20 (Rio de Janeiro, Brazil, 22 June 2012):

“[E]arlier this year, I was privileged to host six countries in the United Nations Environment Program as we launched the Climate and Clean Air Coalition. The goal is to reduce short-lived climate pollutants that cause more than 30 percent of current global warming, as well as millions of premature deaths and extensive crop losses. We know we have to keep working together on CO₂, but we think that our Climate and Clean Air Coalition, to which many more countries are joining, and we welcome you, can take targeted action and produce results with respect to methane and black soot and HFCs.”

CCAC Rio Announcement of Solid Waste Partnership with C40 cities network (Rio de Janeiro, Brazil, 19 June 2012):

Former President Bill Clinton:

“As we all know methane, black carbon, and hydrofluorocarbons clear the atmosphere much quicker than carbon dioxide. We need both these strategies, those that cut CO₂ and those that produce the fastest results by cutting other pollutions. If we focused on the methane, the black carbon, the hydrofluorocarbons we can reduce the rate of climate change for the next thirty years by half and reduce the change in the Arctic by up to two-thirds. That's why the Secretary of State has worked so hard on this issue and why she's coming to Rio to push it. (SLCPs at 28:45; full speech starts 22:55.)”

U.S. Special Envoy for Climate Change Todd Stern:

“This initiative encapsulates perfectly what we're trying to do with the newly launched Climate and Clean Air Coalition. Countries, cities, the World Bank, and civil society partnering together to make real-world, scaled-up reductions of 'short-lived climate pollutants,' which cause some 30% of current warming. With this solid waste initiative, we're making a big dent in the third-largest source of methane worldwide, and, at the same time, improving the health and environment of local communities.”

C-40 Chair and New York City Mayor Michael Bloomberg:

“Improving the management of city solid waste, including reducing the release of methane and other greenhouse gases is a top priority of many C-40 cities. The success of this partnership and of our new C40 network will move us a long way toward the greenhouse gas reduction goals we are setting.”

U.S. Special Representative for Global Intergovernmental Affairs Reta Jo Lewis:

“Urban areas contribute nearly 80 percent of global greenhouse gas emissions. At the same time, city-driven solutions can quickly reach billions. Quite literally, cities are where the rubber hits the road.

Today we are announcing a groundbreaking partnership.....cities, countries, our Coalition, the World Bank, the Global Methane Initiative, and CCI/C-40 are

all joining together to reduce climate pollutants from solid waste, the third largest source of man-made methane worldwide.

And remember that methane is a substance 20 times more potent a greenhouse gas than carbon dioxide. Moreover, left unaddressed, municipal solid waste is predicted to double by 2025.

We'll be working with cities to provide an array of common-sense, results-driven technical expertise and capacity building. And our Climate and Clean Air Coalition partner countries like Mexico, Canada, Bangladesh, the United States, Nigeria, and others will cooperate closely. We'll also be building a knowledge platform of best practices to share with cities around the world."

Remarks by Former United States Secretary of State Hillary Rodham Clinton and Swedish Minister for Environment Lena Ek at Climate and Clean Air Coalition Event (Stockholm, Sweden, 3 June 2012):

“MINISTER EK: ... Much as happened in the short time since we met in Washington in February to launch the Climate and Clean Air Coalition to reduce SLCPs. We were proud to host the first formal meeting of the coalition here in Stockholm in April, where we were joined by new members, and the coalition has now grown from six to 16 countries, plus the European Commission, UNEP, and the World Bank. And we especially, of course, welcome the decision of all G-8 members to join at the recent summit in Camp David.

Short-lived climate pollutants is a strange and maybe unfamiliar set of words to most, but SLCPs such as black carbon, soot, tropospheric ozone, methane, and short-lived HFCs all have some characteristics in common. They significantly contribute to global and regional warming. They also impact crop yields, deteriorate air quality, and affect human health across the globe. And they are short-lived. And just because of this, they represent a golden opportunity to slow down climate warming in the near term, even more so because they represent as much as a third of increases in average global temperature.

I believe this coalition owes to rapid success to two things. Firstly, it delivers a simple but powerful message based on science. By preventing SLCPs emissions, we can significantly reduce near-term climate change and at the same time save 2.5 million lives per year, increase crop yields and food security, and promote gender equality and women's rights across the globe.

Secondly, this is a coalition of action. All partners bring something to the table, and in joining have agreed to take action also at home. The coalition is structured around the basic idea that we need to act now, and countries are demonstrating their will and ability to reduce domestic emissions by agreeing to implement national reduction actions on SLCPs.

It's only through effective action on greenhouse gases that we can stop climate change. Researchers are telling us that without drastic CO₂ emission reductions we are facing temperature increases that will be substantially higher than the two-degree target. Therefore, we are wholly committed to the UNFCCC negotiations and to making the necessary mitigation efforts at home. Measures to reduce CO₂, such as the Sweden carbon tax of 150 U.S. dollars per ton CO₂, are not only necessary but contribute to green growth and enable lower taxes in other areas and job creation in the economy....

SECRETARY CLINTON: ... *The Climate and Clean Air Coalition is designed to get results for what are called – as the minister just said – short-lived climate pollutants, including methane, black carbon, and the hydrofluorocarbons. These pollutants are responsible for more than 30 percent of current global warming. And because they are also very harmful to human health and to agriculture, we can save millions of lives and tons of crops as well by acting now. This is what we call a win-win for sure.*

In February, Sweden, the United States, four other nations, and the UN Environmental Program launched the Climate and Clean Air Coalition, and since then, as the minister said, we've been growing, bringing on all G-8 countries, as well as Norway, Nigeria, Denmark, and Colombia. And we were pleased when the World Bank and the European Commission signed up as well. We've also increased our funding thanks in part to contributions from Sweden and Norway. We are setting up a science advisory panel. And just in April, Sweden hosted the coalition's first ministerial meeting, when we decided on a set of global action-oriented initiatives to implement immediately.

So we have built some strong initial momentum, but we need your help. Today, Sweden and the United States are beginning a global campaign to close the information gap about short-lived climate pollutants. Few people actually know about the impact we could have on global warming if we aggressively target them. And fewer still know that many cost-effective solutions already exist and are just waiting to be broadly implemented....

Now, included in the group that Minister Ek and I met with were leading Swedish companies also supporting this effort, because we know we cannot solve this crisis without the active cooperation and, indeed, the leadership of the private sector, particularly oil and gas companies, makers of diesel trucks, green tech companies that can help turn methane from landfills into clean energy. Today, for example, representatives from Volvo, Mack Trucks talked about how to cut down black carbon worldwide, 20 percent of which is emitted by the transportation sector.

Major reductions of short-lived pollutants can be done inexpensively and with existing technologies. Experts tell us, for example, that one third of all methane leaked and vented by oil and gas companies can be avoided at a net cost of zero dollars or zero kroner. So we need to convince decision makers everywhere, political leaders, CEOs, civil society leaders, investors, and students that this is one of those areas where we can show tangible progress almost immediately and that we can do it in a cost-effective way.

Here are just a few concrete examples. We're launching an initiative focused on hydrofluorocarbons. By 2050 – 2050 – at the current rate, these greenhouse gases could grow to nearly 20 percent of carbon dioxide emissions. So we will start by holding a technology conference in Bangkok in July to showcase new technologies that can eliminate the need for these potent greenhouse gases in refrigeration and air conditioning. At the upcoming sustainability conference in Rio, we'll launch an initiative working with cities to reduce methane and other pollutants from their waste systems, and we will be working with oil and gas companies to take advantage of all the currently available zero-cost options.

Now, we're aware that reducing these short-lived pollutants by themselves will not solve the collective crisis facing the world. We must also aggressively reduce carbon dioxide emissions, which we know remain the principal contributor to climate change and last in the atmosphere for generations. And countries and people around the world, like Sweden and Norway and Denmark, where I just visited, are taking bold actions....

And while we continue to work on bringing down carbon dioxide emissions and finalizing an international agreement, let's also deliver a blow to methane, black carbon, and HFCs. We are poised to do both, and we should.

Now, I began my day yesterday in the high north, in Tromso, Norway, where we saw some breathtaking views and where we toured the waters on a research vessel, listening to marine biologists and sea ice experts and others explain the changes that have come to the Arctic. The waters don't freeze, even in the dead of winter. The ice shelves that have crumbled no longer protect coastlines from erosion. Species are at risk. And it's such a reminder to be in a beautiful place like Stockholm, or yesterday in Tromso, that we inherited a fragile, marvelous planet, and it's our duty to protect it.

So we're very grateful, once again, to be working hand in hand with Sweden. We've already made progress on the Climate and Clean Air Coalition in less than four months. And we're going to continue working closely with Sweden and our other partners. And we are determined to take aggressive action in the months ahead. We can do no less. Thank you all very much. (Applause.)”

Remarks by Former United States Secretary of State Hillary Rodham Clinton and Norwegian Minister Jonas Gahr Stoere (Tromso, Norway, 2 June 2012):

“[T]he United States and Norway are committed to ... do all we can to prevent and mitigate the effects of climate change. I'm highlighting a new partnership that I started called the Climate and Clean Air Coalition, and we're very pleased that Norway is a member. And it is to focus on what are called short-lived climate pollutants – methane, black carbon, hydrofluorocarbons – which make up at least 30 – somewhere between 30 and 40 percent of the greenhouse gas emissions.... [W]e just heard the impact of burning (inaudible) fuels and putting all that black carbon and soot into the air. It then lands on the ice and you know rest.

So I want to thank Norway for joining the Climate and Clean Air Coalition and making an initial commitment of one and a half million dollars, and also a pledge by Norway of one million dollars specifically to target black carbon across the Arctic. I'm very grateful that we had a chance to meet with the head of Statoil and representative of new Norwegianers and ExxonMobil to talk about ways that oil and gas companies are already reducing methane and black carbon emissions from their own production, what more they believe can be done, and how we can bring other companies into this effort to capture your vented, leaked, and flared natural gas, and to cut emissions by up to one-third with no net cost at all. That would make a significant impact on climate change without hurting any oil or gas company's bottom line, and it's exactly the kind of private and public cooperation we need to pursue and that this new coalition is determined to try to bring about.”

Remarks by Former United States Secretary of State Hillary Rodham Clinton at the launch of the Green Partnership for Growth (Copenhagen, Denmark, 31 May 2012):

“[T]his year we launched the Climate and Clean Air Coalition, which brings together governments, the private sector and key organizations around the world to work toward reducing short-lived climate pollutants, which cause more than 30 percent of near-term warming. Reducing short-lived pollutants is an important complement to the work we

must do to reduce carbon emissions. And I'm delighted, Prime Minister, that Denmark has agreed to join the Climate and Clean Air Coalition."

G8 Camp David Declaration (Camp David, U.S. 19 May 2012):

"14. Recognizing the impact of short-lived climate pollutants on near-term climate change, agricultural productivity, and human health, we support, as a means of promoting increased ambition and complementary to other CO₂ and GHG emission reduction efforts, comprehensive actions to reduce these pollutants, which, according to UNEP and others, account for over thirty percent of near-term global warming as well as 2 million premature deaths a year. Therefore, we agree to join the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants."

Fact Sheet: G-8 Action on Energy and Climate Change (Camp David, U.S., 19 May 2012):

"Address Climate Change, Including By Reducing Short-Lived Climate Pollutants

- *In the spirit of increasing mitigation efforts, we agree to collectively join the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, launched on February 16, 2012. This new initiative will enhance our collective ambition in addressing climate change by complementing efforts to address CO₂ emissions. By developing strategies to reduce short term pollutants – chiefly methane, black carbon, and hydrofluorocarbons – we can help reduce global warming, improve health, and increase agricultural productivity, as well as energy security.*
- *Commission the World Bank to prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms.*

In its role as 2012 Chair of the G-8, the United States intends to work with G-8 partners to develop mechanisms for following up these actions over the course of 2012."

International Polar Year 2012, Keynote Address by Dr. Gro Harlem Brundtland (Montreal, Canada, 23 April 2012):

"(Short-lived Climate Forcers)

Even if we manage to slow down or turn around the rising global greenhouse gas emissions in the coming two decades, reductions will not occur quickly enough to conserve the polar and alpine environments, as we know them today.

We need rapid action, with rapid effects.

Reducing short-lived climate forcers such as methane, black carbon and ozone is one such promising avenue for rapid action.

Recent research has shown that more than one-third of current global warming is caused by short-lived pollutants. They also destroy millions of tons of crops every year and wreak havoc on people's health.

Furthermore, methane, a greenhouse gas 20 times more potent than carbon dioxide, can be an abundant source of energy if we capture it instead of just venting it into the air or flaring it.

This is exciting new knowledge. And, it is possible to reduce these short-lived climate forcers.

In a report from November last year UNEP calculated that a package of 16 measures could, if fully implemented across the globe, save close to 2,5 million lives a year; avoid crop losses amounting to 32 million tonnes annually and deliver near-term climate protection of about half a degree Celsius by 2040.

Rapid effects would be even greater in the Arctic. They would reduce projected warming in 2040 by 0.7 degrees Celsius, with important implications for the lives and livelihoods of Arctic peoples, biodiversity and global sea-level rise.

I welcome the announcement earlier this year by US Secretary of State Hillary Clinton of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, as well as the declaration from the Nordic countries last month agreeing on measures to intensify their efforts to reduce short-lived climate forcers at national, regional and global level.

Many are involved in this effort, and I hope more will follow.

I do agree with the Executive Director of UNEP, Achim Steiner, that action on short-lived climate forcers does not take away attention from the fundamental challenges of global warming.

On the contrary, it is buying back some of the time we already have lost.”

Co-Chairs Summary, Thirteenth Meeting of the Leaders’ Representatives of the Major Economies Forum on Energy and Climate (Rome, Italy, 17 April 2012):

"In light of the two degree goal, participants discussed means for increasing the ambition of collective efforts, including: ... exploring pragmatic opportunities that complement the negotiations (e.g.... robust participation in the new Climate and Clean Air Coalition, and phasing out hydrofluorocarbons)."

Joint Statement by North American Leaders (Washington DC, U.S., 2 April 2012):

“We also intend to deepen our trilateral cooperation and work with other interested partners to accelerate efforts aimed at reducing emissions of “short-lived climate pollutants,” noting the recently launched Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants in which we are all actively engaged. Reducing our emissions of these substances, which include methane, black carbon, and many hydrofluorocarbons (HFCs), offers significant opportunities to reduce the rate of global warming in the near term, in the context of our broader efforts to address climate change, while also yielding many health, agricultural productivity, and energy security benefits.”

Co-Chairs' Summary, Ministerial Meeting on Short-Lived Climate Forcers Near Term Climate and Air Quality Benefits (Mexico City, Mexico, 12 September 2011):

“Because SLCFs are a large fraction of current warming they present an enormous near term mitigation opportunity.... Strong support was expressed during the meeting for a strengthened concerted approach that would support national and regional measures in the form of an action oriented initiative at global level. It was further stressed that any future initiative would need to consider existing work in the field, and it was particularly stressed that action on SLCF should be complimentary to efforts under the UNFCCC, particularly long term CO₂ mitigation. Participants noted the importance of including the private sector and civil society. Given the need to address SLCF, participants agreed to develop an inclusive and voluntary global initiative to increase the political awareness and support future cooperation for action on SLCF.”

EU/EC

Council of the European Union, Council Adopts Regulation on Fluorinated Greenhouse Gases (Luxembourg, 14 April 2014):

“The Council today adopted a regulation on fluorinated greenhouse gases (F-gases) ([PE-CONS 1/14](#), [PE-CONS 1/14 COR 1](#), [7929/14 ADD 1](#)).

The new regulation will allow to reduce F-gas emissions in the EU by two-thirds of today's levels by 2030. The use of F-gases in some new equipment, such as refrigerators and air conditioners, will be banned where viable and more climate-friendly alternatives are readily available. The new regulation will not only contribute to the achievement of the EU climate and environmental objectives, but it will also create business opportunities for EU companies on the market for alternative technologies.

The regulation is aimed at protecting the environment by reducing emissions of F-gases. It establishes rules regarding containment, use, recovery and destruction of those gases. In addition, the new law imposes conditions on the placing on the market of products and equipment containing or relying upon F-gases, whilst setting out quantitative limits for the placing on the market of hydrofluorocarbons (HFC).

The regulation also introduces bans on the placing on the market of the following products:

- domestic refrigerators and freezers containing HFCs with a global warming potential (GWP) of 150 or more as from 1 January 2015*
- refrigerators and freezers for commercial use containing HFCs with a GWP of 2500 or more from 1 January 2020, and containing HFCs with a GWP of 150 or more from 1 January 2022;*
- stationary refrigeration equipment that contains or relies upon for its functioning HFCs with a GWP of 2500 or more from 1 January 2020;*
- centralised refrigeration systems for commercial use with a capacity of 40kW or more that contain or rely upon their functioning, fluorinated gases with a GWP of 150 or more, from 1 January 2022;*

- *movable room air-conditioning appliances that contain HFCs with GWP of 150 or more from 1 January 2020;*
- *single split air-conditioning systems containing less than 3 kg of F-gases that contain F-gases with a GWP of 750 or more from 1 January 2025;*
- *foams that contain HFCs with a GWP of 150 or more, extruded polystyrene from 1 January 2020 and other foams 1 January 2023; and*
- *technical aerosols that contain HFCs with a GWP of 150 or more from 1 January 2018.*

The regulation introduces a phase-down mechanism involving a gradually declining cap on the total placement of bulk HFCs (in tonnes of CO₂ equivalent) on the market in the EU with a freeze in 2015, followed by a first reduction in 2016-2017 and reaching 21 % of the levels sold in 2009-12 by 2030.

The Regulation will apply from 1 January 2015.”

Joint Statement: Deepening the EU-China Comprehensive Strategic Partnership for mutual benefit (Brussels, Belgium, 31 March 2014):

“18. Both sides recognised the need to strengthen cooperation on climate change in preparing a protocol, another legal instrument or an agreed outcome with legal force under the United Nations Framework Convention on Climate Change applicable to all Parties to be adopted in 2015 at the Conference of Parties to the Convention (COP21) in Paris. They underlined their commitment to making significant cuts in greenhouse gas emissions through credible and verifiable domestic action. Both sides agreed on the importance of all parties presenting their contributions well in advance of the Paris meeting. The EU and China will cooperate on taking domestic action to avoid or reduce the consumption of HFCs and to work together to promote a global phase-down of these substances.”

EU-US Summit Joint Statement (Brussels, Belgium, 26 March 2014):

“7. Sustainable economic growth will only be possible if we tackle climate change, which is also a risk to global security. We therefore reaffirm our strong determination to work towards the adoption in Paris in 2015 of a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties, to strengthen the multilateral, rules-based regime. The 2015 agreement must be consistent with science and with the goal of limiting the global temperature increase to below 2°C, and should therefore include ambitious mitigation contributions, notably from the world’s major economies and other significant emitters. We are implementing our existing pledges and preparing new mitigation contributions for the first quarter of 2015, mindful of the importance of ensuring that mitigation contributions are transparent, quantifiable, verifiable and ambitious. The EU and the United States demonstrate leadership and are intensifying their cooperation, including: phasing out fossil fuel subsidies, phasing down the production and consumption of hydrofluorocarbons (HFCs) under the Montreal Protocol, in promoting sustainable energy, energy efficiency and renewable energy, fighting deforestation, and mobilizing private and public finance. We are committed to ambitious domestic action to limit HFC use and emissions.”

European Parliament Resolution on Financing of Reinforcement of Dam Infrastructure in Developing Countries (Strasbourg, France, 27 September 2012):

“30. Urges the EU to widely implement and promote emission reduction measures targeting black carbon, such as the recovery of methane from coal, oil and gas extraction and transport, methane capture in waste management and the use of clean-burning stoves for residential cooking, which will contribute to combating climate change and to reducing glacial retreat;”

European Parliament Resolution on a Comprehensive Approach to Non-CO₂ Climate-Relevant Anthropogenic Emissions (Strasbourg, France, 14 September 2011):

“2. Calls for a comprehensive European climate policy, which can benefit from considering all sources of warming and all mitigation options; stresses that in addition to considering CO₂ emission reductions, it should place emphasis on strategies that can produce the fastest climate response;

3. Notes that fast-action regulatory strategies are available to phase down production and consumption of HFCs and to reduce emissions of black carbon and the gases leading to the formation of tropospheric ozone, and that these can begin within 2–3 years and be substantially implemented within 5–10 years, producing the desired climate response within decades or sooner, in particular for some HFCs at a public price as low as 5 to 10 cents per tonne, whereas the carbon price is currently over EUR 13 per tonne;...”

Co-chairs’ Concluding Statement at the High-Level India-EU Dialogue (Delhi, India, 4 February 2009):

“3. We urge the governments of Europe and India to: . . . b) Recognise Black Carbon as a significant climate driver and develop a joint programme to:

*- build international support for mitigation of the threat of Black Carbon to the glaciers of the Hindu Kush-Himalaya-Tibet area;
support a major clean cook stove initiative, including Project Surya and the application of pyrolysis and biochar.”*

UNFCCC Secretariat

Blog post by UNFCCC Executive Secretary Christiana Figueres, [Why Davos has left me with the feeling that 2014 is the year the world can and must rise to the climate challenge](#) (Bonn, Germany, 27 January 2014):

“Mindful of the UN Secretary General’s summit in September, Mr. Howard summed up another session saying that a global commitment to phase out HFCs, powerful greenhouse gases still used in refrigeration and industrial processes, would provide a good signal at the New York summit that can in turn help achieve a meaningful global climate agreement.

Dr. Arunabha Ghosh of the New Delhi-based Council on Energy, Environment and Water pointed out that many companies in India are already acting and developing alternatives to HFCs, and that attention is being focused on the challenge at the highest level of government.”

Blog post by UNFCCC Executive Secretary Christiana Figueres, [Climate Change Issues Key at Annual World Economic Forum \(WEF\) in Davos](#) (Bonn, Germany, 21 January 2014):

“In Davos, I’ll be taking part in discussions on many key issues. I look forward to looking at how complementary action on short-lived climate pollutants can be dramatically scaled up in developing countries including in respect to refrigerant chemicals known as HFCs.”

LRTAP/Gothenburg

[Joint Statement](#) by the Danish EU Presidency and Commissioner Potocnik welcoming new international agreement to tackle air pollution (Brussels, Belgium, 7 May 2012):

“Today the EU reached an international agreement to ... [amend] the Gothenburg Protocol [to the Convention on Long-range Transboundary Air Pollution], setting more ambitious targets to reduce trans-boundary air pollution. The revised objectives of the Protocol will see a reduction in EU emissions of around 60% for sulphur, 40% for nitrogen oxides (NOx), 30% for volatile organic compounds (VOCs), 6% for ammonia and 20% for particulate matter compared to 2005 levels. There's also agreement to act on so called 'Black Carbon', a pollutant with short-lived climate forcing characteristics.

This is a significant step forward in protecting citizens’ health and the environment. For the first time, we have an international agreement that acknowledges the link between air pollution and climate change. By agreeing to regulate one of the contributors to climate change, 'Black Carbon', we will see positive impacts at both local and international level”, said Janez Potočnik, European Commissioner for the Environment.”

