

Evaluation Report of the Climate and Clean Air Coalition (CCAC):

Supporting National Planning for Action (SNAP) of Short-lived Climate Pollutants Initiative

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List of Acronyms

BC	Black Carbon
BenMAP-CE	Benefits Mapping and Analysis Program Community Edition
CCAC	Climate and Clean Air Coalition
COP	Conference of the Parties
DAASU	Directorate of Sectorial and Urban Environmental Issues (Colombia)
DCC	Directorate of Climate Change (Colombia)
DOS	Department of State (US)
DTIE	Division of Technology, Industry and Economics (DTIE)
EC	European Commission
EF	Emissions Factor
EU	European Union
FAO	Food and Agricultural Organisation of the United Nations
FY	Fiscal year
GHG	Greenhouse Gas
GIZ	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit</i> (Germany)
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
HLA	High Level Assembly
IAA	Interagency Acquisition Agreement
ICLEI	Local Governments for Sustainability
IEA	International Energy Agency
IGO	International Governmental Organization
IGSD	Institute for Governance and Sustainable Development
INDC	Intended Nationally Determined Contribution
INECC	National Institute of Ecology and Climate Change (Mexico)
IS	Institutional Strengthening
IUAPPA	International Union of Air Pollution, Prevention and Environmental Protection Associations
LAC	Latin American and the Caribbean
LEAP/IBC	Long Range Energy Alternatives Planning System/Integrated Benefits Calculator
LEDS	Low Emission Development Strategy
MCE2	Molina Center for Energy and Environment
MEL	Monitoring, Evaluation, and Learning
MESTI	Ministry of Environment, Science, Technology and Innovation (Ghana)
NAP	National Action Plan
NDC	National Determined Contribution
NEFCO	Nordic Environment Finance Corporation
OECD	Organization for Economic Co-operation and Development
OES/EGC	Office of Global Change/ Bureau of Oceans and International Environmental and Scientific Affairs (US Department of State)
PM	particulate matter
REIO	Regional Economic Integration Organization

SC	Steering Committee
SEI	Stockholm Environment Institute
SLCF	Short-lived Climate Forcer
SLPC	Short-lived Climate Pollutant
SNAP	Supporting National Planning for Action on SLCPs
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
USD	United States Dollar
USG	United States Government
WG	Working Group
WHO	World Health Organisation
WMO	World Meteorological Organisation

Evaluation Report for the Climate and Clean Air Coalition's Initiative on Supporting National Planning for Action on Short-lived Climate Pollutants (CCAC/SNAP)

A. Executive Summary

The Climate and Clean Air Coalition (CCAC) is a voluntary international organization formed in 2012 by six governments, including United States, to promote the widespread adoption of policies and programs intended to reduce a category of anthropogenic climate and air pollutants referred to as *Short-lived Climate Pollutants* (SLCPs). These pollutants, which include black carbon, methane, and many hydrofluorocarbons (HFCs), have a relatively short life in the atmosphere relative to carbon dioxide (CO²) and a rapid global SLCP emission reduction would have a positive and more immediate local and global impact on human health, agriculture productivity, and on ecosystem sustainability. The CCAC has grown from seven founding members (“Partners”) in 2012 to more than 100 States, regional and international organizations, and non-State organizations, institutions, and corporations.

The U.S. Government (USG) is active in the CCAC’s governance structure, is participating in many of its 11 sectoral and crosscutting program initiatives, and has provided direct funding support contributions totaling US\$18.2 million (25% of total contributions since 2012) to a CCAC Trust Fund managed by the UNEP/CCAC Secretariat. The USG also provide significant in-kind support to developing countries through direct technical assistance and training.

From November 2016 to July 2017, Dexis Consulting Group conducted an evaluation of one of the CCAC’s 11 program initiatives, the *Supporting National Planning for Action on Short-lived Climate Pollutants (SNAP)* initiative, under contract with the U.S. Department of State’s Bureau of Oceans and International Environmental and Scientific Affairs (DOS/OES). This report describes the findings of this SNAP program evaluation whose purpose was to gauge the progress made in the SLCP mitigation plans and actions implemented by 14 developing country SNAP Initiative Partners. Ongoing SNAP program activities support three main objectives:

- *1. Support national-scale SLCP planning and mitigation actions, build the institutional and technical capacity of designated lead SLCP agencies in selected developing countries, and coordinate technical assistance;*
- *2. Develop computer-based modeling and assessment tools and approaches to support the national SLCP mitigation actions; and*
- *3. Foster linkages between national SCLP mitigation actions and regional and international institutions, initiatives, and approaches.*

Through a review of available documentation, an online questionnaire completed by 14 SNAP-supported national SLCP study teams, and a series on high level interviews, the Dexis team tracked the progress of national-scale SNAP program activities partially- or fully-funded through a series of five CCAC-approved funding requests (project proposals).

The ongoing activities supporting SNAP Objective 1 include funding support and technical assistance for the development of SLCP *National Action Plans* (NAPs) in eight developing countries and a more focused national-scale *SLCP Institutional Strengthening* (IS) program targeting 14 countries. The evaluation team found that SNAP's program experience has led to the development of an effective step-by-step approach to NAP development. We also note that 14 developing countries joined SNAP at different times and are at different points in the NAP and IS program. Each of the 14 SNAP country teams has formed a dedicated SLCP national agency with an increasing technical and organizational skill, have linked the climate change and air pollution issues, and that have engaged a wide range of key experts and stakeholders from the national public and private sectors. One key factor contributing to SNAP's effectiveness is the consistent high quality and frequency of the technical assistance and training provided by SEI, UNEP, IUAPPA and U.S. EPA.

As part of SNAP's Objective 2, the development and refinement of a set of analytical tools for assessing national-scale SLCP pollutants, referred together as the "SNAP Toolkit," is now being used by national SLCP teams to quantify national SLCP emissions, assess emission reduction strategies, calculate the benefits of national-scale SLCP reduction, and compare various mitigation scenarios. This SNAP Toolkit includes a refined version of the Stockholm Environment Institute's energy planning LEAP Model linked to an USG-developed Integrated Benefits Calculator (IBC) and Benefits Mapping and Analysis Program (BenMAP). Its application by national SCLP teams has been supported by an effective program of technical assistance and training that has included more than 600 participants.

Objective 3 activities contribute to the strengthening of linkages and an enhanced collaboration between national SLCP planning and mitigation action, CCAC initiatives, and global and regional processes, initiatives and approaches. This includes regional IS workshops for national study teams, peer-to-peer partner events, and other multi-country technical training.

Overall, the evaluation concluded that considering the relatively short five-year life span of the CCAC/SNAP Initiative, it is clear that the program has made significant strides in supporting global action to assess, quantify, and mitigate national-scale SLCP emissions. It is also evident that SNAP has matured into an effective program, but is one that remains relatively young and that the real global-scale impact of the program it still in its future. SNAP has completed its early development stage and now has refined organizational approaches, an expert network supporting technical assistance, and a refined computer-based assessment toolkit that can now be used by a much larger number of countries to replicate and expand SLCP mitigation efforts. With the solid programmatic foundation built over the past five years, it is clearly poised to expand to positively impact a much larger number of developing countries.

We also conclude that the SNAP initiative overall does have some more organizational problems, such as the constraints caused by some bureaucratic processes, the absence of a comprehensive monitoring and evaluation (M&E) system, and