The draft amendment approved by the Convention’s Executive Body is [here](#).

Ministers and other National Government Officials

United States Secretary of State John Kerry, [The Secretary’s Policy Guidance on Elevating Climate Change Across All Our Platforms](#) (Washington DC, U.S., 7 March 2014):

“IV. Enhance multilateral engagement: Helping lead efforts including the Major Economies Forum, Clean Energy Ministerial, Montreal Protocol, and the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants.”

The National Development and Reform Commission of the People's Republic of China, [China's Policies and Actions for Addressing Climate Change](#) (Beijing, China, 5 November 2013):

"The leaders of China and the United States attached great importance to the climate change issue as they reached a crucial consensus on strengthening dialogues and cooperation in climate change and the issue of HFCs during two meetings in 2013."

Remarks by United States Special Envoy for Climate Change Todd Stern, [U.S. Climate Envoy Stern on a New Global Climate Agreement](#) (London, United Kingdom, 22 October 2013):

"Finally, I want to say a few words about what we can accomplish in complementary arenas that are outside the UNFCCC but serve the UNFCCC's climate purpose. For example, the Climate and Clean Air Coalition, which has grown in 18 months from 6 countries to 33 and nearly 40 non-country members, is pursuing multiple promising initiatives to reduce the emissions of short-lived pollutants like methane and black carbon.

...

And we have a great opportunity to avoid an estimated 90 gigatons of CO₂ equivalent by 2050 – a huge amount – by using the Montreal Protocol to phase down the production and consumption of HFCs. A few countries object on the ideological ground that action on HFCs should occur only in the UNFCCC, but this is the kind of mentality we need to transcend. Remember that the point of our efforts – always – must be the results we can produce, consistent with everyone's circumstances and capabilities. The Montreal Protocol has proper jurisdiction. It can handle every issue from assistance to differentiation. And it has the expertise and will have the funding to get the job done. We need to seize this opportunity.

Let me sum up. Here are my watchwords:

...

- *Fourth, complementary initiatives that broaden the overall international climate system in service of the UNFCCC's central objective of avoiding dangerous climate change"*

[Joint statement](#) issued at the conclusion of the 16th BASIC Ministerial meeting on climate change (Foz do Iguacu, Brazil, 15-16 September 2013):

"Ministers agreed that hydrofluorocarbons (HFC) should be dealt with through relevant multilateral fora, guided by the principles and provisions of UNFCCC and its Kyoto Protocol. The availability of safe and technically and economically viable alternatives and the provision of additional financial resources by developed countries should also be taken into account."

Statement by Canada's Environment Minister and Minister for the Arctic Council, Leona Aglukkaq, [Canada's Action to Reduce Short-Lived Climate Pollutants](#) (Oslo, Norway, 3 September 2013):

"As an Arctic nation, Canada understands first-hand the importance of addressing short-lived climate pollutants, which contribute to warming temperatures and the rate of Arctic sea ice melt.

Addressing short-lived climate pollutants is an integral part of Canada's broader climate change and clean air agenda and I am pleased to have had the opportunity to share some of Canada's efforts in this area.

Several of the Government of Canada's existing and forthcoming measures to address air pollution and greenhouse gas emissions also impact short-lived climate pollutants. These include vehicle and engine air pollutant regulations, sulphur in gasoline and in diesel regulations, greenhouse gas regulations for coal-fired electricity, and the national Air Quality Management System.

In addition to the climate benefits, public health is also a key driver in our need to address short-lived climate pollutants in the North and around the world. In this respect, I am encouraged by the efforts among Climate and Clean Air Coalition partners to strengthen linkages between the health and environment communities in order to maximize the health benefits of Climate and Clean Air Coalition initiatives.

As Chair of the Arctic Council, I was also pleased to highlight the important work that the Council has done to address short-lived climate pollutants. During Canada's Arctic Council chairmanship (2013-2015), a new Council Task Force will develop actions to address black carbon and methane emissions in the Arctic."

[Remarks](#) by United States Secretary of State John Kerry with Brazilian Foreign Minister Antonio de Aguiar Patriota After Their Meeting (Brasilia, Brazil, 13 August 2013):

"Our mission is very, very clear. We need to inspire meaningful reform and action within the Major Economies Forum. We need to lead the effort to phase down hydrofluorocarbons in the Montreal Protocol. And together, Brazil and the United States need to join with other countries in an effort to negotiate a climate agreement in 2015 that is ambitious and flexible and that works for all of us."

[Remarks by](#) United States Vice President Joe Biden on the U.S.-India Partnership at the Bombay Stock Exchange (Mumbai, India, 24 July 2013):

"One thing we can do together right now is address pollutants called hydrofluorocarbons, HFCs. The reason I'm very familiar with this is I come from a little state that has an outfit called the DuPont Company. They had a great interest in refrigeration and HFCs when I talked about they should be eliminated. We talk about stakeholders and interests. Well, HFCs found in air conditioners and other products make an outsized contribution to climate change.

I hope that India will join the United States, China and more than 100 other countries to work within the Montreal Protocols to phase down the production and consumption of HFCs.”

United States Secretary of State John Kerry, [Getting the U.S.-China Climate Partnership Right](#) (Washington DC, U.S., 20 July 2013):

“That’s the message Todd Stern, our Special Envoy for Climate Change here at the State Department, carried with him this week to the Major Economies Forum. Plain and simple, all nations have a responsibility to make near-term emissions reductions. The costs of inaction get more and more expensive the longer we wait — and the longer we wait, the less likely we are to avoid the worst and leave future generations with a sustainable planet.”

[Joint statement](#) issued at the conclusion of the 15th BASIC Ministerial meeting on climate change (Cape Town, South Africa, 28 June 2013):

“Ministers emphasized that HFCs are greenhouse gases covered under the UNFCCC and its Kyoto Protocol and shall accordingly be addressed in accordance with its principles and provisions. They agreed to work multilaterally to find an agreed way forward on this issue.”

United States Secretary of State John Kerry, [We work on climate change every day](#) (19 June 2013):

“When we last met with China’s leaders in California just a couple of weekends ago, after productive and candid dialogue, President Obama and President Xi were able to announce that the United States and China have agreed to work together and with others via the Montreal Protocol to phase down the production and consumption of hydrofluorocarbons (HFCs), highly potent greenhouse gases used in refrigerators and air-conditioners. This could eliminate nearly two years’ worth of current global greenhouse gas emissions between now and 2050.”

[Remarks](#) by U.S. Under Secretary for Economic Growth, Energy, and the Environment Robert D. Hormats, U.S. Economic Engagement with the Asia Pacific at the Asia Society Global Forum (Washington, DC, U.S., 12 June 2013):

“President Xi Jinping was in California just a few days ago visiting with President Obama, where they discussed several important issues.... Finally, they agreed to work together and to use the Montreal Protocol to phase down the consumption and production of hydrofluorocarbons (HFCs), which is an important step to confront global climate change.”

Main document from the Eighth Ministerial Meeting of the Arctic Council (Kiruna, Sweden, 15 May 2013):

[Kiruna Declaration](#) (Kiruna, Sweden, 15 May 2013):

“Recognize that reduction of short-lived climate forcers, could slow Arctic and global climate change, and have positive effects on health, and welcome the report on short

lived climate forcers, and support its recommendations including that national black carbon emission inventories for the Arctic should continue to be developed and reported as a matter of priority,

Urge the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer to take action as soon as possible, complementary to the UNFCCC, to phase-down the production and consumption of hydrofluorocarbons, which contribute to the warming of the Arctic region,

Decide to establish a Task Force to develop arrangements on actions to achieve enhanced black carbon and methane emission reductions in the Arctic, and report at the next Ministerial meeting in 2015”

G8 Foreign Ministers' meeting statement (London, UK, 10-11 April 2013):

“The G8 remain fully committed...to increase mitigation ambition in the pre-2020 timeframe, including through international cooperative initiatives such as the Climate and Clean Air Coalition...”

Address by Canada Minister of the Environment Peter Kent at 2013 Global Methane Expo (Vancouver, Canada, 13 March 2013):

“Beyond the Global Methane Initiative, Canada is also working with the international community to address short-lived climate pollutants, including methane, hydrofluorocarbons and black carbon. It is estimated that these pollutants, whose lifetime in the atmosphere is shorter than long-lived gases like CO₂, will contribute about half of the climate warming from man-made emissions over the next couple of decades.

Short-lived climate pollutants are of particular concern to Arctic countries, like Canada, because they may be responsible for the more rapid warming we are currently experiencing in the far North, notably due to the effect of black carbon deposited on snow and ice.

We have been working to address these pollutants within the Arctic Council and as a founding member—and lead partner—in the Climate and Clean Air Coalition. Canada was the first country to provide funding for the Coalition’s work. We believe it has enormous potential to effectively address short-term climate goals and to improve the health of millions of people around the globe.

Canada’s support is helping developing countries implement actions, for example in areas such as municipal solid waste brick production and promoting alternatives to hydrofluorocarbons.

We are also working with our Partners in the Climate and Clean Air Coalition to have its activities build on and strengthen the successes of initiatives like the Global Methane Initiative.”

Joint Statement issued at the Conclusion of the 14th BASIC Ministerial Meeting on Climate Change (Chennai, India, 16 Feb 2013):

“19. Ministers noted the recommendation of the BASIC experts to organize an international conference on scientific and technical aspects of black carbon and the need

for further work for enhancement of knowledge and understanding of the potential role of black carbon in global warming, besides reduction of the extant uncertainty.”

Remarks by United States Special Envoy for Climate Change Todd Stern at Secretary Clinton's Foreign Affairs Policy Board Meeting (Washington DC, U.S., 3 January 2013):

“CCAC. Last February, Secretary Clinton announced a new effort, the Climate and Clean Air Coalition, committed to reducing non-CO₂ pollutants such as methane, black carbon and HFCs. Together, these agents account for over 30% of current global warming, millions of premature deaths, and extensive crop losses. Because these pollutants are short-lived in the atmosphere, meaningful reductions could have a real impact on the level of temperature increase in the near term.

We started with six countries and are now at 26 plus nearly 20 non-state partners, including UNEP (our Secretariat) and the World Bank. We have over \$20 million in committed funds and are working on a series of initiatives to attack large sources of emissions, such as methane from landfills and from oil and gas production; black carbon from heavy-duty diesel engines; and HFCs used in refrigeration and air conditioners. The first year has been very successful in getting the Coalition off the ground. The key now will be to build the initiatives and make them effective.”

Quotes by Ministers of Nations Committed to Scaling Up Voluntary Action to Reduce Short-Lived Climate Pollutants (Doha, 6 December 2012):

Hiroyuki Nagahama, Minister of the Environment, Japan:

"Japan fully endorses the framework for the Coalition and meaningful actions focused on SLCPs that aims to realize co-benefit between climate change and air pollution. Japan is advancing its international cooperation related to SLCPs such as through co-benefit projects in Asia which address both global warming and air pollution."

Hadiza Ibrahim Mailafia, Honourable Minister, Federal Ministry of Environment, Nigeria:

"Nigeria is focused on developing her economy with minimal ecological footprint and we are setting priorities at achieving zero flare in the oil and gas sector, reducing black carbon from cooking with wood fuels, waste burning and diesel engines as well as methane from the agricultural sector. We will reduce the emission of SLCPs from all sectors in Nigeria for the health of our people, protect the environment and create green jobs."

Todd Stern, United States Special Envoy for Climate Change:

"I'm encouraged by the strong growth of the Climate and Clean Air Coalition since our founding less than 10 months ago. We started with 6 country partners; we now have 25 plus the European Commission and key non-state partners like the UN Environmental Programme and the World Bank. Today, we gathered together to redouble our efforts to quickly reduce short-lived climate pollutants. Working together - countries, international organizations,

businesses, and NGOs - we can achieve substantial near-term climate benefits, save lives, and improve crop yields, all in a way that fully complements the aggressive action we all need to take on CO₂."

Connie Hedegaard, European Commissioner for Climate Action:

"To further increase the European Union's ambition between now and 2020, and in line with the Coalition's initiative on HFCs, the European Commission recently proposed legislation that would reduce sales of these powerful greenhouse gases in the EU by almost 80%. This would save the equivalent of 625 million tonnes of CO₂ by 2030. By demonstrating that suitable, safe and energy-efficient alternatives to these pollutants are already available and affordable in many sectors, this bold step aims to encourage others to take similar measures."

United Nations Development Programme Administrator Helen Clark:

"To tackle climate change, the whole world must develop differently and that requires engaged citizens and bold leadership, willing and able to take on entrenched interests and leave behind failed models. As the actions of the Climate and Clean Air Coalition build momentum, UNDP looks forward to being part of the united effort with the Coalition partners to try new approaches and achieve widespread benefits for sustainable human development."

Lena Ek, Minister for the Environment, Sweden:

"The best researchers in the field have joined our Scientific Advisory Panel whose task is to ensure that what we do has a scientific basis."

Peter Kent, Minister of the Environment, Canada:

"Taking action to reduce short-lived climate pollutants strengthens the global effort to make near-term progress on climate change and reduce greenhouse gas emissions and other pollutants. By extending our efforts in complementary fora such as the Climate and Clean Air Coalition (CCAC), we are tackling global climate goals that can improve the health of millions of citizens around the world. Canada is proud to be a founding member of the CCAC and is encouraged by today's announcement of six additional country partners."

Mark Dreyfus QC, Australia's Vice Minister, Ministry of Climate Change and Energy Efficiency:

"Australia is committed to taking action to reduce short lived climate pollution. The science suggests that acting quickly to reduce SLCPs, which have a strong warming impact, has the potential to slow down warming by 2050. Tackling these pollutants is also beneficial to human health, air quality, crop yields and ecosystems."

Jochen Flasbarth, President of the Federal Environment Agency, Germany:

"Germany fully supports the CCAC and the common target to reduce significantly short lived climate pollutants. We believe that activities under the

CCAC can play an important role by helping increase mitigation ambition before 2020 on our way to a new climate treaty under the UNFCCC."

Remarks by US EPA Administrator Lisa P. Jackson, on the Montreal Protocol's 25th Anniversary (Washington, DC, 19 September 2012):

"We've accomplished so much [under the Montreal Protocol] – and we're on the path to return to pre-1980 ozone levels. But we know there are new challenges emerging. For example, it has become clear that, while safe for the ozone layer, some alternatives are also greenhouse gases. Over time, these gases could aggregate and erode some of the Montreal Protocol's climate gains. Given the treaty's history of flexible accommodation to new science, we are confident that we'll be able to address new challenges as effectively as the old ones. The United States, along with our partners Canada and Mexico, have taken steps to respond to recent scientific findings by creating the North American Proposal to amend the Montreal Protocol. This proposal uses the treaty's proven tools to help us fight climate change globally. I have said before that – when it comes to climate change – the Montreal Protocol contains the seeds of success. Those seeds have been planted. Let's continue to harvest them."

Remarks by US Special Envoy for Climate Change Todd Stern at Dartmouth College (Hanover, New Hampshire, U.S., 2 August 2012):

"In February, Secretary Clinton announced a new effort, the Climate and Clean Air Coalition, committed to reducing so-called "short-lived climate pollutants," such as methane, black carbon and HFCs. Together, these agents account for over 30% of current global warming, millions of premature deaths, and extensive crop losses. We started with six countries and have already grown to some twenty countries and ten non-state partners. We have created a Science Advisory Panel, brought on other key players like the World Bank, and so far have \$20 million in committed funds. We are implementing scaled-up, real-world initiatives to attack large sources of emissions, such as methane from landfills and from oil and gas production; black carbon from heavy-duty diesel engines; and HFCs used in refrigeration and air conditioners."

Joint Statement issued at the conclusion of the 11th BASIC Ministerial Meeting on Climate Change (Johannesburg, South Africa, 13 July 2012):

"Ministers ... identified the need for further scientific and technical analysis by experts of relevant issues, including ... short-lived climate forcers."

Remarks by Former United States Secretary of State Hillary Rodham Clinton at the Climate Clean Air Coalition and Green Embassy Event (Helsinki, Finland, 27 June 2012):

"And last week, at the sustainability conference, Rio+20, the coalition launched a new initiative to reduce methane and other pollutants from landfills. We have encouraged and enlisted mayors from several major world cities. We also have the World Bank on board, and other countries are joining. In fact, all of the G-8 countries recently signed up to the coalition at the last meeting.

But we're not stopping there, because we formed this coalition for the purpose of taking action, and demonstrating globally that we can actually do things, that we can translate our concerns and our words into actions and results. In partnership with the UN

Environment and Development Programmes, the European Commission, and key private sector companies, we are co-hosting a conference in Bangkok this July to showcase new technologies that can drastically reduce the need for HFCs in refrigeration and air conditioning.

Here is a perfect example of the problem: As you have a growing middle class in countries like India and China, where the climate can often get very, very hot, you have an increasing demand for air conditioning. The increasing demand for air conditioning in turn puts more HFCs into the air, thereby creating more of a problem from the short-lived pollutants. So what we want to do is try to get ahead of this, not to tell people – certainly, we in the United States are in no position to tell people, “Look, you’ve lived without air conditioning for thousands of years; you can keep doing it for the sake of the climate.”

No, instead we want to say, “Look, as you have developed, as your incomes have risen, we know that you want to take advantage of air conditioning, but let’s see if we can find a way to do that that is more climate-friendly.” And that is part of the mission that we have in this new coalition.”

Plenary Remarks by Former United States Secretary of State Hillary Rodham Clinton at Rio+20 (Rio de Janeiro, Brazil, 22 June 2012):

“[E]arlier this year, I was privileged to host six countries in the United Nations Environment Program as we launched the Climate and Clean Air Coalition. The goal is to reduce short-lived climate pollutants that cause more than 30 percent of current global warming, as well as millions of premature deaths and extensive crop losses. We know we have to keep working together on CO₂, but we think that our Climate and Clean Air Coalition, to which many more countries are joining, and we welcome you, can take targeted action and produce results with respect to methane and black soot and HFCs.”

CCAC Rio Announcement of Solid Waste Partnership with C40 cities network (Rio de Janeiro, Brazil, 19 June 2012):

U.S. Special Envoy for Climate Change Todd Stern:

“This initiative encapsulates perfectly what we’re trying to do with the newly launched Climate and Clean Air Coalition. Countries, cities, the World Bank, and civil society partnering together to make real-world, scaled-up reductions of ‘short-lived climate pollutants,’ which cause some 30% of current warming. With this solid waste initiative, we’re making a big dent in the third-largest source of methane worldwide, and, at the same time, improving the health and environment of local communities.”

C-40 Chair and New York City Mayor Michael Bloomberg:

“Improving the management of city solid waste, including reducing the release of methane and other greenhouse gases is a top priority of many C-40 cities. The success of this partnership and of our new C40 network will move us a long way toward the greenhouse gas reduction goals we are setting.”

U.S. Special Representative for Global Intergovernmental Affairs Reta Jo Lewis:

“Urban areas contribute nearly 80 percent of global greenhouse gas emissions. At the same time, city-driven solutions can quickly reach billions. Quite literally, cities are where the rubber hits the road.

Today we are announcing a groundbreaking partnership.....cities, countries, our Coalition, the World Bank, the Global Methane Initiative, and CCI/C-40 are all joining together to reduce climate pollutants from solid waste, the third largest source of man-made methane worldwide.

And remember that methane is a substance 20 times more potent a greenhouse gas than carbon dioxide. Moreover, left unaddressed, municipal solid waste is predicted to double by 2025.

We’ll be working with cities to provide an array of common-sense, results-driven technical expertise and capacity building. And our Climate and Clean Air Coalition partner countries like Mexico, Canada, Bangladesh, the United States, Nigeria, and others will cooperate closely. We’ll also be building a knowledge platform of best practices to share with cities around the world.”

Remarks by Former United States Secretary of State Hillary Rodham Clinton and Swedish Minister for Environment Lena Ek at Climate and Clean Air Coalition Event (Stockholm, Sweden, 3 June 2012):

“MINISTER EK: ... Much as happened in the short time since we met in Washington in February to launch the Climate and Clean Air Coalition to reduce SLCPs. We were proud to host the first formal meeting of the coalition here in Stockholm in April, where we were joined by new members, and the coalition has now grown from six to 16 countries, plus the European Commission, UNEP, and the World Bank. And we especially, of course, welcome the decision of all G-8 members to join at the recent summit in Camp David.

Short-lived climate pollutants is a strange and maybe unfamiliar set of words to most, but SLCPs such as black carbon, soot, tropospheric ozone, methane, and short-lived HFCs all have some characteristics in common. They significantly contribute to global and regional warming. They also impact crop yields, deteriorate air quality, and affect human health across the globe. And they are short-lived. And just because of this, they represent a golden opportunity to slow down climate warming in the near term, even more so because they represent as much as a third of increases in average global temperature.

I believe this coalition owes to rapid success to two things. Firstly, it delivers a simple but powerful message based on science. By preventing SLCPs emissions, we can significantly reduce near-term climate change and at the same time save 2.5 million lives per year, increase crop yields and food security, and promote gender equality and women’s rights across the globe.

Secondly, this is a coalition of action. All partners bring something to the table, and in joining have agreed to take action also at home. The coalition is structured around the basic idea that we need to act now, and countries are demonstrating their will and ability to reduce domestic emissions by agreeing to implement national reduction actions on SLCPs.

It’s only through effective action on greenhouse gases that we can stop climate change. Researchers are telling us that without drastic CO₂ emission reductions we are facing

temperature increases that will be substantially higher than the two-degree target. Therefore, we are wholly committed to the UNFCCC negotiations and to making the necessary mitigation efforts at home. Measures to reduce CO₂, such as the Sweden carbon tax of 150 U.S. dollars per ton CO₂, are not only necessary but contribute to green growth and enable lower taxes in other areas and job creation in the economy....

SECRETARY CLINTON: ... The Climate and Clean Air Coalition is designed to get results for what are called – as the minister just said – short-lived climate pollutants, including methane, black carbon, and the hydrofluorocarbons. These pollutants are responsible for more than 30 percent of current global warming. And because they are also very harmful to human health and to agriculture, we can save millions of lives and tons of crops as well by acting now. This is what we call a win-win for sure.

In February, Sweden, the United States, four other nations, and the UN Environmental Program launched the Climate and Clean Air Coalition, and since then, as the minister said, we've been growing, bringing on all G-8 countries, as well as Norway, Nigeria, Denmark, and Colombia. And we were pleased when the World Bank and the European Commission signed up as well. We've also increased our funding thanks in part to contributions from Sweden and Norway. We are setting up a science advisory panel. And just in April, Sweden hosted the coalition's first ministerial meeting, when we decided on a set of global action-oriented initiatives to implement immediately.

So we have built some strong initial momentum, but we need your help. Today, Sweden and the United States are beginning a global campaign to close the information gap about short-lived climate pollutants. Few people actually know about the impact we could have on global warming if we aggressively target them. And fewer still know that many cost-effective solutions already exist and are just waiting to be broadly implemented....

Now, included in the group that Minister Ek and I met with were leading Swedish companies also supporting this effort, because we know we cannot solve this crisis without the active cooperation and, indeed, the leadership of the private sector, particularly oil and gas companies, makers of diesel trucks, green tech companies that can help turn methane from landfills into clean energy. Today, for example, representatives from Volvo, Mack Trucks talked about how to cut down black carbon worldwide, 20 percent of which is emitted by the transportation sector.

Major reductions of short-lived pollutants can be done inexpensively and with existing technologies. Experts tell us, for example, that one third of all methane leaked and vented by oil and gas companies can be avoided at a net cost of zero dollars or zero kroner. So we need to convince decision makers everywhere, political leaders, CEOs, civil society leaders, investors, and students that this is one of those areas where we can show tangible progress almost immediately and that we can do it in a cost-effective way.

Here are just a few concrete examples. We're launching an initiative focused on hydrofluorocarbons. By 2050 – 2050 – at the current rate, these greenhouse gases could grow to nearly 20 percent of carbon dioxide emissions. So we will start by holding a technology conference in Bangkok in July to showcase new technologies that can eliminate the need for these potent greenhouse gases in refrigeration and air conditioning. At the upcoming sustainability conference in Rio, we'll launch an initiative working with cities to reduce methane and other pollutants from their waste systems, and we will be working with oil and gas companies to take advantage of all the currently available zero-cost options.

Now, we're aware that reducing these short-lived pollutants by themselves will not solve the collective crisis facing the world. We must also aggressively reduce carbon dioxide emissions, which we know remain the principal contributor to climate change and last in the atmosphere for generations. And countries and people around the world, like Sweden and Norway and Denmark, where I just visited, are taking bold actions....

And while we continue to work on bringing down carbon dioxide emissions and finalizing an international agreement, let's also deliver a blow to methane, black carbon, and HFCs. We are poised to do both, and we should.

Now, I began my day yesterday in the high north, in Tromso, Norway, where we saw some breathtaking views and where we toured the waters on a research vessel, listening to marine biologists and sea ice experts and others explain the changes that have come to the Arctic. The waters don't freeze, even in the dead of winter. The ice shelves that have crumbled no longer protect coastlines from erosion. Species are at risk. And it's such a reminder to be in a beautiful place like Stockholm, or yesterday in Tromso, that we inherited a fragile, marvelous planet, and it's our duty to protect it.

So we're very grateful, once again, to be working hand in hand with Sweden. We've already made progress on the Climate and Clean Air Coalition in less than four months. And we're going to continue working closely with Sweden and our other partners. And we are determined to take aggressive action in the months ahead. We can do no less. Thank you all very much. (Applause.)"

Remarks by Former United States Secretary of State Hillary Rodham Clinton and Norwegian Minister Jonas Gahr Stoere (Tromso, Norway, 2 June 2012):

"[T]he United States and Norway are committed to ... do all we can to prevent and mitigate the effects of climate change. I'm highlighting a new partnership that I started called the Climate and Clean Air Coalition, and we're very pleased that Norway is a member. And it is to focus on what are called short-lived climate pollutants – methane, black carbon, hydrofluorocarbons – which make up at least 30 – somewhere between 30 and 40 percent of the greenhouse gas emissions.... [W]e just heard the impact of burning (inaudible) fuels and putting all that black carbon and soot into the air. It then lands on the ice and you know rest.

So I want to thank Norway for joining the Climate and Clean Air Coalition and making an initial commitment of one and a half million dollars, and also a pledge by Norway of one million dollars specifically to target black carbon across the Arctic. I'm very grateful that we had a chance to meet with the head of Statoil and representative of new Norwegians and ExxonMobil to talk about ways that oil and gas companies are already reducing methane and black carbon emissions from their own production, what more they believe can be done, and how we can bring other companies into this effort to capture your vented, leaked, and flared natural gas, and to cut emissions by up to one-third with no net cost at all. That would make a significant impact on climate change without hurting any oil or gas company's bottom line, and it's exactly the kind of private and public cooperation we need to pursue and that this new coalition is determined to try to bring about."

Remarks by Former United States Secretary of State Hillary Rodham Clinton at the launch of the Green Partnership for Growth (Copenhagen, Denmark, 31 May 2012):

“[T]his year we launched the Climate and Clean Air Coalition, which brings together governments, the private sector and key organizations around the world to work toward reducing short-lived climate pollutants, which cause more than 30 percent of near-term warming. Reducing short-lived pollutants is an important complement to the work we must do to reduce carbon emissions. And I’m delighted, Prime Minister, that Denmark has agreed to join the Climate and Clean Air Coalition.”

Joint Statement by the Danish EU Presidency and Commissioner Potocnik welcoming new international agreement to tackle air pollution (Brussels, Belgium, 7 May 2012):

“Today the EU reached an international agreement to ... [amend] the Gothenburg Protocol [to the Convention on Long-range Transboundary Air Pollution], setting more ambitious targets to reduce trans-boundary air pollution. The revised objectives of the Protocol will see a reduction in EU emissions of around 60% for sulphur, 40% for nitrogen oxides (NOx), 30% for volatile organic compounds (VOCs), 6% for ammonia and 20% for particulate matter compared to 2005 levels. There's also agreement to act on so called 'Black Carbon', a pollutant with short-lived climate forcing characteristics.

This is a significant step forward in protecting citizens’ health and the environment. For the first time, we have an international agreement that acknowledges the link between air pollution and climate change. By agreeing to regulate one of the contributors to climate change, 'Black Carbon', we will see positive impacts at both local and international level”, said Janez Potočnik, European Commissioner for the Environment.”

Svalbard Declaration on Shortlived Climate Forcers (Svalbard, Norway, 27 March 2012):

“We, the environment ministers of Denmark, Finland, the Faroe Islands, Iceland, Norway, Sweden and Åland, discussed what we can do to cut global and Nordic emissions of short-lived climate forcers, such as black carbon and methane...

Based on our close co-operation and shared values, we, the Nordic environment ministers, will intensify our efforts to reduce emissions of SLCFs at national, regional and global level.

We will act as a driving force and work more closely together in international fora to advocate more ambitious international regulation of emissions of greenhouse gases and SLCFs.”

Nuuk Declaration, Seventh Ministerial Meeting of the Arctic Council (Nuuk, Greenland, 12 May 2011):

“Welcome the Arctic Council reports on Short-Lived Climate Forcers (SLCF), that have significantly enhanced understanding of black carbon, encourage Arctic states to implement, as appropriate in their national circumstances, relevant recommendations for

reducing emissions of black carbon, and request the Task Force and the AMAP expert group to continue their work by focusing on methane and tropospheric ozone, as well as further black carbon work where necessary and provide a report to the next Ministerial meeting in 2013, ...

Decide to establish a Short-Lived Climate Forcer Contaminants project steering group that will undertake circumpolar demonstration projects to reduce black carbon and other SLCF emissions....”

Joint Statement issued at the conclusion of the 6th BASIC Ministerial meeting on Climate Change (New Delhi, India, 27 February 2011):

“HFC gases are not ozone depleting substances but some of these have high global warming potential. The Ministers felt that the issue of phase down of HFCs with high global warming potential required in-depth examination.”

Tromsø Declaration, Sixth Ministerial Meeting of the Arctic Council (Tromsø, Norway, 29 April 2009):

“Urge implementation of early actions where possible on methane and other short-lived climate forcers, and encourage collaboration with the Methane to Markets Partnership and other relevant international bodies taking action to reduce methane and other short-lived forcers,

Decide to establish a task force on short-lived climate forcers to identify existing and new measures to reduce emissions of these forcers and recommend further immediate actions that can be taken and to report on progress at the next Ministerial meeting,”

Remarks by Former United States Secretary of State Hillary Rodham Clinton, Joint Session of the Antarctic Treaty Consultative Meeting and the Arctic Council, 50th Anniversary of the Antarctic Treaty (Baltimore, U.S., 6 April 2009):

“There are also steps we must take to protect the environment. For example, we know that short-lived carbon forcers like methane, black carbon, and tropospheric ozone contributes significantly to the warming of the Arctic. And because they are short lived, they also give us an opportunity to make rapid progress if we work to limit them.”

National Legislators

Letter from U.S. Members of Congress Urging EPA Administrator McCarthy to Accelerate Phase-down of Hydrofluorocarbons (Washington DC, U.S., 3 December 2013):

“We are writing to ask your agency to pursue commonsense policies that accelerate the replacement phase down of hydrofluorocarbons (HFCs) in this country and globally. We believe the agency can ensure we continue to have affordable, safe refrigeration and air conditioning, while also driving greenhouse gas emissions down...Recognizing that it may take some time to amend the Montreal Protocol and incorporate those changes into US regulations, we believe the EPA does not need to wait to implement smart policies that can help accelerate these transitions in the United States and globally. We

encourage you to focus your agency on HFC applications where technology solutions and alternative products are already available or soon to be in the market, similar to what the European Union has done with their Mobile Air Conditioning Directive. The agency should look to where market transitions are already underway and where EPA action could hasten the pace of those transitions, both domestically and elsewhere. We think that such actions would not only have significant cost-effective environmental benefits but would also strengthen the Administration's hand in the Montreal Protocol negotiations."

International Financial Institutions

Global Environment Facility, [GEF-6 Programming Directions](#) (Washington DC, U.S., 24 February 2014):

"CLIMATE CHANGE MITIGATION FOCAL AREA STRATEGY

...

14. GEF resources play a key role in piloting emerging innovative solutions, including technologies, management practices, supportive policies and strategies, and financial tools. Examples for GEF-6 include piloting advanced energy technologies, support for performance-based mechanisms, mitigation or reduction of emissions of short-lived climate forcers (SLCFs), as well as promotion of de-risking tools. Support in these areas elucidates the potential for systemic change by partners and other financing institutions in position to mobilize much larger-scale financing.

...

35. ... Technologies and options with potential for large-scale GHG reduction will be considered for support, including but not limited to: smart grid technologies; short-lived climate forcer (SLCF) reduction measures;

...

36. In particular, reducing the concentration of SLCFs has the potential to slow the rate of global warming over the next two to four decades, as they tend to have much stronger global warming potentials compared to CO₂. In response to the time-sensitive needs, GEF's support may include reducing emissions from sources such as vehicles, engines, brick kilns, cook stoves, and open burning of agricultural and other wastes, and other forest and land-based sources, through measures including energy efficiency improvements, alternative technologies and appliances with lower emissions, improved management practices in agriculture, livestock, forest, and land-use sectors, as well as mitigating methane emissions through upgrading wastewater treatment works. SLCF-reduction will be supported according to the provision of the Conventions for which the GEF serves as the financial mechanism. Ensuring that gender is taken into consideration in these areas is critical for community engagement and uptake. These efforts may bring about co-benefits of reducing local and regional pollutants such as particulate matter, as well as socio-economic benefit.

...

56. *This Program targets urban interventions with significant climate change mitigation potential, to help cities shift towards low-emission urban development. Projects may be submitted under this Program 3 to address mitigation goals... Examples of projects eligible for support under Program 3 include:*

...

(f) Initiatives to assess and reduce the impacts of SLCFs at the urban level.

...

57. *Furthermore, multi-focal and multi-trust fund projects addressing urban issues may access Program 3 for mitigation action, while combining other focal area resources for the following:*

(a) Promotion of sustainable production and consumption practices to de-couple urban growth and resource use, to reduce use of persistent organic chemicals (POPs) and other chemicals, methane and other SLCF emissions, mercury or lead, and e-waste generation.

(b) Phase-out of ozone depleting substances, with energy efficient and low GHG potential options.

...

60. *The LULUCF and the agriculture sectors represent major GHG emission sources, accounting for approximately 31% of global emissions. Methane (CH₄) and nitrous oxide (N₂O) emissions from the agriculture and to a lesser extent forestry sectors represent 14% of global emissions. Globally, agricultural CH₄ and N₂O emissions have increased by nearly 17% from 1990 to 2005. These emissions were not explicitly included in previous GEF strategies. GEF-6 support is extended to mitigate them.*

61. *The GEF-6 Climate Change Mitigation Strategy for LULUCF and agriculture will support projects that are designed to be adequate in scale and scope to mitigate climate change with additional attention to address leakage. Projects supported by this Program will be expected to address the root causes of forest carbon and other land use emission and emissions from agricultural practices. Within such focus, this Program may also be used to address mitigation potential within the context of food security projects, and to strengthen and improve the MRV of the GHG emissions and carbon sequestration. Initiatives to address SLCFs will also be considered for support. The GEF will provide support for the four areas described in the following sections.*

...

64. *Illustrations of potential application include mitigation efforts in peatland and blue carbon. Deforestation and drainage of peatlands generate emissions of approximately 2 to 3 gigatonnes of CO₂ each year, most of which could be attributed to conversion of peatlands to agricultural areas. The Program will support protection of carbon reservoirs in peatlands and technologically viable measures to restore such sinks, in addition to reforestation. Measures to address SLCF emissions from peat fires may also*

be supported. With an integrated approach on riverine and coastal zones, particularly coastal peatlands, combining mitigation and adaptation objectives, the program will enable countries to protect blue carbon stocks in these ecosystems and harness their ability to function as a carbon sink and a natural infrastructure.

...

66... The CH₄ emission reduction options may include improved livestock management, improved wetland rice fields irrigation, reduced emissions from organic soils, and better waste management in intensive livestock systems. The program may provide support to control slash and burn shifting agriculture and open burning practices.

...

CHEMICALS AND WASTE FOCAL AREA STRATEGY

...

15. The GEF will also seek to encourage projects that combine multiple focal areas and trust funds to help deliver multiple benefits within the chemical and waste cluster and with other focal areas... Another example is the opportunity for the financial mechanisms of the GEF and Montreal Protocol Multilateral Fund to cooperate on mobilizing resources to maximize the climate benefits of the hydrochlorofluorocarbons (HCFC) phase-out and ODS destruction.

...

Program 5: Complete the phase out of ODS in CEITs and assist Article 5 countries under the Montreal Protocol to achieve climate mitigation benefits

40. The GEF currently provides assistance under this program for the completion of the phase-out of HCFCs in countries with economies in transition (CEITs). This program will support HCFC phase-out management plans (HPMPs) and production sector plans . Based on data reported to the Ozone Secretariat, it is projected that 303.44 ODP tons remain to be phased out in these countries.

41. Under GEF-5, consideration of the nexus and potential synergies between ozone protection, climate mitigation, and chemicals program was initiated (e.g. GEF/C.42/09), and in 2013 the Secretariats of the GEF and Multilateral Fund have made substantial progress in discussions on cooperation between the two financial mechanisms to mobilize future resources to maximize the climate benefits of the HCFC phase-out and ODS destruction. Such cooperation could extend to other developing country Parties operating under Article 5 of the Montreal Protocol (“Article 5 countries”), with possible GEF assistance forming complementary financing to that being provided under the Multilateral Fund.

42. There are significant climate benefits from replacing HCFCs with climate friendly alternatives and replacement of HCFC dependent technology with more energy efficient technologies. Work is underway to phase out HCFCs in countries considered Article 5 Parties in the Montreal Protocol. The Multilateral Fund provides financial assistance to these countries, as per the guidelines of the Executive Committee, the most cost-effective alternative that may or may not fully address the most climate benefits that could

potentially be achieved from this process. As a result, Article 5 Parties have approached the GEF to co-finance additional activities in HCFC phase-out program which could cover climate co-benefits that are not eligible for funding under the Multilateral Fund, and would introduce those elements that would maximize climate and ozone benefits. For this purpose, special programs will be established to promote linkages in Article 5 countries to assist in the phase-out of HCFCs. This will only apply to manufacturing of appliances and foams, and the refrigeration servicing sector and will cover only energy efficiency gains, i.e. climate mitigation benefits, associated with action being taken using other funding sources by the Article 5 countries, only when these elements are clearly not eligible for funding under the Multilateral Fund.”

The World Bank Feature Story, [World Bank Group President: This Is the Year of Climate Action](#) (Washington DC, U.S., 23 January 2014):

“Another important move that can make a difference quickly: By reducing short-lived climate pollutants, such as soot from fires and diesel vehicles and methane from landfills and extractive industries, countries can reap a double reward of reducing the impact on snow and glaciers and lowering the costs to human health and crops.”

Blog post by program manager in the World Bank’s Climate Policy and Finance Department, Karin Shepardson, [Celebrating Success, Ongoing Challenges, and Opportunities that face the Montreal Protocol](#) (Washington DC, U.S., 16 September 2013):

“In my view, the Protocol, through its projects and partnership with relevant industry, is and can continue to make a marked impact in the fight to tackle climate change. One cross-cutting challenge is tied to the growth in the use of another class of chemicals, hydrofluorocarbons (HFCs), which may open newer areas of work under the Protocol. HFCs pose no harm to the ozone layer but they do have a high GWP and the growth in their use has been fueled by the phase-out of ozone depleting substances and rapid urbanization.

Certain HFCs are also [Short-Lived Climate Pollutants](#) (SLCPs), named for their relatively short lifespan in the atmosphere. Phasing-in low global warming potential and non-HFC alternatives can therefore, have a rapid net positive effect on the climate, while complementing longer term CO₂ mitigation efforts. Recently, the World Bank launched a new report, [Integration of Short-lived Climate Pollutants in World Bank Activities](#), which identifies places where the World Bank can do more through its projects to reduce the emission of SLCPs including HFCs.

International Ozone Day offers the opportunity to remind ourselves that work undertaken to protect the atmosphere also yields beneficial results at ground level that can influence, for example, the development of climate smart cities through targeted energy efficiency measures, or the opportunity to minimize HFC phase-in where possible, for example in urban, disaster recovery, health, and agriculture sectors.”

Blog post by World Bank Senior Carbon Finance Specialist Brice Jean Marie Quesnel, [Reducing Methane with Innovative Finance](#) (3 September 2013):

One key to addressing climate change is attracting private capital to finance low-carbon sustainable development. For 2013, the World Bank estimates over [US\\$1 trillion](#) will

flow to developing countries from private sources. In order to increase capital flows to finance low-carbon investment, many forms of innovation are needed. One source of innovation could come in the shape of results-based finance (RBF). RBF, also known as pay-for-performance, was pioneered in the health sector and serves as the backbone of anticipated payments for [protecting forests](#). It is increasingly being considered as a means for financing the adoption of low-carbon development pathways and greenhouse gas (GHG) emissions abatement. RBF provides payments for success, and only upon the delivery of pre-defined, verified results.

To see how such a results-based approach to mobilizing private sector funding could work in methane reduction, the World Bank convened - at the request of the G8 - a dedicated study group which looked at the role that pay-for-performance mechanisms could play. The [resulting report from the methane finance study group](#) found that, when implemented, pay-for-performance provided by a credit-worthy third party can be a powerful catalyst for private investment. There is potentially much wider scope for the use of pay-for-performance mechanism in climate finance for its deployment to target other GHGs in addition to methane.

However, the potential to reduce methane could be considered a 'quick-win' as the report, titled *Using Pay-for-Performance Mechanisms to Finance Methane Abatement*, found that almost 850 million tons of carbon dioxide equivalent from 1,200 not yet built or idle methane abatement projects could be mobilized quickly by a pay-for-performance facility. Beyond these already identified projects, the study group found that as much as 8,200 million tons of carbon dioxide equivalent could be reduced from methane projects in developing countries by 2020, if a \$10-per-ton of pay-for-performance incentive could be provided.

It is also clear that such a facility could take advantage of the tools and experience that has emerged under the [Clean Development Mechanism](#) and carbon markets. The approach would build on existing infrastructure – such as auditing firms and accounting methodologies - to verify the reduction of methane, thus saving cost and time. Other innovative ways to contract for methane reductions using instruments borrowed from capital markets, such as put options, could be applied to maximize the demonstration effect of the facility. For example, auctions can allocate resources, which would guarantee that the facility would pay a fair price to achieve results.

Beyond methane, a pay-for-performance approach could be applied to abate other short-lived climate pollutants (SLCPs), such as black carbon, and find even broader applications in climate mitigation finance.

This week in Oslo, the [High Level Assembly of the Climate and Clean Air Coalition](#) (CCAC) met to discuss what can be done to reduce SLCPs. Recent estimates suggest that SLCPs contribute to between 40 and 45 percent of the total warming ([Molina et al. 2009](#); [Bond et al. 2013](#) (pdf)).

Even within the World Bank, the [potential to reduce short-lived climate pollutants exists](#) as demonstrated by a recent report. This report, titled [Integration of Short-Lived Climate Pollutants in World Bank Activities](#), reviewed the World Bank projects and has identified ways in which the World Bank Group could do more to reduce short-lived climate pollutants. The hope is that this report would lead to bigger and better things for reducing SLCPs within the World Bank projects. Here in Oslo and beyond, we are eager to sit down with our CCAC partners and others stakeholders to discuss how to

practically innovate and implement new approaches to finance projects that abate critical pollutants.

The World Bank Feature Story, [Cutting Short-Lived Climate Pollutants: A Win-Win for Development and Climate](#) (Washington DC, U.S., 3 September 2013):

STORY HIGHLIGHTS

- *Reducing short-lived climate pollutants, such as black carbon, methane, and hydrofluorocarbons, can provide immediate benefits for health and agriculture and fight climate change.*
- *Analysis of the World Bank portfolio shows that between financial years 2007 and 2012, 7.7 percent of World Bank commitments - approximately US\$18 billion - went into "SLCP-relevant" activities.*
- *A new report identifies ways that the World Bank through its projects can further help reduce short-lived climate pollutants.*

Some of the easiest targets for lowering greenhouse gas emissions are right in front of us every day: black carbon from diesel-fueled vehicles and solid fuel cooking fires, methane from solid waste, hydrofluorocarbons from aerosols.

These are short-lived climate pollutants, named for their relatively short lifespan in the atmosphere. Reducing them now can buy time as countries work to lower their longer-lasting carbon emissions, and their reduction can provide immediate co-benefits for health and agriculture at the same time.

A new report, "[Integration of Short-Lived Climate Pollutants in World Bank Activities](#)," identifies ways that the World Bank can do more through its projects to reduce the emission of the short-lived climate pollutants (SLCPs): black carbon, methane, tropospheric ozone, and fluorinated gases known as HFCs.

The review highlights ways the Bank's investments are already reducing SLCPs and shows where potential exists for even greater reduction. It discusses a wide range of SLCP-reducing activities, including:

- *bus and rail-based transport systems, which can reduce black carbon emissions and have strong, local public health co-benefits;*
- *solid waste collection and disposal methods that can reduce methane emissions;*
- *improved cookstoves and kilns that can reduce black carbon; and*
- *rice irrigation and wastewater management that can lower methane emissions and have global benefits to agricultural productivity and health.*

From financial years 2007 to 2012, 7.7 percent of World Bank commitments – approximately US\$ 18 billion – went into "SLCP-relevant" activities in energy, transport, roads, agriculture, forestry, and urban waste and wastewater. The report suggests that more can be done.

The report, prepared at the request of the G8, was released today by World Bank Vice President for Sustainable Development Rachel Kyte at the High-Level Assembly of the [Climate and Clean Air Coalition](#)

“While we continue – and must continue – to hammer away at reducing CO₂ emissions, efforts to reduce these short-lived climate pollutants can have an immediate effect on slowing warming and the resulting consequences of more extreme weather and devastating sea-level rise,” KYTE said.

“From our perspective, aggressive action to reduce SLCPs is critically important as it provides our clients, developing countries, especially the poorest and most vulnerable, a critical opportunity to adapt to our changing climate,” she said. “At the same time, reducing these pollutants can reap huge health, agriculture and other development benefits.”

According to the [United Nations Environment Programme](#) (pdf), fast action to reduce SLCPs could avoid an estimated 2.4 million premature deaths from outdoor air pollution annually by 2030 and avoid about 32 million tons of crop loss per year. It could also have a direct impact on climate change, with the potential to reduce the warming expected by 2050 by up to 0.5 degrees Celsius.

To better integrate SLCP-reducing activities into the World Bank’s day-to-day operations, the report proposes developing more comprehensive economic analysis that can account for all local and global benefits that projects could provide due to SLCP emission reductions.

“World Bank lending operations actively contribute to the sustainable development priorities of countries,” said Sameer Akbar, the lead author of the report and a senior environmental specialist at the World Bank. “Many of the activities associated with these operations also reduce SLCPs. Reduction of SLCPs can improve air quality and public health, and strengthen food security.”

“Going forward, the goal is to transform as many of the World Bank activities - with the potential to reduce emissions - into SLCP reducing activities,” said Akbar.

Projects already reducing SLCPs

The World Bank is already working on addressing some of these pollutants.

The [Mexico Sustainable Rural Development Project](#) serves as a powerful example of how SLCP reductions are already being delivered. Through a \$100 million World Bank loan, blended with a \$10.5 million GEF grant, the Government of Mexico has been able to co-fund the installation of more than [300 bio-digesters on smallholder pig and dairy farms](#), reducing manure-related methane emissions and reliance on fossil-fuel electricity while providing jobs and other economic co-benefits.

In [South Asia](#), the Bank has projects aimed at improving indoor and outdoor air quality focusing on reducing emissions from the brick making and transportation sectors.

With funding from the Montreal Protocol, [China](#) will reduce its production of hydrochlorofluorocarbons (HCFCs) by 10% between now and 2015. Overall, since 2011, [five projects that phase-out HCFCs](#) (pdf) are estimated to avoid nearly 27 million tons of CO₂ equivalent annually through alternative technology choices.

A [bus rapid transport project in Cebu, Philippines](#) (pdf), is estimated to save anywhere between US\$94 and US\$135 million in direct health costs. Additionally, [52 World Bank carbon finance projects, with an investment of US\\$543 million](#) (pdf), is estimated to avoid 150 premature deaths due to improved air quality and prevent 375,000 tons of methane emissions each year.

Earlier this year, a [report](#) by the Methane Finance Study Group (convened by the World Bank, also at the request of the G8) found that a relatively small investment could bring fast and significant reductions in the powerful greenhouse gas methane.

According to the report, reductions of as much as 8,200 million tons of CO₂ equivalent could be delivered in developing countries at less than \$10 per ton in incremental cost financing—a gap which can be closed by pay-for-performance mechanisms. Methane is over 25 times more potent than CO₂ at warming the planet.

Reuters Newsmaker Event with World Bank Group President Jim Yong Kim ([Transcript Video](#)) (London, United Kingdom 19 June 2013):

***“DR. KIM:** ... And in my recent talks with them, they said that this past winter where the pollution was so bad and the figures are coming out, now 1.2 million people died last year as a result of the pollution. I mean these folks - In China. This is the black carbon, the so-called short-lived climate pollutants that have just wreaked havoc in China. And so there's a new spirit in China. The new government, I think, is really committed to tackling climate change. And so if we can get the European countries, the United States and China to agree to really tackle this issue, that's the huge bulk of the issue. This is where we really have to make progress.*

...

***DR. KIM:** Let's just take one issue, the so-called short-lived climate pollutants- this is an issue when she was Secretary of State, Hillary Clinton really championed. I mean these have a huge impact and it's the black carbon that has had such an impact. So the black carbon is doing a bunch of things. Right now these are inefficient coal-burning factors that are spewing this black stuff in the air. We can decrease short-lived climate pollutants dramatically in a short period of time. Here's what it's doing. First of all it's getting in people's lungs and killing people. This is what we're seeing in China. But it's also going up into the air and covering the snow-capped peaks of mountains and that by making them darker it absorbs some light and it increases the melting. But if we can take action on those right now, we can actually delay the rise of temperature to two degrees centigrade. So these are not small things. If we can move rapidly to more renewables, if we can build cleaner cities and if we can institute climate-smart agriculture everywhere, we can have a very major impact on global warming and we can do it today and the real point Steve is that this is not a bleak future where nobody's showering and no one has energy. This is a bright future where people do have energy, people are living in economies that are growing but it'll just be a lot cleaner.*

...

***DR. KIM:** ... I mean, the goals that they've set for reducing their carbon footprint, for reducing short-lived climate pollutants are really, really aggressive. I'm sure you know that when the Chinese government decides to do something they move more quickly and more efficiently than just about any government I've ever seen.”*

Blog post by Principal Climate Change Specialist in the Environment Department at the International Finance Corporation, Alan Miller, [Carbon Dioxide Levels Reach Unprecedented Highs: But Catastrophic Climate Change Can Still be Avoided](#) (Washington DC, U.S., 15 May 2013):

“The good news is, recent analysis have continued to highlight opportunities for effectively slowing the rate of warming deserves extra attention. This research, by Xu and others, as noted in a recent blog by World Bank's Vice President for Sustainable Development Rachel Kyte, points to the opportunity to significantly slow global warming through efforts to reduce emissions of non-CO₂ greenhouse gases - four short-lived climate pollutants (SLCPs) – black carbon, methane tropospheric ozone and some hydrofluorocarbons (HFCs). This analysis, the first to model and compare all emission reductions on an equal basis, found that an aggressive effort to reduce the SLCPs could reduce the rate of warming by 1.1°C by the end of the century – equal to the potential from ambitious reductions in CO₂ emissions. If both strategies are implemented, it becomes possible to “to avoid reaching the 2°C threshold until 2100.”

The large benefits of reducing SLCPs despite their much larger relative atmospheric concentration of CO₂ are a function of two characteristics – their much greater impact on warming and their shorter atmospheric lifetime, which results in larger and more immediate benefits from emission reductions. The other important feature of the SLCPs is the opportunity for local benefits from emission reduction strategies, especially from controlling methane and black carbon – the latter most effectively achieved by pollution controls on diesel vehicles and cleaner cook stoves. HFC replacement is also ongoing thanks in part to funding from the Montreal Protocol, an international treaty to eliminate the production and consumption of ozone-damaging chemicals. The political path to emission reductions may therefore be easier than for reducing the use of fossil fuels and emissions of CO₂.

The World Bank publication, Turn Down the Heat, makes clear the disastrous consequences that will follow from global warming of several degrees or more. The modest good news is that we have the means and time to avoid it, while we work to reduce carbon dioxide emissions.”

Blog post by World Bank Senior Environmental Economist, Maria Sarraf, [Reducing Short-Lived Climate Pollutants, One Brick at a Time](#) (Bangladesh, 6 May 2013):

“South Asia suffers disproportionately from both indoor and outdoor air pollution due to high level of particulate matter. The four countries with the highest air pollution impact on human health are all in South Asia: India, Bangladesh, Nepal, and Pakistan. It is estimated that in India alone, about 620,000 die every year because of outdoor air pollution. Therefore, reducing SLCPs will not only reduce global warming but will also substantially improve human health.

Brick making is a major source of PM emissions because it uses outdated, inefficient, and highly polluting technologies and coal as the primary fuel in South Asia. For the same amount of coal consumed, Bangladesh, India, and Nepal produce a total of about 300 billion bricks annually, while China produces about 1 trillion bricks. Due to a massive transformation of its brick industry, China produces today more than three times the amount of bricks as Bangladesh, India, and Nepal combined while emitting less than half

the PM emissions. The potential for energy saving and emissions reduction in South Asia is huge.

The World Bank is already involved in the brick sector in South Asia through the following activities:

- *The innovative environmental project in Bangladesh, Clean Air and Sustainable Environment, aims at improving the urban air quality of Dhaka by reducing emissions from the brick making and transport sectors.*
- *The Hoffman Hybrid Kilns Carbon Finance Project includes 18 kilns in Bangladesh. By improving energy efficiency of the kilns and introduction of internal fuel use (mixing the clay with ground coal for making green bricks), each of the kilns produces about \$75,000 in carbon credits per year.*
- *In India, the Bank has successfully helped leverage carbon benefits to the Fal-G brick factories which use mainly fly ash and gypsum to produce compressed bricks. In this technology, alternative raw materials are used to replace clay. The bricks are compressed instead of fired, so no coal is used.*

More needs to be done. The World Bank study Introducing Energy-efficient Clean Technologies in the Brick Sector of Bangladesh estimates that producing one brick today in Bangladesh emits about 2.5 grams of PM and 500 grams of CO₂ and creates health damage 2.1 taka (3 cents) per brick. Transforming that industry will lead to significant reduction of premature death and health problems; it will reduce energy dependency and contribute to less warming. The current vibrant momentum of mitigating SLCPs in the global climate change arena is a good opportunity to scale up our effort in the brick sector and black carbon emissions.”

Blog post by Vice President of Sustainable Development at the World Bank, Rachel Kyte, [Fighting Black Carbon as Oceans & Temperatures Rise](#) (Washington DC, U.S., 2 May 2013):

“Aggressive action to reduce SLCPs, especially black carbon emissions, currently unregulated at the international level, can slow the advent of 2 degrees while we also work to lower CO₂ emissions. From our perspective, this is critically important as it buys our clients, developing countries, especially the poorest and most vulnerable, critical time. Slowing warming as it heads toward 2 degrees and understanding the impacts of black carbon on sea level rise in particular would be essential for island states. For them, half a meter stands between survival and devastation.

For these reasons, the Bank is committed to working with a coalition of the working that has come together around short lived climate pollutants, the Climate and Clean Air Coalition, with a particular focus in our own work now and what we can do to spur reductions in black carbon emissions and other SLCPs like methane.

Of course it’s not just a climate issue. For many, black carbon, first and foremost, is a health issue. Easily inhaled into the lungs from indoor cooking fires and from industrial and vehicle pollution, it contributes to asthma and other health problems. The benefits of reducing black carbon are immediately evident in health care costs and productivity gains.

Ramping up our work to reduce black carbon along with the ongoing fight to reduce greenhouse gas emissions to stop climate change can provide immediate, near-term and local benefits from action now, as well as long-term, public goods.”

Blog post by Vice President of Sustainable Development at the World Bank, Rachel Kyte, [Doha: Keeping Hope Alive - Just](#) (Washington DC, U.S., 12 December 2012):

“Working Coalitions

*Increasingly like-minded coalitions are forming, across dividing lines of developed and developing countries, public, private sectors and civil society, in order to get on with the business of emissions reductions. One highlight of the conference was the meeting of the **Climate and Clean Air Coalition**, a remarkable group of countries united to reduce SLCPs, short-lived climate pollutants - methane, HFCs, black carbon.*

This coalition is moving fast, driven by multiple pressing needs, including concern about the impact of black carbon on the melting of Arctic sea ice, and fast-growing countries’ need to reduce methane emissions from landfills. A serious reduction in SLCPs could help avert a 4-degree world.

At the Bank, we want to expand the SLCP-relevant part of our IDA/IBRD portfolio from 12 percent in 2012 to 15 percent by 2015 and 20 percent by 2020, and will work on payment for results for methane reduction. We also plan to increase impact on SLCPs through our GEF, Carbon Finance, Global Gas Flaring, and Montreal Protocol portfolios.

In the struggle for action, the CCAC has emerged, in the words of Lena Ek, the Swedish Minister of the Environment, as the “coalition of the working.”...

Reducing Gas Flaring

*Reducing gas flaring from oil fields – and their emissions – also gained traction at Doha. Qatar extended its membership in the **Global Gas Flaring Reduction Partnership**, which has helped cut gas flaring by 20 percent in the past decade, preventing some 274 million tons of CO₂ emissions, roughly equivalent to taking 52 million cars off the road.*

The World Bank, a founding member of the partnership, recently challenged oil producing countries to reduce flaring by 30 percent by 2017. We would welcome countries and companies from under represented oil rich regions of the world, as well as more of Qatar's neighbors into the partnership.”

Blog post by Vice President of Sustainable Development at the World Bank, Rachel Kyte, [Celebrating 25 Years of the Montreal Protocol - and Looking Ahead](#) (Washington DC, U.S., 19 September 2012):

“The Climate and Clean Air Coalition, launched earlier this year, tries to build on the success of the Montreal Protocol. It targets short-lived climate pollutants - black carbon, methane and HFCs - which accelerate climate change. These are areas where we can make real progress for the environment and for human health while we move slowly forward on CO₂. With the support of the World Bank, UNEP, and other organizations, 17 countries and the European Union have committed to reducing short-live climate

pollutants in places where it's technically and economically feasible at home and helping other countries take similar action."

Blog post by the Director of the Climate Policy and Finance Department at the World Bank, Mary Barton-Dock, [Buying Time as the Climate Clock Ticks on](#) (Washington DC, U.S., 19 July 2012):

"We've all had our moments of frustration with the unending negotiations on mechanisms to control carbon dioxide emissions. In the last Conference of Parties held at Durban in 2011, it was decided that the global deal for the post Kyoto framework will only be reached by 2015.

Meanwhile, the climate clock is ticking: countries continue to face the impacts of climate change with the poorest being hardest hit. Science has shed the spotlight on a "parallel track" which could help us deal with part of the climate change problem in a faster, cheaper way – it is tackling short-lived climate pollutants (SLCPs), primarily black carbon, methane, and hydrofluorocarbons (HFCs).

These pollutants, while being extremely potent in terms of their global warming potential are short-lived in the atmosphere. For example, black carbon persists in the atmosphere for about two weeks (compared to CO₂ that lives for up to 100 years) and is 917 times more warming than CO₂ over a 100 year timeframe (and 3,320 times over 20 years). So, action on SCLPs can help buy time in addressing the more important and longer-term greenhouse gas (GHG) emissions.

The World Bank works in sectors that emit SLCPs. For example black carbon (BC) is a component of "soot", consisting of darkly colored, fine airborne particles (aerosols) produced during incomplete combustion of fossil fuels or biomass by power utilities, waste operations, households, industry and transport. It is not a greenhouse gas but contributes to global warming by absorbing visible solar radiation in the atmosphere. As a result, when it settles on ice or snow, it leads to faster melting. [Click here to read the World Bank report on black carbon and climate change considerations.](#)

There have been a number of studies (Methane Emission Reduction Potential (pdf), Simultaneously Mitigating Near-Term Climate Change and Improving Human Health and Food Security) that show that SLCPs are harmful to health and the local environment while also having a significant impact on global climate change. The United Nations Environment Programme has recently undertaken one of the most comprehensive reports focusing on actions to address SLCPs. The findings have galvanized several global initiatives in the last few months, including several events at the recent Rio+20 conference. One of those saw participation from President Clinton, Mayor Bloomberg, and our own Vice President Rachel Kyte. (See the amateur video posted on Youtube)

The biggest intergovernmental effort initiated recently to address SLCPs is the Climate and Clean Air Coalition that aims to support countries to reduce the impacts of these pollutants. The United States along with the Governments of Bangladesh, Canada, Ghana, Mexico, and Sweden launched the coalition in February 2012. The launch meeting was organized by the US State Department in Washington DC with Secretary of State Hillary Clinton announcing the coalition.

The CCAC has since grown to almost 20 members, with all the G8 countries joining the CCAC during the last summit at Camp David. The coalition commissioned the World Bank “...to prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms.”

The World Bank Group has numerous projects that we implement that help reduce SLCPs. For example, a back of the envelope analysis for methane and black carbon showed about \$12 billion of investments, or 140 projects, approved between 2006-11 support SLCP reductions. These include investment in everything from cleaner fuels, better urban landfill management and cleaner cookstoves. We also support important partnerships to reduce SLCPs, such as the Global Gas Flaring Reduction Partnership (GGFR) which works with governments and companies in reducing the flaring and venting of associated gas. The Montreal Protocol, for which the World Bank serves as an implementing agency, is now actively promoting alternatives to HFCs where available. HFCs are human-created gases used to replace ozone depleting substances but which are strong, short-lived global warmers by themselves.

World-wide gas flaring and venting activities add about 350 million tons of CO₂ equivalent; while venting is a major source of methane, flaring is a significant source of black carbon, though volumes in both cases (at the global level) are still unknown. A field study in Uzbekistan showed that one flare stack emitted as much black carbon per second as about 500 diesel buses. GGFR is currently funding cutting-edge research into methodologies that will help quantify and identify the black carbon – invisible to the naked eye – so that it can be tackled. (Watch this demo on a new tool that quantifies black carbon emissions from a gas flare in Mexico.)

I think dealing with SLCPs is a very good example of a triple win. These are good development solutions that reduce local pollution and its impacts on health and agricultural production, and help address the global challenge of climate change without getting mired in controversy over global commitments.

Slowing climate change, improving health outcomes and improving food production – not a bad day’s work!

As part of our contribution to the Climate and Clean Air Coalition, we will be zooming into these issues and gathering more evidence on the nature and impact of SLCPs through our portfolio, and what we can do to improve the evidence and analysis around them, and address them, including through innovative financing mechanisms.”

World Bank Group [Environmental Strategy 2012-2022: Toward a Green, Clean and Resilient World for All](#) (Washington DC, U.S., 5 June 2012):

“The emerging scientific evidence on the climate impacts of short-lived climate forcers (SLCFs) such as black carbon and ozone, which were until recently considered just local air pollutants, also provides a good opportunity to address climate change through WBG operations. It is increasingly evident that addressing SLCF emissions from transport, energy, and agriculture .can help “buy time” for climate actions, given the short atmospheric life span but very high warming potential of such emissions.... (p. 60)

With the Montreal Protocol engaged in the phaseout of hydrochlorofluorocarbons through 2030, it is viewed as a key partner in addressing climate change. The WBG will promote alternatives to the use of ozone depleting substances that also maximize climate benefits through adoption of climate-benign substances where feasible and improvement of energy efficiency in related equipment. The World Bank will help developing country partners worldwide reduce and phase out both the production and use of ozone-depleting substances.... (at p. 58)

The World Bank will work with its partners and carbon finance funds to scale up use of a new generation of stoves to help reduce indoor pollution, benefit women and girls, and reduce pressure on the environment.... (p. 56)”

UNEP

Guardian Sustainable Business Blog post by UN Under-Secretary General and Executive Director of the UN Environment Programme Achim Steiner, [Davos 2014: Achim Steiner insider diary](#) (Nairobi, Kenya, 25 January 2014):

“Next came 'short-lived climate pollutants' - part of this years' Davos focus on climate change. After working in UNEP for five years to mature cutting edge science into options for action, one of those Davos moments happened.

Major business leaders and public officials agreed to join hands in moving on HFCs, methane and black carbon, which drive global warming but also affect our health and economies. Its like teeth wheels clicking into place - you know you have changed gears.”

Quotes by UN Under-Secretary General and Executive Director of the UN Environment Programme Achim Steiner, [UN Environment Head Welcomes Signal to Combat Climate Change by World's Two Largest Economies](#) (Nairobi, Kenya, 9 June 2013):

“Mr Steiner said the announcement, made by President Barack Obama and Chinese President Jinping Xi at their retreat in California this weekend could signal a new and perhaps transformational chapter in international cooperation on climate change.

...

Mr Steiner said: ‘Along with a variety of recent signals from several key countries including China and the United States, this one on HFCs by these two key economies is welcome as the world moves towards a universal UN treaty on climate change by 2015 - certainly allowing the market for HFCs to grow will only aggravate the challenge of combating climate change’.

...

It is widely recognized that securing a meaningful treaty and keeping an average global temperature rise under 2 degrees C this century will require all hands on deck-what however must not be overlooked or sidelined is the urgency to also tackle the principle

greenhouse gas, carbon dioxide, as part of negotiations underway under the UN climate convention,' he said.

'The signal from China and the United States in respect to HFCs is important as both a confidence builder and if it paves the way to a universal agreement involving all nations that reflects the science of where all emissions are today and where they need to be by a series of deadlines beginning with 2020,' said Mr Steiner. "

Policy Statement by UN Under-Secretary General and UNEP Executive Director Achim Steiner at the Opening of the First Universal Session of the Governing Council of UNEP (Nairobi, Kenya, 18 February 2013):

"KEY RESULTS AND ACCOMPLISHMENTS IN 2012

In 2012, the United Nations Environment Programme (UNEP) has confirmed its role as a convener, facilitator and provider of scientific assessments and analyses to catalyze international policy responses and action. It is also a service provider for major programmes at the national and regional levels. The growing confidence in UNEP's capacity to deliver quality services is reflected in the number of mandates awarded to UNEP by Member States and intergovernmental bodies in 2012.

- Within 10 months of its launch, the **Climate and Clean Air Coalition**, a global partnership to address short-lived climate pollutants, registered 49 members, secured pledges of USD 16.5 million and designated UNEP to provide the Secretariat....*

UNEP'S DELIVERY OF THE PROGRAMME OF WORK IN 2012...

The climate change sub-programme aims to strengthen the ability of countries, particularly developing nations, to integrate climate change responses into national development processes.

After more than ten years supporting the science of short-lived climate pollutants, through initiatives such as the Atmospheric Brown Cloud, UNEP and a group of governments ranging from the United States and Sweden to Bangladesh and Mexico launched the Climate and Clean Air Coalition (CCAC).

The coalition's aim is to leverage existing initiatives and launch new ones to fast track cuts in emissions of black carbon or soot, methane and a group of hydrofluorocarbons (HFCs) — it complements an opportunity to support the work of the UN Framework Convention on Climate Change (UNFCCC) while also saving over 2.5 million lives and more than 30 million tonnes of crops.

Since February 2012, the CCAC has grown to 49 government and non-governmental partners, with UNEP as the secretariat. The focus has been on developing and implementing priority action plans."

Remarks by UN Under-Secretary General and UNEP Executive Director Achim Steiner, at the Opening of COP 4 of the Tehran Convention—the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Moscow, Russia, 12 December 2012):

“... We meet here just days after the UN Climate convention meeting in Doha. One bright spot in the meeting was a new voluntary initiative called the Coalition for Climate and Clean Air. It now totals over 50 partners since being launched in February this year with six countries plus UNEP. It aims to catalyze action on so called short lived climate pollutants including black carbon or soot and methane.

I would urge oil and gas producers within this region to see if they wish to be part-one of the Coalition’s targets is fast action to cut black carbon and methane from oil and gas industry operations including flaring.

All in all, if these short lived climate pollutants can be addressed, then we could see perhaps a 0.5 degrees C temperature benefit up to 2040-as much as 0.7 degrees C in the Arctic- as well as significant health and agricultural wins.”

UNDP

Quotes by UNDP Administrator Helen Clark, UNDP welcomes China-US agreement to combat climate change (New York, U.S., 11 June 2013):

“UNDP Administrator Helen Clark said today that joint activities by the world’s two largest economies can give impetus to climate change mitigation, negotiations and efforts.

...

‘UNDP is urging developed countries to extend financial and technological support to developing countries so that they can leapfrog to ozone- and climate-friendly technologies,’ Helen Clark said.

‘UNDP is committed to supporting developing countries to transform their economies through the use of environmentally sound technologies.’”

Montreal Protocol/HFCs

The Brussels G-7 Summit Declaration (Brussels, Belgium, 5 June 2014):

“We, the Leaders of Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, the President of the European Council and the President of the European Commission, met in Brussels on 4 and 5 June 2014.

...

We will work together and with others to phase down the production and consumption of hydrofluorocarbons (HFC) under the Montreal Protocol. We will also continue to take action to promote the rapid deployment of climate-friendly and safe alternatives in motor

vehicle air-conditioning and we will promote public procurement of climate-friendly HFC alternatives.”

Council of the European Union, [Council Adopts Regulation on Fluorinated Greenhouse Gases](#) (Luxembourg, 14 April 2014):

“The Council today adopted a regulation on fluorinated greenhouse gases (F-gases) ([PE-CONS 1/14](#), [PE-CONS 1/14 COR 1](#), [7929/14 ADD 1](#)).

The new regulation will allow to reduce F-gas emissions in the EU by two-thirds of today's levels by 2030. The use of F-gases in some new equipment, such as refrigerators and air conditioners, will be banned where viable and more climate-friendly alternatives are readily available. The new regulation will not only contribute to the achievement of the EU climate and environmental objectives, but it will also create business opportunities for EU companies on the market for alternative technologies.

The regulation is aimed at protecting the environment by reducing emissions of F-gases. It establishes rules regarding containment, use, recovery and destruction of those gases. In addition, the new law imposes conditions on the placing on the market of products and equipment containing or relying upon F-gases, whilst setting out quantitative limits for the placing on the market of hydrofluorocarbons (HFC).

The regulation also introduces bans on the placing on the market of the following products:

- *domestic refrigerators and freezers containing HFCs with a global warming potential (GWP) of 150 or more as from 1 January 2015*
- *refrigerators and freezers for commercial use containing HFCs with a GWP of 2500 or more from 1 January 2020, and containing HFCs with a GWP of 150 or more from 1 January 2022;*
- *stationary refrigeration equipment that contains or relies upon for its functioning HFCs with a GWP of 2500 or more from 1 January 2020;*
- *centralised refrigeration systems for commercial use with a capacity of 40kW or more that contain or rely upon their functioning, fluorinated gases with a GWP of 150 or more, from 1 January 2022;*
- *movable room air-conditioning appliances that contain HFCs with GWP of 150 or more from 1 January 2020;*
- *single split air-conditioning systems containing less than 3 kg of F-gases that contain F-gases with a GWP of 750 or more from 1 January 2025;*
- *foams that contain HFCs with a GWP of 150 or more, extruded polystyrene from 1 January 2020 and other foams 1 January 2023; and*
- *technical aerosols that contain HFCs with a GWP of 150 or more from 1 January 2018.*

The regulation introduces a phase-down mechanism involving a gradually declining cap on the total placement of bulk HFCs (in tonnes of CO₂ equivalent) on the market in the EU with a freeze in 2015, followed by a first reduction in 2016-2017 and reaching 21 % of the levels sold in 2009-12 by 2030.

The Regulation will apply from 1 January 2015.”

Global Environment Facility, [GEF-6 Programming Directions](#) (Washington DC, U.S., 24 February 2014):

“CLIMATE CHANGE MITIGATION FOCAL AREA STRATEGY

...

57. Furthermore, multi-focal and multi-trust fund projects addressing urban issues may access Program 3 for mitigation action, while combining other focal area resources for the following:

...

(b) Phase-out of ozone depleting substances, with energy efficient and low GHG potential options.

...

CHEMICALS AND WASTE FOCAL AREA STRATEGY

...

15. The GEF will also seek to encourage projects that combine multiple focal areas and trust funds to help deliver multiple benefits within the chemical and waste cluster and with other focal areas... Another example is the opportunity for the financial mechanisms of the GEF and Montreal Protocol Multilateral Fund to cooperate on mobilizing resources to maximize the climate benefits of the hydrochlorofluorocarbons (HCFC) phase-out and ODS destruction.

...

Program 5: Complete the phase out of ODS in CEITs and assist Article 5 countries under the Montreal Protocol to achieve climate mitigation benefits

40. The GEF currently provides assistance under this program for the completion of the phase-out of HCFCs in countries with economies in transition (CEITs). This program will support HCFC phase-out management plans (HPMPs) and production sector plans. Based on data reported to the Ozone Secretariat, it is projected that 303.44 ODP tons remain to be phased out in these countries.

41. Under GEF-5, consideration of the nexus and potential synergies between ozone protection, climate mitigation, and chemicals program was initiated (e.g. GEF/C.42/09), and in 2013 the Secretariats of the GEF and Multilateral Fund have made substantial progress in discussions on cooperation between the two financial mechanisms to mobilize

future resources to maximize the climate benefits of the HCFC phase-out and ODS destruction. Such cooperation could extend to other developing country Parties operating under Article 5 of the Montreal Protocol (“Article 5 countries”), with possible GEF assistance forming complementary financing to that being provided under the Multilateral Fund.

42. There are significant climate benefits from replacing HCFCs with climate friendly alternatives and replacement of HCFC dependent technology with more energy efficient technologies. Work is underway to phase out HCFCs in countries considered Article 5 Parties in the Montreal Protocol. The Multilateral Fund provides financial assistance to these countries, as per the guidelines of the Executive Committee, the most cost-effective alternative that may or may not fully address the most climate benefits that could potentially be achieved from this process. As a result, Article 5 Parties have approached the GEF to co-finance additional activities in HCFC phase-out program which could cover climate co-benefits that are not eligible for funding under the Multilateral Fund, and would introduce those elements that would maximize climate and ozone benefits. For this purpose, special programs will be established to promote linkages in Article 5 countries to assist in the phase-out of HCFCs. This will only apply to manufacturing of appliances and foams, and the refrigeration servicing sector and will cover only energy efficiency gains, i.e. climate mitigation benefits, associated with action being taken using other funding sources by the Article 5 countries, only when these elements are clearly not eligible for funding under the Multilateral Fund.”

Joint Statement: Deepening the EU-China Comprehensive Strategic Partnership for mutual benefit (Brussels, Belgium, 31 March 2014):

“18. Both sides recognised the need to strengthen cooperation on climate change in preparing a protocol, another legal instrument or an agreed outcome with legal force under the United Nations Framework Convention on Climate Change applicable to all Parties to be adopted in 2015 at the Conference of Parties to the Convention (COP21) in Paris. They underlined their commitment to making significant cuts in greenhouse gas emissions through credible and verifiable domestic action. Both sides agreed on the importance of all parties presenting their contributions well in advance of the Paris meeting. The EU and China will cooperate on taking domestic action to avoid or reduce the consumption of HFCs and to work together to promote a global phase-down of these substances.”

EU-US Summit Joint Statement (Brussels, Belgium, 26 March 2014):

“7. Sustainable economic growth will only be possible if we tackle climate change, which is also a risk to global security. We therefore reaffirm our strong determination to work towards the adoption in Paris in 2015 of a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties, to strengthen the multilateral, rules-based regime. The 2015 agreement must be consistent with science and with the goal of limiting the global temperature increase to below 2°C, and should therefore include ambitious mitigation contributions, notably from the world’s major economies and other significant emitters. We are implementing our existing pledges and preparing new mitigation contributions for the first quarter of 2015, mindful of the importance of ensuring that mitigation contributions are transparent, quantifiable, verifiable and ambitious. The EU and the United States demonstrate leadership and are intensifying their cooperation, including: phasing out fossil fuel subsidies, phasing down the production and consumption of hydrofluorocarbons (HFCs)

under the Montreal Protocol, in promoting sustainable energy, energy efficiency and renewable energy, fighting deforestation, and mobilizing private and public finance. We are committed to ambitious domestic action to limit HFC use and emissions.”

United States Secretary of State John Kerry, [The Secretary’s Policy Guidance on Elevating Climate Change Across All Our Platforms](#) (Washington DC, U.S., 7 March 2014):

“IV. Enhance multilateral engagement: Helping lead efforts including the Major Economies Forum, Clean Energy Ministerial, Montreal Protocol, and the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants.”

White House [Fact Sheet: Key Deliverables for the 2014 North American Leaders Summit](#) (Washington DC, U.S., 19 February 2014):

“ENERGY/CLIMATE CHANGE

...

- *Continue trilateral work under the Montreal Protocol to phase down HFC production and consumption.”*

[Joint Statement by North American Leaders - 21st Century North America: Building the Most Competitive and Dynamic Region in the World](#) (Washington DC, U.S., 19 February 2014):

“Our countries will continue to work together to address climate change in pursuit of an ambitious and inclusive global agreement within the U.N. Framework Convention on Climate Change, while also collaborating through complementary mechanisms like the Major Economies Forum, the Climate and Clean Air Coalition, and the Energy and Climate Partnership of the Americas. In addition, we will intensify our efforts to promote an amendment to the Montreal Protocol to phase-down production and consumption of climate-damaging hydrofluorocarbons (HFCs).”

Press Statement on CCAC Second Anniversary, [Climate and Clean Air Coalition Marks Two Years of Rapid Growth in Action on Short-Lived Climate Pollutants](#) (Paris, France, 18 February 2014):

“‘The Coalition works on a triple-benefit agenda: better health, increased crop yields and food security, and near-term climate protection,’ said Helena Molin Valdes, Head of the CCAC Secretariat. ‘Black carbon, methane, tropospheric ozone and hydrofluorocarbons (HFCs) are having an impact in all these fields, and we can have quick gains if we act now. And the solutions are all available—this is what the partners in the Coalition are focusing on.’

...

Other accomplishments of the CCAC over the last two years include:

- *Ten transformative initiatives, including work to reduce short-lived climate pollutants in municipal solid waste, oil and gas, diesel engines, brick production, HFCs, cookstoves and agriculture, with additional progress in finance, regional SLCP assessments and national planning;*

...

- *Showcasing alternative technologies to replace high-global-warming-potential HFCs;”*

Statement by Head of CCAC Secretariat, Helena Molin Valdes, [Two Years and the Triple Imperative](#) (Paris, France, 16 February 2014):

“Third and most importantly, our focus on action: The ministers and CEOs who are deeply involved in the Coalition aren’t here just to talk. This “Coalition of the Working” now has ten focused initiatives designed to provide transformative change and catalyze further action to achieve major emission reductions and the multiple benefits projected by reducing black carbon, methane, tropospheric ozone and some hydrofluorocarbons. All of the initiatives are off the ground and have started to produce results. We are mentioning some in our press statement for today. The first report was released in November, and the next will be ready for the September 2014 United Nations Secretary-Genera’s Climate Summit in September 2014.”

White House [Fact Sheet](#): U.S. Cooperation with France on Protecting the Environment, Building a Clean Energy Economy, and Addressing Climate Change (Washington DC, U.S., 11 February 2014):

“France is also an important partner in the global effort to phase down production and consumption hydrofluorocarbons (HFCs) using the institutions and expertise of the Montreal Protocol.”

Blog post by UNFCCC Executive Secretary Christiana Figueres, [Why Davos has left me with the feeling that 2014 is the year the world can and must rise to the climate challenge](#) (Bonn, Germany, 27 January 2014):

“Mindful of the UN Secretary General’s summit in September, Mr. Howard summed up another session saying that a global commitment to phase out HFCs, powerful greenhouse gases still used in refrigeration and industrial processes, would provide a good signal at the New York summit that can in turn help achieve a meaningful global climate agreement.

Dr. Arunabha Ghosh of the New Delhi-based Council on Energy, Environment and Water pointed out that many companies in India are already acting and developing alternatives to HFCs, and that attention is being focused on the challenge at the highest level of government.”

Guardian Sustainable Business Blog post by UN Under-Secretary General and Executive Director of the UN Environment Programme Achim Steiner, [Davos 2014: Achim Steiner insider diary](#) (Nairobi, Kenya, 25 January 2014):

“Next came 'short-lived climate pollutants' - part of this years' Davos focus on climate change. After working in UNEP for five years to mature cutting edge science into options for action, one of those Davos moments happened.

Major business leaders and public officials agreed to join hands in moving on HFCs, methane and black carbon, which drive global warming but also affect our health and economies. Its like teeth wheels clicking into place - you know you have changed gears.”

Blog post by UNFCCC Executive Secretary Christiana Figueres, [Climate Change Issues Key at Annual World Economic Forum \(WEF\) in Davos](#) (Bonn, Germany, 21 January 2014):

“In Davos, I'll be taking part in discussions on many key issues. I look forward to looking at how complementary action on short-lived climate pollutants can be dramatically scaled up in developing countries including in respect to refrigerant chemicals known as HFCs.”

[Joint Fact Sheet on Strengthening U.S.-China Economic Relations](#) (Washington DC, U.S., 5 December 2013):

“The United States and China reaffirm their commitment to implement the consensus reached by Presidents Obama and Xi Jinping on hydrofluorocarbons from June 8, 2013, and September 6, 2013.”

[U.S. Fact Sheet on Strengthening U.S.-China Economic Relations](#) (Washington DC, U.S., 5 December 2013):

“Today, both countries reaffirmed the agreements reached by leaders earlier this year regarding phasing down the production and consumption of the highly potent greenhouse gas hydrofluorocarbons (HFCs) using the expertise and institutions of the Montreal Protocol and to take next steps in the process, including the establishment of an open-ended contact group in the Montreal Protocol.”

[Letter from U.S. Members of Congress Urging EPA Administrator McCarthy to Accelerate Phase-down of Hydrofluorocarbons](#) (Washington DC, U.S., 3 December 2013):

“We are writing to ask your agency to pursue commonsense policies that accelerate the replacement phase down of hydrofluorocarbons (HFCs) in this country and globally. We believe the agency can ensure we continue to have affordable, safe refrigeration and air conditioning, while also driving greenhouse gas emissions down...Recognizing that it may take some time to amend the Montreal Protocol and incorporate those changes into US regulations, we believe the EPA does not need to wait to implement smart policies that can help accelerate these transitions in the United States and globally. We encourage you to focus your agency on HFC applications where technology solutions

and alternative products are already available or soon to be in the market, similar to what the European Union has done with their Mobile Air Conditioning Directive. The agency should look to where market transitions are already underway and where EPA action could hasten the pace of those transitions, both domestically and elsewhere. We think that such actions would not only have significant cost-effective environmental benefits but would also strengthen the Administration's hand in the Montreal Protocol negotiations."

Joint press statement, 21st EU-Japan summit (Tokyo, Japan, 19 November 2013):

"In that connection, they underlined the contribution of international cooperative initiatives to the additional mitigation effort to narrow the existing gap between emission reduction pledges and what is needed according to science. In particular, they stressed the need for rapid progress on the phase down of HFCs and for its close consideration as one of the issues to be addressed in the context of the Montreal Protocol."

The National Development and Reform Commission of the People's Republic of China, China's Policies and Actions for Addressing Climate Change (Beijing, China, 5 November 2013):

"The leaders of China and the United States attached great importance to the climate change issue as they reached a crucial consensus on strengthening dialogues and cooperation in climate change and the issue of HFCs during two meetings in 2013."

Remarks by United States Special Envoy for Climate Change Todd Stern, U.S. Climate Envoy Stern on a New Global Climate Agreement (London, United Kingdom, 22 October 2013):

"And we have a great opportunity to avoid an estimated 90 gigatons of CO₂ equivalent by 2050 – a huge amount – by using the Montreal Protocol to phase down the production and consumption of HFCs. A few countries object on the ideological ground that action on HFCs should occur only in the UNFCCC, but this is the kind of mentality we need to transcend. Remember that the point of our efforts – always – must be the results we can produce, consistent with everyone's circumstances and capabilities. The Montreal Protocol has proper jurisdiction. It can handle every issue from assistance to differentiation. And it has the expertise and will have the funding to get the job done. We need to seize this opportunity."

Let me sum up. Here are my watchwords:

...

- *Fourth, complementary initiatives that broaden the overall international climate system in service of the UNFCCC's central objective of avoiding dangerous climate change"*

U.S.-India Joint Statement (Washington DC, U.S., 27 September 2013):

"The two leaders agreed to immediately convene the India-U.S. Task Force on hydrofluorocarbons (HFCs) to discuss, inter alia, multilateral approaches that include

using the expertise and the institutions of the Montreal Protocol to phase down the consumption and production of HFCs, based on economically viable and technically feasible alternatives, and include HFCs within the scope of the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol for accounting and reporting of emissions.

...

They also supported complementary initiatives, through multilateral approaches that include using the expertise and the institutions of the Montreal Protocol to phase down the production and the consumption of HFCs, based on the examination of economically viable and technically feasible alternatives. They will continue to include HFCs within the scope of UNFCCC and its Kyoto Protocol for accounting and reporting of emissions.”

Presidential Statement, [Micronesia’s Contributions to the World’s Most Successful Environmental Treaty](#) (September 17, 2013):

Today, on the 26th annual International Day for Preservation of the Ozone Layer, Micronesia hails the accomplishments of the Montreal Protocol in protecting the ozone layer and climate system.

In light of the recent declaration of leaders of the G-20 nations, there now appears to be overwhelming support for using the Montreal Protocol to deliver substantial additional benefits for the global climate by reducing powerful greenhouse gases called HFCs.

For Micronesians, this news should inspire renewed optimism and also considerable pride. Micronesia was the first country to propose phasing down HFCs under the Montreal Protocol in 2009.

Our proposal was ground-breaking at the time but rooted in basic common sense. The Montreal Protocol has decades of experience and expertise in phasing out manmade greenhouse gases, including CFCs and HCFCs, the predecessors of HFCs. It is the world’s most successful environmental treaty, due in large part to a governance system that treats developing countries fairly, providing them the resources and the time to undertake the measures necessary to protect the environment.

Prior to our work on HFCs, Micronesia was already driving efforts to protect the climate system with the Montreal Protocol. In 2008 we succeeded with another proposal to accelerate the phase out of HCFCs.

Now, phasing down HFCs is the next step, and there remains much work to be done. Leaders of the world’s biggest economies have sent a strong signal, and now Montreal Protocol negotiators and technical experts must design and agree to an equitable and ambitious plan to phase down HFCs. This work must commence in earnest at the Meeting of the Parties to the Montreal Protocol in Bangkok, October 21-25, 2013.

We thank and acknowledge The Kingdom of Morocco and the Republic of the Maldives for their co-sponsorship of the amendment proposal this year and for their hard work in generating support worldwide. We invite other countries to join our efforts and to work with us as we continue what will be a long and difficult but increasingly urgent effort to

secure the international cooperation necessary to protect the climate system and to ensure the sustainability and prosperity of our societies.

Blog post by program manager in the World Bank's Climate Policy and Finance Department, Karin Shepardson, [Celebrating Success, Ongoing Challenges, and Opportunities that face the Montreal Protocol](#) (Washington DC, U.S., 16 September 2013):

"In my view, the Protocol, through its projects and partnership with relevant industry, is and can continue to make a marked impact in the fight to tackle climate change. One cross-cutting challenge is tied to the growth in the use of another class of chemicals, hydrofluorocarbons (HFCs), which may open newer areas of work under the Protocol. HFCs pose no harm to the ozone layer but they do have a high GWP and the growth in their use has been fueled by the phase-out of ozone depleting substances and rapid urbanization.

Certain HFCs are also [Short-Lived Climate Pollutants](#) (SLCPs), named for their relatively short lifespan in the atmosphere. Phasing-in low global warming potential and non-HFC alternatives can therefore, have a rapid net positive effect on the climate, while complementing longer term CO₂ mitigation efforts. Recently, the World Bank launched a new report, [Integration of Short-lived Climate Pollutants in World Bank Activities](#), which identifies places where the World Bank can do more through its projects to reduce the emission of SLCPs including HFCs.

International Ozone Day offers the opportunity to remind ourselves that work undertaken to protect the atmosphere also yields beneficial results at ground level that can influence, for example, the development of climate smart cities through targeted energy efficiency measures, or the opportunity to minimize HFC phase-in where possible, for example in urban, disaster recovery, health, and agriculture sectors."

[Joint statement](#) issued at the conclusion of the 16th BASIC Ministerial meeting on climate change (Foz do Iguacu, Brazil, 15-16 September 2013):

"Ministers agreed that hydrofluorocarbons (HFC) should be dealt with through relevant multilateral fora, guided by the principles and provisions of UNFCCC and its Kyoto Protocol. The availability of safe and technically and economically viable alternatives and the provision of additional financial resources by developed countries should also be taken into account."

[G20 Leaders' Declaration](#) (Saint Petersburg, Russia, 6 September 2013):

"We also support complementary initiatives, through multilateral approaches that include using the expertise and the institutions of the Montreal Protocol to phase down the production and consumption of hydrofluorocarbons (HFCs), based on the examination of economically viable and technically feasible alternatives. We will continue to include HFCs within the scope of UNFCCC and its Kyoto Protocol for accounting and reporting of emissions."

The White House, United States and China Reach Agreement on Phase Down of HFCs (Washington DC, U.S., 6 September 2013):

Building on their June 8 accord on hydrofluorocarbons (HFCs) in Sunnylands, President Obama and President Xi agreed at their bilateral meeting as a next step to establish a contact group under the Montreal Protocol on HFCs to consider issues related to cost-effectiveness, financial and technology support, safety, environmental benefits, and an amendment to the Montreal Protocol.

The agreement between President Obama and President Xi on HFCs reads as follows:

We reaffirm our announcement on June 8, 2013 that the United States and China agreed to work together and with other countries through multilateral approaches that include using the expertise and institutions of the Montreal Protocol to phase down the production and consumption of HFCs, while continuing to include HFCs within the scope of UNFCCC and its Kyoto Protocol provisions for accounting and reporting of emissions. We emphasize the importance of the Montreal Protocol, including as a next step through the establishment of an open-ended contact group to consider all relevant issues, including financial and technology support to Article 5 developing countries, cost effectiveness, safety of substitutes, environmental benefits, and an amendment. We reiterate our firm commitment to work together and with other countries to agree on a multilateral solution.

Communiqué, Third Meeting of the High Level Assembly of CCAC (Oslo, Norway, 3 September 2013):

“We, Ministers, heads of organizations, and other high-level representatives of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), came together today to reiterate our firm commitment to work together to address near-term climate change, improve air quality and public health, and strengthen food and energy security, by taking urgent action to reduce emissions of short-lived climate pollutants (SLCPs) like black carbon, methane, tropospheric ozone, and many hydrofluorocarbons (HFCs). We recognize the need for these actions to complement ambitious global reductions of long-lived greenhouse gases like carbon dioxide to fully address the issue of climate change.

...

Scaling-up global efforts

The Coalition is working to catalyze scaled up efforts on SLCPs, which has the potential to slow down global warming by up to 0.5°C by 2050 as well as improve air quality. To help achieve its objectives, the Coalition has launched 10 high-impact global initiatives, including:

...

- ***HFC Alternative Technology and Standards*** – *HFCs, potent greenhouse gases, have increased by approximately 8 percent per year from 2004 to 2008; without further action, these emissions are projected to accelerate rapidly. We will continue to promote climate-friendly alternatives and make efforts to reduce*

emissions of HFCs. CCAC Partner countries will adopt domestic approaches to encourage climate-friendly HFC alternative technologies and work toward a phasedown in the production and consumption of HFCs under the Montreal Protocol. We will work with international standards organizations to revise their standards to include climate-friendly HFC alternatives.”

The World Bank Feature Story, [Cutting Short-Lived Climate Pollutants: A Win-Win for Development and Climate](#) (Washington DC, U.S., 3 September 2013):

STORY HIGHLIGHTS

- *Reducing short-lived climate pollutants, such as black carbon, methane, and hydrofluorocarbons, can provide immediate benefits for health and agriculture and fight climate change.*
- *Analysis of the World Bank portfolio shows that between financial years 2007 and 2012, 7.7 percent of World Bank commitments - approximately US\$18 billion - went into "SLCP-relevant" activities.*
- *A new report identifies ways that the World Bank through its projects can further help reduce short-lived climate pollutants.*

Some of the easiest targets for lowering greenhouse gas emissions are right in front of us every day: black carbon from diesel-fueled vehicles and solid fuel cooking fires, methane from solid waste, hydrofluorocarbons from aerosols.

These are short-lived climate pollutants, named for their relatively short lifespan in the atmosphere. Reducing them now can buy time as countries work to lower their longer-lasting carbon emissions, and their reduction can provide immediate co-benefits for health and agriculture at the same time.

A new report, "[Integration of Short-Lived Climate Pollutants in World Bank Activities](#)," identifies ways that the World Bank can do more through its projects to reduce the emission of the short-lived climate pollutants (SLCPs): black carbon, methane, tropospheric ozone, and fluorinated gases known as HFCs.

The review highlights ways the Bank's investments are already reducing SLCPs and shows where potential exists for even greater reduction. It discusses a wide range of SLCP-reducing activities, including:

- *bus and rail-based transport systems, which can reduce black carbon emissions and have strong, local public health co-benefits;*
- *solid waste collection and disposal methods that can reduce methane emissions;*
- *improved cookstoves and kilns that can reduce black carbon; and*
- *rice irrigation and wastewater management that can lower methane emissions and have global benefits to agricultural productivity and health.*

From financial years 2007 to 2012, 7.7 percent of World Bank commitments – approximately US\$ 18 billion – went into “SLCP-relevant” activities in energy, transport, roads, agriculture, forestry, and urban waste and wastewater. The report suggests that more can be done.

The report, prepared at the request of the G8, was released today by World Bank Vice President for Sustainable Development Rachel Kyte at the High-Level Assembly of the [Climate and Clean Air Coalition](#)

“While we continue – and must continue – to hammer away at reducing CO₂ emissions, efforts to reduce these short-lived climate pollutants can have an immediate effect on slowing warming and the resulting consequences of more extreme weather and devastating sea-level rise,” Kyte said.

“From our perspective, aggressive action to reduce SLCPs is critically important as it provides our clients, developing countries, especially the poorest and most vulnerable, a critical opportunity to adapt to our changing climate,” she said. “At the same time, reducing these pollutants can reap huge health, agriculture and other development benefits.”

According to the [United Nations Environment Programme](#) (pdf), fast action to reduce SLCPs could avoid an estimated 2.4 million premature deaths from outdoor air pollution annually by 2030 and avoid about 32 million tons of crop loss per year. It could also have a direct impact on climate change, with the potential to reduce the warming expected by 2050 by up to 0.5 degrees Celsius.

To better integrate SLCP-reducing activities into the World Bank’s day-to-day operations, the report proposes developing more comprehensive economic analysis that can account for all local and global benefits that projects could provide due to SLCP emission reductions.

“World Bank lending operations actively contribute to the sustainable development priorities of countries,” said Sameer Akbar, the lead author of the report and a senior environmental specialist at the World Bank. “Many of the activities associated with these operations also reduce SLCPs. Reduction of SLCPs can improve air quality and public health, and strengthen food security.”

“Going forward, the goal is to transform as many of the World Bank activities - with the potential to reduce emissions - into SLCP reducing activities,” said Akbar.

Projects already reducing SLCPs

The World Bank is already working on addressing some of these pollutants.

The [Mexico Sustainable Rural Development Project](#) serves as a powerful example of how SLCP reductions are already being delivered. Through a \$100 million World Bank loan, blended with a \$10.5 million GEF grant, the Government of Mexico has been able to co-fund the installation of more than [300 bio-digesters on smallholder pig and dairy farms](#), reducing manure-related methane emissions and reliance on fossil-fuel electricity while providing jobs and other economic co-benefits.

In [South Asia](#), the Bank has projects aimed at improving indoor and outdoor air quality focusing on reducing emissions from the brick making and transportation sectors.

With funding from the Montreal Protocol, [China](#) will reduce its production of hydrochlorofluorocarbons (HCFCs) by 10% between now and 2015. Overall, since

2011, [five projects that phase-out HCFCs](#) (pdf) are estimated to avoid nearly 27 million tons of CO₂ equivalent annually through alternative technology choices.

A [bus rapid transport project in Cebu, Philippines](#) (pdf), is estimated to save anywhere between US\$94 and US\$135 million in direct health costs. Additionally, [52 World Bank carbon finance projects, with an investment of US\\$543 million](#) (pdf), is estimated to avoid 150 premature deaths due to improved air quality and prevent 375,000 tons of methane emissions each year.

Earlier this year, a [report](#) by the Methane Finance Study Group (convened by the World Bank, also at the request of the G8) found that a relatively small investment could bring fast and significant reductions in the powerful greenhouse gas methane.

According to the report, reductions of as much as 8,200 million tons of CO₂ equivalent could be delivered in developing countries at less than \$10 per ton in incremental cost financing—a gap which can be closed by pay-for-performance mechanisms. Methane is over 25 times more potent than CO₂ at warming the planet.

[Remarks](#) by United States Secretary of State John Kerry with Brazilian Foreign Minister Antonio de Aguiar Patriota After Their Meeting (Brasilia, Brazil, 13 August 2013):

“Our mission is very, very clear. We need to inspire meaningful reform and action within the Major Economies Forum. We need to lead the effort to phase down hydrofluorocarbons in the Montreal Protocol. And together, Brazil and the United States need to join with other countries in an effort to negotiate a climate agreement in 2015 that is ambitious and flexible and that works for all of us.”

[Remarks](#) by United States Vice President Joe Biden on the U.S.-India Partnership at the Bombay Stock Exchange (Mumbai, India, 24 July 24 2013):

“One thing we can do together right now is address pollutants called hydrofluorocarbons, HFCs. The reason I’m very familiar with this is I come from a little state that has an outfit called the DuPont Company. They had a great interest in refrigeration and HFCs when I talked about they should be eliminated. We talk about stakeholders and interests. Well, HFCs found in air conditioners and other products make an outsized contribution to climate change.

I hope that India will join the United States, China and more than 100 other countries to work within the Montreal Protocols to phase down the production and consumption of HFCs.”

[U.S.-China Strategic and Economic Dialogue Outcomes of the Strategic Track](#) (Washington DC, U.S., 12 July 2013):

“33. Climate Change Working Group: ... The Working Group will carry forward the agreement of President Obama and President Xi Jinping on hydrofluorocarbons.”

[U.S.-China Strategic and Economic Dialogue V Strategic Track Select Outcomes](#)

(Washington DC, U.S., 12 July 2013):

“They will also work together to implement the agreement of Presidents Obama and Xi on HFCs.”

[Report of the U.S.-China Climate Change Working Group to the Strategic and Economic Dialogue](#) (Washington DC, U.S., 10 July 2013):

“Additionally, President Barack Obama and President Xi Jinping made the announcement on June 8, 2013 that the United States and China agreed to work together and with other countries through multilateral approaches that include using the expertise and institutions of the Montreal Protocol to phase down the production and consumption of HFCs, while continuing to include HFCs within the scope of UNFCCC and its Kyoto Protocol provisions for accounting and reporting of emissions. The Working Group will work effectively to carry forward this effort.”

[U.S.-China Climate Change Working Group Fact Sheet](#) (Washington DC, U.S., 10 July 2013):

“The Working Group will work to implement the agreement on hydrofluorocarbons (HFCs) reached by President Obama and President Xi at their meeting on June 8, 2013, in Sunnylands, California.”

[Joint statement issued at the conclusion of the 15th BASIC Ministerial meeting on climate change](#) (Cape Town, South Africa, 28 June 2013):

“Ministers emphasized that HFCs are greenhouse gases covered under the UNFCCC and its Kyoto Protocol and shall accordingly be addressed in accordance with its principles and provisions. They agreed to work multilaterally to find an agreed way forward on this issue.”

[The President’s Climate Action Plan](#) (Washington DC, U.S., June 2013):

“CUT CARBON POLLUTION IN AMERICA

...

IV. Reducing Other Greenhouse Gas Emissions

Curbing Emissions of Hydrofluorocarbons: Hydrofluorocarbons (HFCs), which are primarily used for refrigeration and air conditioning, are potent greenhouse gases. In the United States, emissions of HFCs are expected to nearly triple by 2030, and double from current levels of 1.5 percent of greenhouse gas emissions to 3 percent by 2020.

To reduce emissions of HFCs, the United States can and will lead both through international diplomacy as well as domestic actions. In fact, the Administration has already acted by including a flexible and powerful incentive in the fuel economy and carbon pollution standards for cars and trucks to encourage automakers to reduce HFC leakage and transition away from the most potent HFCs in vehicle air conditioning

systems. Moving forward, the Environmental Protection Agency will use its authority through the Significant New Alternatives Policy Program to encourage private sector investment in low-emissions technology by identifying and approving climate-friendly chemicals while prohibiting certain uses of the most harmful chemical alternatives. In addition, the President has directed his Administration to purchase cleaner alternatives to HFCs whenever feasible and transition over time to equipment that uses safer and more sustainable alternatives.

...

LEAD INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

...

V. Working with Other Countries to Take Action to Address Climate Change

...

Expanding Bilateral Cooperation with Major Emerging Economies:

...

We will be building on these successes and finding new areas for cooperation in the second term, and we are already making progress: Just this month, President Obama and President Xi Jinping of China reached an historic agreement at their first summit to work to use the expertise and institutions of the Montreal Protocol to phase down the consumption and production of HFCs, a highly potent greenhouse gas. The impact of phasing out HFCs by 2050 would be equivalent to the elimination of two years' worth of greenhouse gas emissions from all sources.

Combating Short-Lived Climate Pollutants: *Pollutants such as methane, black carbon, and many HFCs are relatively short-lived in the atmosphere, but have more potent greenhouse effects than carbon dioxide. In February 2012, the United States launched the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollution, which has grown to include more than 30 country partners and other key partners such as the World Bank and the U.N. Environment Programme. Major efforts include reducing methane and black carbon from waste and landfills. We are also leading through the Global Methane Initiative, which works with 42 partner countries and an extensive network of over 1,100 private sector participants to reduce methane emissions.*

...

VI. Leading Efforts to Address Climate Change through International Negotiations

At the Montreal Protocol, we are leading efforts in support of an amendment that would phase down HFCs; at the International Maritime Organization, we have agreed to and are now implementing the first-ever sector-wide, internationally applicable energy efficiency standards; and at the International Civil Aviation Organization, we have ambitious aspirational emissions and energy efficiency targets and are working towards agreement to develop a comprehensive global approach."

Remarks by U.S. President Barack Obama on Climate Change (Washington DC, U.S., 25 June 2013):

“We’ve also intensified our climate cooperation with major emerging economies like India and Brazil, and China -- the world’s largest emitter. So, for example, earlier this month, President Xi of China and I reached an important agreement to jointly phase down our production and consumption of dangerous hydrofluorocarbons, and we intend to take more steps together in the months to come. It will make a difference. It’s a significant step in the reduction of carbon emissions. (Applause.)”

United States Secretary of State John Kerry, We work on climate change every day (19 June 2013):

“When we last met with China’s leaders in California just a couple of weekends ago, after productive and candid dialogue, President Obama and President Xi were able to announce that the United States and China have agreed to work together and with others via the Montreal Protocol to phase down the production and consumption of hydrofluorocarbons (HFCs), highly potent greenhouse gases used in refrigerators and air-conditioners. This could eliminate nearly two years’ worth of current global greenhouse gas emissions between now and 2050.”

Remarks by U.S. Under Secretary for Economic Growth, Energy, and the Environment Robert D. Hormats, U.S. Economic Engagement with the Asia Pacific at the Asia Society Global Forum (Washington, DC, U.S., 12 June 2013):

“President Xi Jinping was in California just a few days ago visiting with President Obama, where they discussed several important issues.... Finally, they agreed to work together and to use the Montreal Protocol to phase down the consumption and production of hydrofluorocarbons (HFCs), which is an important step to confront global climate change.”

Quotes by UNDP Administrator Helen Clark, UNDP welcomes China-US agreement to combat climate change (New York, U.S.A., 11 June 2013):

“UNDP Administrator Helen Clark said today that joint activities by the world’s two largest economies can give impetus to climate change mitigation, negotiations and efforts.

...

‘UNDP is urging developed countries to extend financial and technological support to developing countries so that they can leapfrog to ozone- and climate-friendly technologies,’ Helen Clark said.

‘UNDP is committed to supporting developing countries to transform their economies through the use of environmentally sound technologies.’”

Quotes by UN Under-Secretary General and Executive Director of the UN Environment Programme Achim Steiner, [UN Environment Head Welcomes Signal to Combat Climate Change by World's Two Largest Economies](#) (Nairobi, Kenya, 9 June 2013):

“Mr Steiner said the announcement, made by President Barack Obama and Chinese President Jinping Xi at their retreat in California this weekend could signal a new and perhaps transformational chapter in international cooperation on climate change.

...

Mr Steiner said: ‘Along with a variety of recent signals from several key countries including China and the United States, this one on HFCs by these two key economies is welcome as the world moves towards a universal UN treaty on climate change by 2015 - certainly allowing the market for HFCs to grow will only aggravate the challenge of combating climate change’.

...

‘It is widely recognized that securing a meaningful treaty and keeping an average global temperature rise under 2 degrees C this century will require all hands on deck-what however must not be overlooked or sidelined is the urgency to also tackle the principle greenhouse gas, carbon dioxide, as part of negotiations underway under the UN climate convention,’ he said.

‘The signal from China and the United States in respect to HFCs is important as both a confidence builder and if it paves the way to a universal agreement involving all nations that reflects the science of where all emissions are today and where they need to be by a series of deadlines beginning with 2020,’ said Mr Steiner.”

[Remarks](#) by Chinese State Councilor Yang Jiechi's on the Results of the Presidential Meeting between Xi Jinping and Obama at the Annenberg Estate (Beijing, China, 9 June 2013):

“Both sides agreed to strengthen coordination and cooperation in the area of climate change and advance practical cooperation in this area through the climate change working group of the two countries. They also vowed to work together and with other nations via multilateral mechanisms, including the use of the expertise and institution of the Montreal Protocol, to gradually reduce the production and consumption of hydrofluorocarbons (HFCs), and continue to include HFCs within the boundary of the related emission reports and calculation clauses of the UN Framework Convention on Climate Change and the Kyoto Protocol.”

The White House, [United States and China Agree to Work Together on Phase Down of HFCs](#) (Washington DC, 8 June 2013):

Today, President Obama and President Xi agreed on an important new step to confront global climate change. For the first time, the United States and China will work together and with other countries to use the expertise and institutions of the Montreal Protocol to phase down the consumption and production of hydrofluorocarbons (HFCs), among other forms of multilateral cooperation. A global phase down of HFCs could potentially

reduce some 90 gigatons of CO₂ equivalent by 2050, equal to roughly two years worth of current global greenhouse gas emissions.

The agreement between the United States and China reads as follows:

Regarding HFCs, the United States and China agreed to work together and with other countries through multilateral approaches that include using the expertise and institutions of the Montreal Protocol to phase down the production and consumption of HFCs, while continuing to include HFCs within the scope of UNFCCC and its Kyoto Protocol provisions for accounting and reporting of emissions.

HFCs are potent greenhouse gases used in refrigerators, air conditioners, and industrial applications. While they do not deplete the ozone layer, many are highly potent greenhouse gases. Their use is growing rapidly as replacements for ozone-depleting substances that are being phased out under the Montreal Protocol on Substances that Deplete the Ozone Layer. Left unabated, HFC emissions growth could grow to nearly 20 percent of carbon dioxide emissions by 2050, a serious climate mitigation concern.

The Montreal Protocol was established in 1987 to facilitate a global approach to combat depletion of the stratospheric ozone layer. Every country in the world is a party to the Protocol, and it has successfully phased out or is in the process of phasing out several key classes of chemicals, including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons. The transitions out of CFCs and HCFCs provide major ozone layer protection benefits, but the unintended consequence is the rapid current and projected future growth of climate-damaging HFCs.

For the past four years, the United States, Canada, and Mexico have proposed an amendment to the Montreal Protocol to phase down the production and consumption of HFCs. The amendment would gradually reduce consumption and production and control byproduct emissions of HFCs in all countries, and require reporting in these areas. The amendment includes a financial assistance component for countries that can already access the Protocol's Multilateral Fund, and leaves unchanged the reporting and accounting provisions of the UN Framework Convention on Climate Change and Kyoto Protocol on HFC emissions.

[Kiruna Declaration](#) (Kiruna, Sweden, 15 May 2013):

“Urge the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer to take action as soon as possible, complementary to the UNFCCC, to phase-down the production and consumption of hydrofluorocarbons, which contribute to the warming of the Arctic region,”

Blog post by Principal Climate Change Specialist in the Environment Department at the International Finance Corporation, Alan Miller, [Carbon Dioxide Levels Reach Unprecedented Highs: But Catastrophic Climate Change Can Still be Avoided](#) (Washington DC, 15 May 2013):

“The good news is, recent analysis have continued to highlight opportunities for effectively slowing the rate of warming deserves extra attention. This research, by Xu and others, as noted in a recent blog by World Bank's Vice President for Sustainable Development Rachel Kyte, points to the opportunity to significantly slow global warming

through efforts to reduce emissions of non-CO₂ greenhouse gases - four short-lived climate pollutants (SLCPs) – black carbon, methane tropospheric ozone and some hydrofluorocarbons (HFCs). This analysis, the first to model and compare all emission reductions on an equal basis, found that an aggressive effort to reduce the SLCPs could reduce the rate of warming by 1.1°C by the end of the century – equal to the potential from ambitious reductions in CO₂ emissions. If both strategies are implemented, it becomes possible to "to avoid reaching the 2°C threshold until 2100."

The large benefits of reducing SLCPs despite their much larger relative atmospheric concentration of CO₂ are a function of two characteristics – their much greater impact on warming and their shorter atmospheric lifetime, which results in larger and more immediate benefits from emission reductions. The other important feature of the SLCPs is the opportunity for local benefits from emission reduction strategies, especially from controlling methane and black carbon – the latter most effectively achieved by pollution controls on diesel vehicles and cleaner cook stoves. HFC replacement is also ongoing thanks in part to funding from the Montreal Protocol, an international treaty to eliminate the production and consumption of ozone-damaging chemicals. The political path to emission reductions may therefore be easier than for reducing the use of fossil fuels and emissions of CO₂.

The World Bank publication, Turn Down the Heat, makes clear the disastrous consequences that will follow from global warming of several degrees or more. The modest good news is that we have the means and time to avoid it, while we work to reduce carbon dioxide emissions."

Address by Canada Minister of the Environment Peter Kent at 2013 Global Methane Expo (Vancouver, Canada, 13 March 2013):

"Beyond the Global Methane Initiative, Canada is also working with the international community to address short-lived climate pollutants, including methane, hydrofluorocarbons and black carbon. It is estimated that these pollutants, whose lifetime in the atmosphere is shorter than long-lived gases like CO₂, will contribute about half of the climate warming from man-made emissions over the next couple of decades.

Short-lived climate pollutants are of particular concern to Arctic countries, like Canada, because they may be responsible for the more rapid warming we are currently experiencing in the far North, notably due to the effect of black carbon deposited on snow and ice.

We have been working to address these pollutants within the Arctic Council and as a founding member—and lead partner—in the Climate and Clean Air Coalition. Canada was the first country to provide funding for the Coalition's work. We believe it has enormous potential to effectively address short-term climate goals and to improve the health of millions of people around the globe.

Canada's support is helping developing countries implement actions, for example in areas such as municipal solid waste brick production and promoting alternatives to hydrofluorocarbons.

We are also working with our Partners in the Climate and Clean Air Coalition to have its activities build on and strengthen the successes of initiatives like the Global Methane Initiative."

Policy Statement by UN Under-Secretary General and UNEP Executive Director Achim Steiner at the Opening of the First Universal Session of the Governing Council of UNEP (Nairobi, Kenya, 18 February 2013):

“UNEP’S DELIVERY OF THE PROGRAMME OF WORK IN 2012

...

The climate change sub-programme aims to strengthen the ability of countries, particularly developing nations, to integrate climate change responses into national development processes.

After more than ten years supporting the science of short-lived climate pollutants, through initiatives such as the Atmospheric Brown Cloud, UNEP and a group of governments ranging from the United States and Sweden to Bangladesh and Mexico launched the Climate and Clean Air Coalition (CCAC).

The coalition’s aim is to leverage existing initiatives and launch new ones to fast track cuts in emissions of black carbon or soot, methane and a group of hydrofluorocarbons (HFCs) — it complements an opportunity to support the work of the UN Framework Convention on Climate Change (UNFCCC) while also saving over 2.5 million lives and more than 30 million tonnes of crops.

Since February 2012, the CCAC has grown to 49 government and non-governmental partners, with UNEP as the secretariat. The focus has been on developing and implementing priority action plans.”

Chair’s conclusions from the Arctic Environment Ministers Meeting, Arctic change – Global effects (Jukkasjärvi, Sweden, 5-6 February 2013):

“Reducing short lived climate pollutants

Ministers emphasized that substantial cuts in global emissions of carbon dioxide and other long-lived greenhouse gases are the backbone of any meaningful global climate change mitigation efforts, while noting that reducing short-lived climate pollutants (SLCPs) such as black carbon, methane, hydrofluorocarbons and tropospheric ozone could slow global and Arctic climate change. Intensified efforts to reduce such emissions at a global scale may reduce the increase in global mean temperature by up to 0.5°C by 2040 according to a recent UNEP report, which would be an important contribution to the achievement of the 2°C objective. Reducing emissions of, for example, black carbon would further provide positive health effects for people in the Arctic States.

Ministers stressed the need for urgent action to reduce SLCP emissions to contribute to Arctic climate change mitigation and to the preservation of the unique culture and ecosystems of the Arctic which are under threat from rapid climate changes. They also underscored the continued role of the Arctic Council and Arctic States in spearheading greater international action on SLCPs and the importance of continuously improving the scientific knowledge of SLCPs and how they impact the climate.

Ministers emphasized the importance of emission inventories for black carbon to identify emission trends and mitigation opportunities. They concurred that each Arctic State should periodically produce national emission inventories for black carbon in line with

the guidelines that are to be agreed upon under the Convention on Long Range Transboundary Air Pollution (CLRTAP). Inventories should be submitted to CLRTAP and shared within the Arctic Council, with the ambition to have submissions starting from February 15 2015.

Ministers concluded that decisive action on black carbon and other SLCPs is needed, and encouraged coordination and support for international and global efforts to address emissions. Ministers encouraged the Arctic Council to consider establishing a process at the Kiruna Ministerial meeting aiming for an instrument or other arrangements to enhance efforts to reduce emissions of black carbon from the Arctic States for review and appropriate decision at the next Ministerial meeting in 2015. Measures to address black carbon (and in some cases other SLCPs) that the Arctic States may wish to consider include: national action plans to be submitted to, and compiled by, the Arctic Council; a common vision for emission reductions; promotion of best mitigation practices and technologies available for relevant pollution sources in the Arctic States and the polar region; promotion of collaborative measures with the private sector; and consideration of benchmarks or targets.”

Meeting Statement on Short-Lived Climate Pollutants in Asia, Outcomes from the Regional Intergovernmental Consultation on Near-Term Climate Protection and Clean Air Benefits in Asia and the Pacific (Bangkok, Thailand, 5 February 2013):

INTRODUCTION

High-level policy makers and government officials, representatives of international organizations, experts, practitioners, and other stakeholders from across the Asia-Pacific region and beyond met in Bangkok, Thailand, on the 4th and 5th of February, 2013, to discuss the urgency of addressing short-lived climate pollutants (SLCPs). The meeting aimed to raise awareness of SLCP issues among participating countries and organizations and explore ways to catalyse concrete measures, policies, and strategies that mitigate SLCPs in the Asia-Pacific region.

The governments of Bangladesh and Japan co-hosted the meeting under the auspices of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC). The CCAC is a voluntary, non-binding, collaborative global partnership uniting governments, inter-governmental organizations, representatives of civil society and the private sector in a shared commitment to taking action on SLCPs. The CCAC was launched in February 2012 and as of 5th February 2013 it has 51 Partners (28 State and Regional Economic Integration Organization (REIO) Partners, and 23 non-States Partners).

The 112 participants who attended the meeting included government officials and experts from the following 19 countries across the Asia-Pacific region: Australia, Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Japan, Jordan, Kyrgyz Republic, Malaysia, Myanmar, Nepal, Philippines, Republic of Korea, Republic of Maldives, Sri Lanka, Thailand and Uzbekistan. The meeting also included representatives of other CCAC Partner countries, Intergovernmental Organizations, Non-Governmental Organizations and private sectors entities (see Annex for full list of participants).

The meeting concluded that reducing SLCPs in the Asia-Pacific region provides substantial benefits for air quality, human health, food and energy security, poverty reduction, ecosystems, and other environmental public goods. In addition, the reduction of SLCPs helps reduce near-term warming (over the next few decades) and climate

impacts across the Asia-Pacific region and globally. Accelerated and scaled up mitigation of SLCPs, such as black carbon, methane, tropospheric ozone, and many hydrofluorocarbons (HFCs), is therefore a critically important complement to efforts in multilateral climate processes to mitigate carbon dioxide (CO₂) and other long-lived greenhouse gases (GHGs).

MEETING STATEMENT

Participants at the meeting appreciated the implications of the UNEP/WMO Integrated Assessment of Black Carbon and Tropospheric Ozone and the outcomes of Atmospheric Brown Clouds (ABC) programme in Asia, noting the magnitude of health, climate and agricultural impacts of SLCP emissions in the Asia-Pacific region.

Presentations and views expressed underscored the potential for heightened awareness-raising and analysis of SLCPs to inform concerted action, particularly integration of SLCP concerns into existing development agendas and programmes.

Overall, participants noted the need for more scientific advice on certain areas, including the volumes and impacts of black carbon emissions, methane emissions from agriculture and fossil fuel extraction, and technologies currently in use in various sectors. Such advice must be based on sound observations and modelling.

The importance and urgency of reducing particulate matter emissions (especially PM_{2.5} that includes black carbon) was stressed, considering the present situation of air pollution in the Asia-Pacific region, as was the importance of tackling emissions of nitrogen oxides (NO_x) and volatile organic compounds (VOCs), in addition to methane emissions, to decrease tropospheric ozone (O₃) levels.

Participants highlighted the potential of current best practices and effective initiatives underway under various national air quality and low-carbon development strategies for scaling up and accelerating the reduction of SLCPs.

Recognizing that while fast action to mitigate SLCPs could help slow the rate of climate change and improve the chances of staying below the 2°C target in the near-term, such effort should be complementary to global efforts to reduce CO₂, in particular under the United Nations Framework Convention on Climate Change (UNFCCC), as long-term climate protection will only be possible if deep and persistent cuts in CO₂ emissions are rapidly realized in the near-term.

Noting the transboundary nature of air pollution, participants recognised the importance of gathering observations on long-range transport of pollutants and information sharing among nations, international organisations and initiatives across the Asia-Pacific region, and in appropriate sub-regions of the continent, to promote the development of an efficient, rapid, scientifically-informed and sustainable response to the issue. Participants welcomed international and regional efforts, such as those of the CCAC and ABC Asia, in support of the formulation and implementation of such a response, and acknowledged Japan's financial pledge to the CCAC.

Priority measures for Asia and the Pacific

A range of priority measures and actions to reduce SLCPs across the Asia-Pacific region were identified during the meeting:

- *Raising awareness on the significance of SLCPs among key stakeholder groups and the general public, especially policymakers, at local, national and regional levels, and with international partners, including improving information and data generation and sharing, institutional and capacity building, and stakeholder engagement;*
- *Promoting cleaner and more efficient cooking, heating and lighting, and access to clean energy;*
- *Reducing emissions from transport sources, especially trucks and other heavy duty vehicles, diesel generators and other engines, and addressing the prospects for reducing emissions from international shipping and harbour activities;*
- *Reducing black carbon emissions from brick kilns and rice parboiling units;*
- *Reducing agricultural burning and agricultural methane emissions;*
- *Reducing methane emissions from coal mining;*
- *Reducing methane, black carbon and other SLCP-related emissions from waste disposal and open burning as part of environmentally sound management of municipal solid waste and waste water;*
- *Reducing methane leakage, venting and flaring from the oil and gas sectors; and*
- *Avoiding the phasing in of high - global warming potential (GWP) HFCs and promoting low-GWP alternatives, as well as improved energy efficiency in refrigeration and air conditioning.*

Recommendations

The following recommendations were identified at the meeting:

Countries and other relevant authorities in the Asia-Pacific region could:

- *consider participating in the CCAC's voluntary, non-binding, collaborative initiatives and joining the CCAC;*
- *identify key sources of SLCPs and consider integration of SLCPs into national and inter-ministerial action planning processes to support the inclusion of SLCP-targeted actions into national development programs, air quality, low-carbon and climate resilient development and green growth plans;*
- *raise awareness of the scientific aspects of SLCPs, including their potential impacts on environmental and development goals and SLCP mitigation benefits domestically and regionally;*
- *take steps to accelerate and incentivize action to reduce SLCPs, including engagement with the private sector and civil society groups;*
- *engage with other relevant networks working in Asia on issues related to SLCPs;*
- *share with other countries knowledge and experiences relating to the reduction of SLCP emissions;*
- *strengthen monitoring of air pollutants, including SLCPs, and support associated national institutions to improve understanding both of the levels of pollution and physical processes and of the effectiveness of mitigation options;*
- *consider ways of financing SLCP-relevant initiatives.*

The Association of Southeast Asia Nations (ASEAN), the South Asian Association for Regional Cooperation (SAARC), East Asia Summit and other regional intergovernmental associations are encouraged to:

- *help provide a forum for action on SLCPs, and coordinate regional responses to SLCPs consistent with existing regional agreements and initiatives on health and environment;*
- *integrate SLCPs into relevant sectoral discussions, including health, agriculture, energy, transport, development and environment, among others.*

The Climate and Clean Air Coalition (CCAC) is encouraged to:

- *assist in improving the science, understanding and awareness of SLCP issues in the Asia-Pacific region, including by undertaking a comprehensive scientific and action-oriented regional integrated assessment of emission levels and sources, scientific uncertainties of regional impacts of SLCPs and the role of black and organic carbon, impacts, mitigation strategies, costs and benefits, and current action on SLCP emissions;*
- *further promote Asia-Pacific participation and integrate Asia-Pacific priorities into CCAC actions;*
- *deepen and expand collaboration with existing air pollution networks and other relevant initiatives in Asia and the Pacific including to support integration of SLCP considerations in relevant work programs and actions.*

The World Bank Group, Asian Development Bank, other international development and finance institutions and bilateral aid agencies are encouraged to:

- *pursue integration of SLCPs into their strategies and portfolio of relevant development and investment programmes and promote financing mechanisms for SLCP reductions in the Asia-Pacific region, consistent with the G8 request to the World Bank Group¹.*

International NGOs, research institutions, and other organizations and initiatives are encouraged to:

- *promote collaboration within the Asia-Pacific region and beyond on research and development (R&D), data generation, data sharing and best practices to raise awareness of SLCP issues, emphasising available actions to reduce the emissions of SLCPs and their adverse impact on climate, air quality and livelihoods in the Asia and beyond;*
- *facilitate and support programmes and projects that implement measures to reduce SLCPs.*

The private sector is encouraged to:

- *participate as an important stakeholder in the efforts to reduce SLCPs in collaboration with local and national governments and other stakeholders.*

PROCESS

¹ At the Camp David Summit (2012), G-8 Leaders commissioned the World Bank to “prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms.” (<http://www.whitehouse.gov/the-press-office/2012/05/19/fact-sheet-g-8-action-energy-and-climate-change>)

This statement was produced during the Regional Intergovernmental Consultation on Near-Term Climate Protection and Clean Air Benefits in Asia and the Pacific held on 4 and 5 February 2013 in Bangkok, Thailand. The statement was drafted by the meeting organizers in an attempt to reflect discussions and conclusions reached during the meeting. The draft statement was circulated for review to the meeting participants and discussed and revised during a dedicated plenary on the last day of the meeting. Participants were subsequently invited to send to the meeting organizers any additional comments they had for integration into this final version of the statement. For more information on this statement, please contact the CCAC Secretariat (ccac_secretariat@unep.org).

Organization

The meeting was organised by the CCAC, the UNEP Regional Office for Asia and the Pacific (ROAP) and the Stockholm Environment Institute (SEI) in co-operation with the co-hosts, the Governments of Bangladesh and Japan, and other CCAC state and non-state partners - the Asian Co-benefits Partnership, Clean Air Asia, the Institute of Global Environmental Strategies (IGES), the International Union of Air Pollution Prevention and Environmental Protection Associations (IUAPPA) and the U.S. Department of State. The meeting was funded by the CCAC Trust Fund, the Swedish International Development Cooperation Agency (Sida) and the U.S. Department of State.

(Annex omitted)

Remarks by United States Special Envoy for Climate Change Todd Stern at Secretary Clinton's Foreign Affairs Policy Board Meeting (Washington DC, U.S., 3 January 2013):

“CCAC. Last February, Secretary Clinton announced a new effort, the Climate and Clean Air Coalition, committed to reducing non-CO₂ pollutants such as methane, black carbon and HFCs. Together, these agents account for over 30% of current global warming, millions of premature deaths, and extensive crop losses. Because these pollutants are short-lived in the atmosphere, meaningful reductions could have a real impact on the level of temperature increase in the near term.

We started with six countries and are now at 26 plus nearly 20 non-state partners, including UNEP (our Secretariat) and the World Bank. We have over \$20 million in committed funds and are working on a series of initiatives to attack large sources of emissions, such as methane from landfills and from oil and gas production; black carbon from heavy-duty diesel engines; and HFCs used in refrigeration and air conditioners. The first year has been very successful in getting the Coalition off the ground. The key now will be to build the initiatives and make them effective.”

Blog post by Vice President of Sustainable Development at the World Bank, Rachel Kyte, [Doha: Keeping Hope Alive - Just](#) (Washington, DC, 12 December 2012):

“Working Coalitions

*Increasingly like-minded coalitions are forming, across dividing lines of developed and developing countries, public, private sectors and civil society, in order to get on with the business of emissions reductions. One highlight of the conference was the meeting of the **Climate and Clean Air Coalition**, a remarkable group of countries united to reduce*

SLCPs, short-lived climate pollutants - methane, HFCs, black carbon.

This coalition is moving fast, driven by multiple pressing needs, including concern about the impact of black carbon on the melting of Arctic sea ice, and fast-growing countries' need to reduce methane emissions from landfills. A serious reduction in SLCPs could help avert a 4-degree world.

At the Bank, we want to expand the SLCP-relevant part of our IDA/IBRD portfolio from 12 percent in 2012 to 15 percent by 2015 and 20 percent by 2020, and will work on payment for results for methane reduction. We also plan to increase impact on SLCPs through our GEF, Carbon Finance, Global Gas Flaring, and Montreal Protocol portfolios.

In the struggle for action, the CCAC has emerged, in the words of Lena Ek, the Swedish Minister of the Environment, as the "coalition of the working." "

Quotes by UN Under-Secretary General and UNEP Executive Director Achim Steiner and Ministers of Nations Committed to Scaling Up Voluntary Action to Reduce Short-Lived Climate Pollutants (Doha, 6 December 2012):

“Connie Hedegaard, European Commissioner for Climate Action:

"To further increase the European Union's ambition between now and 2020, and in line with the Coalition's initiative on HFCs, the European Commission recently proposed legislation that would reduce sales of these powerful greenhouse gases in the EU by almost 80%. This would save the equivalent of 625 million tonnes of CO₂ by 2030. By demonstrating that suitable, safe and energy-efficient alternatives to these pollutants are already available and affordable in many sectors, this bold step aims to encourage others to take similar measures." "

Meeting Statement on Short-Lived Climate Pollutants, Outcomes of the Intergovernmental Consultation on Clean Air Benefits and Near-term Climate Protection in Africa (Accra, Ghana, 21 September 2012):

Introduction

High-level government officials, policy-makers, practitioners, environmental experts and industrial stakeholders from across Africa and around the world met in Accra, Ghana, 19th - 21st September 2012, to discuss the relevance of short-lived climate pollutants (SLCPs) to the African continent, including strategies for reducing emissions.

The meeting was held under the auspices of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), and hosted by the Governments of Ghana and Nigeria, which are Partners of the CCAC. It aimed at raising awareness of SLCP issues among participating countries and exploring with policy-makers and other stakeholders effective action to be taken at national and regional levels to reduce the emission of SLCPs and their adverse impacts on health, food security, human security, and climate on the African Continent as a whole.

The meeting included high-level government participation from the following nine African Countries: Benin, Côte d'Ivoire, Ethiopia, Gabon, Ghana, Malawi, Nigeria,

Senegal and Togo. Also in attendance were representatives from the CCAC Secretariat, the African Climate Policy Centre, UNDP, UNEP, the World Bank, C40 in Partnership with the Clinton Climate Initiative (C40/CCI), and other experts from African and global non-governmental organizations as well as partners of the CCAC.

Other participants at the meeting expressed the interest of their country in supporting the CCAC and the commitment to tackling the issue of SLCPs in Africa.

Tackling SLCPs, such as black carbon, methane, tropospheric ozone, and many hydrofluorocarbons (HFCs), would contribute to the delivery of Africa's Millennium Development Goals (MDGs). By complementing other existing multilateral actions on environmental and development issues, tackling SLCPs would prevent premature deaths and provide substantial and immediate health, human and food security, poverty-reduction, crop yield and other environmental benefits. In addition, their reduction would help reduce near-term warming and climate impacts across Africa and globally over the next few decades.

Meeting Statement

We, the participants to this meeting, recognize that action to reduce emissions of SLCPs is critical to delivering MDGs and health, human security, food security, and regional and global climate benefits. By working with the support of the CCAC, the African Union, and Regional Economic Communities (RECs), we wish to undertake action at local, inter-ministry, national, regional and international levels to reduce SLCP emissions across Africa and deliver rapid human development and environment benefits to the continent.

We recognise the importance of information sharing among African nations across the whole of Africa and in appropriate sub-regions of the continent, and propose that a coordinated and open platform is developed to raise awareness, exchange knowledge and case study information, existing data and analysis, and experience on financing options so that all African nations can benefit from existing efforts related to SLCP mitigation. This will ensure that efforts are not duplicated but are instead directed efficiently and with consideration of knowledge and implementation gaps, to develop a rapid and sustainable response to the issue.

We commit to promoting the following to reduce SLCP emissions:

- *Development of cleaner and more efficient cooking fuels and stoves;*
- *Action on reducing emissions from transport sources and diesel engines.*
- *Reducing agricultural burning and agricultural methane emissions by promoting sustainable agricultural production;*
- *Clean development of the oil and gas sector, including reducing methane leakage, venting and flaring;*
- *Reducing methane, black carbon and other SLCP emissions from waste as part of enhanced municipal waste management;*
- *Reducing SLCP emissions from other relevant SLCP sectors, such as brick manufacture and air conditioning and refrigeration (using HFCs);*
- *Information and data generation and sharing, infrastructure development, and stakeholder engagement to promote education and awareness across the African*

community at local, national and regional scales, and with international partners.

We recommend:

To all countries, other national parliaments and relevant authorities of Africa:

- *To consider participating in the CCAC's initiatives and joining the CCAC.*
- *To identify key sources of SLCPs and consider National Action Planning for SLCP emissions reductions, with integration of actions into national development priorities and low-carbon and climate resilient development or green growth plans.*
- *To keep raising awareness of SLCPs and SLCP mitigation nationally and sub-regionally.*
- *To take steps to accelerate and incentivize action to reduce SLCPs, including via engagement of the private sector and civil society groups.*
- *To engage with other relevant networks working in Africa on issues related to SLCPs, such as C40/CCI.*

To the African Union:

- *To help create a forum for action on SLCPs, and coordinate an African regional response to SLCPs consistent with the Libreville Declaration, Luanda Commitment, and other relevant ministerial agreements; .*
- *To integrate SLCPs into relevant sectoral discussions, including health, energy, development and environment, among others.*

To the Climate and Clean Air Coalition (CCAC):

- *To commission an African regional assessment on SLCPs to enhance understanding of emission levels and sources, impacts, mitigation strategies, costs and benefits, and current action on SLCP emissions. This will build on the UNEP/WMO Integrated Assessment on Black Carbon and Tropospheric Ozone and the UNEP synthesis report on Near-Term Climate Protection and Clean Air Benefits;*
- *To integrate African participation and priorities into CCAC actions;*
- *To better understand and educate on financing for SLCP reductions, and build capacity for nations to access these financing options to address SLCPs in Africa;*
- *To support the creation of a platform dedicate to sharing knowledge, experience and best practices on SLCP reduction relevant to Africa;*
- *To promote institutional innovation, capacity building and capacity to deploy technology;*

To the World Bank Group, African Development Bank, and other finance institutions:

- *To pursue integration of SLCPs into development and investment programs in Africa, consistent with the G8 request to the World Bank Group;*

- *To promote financing mechanisms for SLCP reductions, consistent with the G8 directive and the objectives of the CCAC finance initiative.*

To international NGOs and research institutions and organizations:

- *To promote collaboration within Africa and beyond on R&D, data generation, data sharing and best practices to raise awareness of SLCP issues and available concrete actions to reduce the emissions of SLCPs and their adverse impact on climate and livelihoods on the African continent and beyond.*

(Annex omitted)

Remarks by US EPA Administrator Lisa P. Jackson, on the Montreal Protocol's 25th Anniversary (Washington, DC, 19 September 2012):

“We’ve accomplished so much [under the Montreal Protocol] – and we’re on the path to return to pre-1980 ozone levels. But we know there are new challenges emerging. For example, it has become clear that, while safe for the ozone layer, some alternatives are also greenhouse gases. Over time, these gases could aggregate and erode some of the Montreal Protocol’s climate gains. Given the treaty’s history of flexible accommodation to new science, we are confident that we’ll be able to address new challenges as effectively as the old ones. The United States, along with our partners Canada and Mexico, have taken steps to respond to recent scientific findings by creating the North American Proposal to amend the Montreal Protocol. This proposal uses the treaty’s proven tools to help us fight climate change globally. I have said before that – when it comes to climate change – the Montreal Protocol contains the seeds of success. Those seeds have been planted. Let’s continue to harvest them.”

Blog post by Vice President of Sustainable Development at the World Bank, Rachel Kyte, Celebrating 25 Years of the Montreal Protocol - and Looking Ahead (Washington, DC, 19 September 2012):

“The Climate and Clean Air Coalition, launched earlier this year, tries to build on the success of the Montreal Protocol. It targets short-lived climate pollutants - black carbon, methane and HFCs - which accelerate climate change. These are areas where we can make real progress for the environment and for human health while we move slowly forward on CO₂. With the support of the World Bank, UNEP, and other organizations, 17 countries and the European Union have committed to reducing short-live climate pollutants in places where it’s technically and economically feasible at home and helping other countries take similar action.”

Remarks by US Special Envoy for Climate Change Todd Stern at Dartmouth College (Hanover, New Hampshire, 2 August 2012):

“In February, Secretary Clinton announced a new effort, the Climate and Clean Air Coalition, committed to reducing so-called “short-lived climate pollutants,” such as methane, black carbon and HFCs. Together, these agents account for over 30% of current global warming, millions of premature deaths, and extensive crop losses. We started with six countries and have already grown to some twenty countries and ten non-state partners. We have created a Science Advisory Panel, brought on other key players

like the World Bank, and so far have \$20 million in committed funds. We are implementing scaled-up, real-world initiatives to attack large sources of emissions, such as methane from landfills and from oil and gas production; black carbon from heavy-duty diesel engines; and HFCs used in refrigeration and air conditioners.”

Blog post by the Director of the Climate Policy and Finance Department at the World Bank, Mary Barton-Dock, [Buying Time as the Climate Clock Ticks on](#) (Washington, DC, 19 July 2012):

“We’ve all had our moments of frustration with the unending negotiations on mechanisms to control carbon dioxide emissions. In the last Conference of Parties held at Durban in 2011, it was decided that the global deal for the post Kyoto framework will only be reached by 2015.

Meanwhile, the climate clock is ticking: countries continue to face the impacts of climate change with the poorest being hardest hit. Science has shed the spotlight on a “parallel track” which could help us deal with part of the climate change problem in a faster, cheaper way – it is tackling short-lived climate pollutants (SLCPs), primarily black carbon, methane, and hydrofluorocarbons (HFCs).

These pollutants, while being extremely potent in terms of their global warming potential are short-lived in the atmosphere. For example, black carbon persists in the atmosphere for about two weeks (compared to CO₂ that lives for up to 100 years) and is 917 times more warming than CO₂ over a 100 year timeframe (and 3,320 times over 20 years). So, action on SCLPs can help buy time in addressing the more important and longer-term greenhouse gas (GHG) emissions.

The World Bank works in sectors that emit SLCPs. For example black carbon (BC) is a component of “soot”, consisting of darkly colored, fine airborne particles (aerosols) produced during incomplete combustion of fossil fuels or biomass by power utilities, waste operations, households, industry and transport. It is not a greenhouse gas but contributes to global warming by absorbing visible solar radiation in the atmosphere. As a result, when it settles on ice or snow, it leads to faster melting. [Click here to read the World Bank report on black carbon and climate change considerations.](#)

There have been a number of studies (Methane Emission Reduction Potential (pdf), Simultaneously Mitigating Near-Term Climate Change and Improving Human Health and Food Security) that show that SLCPs are harmful to health and the local environment while also having a significant impact on global climate change. The United Nations Environment Programme has recently undertaken one of the most comprehensive reports focusing on actions to address SLCPs. The findings have galvanized several global initiatives in the last few months, including several events at the recent Rio+20 conference. One of those saw participation from President Clinton, Mayor Bloomberg, and our own Vice President Rachel Kyte. (See the amateur video posted on Youtube)

The biggest intergovernmental effort initiated recently to address SLCPs is the Climate and Clean Air Coalition that aims to support countries to reduce the impacts of these pollutants. The United States along with the Governments of Bangladesh, Canada, Ghana, Mexico, and Sweden launched the coalition in February 2012. The launch

meeting was organized by the US State Department in Washington DC with Secretary of State Hillary Clinton announcing the coalition.

The CCAC has since grown to almost 20 members, with all the G8 countries joining the CCAC during the last summit at Camp David. The coalition commissioned the World Bank "...to prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms."

The World Bank Group has numerous projects that we implement that help reduce SLCPs. For example, a back of the envelope analysis for methane and black carbon showed about \$12 billion of investments, or 140 projects, approved between 2006-11 support SLCP reductions. These include investment in everything from cleaner fuels, better urban landfill management and cleaner cookstoves. We also support important partnerships to reduce SLCPs, such as the Global Gas Flaring Reduction Partnership (GGFR) which works with governments and companies in reducing the flaring and venting of associated gas. The Montreal Protocol, for which the World Bank serves as an implementing agency, is now actively promoting alternatives to HFCs where available. HFCs are human-created gases used to replace ozone depleting substances but which are strong, short-lived global warmers by themselves.

World-wide gas flaring and venting activities add about 350 million tons of CO₂ equivalent; while venting is a major source of methane, flaring is a significant source of black carbon, though volumes in both cases (at the global level) are still unknown. A field study in Uzbekistan showed that one flare stack emitted as much black carbon per second as about 500 diesel buses. GGFR is currently funding cutting-edge research into methodologies that will help quantify and identify the black carbon – invisible to the naked eye – so that it can be tackled. (Watch this demo on a new tool that quantifies black carbon emissions from a gas flare in Mexico.)

I think dealing with SLCPs is a very good example of a triple win. These are good development solutions that reduce local pollution and its impacts on health and agricultural production, and help address the global challenge of climate change without getting mired in controversy over global commitments.

Slowing climate change, improving health outcomes and improving food production – not a bad day's work!

As part of our contribution to the Climate and Clean Air Coalition, we will be zooming into these issues and gathering more evidence on the nature and impact of SLCPs through our portfolio, and what we can do to improve the evidence and analysis around them, and address them, including through innovative financing mechanisms."

Remarks by Former United States Secretary of State Hillary Rodham Clinton at the Climate Clean Air Coalition and Green Embassy Event (Helsinki, Finland, 27 June 2012):

"And last week, at the sustainability conference, Rio+20, the coalition launched a new initiative to reduce methane and other pollutants from landfills. We have encouraged and enlisted mayors from several major world cities. We also have the World Bank on board,

and other countries are joining. In fact, all of the G-8 countries recently signed up to the coalition at the last meeting.

But we're not stopping there, because we formed this coalition for the purpose of taking action, and demonstrating globally that we can actually do things, that we can translate our concerns and our words into actions and results. In partnership with the UN Environment and Development Programmes, the European Commission, and key private sector companies, we are co-hosting a conference in Bangkok this July to showcase new technologies that can drastically reduce the need for HFCs in refrigeration and air conditioning.

Here is a perfect example of the problem: As you have a growing middle class in countries like India and China, where the climate can often get very, very hot, you have an increasing demand for air conditioning. The increasing demand for air conditioning in turn puts more HFCs into the air, thereby creating more of a problem from the short-lived pollutants. So what we want to do is try to get ahead of this, not to tell people – certainly, we in the United States are in no position to tell people, “Look, you’ve lived without air conditioning for thousands of years; you can keep doing it for the sake of the climate.”

No, instead we want to say, “Look, as you have developed, as your incomes have risen, we know that you want to take advantage of air conditioning, but let’s see if we can find a way to do that that is more climate-friendly.” And that is part of the mission that we have in this new coalition.”

Rio+20 Declaration, *The Future We Want* (Rio de Janeiro, Brazil, 22 June 2012):

“222. We recognize that the phase-out of ozone-depleting substances is resulting in a rapid increase in the use and release of high global-warming potential hydrofluorocarbons to the environment. We support a gradual phase-down in the consumption and production of hydrofluorocarbons.”

Plenary Remarks by Former United States Secretary of State Hillary Rodham Clinton at Rio+20 (Rio de Janeiro, Brazil, 22 June 2012):

“[E]arlier this year, I was privileged to host six countries in the United Nations Environment Program as we launched the Climate and Clean Air Coalition. The goal is to reduce short-lived climate pollutants that cause more than 30 percent of current global warming, as well as millions of premature deaths and extensive crop losses. We know we have to keep working together on CO₂, but we think that our Climate and Clean Air Coalition, to which many more countries are joining, and we welcome you, can take targeted action and produce results with respect to methane and black soot and HFCs.”

CCAC Rio Announcement of Solid Waste Partnership with C40 cities network (Rio de Janeiro, Brazil, 19 June 2012):

Former President Bill Clinton:

“As we all know methane, black carbon, and hydrofluorocarbons clear the atmosphere much quicker than carbon dioxide. We need both these strategies,

those that cut CO₂ and those that produce the fastest results by cutting other pollutions. If we focused on the methane, the black carbon, the hydrofluorocarbons we can reduce the rate of climate change for the next thirty years by half and reduce the change in the Arctic by up to two-thirds. That's why the Secretary of State has worked so hard on this issue and why she's coming to Rio to push it. (SLCPs at 28:45; full speech starts 22:55.)”

World Bank Group [Environmental Strategy 2012-2022: Toward a Green, Clean and Resilient World for All](#) (Washington DC, U.S., 5 June 2012):

“With the Montreal Protocol engaged in the phaseout of hydrochlorofluorocarbons through 2030, it is viewed as a key partner in addressing climate change. The WBG will promote alternatives to the use of ozone depleting substances that also maximize climate benefits through adoption of climate-benign substances where feasible and improvement of energy efficiency in related equipment. The World Bank will help developing country partners worldwide reduce and phase out both the production and use of ozone-depleting substances.”

[Remarks](#) by Former United States Secretary of State Hillary Rodham Clinton and Swedish Minister for Environment Lena Ek at Climate and Clean Air Coalition Event (Stockholm, Sweden, 3 June 2012):

*“**MINISTER EK:** ... Much as happened in the short time since we met in Washington in February to launch the Climate and Clean Air Coalition to reduce SLCPs. We were proud to host the first formal meeting of the coalition here in Stockholm in April, where we were joined by new members, and the coalition has now grown from six to 16 countries, plus the European Commission, UNEP, and the World Bank. And we especially, of course, welcome the decision of all G-8 members to join at the recent summit in Camp David.*

Short-lived climate pollutants is a strange and maybe unfamiliar set of words to most, but SLCPs such as black carbon, soot, tropospheric ozone, methane, and short-lived HFCs all have some characteristics in common. They significantly contribute to global and regional warming. They also impact crop yields, deteriorate air quality, and affect human health across the globe. And they are short-lived. And just because of this, they represent a golden opportunity to slow down climate warming in the near term, even more so because they represent as much as a third of increases in average global temperature.

I believe this coalition owes to rapid success to two things. Firstly, it delivers a simple but powerful message based on science. By preventing SLCPs emissions, we can significantly reduce near-term climate change and at the same time save 2.5 million lives per year, increase crop yields and food security, and promote gender equality and women's rights across the globe.

Secondly, this is a coalition of action. All partners bring something to the table, and in joining have agreed to take action also at home. The coalition is structured around the basic idea that we need to act now, and countries are demonstrating their will and ability to reduce domestic emissions by agreeing to implement national reduction actions on SLCPs.

It's only through effective action on greenhouse gases that we can stop climate change. Researchers are telling us that without drastic CO₂ emission reductions we are facing temperature increases that will be substantially higher than the two-degree target. Therefore, we are wholly committed to the UNFCCC negotiations and to making the necessary mitigation efforts at home. Measures to reduce CO₂, such as the Sweden carbon tax of 150 U.S. dollars per ton CO₂, are not only necessary but contribute to green growth and enable lower taxes in other areas and job creation in the economy....

SECRETARY CLINTON: *... The Climate and Clean Air Coalition is designed to get results for what are called – as the minister just said – short-lived climate pollutants, including methane, black carbon, and the hydrofluorocarbons. These pollutants are responsible for more than 30 percent of current global warming. And because they are also very harmful to human health and to agriculture, we can save millions of lives and tons of crops as well by acting now. This is what we call a win-win for sure.*

In February, Sweden, the United States, four other nations, and the UN Environmental Program launched the Climate and Clean Air Coalition, and since then, as the minister said, we've been growing, bringing on all G-8 countries, as well as Norway, Nigeria, Denmark, and Colombia. And we were pleased when the World Bank and the European Commission signed up as well. We've also increased our funding thanks in part to contributions from Sweden and Norway. We are setting up a science advisory panel. And just in April, Sweden hosted the coalition's first ministerial meeting, when we decided on a set of global action-oriented initiatives to implement immediately.

So we have built some strong initial momentum, but we need your help. Today, Sweden and the United States are beginning a global campaign to close the information gap about short-lived climate pollutants. Few people actually know about the impact we could have on global warming if we aggressively target them. And fewer still know that many cost-effective solutions already exist and are just waiting to be broadly implemented....

Now, included in the group that Minister Ek and I met with were leading Swedish companies also supporting this effort, because we know we cannot solve this crisis without the active cooperation and, indeed, the leadership of the private sector, particularly oil and gas companies, makers of diesel trucks, green tech companies that can help turn methane from landfills into clean energy. Today, for example, representatives from Volvo, Mack Trucks talked about how to cut down black carbon worldwide, 20 percent of which is emitted by the transportation sector.

Major reductions of short-lived pollutants can be done inexpensively and with existing technologies. Experts tell us, for example, that one third of all methane leaked and vented by oil and gas companies can be avoided at a net cost of zero dollars or zero kroner. So we need to convince decision makers everywhere, political leaders, CEOs, civil society leaders, investors, and students that this is one of those areas where we can show tangible progress almost immediately and that we can do it in a cost-effective way.

Here are just a few concrete examples. We're launching an initiative focused on hydrofluorocarbons. By 2050 – 2050 – at the current rate, these greenhouse gases could grow to nearly 20 percent of carbon dioxide emissions. So we will start by holding a technology conference in Bangkok in July to showcase new technologies that can eliminate the need for these potent greenhouse gases in refrigeration and air conditioning. At the upcoming sustainability conference in Rio, we'll launch an initiative working with cities to reduce methane and other pollutants from their waste systems, and

we will be working with oil and gas companies to take advantage of all the currently available zero-cost options.

Now, we're aware that reducing these short-lived pollutants by themselves will not solve the collective crisis facing the world. We must also aggressively reduce carbon dioxide emissions, which we know remain the principal contributor to climate change and last in the atmosphere for generations. And countries and people around the world, like Sweden and Norway and Denmark, where I just visited, are taking bold actions....

And while we continue to work on bringing down carbon dioxide emissions and finalizing an international agreement, let's also deliver a blow to methane, black carbon, and HFCs. We are poised to do both, and we should.

Now, I began my day yesterday in the high north, in Tromso, Norway, where we saw some breathtaking views and where we toured the waters on a research vessel, listening to marine biologists and sea ice experts and others explain the changes that have come to the Arctic. The waters don't freeze, even in the dead of winter. The ice shelves that have crumbled no longer protect coastlines from erosion. Species are at risk. And it's such a reminder to be in a beautiful place like Stockholm, or yesterday in Tromso, that we inherited a fragile, marvelous planet, and it's our duty to protect it.

So we're very grateful, once again, to be working hand in hand with Sweden. We've already made progress on the Climate and Clean Air Coalition in less than four months. And we're going to continue working closely with Sweden and our other partners. And we are determined to take aggressive action in the months ahead. We can do no less. Thank you all very much. (Applause.)"

Co-Chairs Summary, Thirteenth Meeting of the Leaders' Representatives of the Major Economies Forum on Energy and Climate (Rome, Italy, 17 April 2012):

"In light of the two degree goal, participants discussed means for increasing the ambition of collective efforts, including: ... exploring pragmatic opportunities that complement the negotiations (e.g.... robust participation in the new Climate and Clean Air Coalition, and phasing out hydrofluorocarbons)."

Joint Statement by North American Leaders (Washington DC, U.S., 2 April 2012):

"We also intend to deepen our trilateral cooperation and work with other interested partners to accelerate efforts aimed at reducing emissions of "short-lived climate pollutants," noting the recently launched Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants in which we are all actively engaged. Reducing our emissions of these substances, which include methane, black carbon, and many hydrofluorocarbons (HFCs), offers significant opportunities to reduce the rate of global warming in the near term, in the context of our broader efforts to address climate change, while also yielding many health, agricultural productivity, and energy security benefits."

Fact Sheet: The United States and Norway - NATO Allies and Global Partners
(Washington DC, U.S., 20 October 2011):

“President Obama hosted Norwegian Prime Minister Jens Stoltenberg for a meeting in the Oval Office on October 20... The leaders renewed their commitments in the following areas: ...

***The Arctic:** In the Arctic Council, the United States and Norway co-chair a task force examining the role of certain greenhouse gases (such as methane and hydrofluorocarbons) and aerosols (such as black carbon), known collectively as "short-lived climate forcers," in causing global climate change... ”*

European Parliament Resolution on a Comprehensive Approach to Non-CO₂ Climate-Relevant Anthropogenic Emissions (Strasbourg, France, 14 September 2011):

“3. Notes that fast-action regulatory strategies are available to phase down production and consumption of HFCs and to reduce emissions of black carbon and the gases leading to the formation of tropospheric ozone, and that these can begin within 2–3 years and be substantially implemented within 5–10 years, producing the desired climate response within decades or sooner, in particular for some HFCs at a public price as low as 5 to 10 cents per tonne, whereas the carbon price is currently over EUR 13 per tonne; ... ”

Pontifical Academy of Sciences Working Group Report, Fate of Mountain Glaciers in the Anthropocene (Rome, Italy, 11 May 2011):

“Possible mitigation by reducing the emission of non-CO₂ short-lived drivers: The second part of an integrated mitigation strategy is to cut the climate forcers that have short atmospheric lifetimes. These include black carbon soot, tropospheric ozone and its precursor methane, and hydrofluorocarbons (HFCs). Black carbon (BC) and tropospheric ozone strongly impact regional as well as global warming. Cutting the short-lived climate forcers using existing technologies can reduce the rate of global warming significantly by the latter half of this century, and the rate of Arctic warming by two-thirds, provided CO₂ is also cut.”

Joint Statement issued at the conclusion of the 6th BASIC Ministerial meeting on Climate Change (New Delhi, India, 27 February 2011):

“HFC gases are not ozone depleting substances but some of these have high global warming potential. The Ministers felt that the issue of phase down of HFCs with high global warming potential required in-depth examination.”

G8 Declaration, Responsible Leadership for a Sustainable Future (L’Aquila, Italy, 10 July 2009):

“66. We recognize that the accelerated phase-out of HCFCs mandated under the Montreal Protocol is leading to a rapid increase in the use of HFCs, many of which are very potent GHGs. Therefore we will work with our partners to ensure that HFC emissions reductions are achieved under the appropriate framework. We are also committed to taking rapid action to address other significant climate forcing agents, such as black carbon. These efforts, however, must not draw away attention from ambitious

and urgent cuts in emissions from other, more long-lasting, greenhouse gases, which should remain the priority.”

Declaration of Leaders, the Major Economies Meeting on Energy Security and Climate Change (Toyako, Japan, 9 July 2008):

“10. To enable the full, effective, and sustained implementation of the Convention between now and 2012, we will: ... ·Continue to promote actions under the Montreal Protocol on Substances That Deplete the Ozone Layer for the benefit of the global climate system; ...”

G8 Declaration on Growth and Responsibility in the World Economy (Heiligendamm, Germany, 7 June 2007):

“59. We will also endeavor under the Montreal Protocol to ensure the recovery of the ozone layer by accelerating the phase-out of HCFCs in a way that supports energy efficiency and climate change objectives. In working together toward our shared goal of speeding ozone recovery, we recognize that the Clean Development Mechanism impacts emissions of ozone-depleting substances.”

Others

Joint statement on methane emissions by Institutional Investors Group on Climate Change (IIGCC), the Investor Network on Climate Risk (INCR) and the Investors Group on Climate Change (IGCC) (21 January 2014):

IIGCC, INCR and IGCC represent more than 200 institutional investors with \$20 trillion in assets that share a common concern about the potential for climate change to have major negative impacts on the global economy and the long-term financial performance of our investments. Our members support cost-effective efforts to mitigate climate change.

We are concerned about the volume of natural gas that is emitted to the atmosphere through venting or leakage, or flared - equivalent to nearly two gigatons CO₂ of greenhouse gas emissions per year.¹ We are particularly concerned about methane, given its short-term potency as a greenhouse gas. High methane leakage rates undermine the climate change benefit of using natural gas as an energy source.

In 2012 we called² on natural gas producing companies and government regulators to consider how they can play a role in encouraging the more effective control of methane emissions. We subsequently engaged with companies on these issues and asked the CDP to incorporate questions on methane control into their survey.

¹ UNEP CCAC “Climate and Clean Air Coalition Working with Oil and Gas Companies to Reduce Methane and Black Carbon Emissions”

<http://www.unep.org/ccac/News/WorkingtoReduceMethaneandBlackCarbon/tabid/105825/Default.aspx>

² IIGCC, INCR and IGCC (2012) Controlling methane emissions in the oil and gas sector.

<http://www.iigcc.org/publications/publication/controlling-methane-emissions-in-the-oil-and-gas-sector>

Companies told us that when using the best new technologies, methane emissions from oil and gas production can be reduced to close to zero. This feedback is backed by new research evidence.¹ Research also indicates that methane emissions can be very high in gas producing regions where these new technologies have not been widely implemented.²

This evidence on emissions patterns underlines the importance of adopting best practice methane emissions controls. We support efforts by the global oil and gas industry to encourage universal implementation of best practices, in order to maintain the chance of achieving a 2°C trajectory.³

We therefore encourage oil and gas companies to join the new CCAC Oil and Gas Methane Partnership. The Climate and Clean Air Coalition (CCAC) is an international effort backed by over 30 governments to bring together countries, companies, and others to work together to substantially and cost-effectively reduce methane, black carbon, and HFCs. The Oil and Gas Methane Partnership is a global initiative to encourage systematic evaluation and management of methane emissions in a flexible, cost-effective manner. The initiative aims to develop the technical support, publically reporting and national policies that will ensure progress is made on this issue.

We believe that participation in the CCAC Oil and Gas Methane Partnership will help companies to reduce their emissions, improve the efficiency of company operations and enhance the role and credibility of natural gas as a bridge to a low carbon future.

International Polar Year 2012, [Keynote Address](#) by Dr. Gro Harlem Brundtland
(Montreal, Canada, 23 April 2012):

“(Short-lived Climate Forcers)

Even if we manage to slow down or turn around the rising global greenhouse gas emissions in the coming two decades, reductions will not occur quickly enough to conserve the polar and alpine environments, as we know them today.

We need rapid action, with rapid effects.

Reducing short-lived climate forcers such as methane, black carbon and ozone is one such promising avenue for rapid action.

Recent research has shown that more than one-third of current global warming is caused by short-lived pollutants. They also destroy millions of tons of crops every year and wreak havoc on people’s health.

¹ Allen D. et al. (2013) Measurements of methane emissions at natural gas production sites in the United States. *PNAS*

<http://www.pnas.org/content/110/44/17768>

² Miller, S (2013) Anthropogenic emissions of methane in the United States. *PNAS*.

<http://www.pnas.org/content/110/50/20018.abstract>

³ IEA (2013) “Redrawing the energy-climate map.”

<http://www.worldenergyoutlook.org/media/weowebiste/2013/energyclimatemap/RedrawingEnergyClimateMap.pdf>

Furthermore, methane, a greenhouse gas 20 times more potent than carbon dioxide, can be an abundant source of energy if we capture it instead of just venting it into the air or flaring it.

This is exciting new knowledge. And, it is possible to reduce these short-lived climate forcers.

In a report from November last year UNEP calculated that a package of 16 measures could, if fully implemented across the globe, save close to 2,5 million lives a year; avoid crop losses amounting to 32 million tonnes annually and deliver near-term climate protection of about half a degree Celsius by 2040.

Rapid effects would be even greater in the Arctic. They would reduce projected warming in 2040 by 0.7 degrees Celsius, with important implications for the lives and livelihoods of Arctic peoples, biodiversity and global sea-level rise.

I welcome the announcement earlier this year by US Secretary of State Hillary Clinton of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, as well as the declaration from the Nordic countries last month agreeing on measures to intensify their efforts to reduce short-lived climate forcers at national, regional and global level.

Many are involved in this effort, and I hope more will follow.

I do agree with the Executive Director of UNEP, Achim Steiner, that action on short-lived climate forcers does not take away attention from the fundamental challenges of global warming.

On the contrary, it is buying back some of the time we already have lost.”

IGBP & IGAC Statement, [Time to Act: The Opportunity to Simultaneously Mitigate Air Pollution and Climate Change](#) (London, UK, 29 March 2012):

“An integrated approach to addressing air pollution and climate change is essential if society desires to slow the rate of climate change and to protect human health, food/water security and ecosystems. ...

Control of air pollutants and their precursors that lead to warming (such as black carbon, methane and tropospheric ozone) would be a highly effective way to reduce the rate of climate change in the near-term, but would only be effective in the long-term if continued action to reduce long-lived greenhouse gases, notably carbon dioxide (CO₂), are taken in parallel.”

Pontifical Academy of Sciences Working Group Report, [Fate of Mountain Glaciers in the Anthropocene](#) (Rome, Italy, 11 May 2011):

“Possible mitigation by reducing the emission of non-CO₂ short-lived drivers: The second part of an integrated mitigation strategy is to cut the climate forcers that have short atmospheric lifetimes. These include black carbon soot, tropospheric ozone and its precursor methane, and hydrofluorocarbons (HFCs). Black carbon (BC) and tropospheric ozone strongly impact regional as well as global warming. Cutting the short-lived climate forcers using existing technologies can reduce the rate of global

warming significantly by the latter half of this century, and the rate of Arctic warming by two-thirds, provided CO₂ is also cut.”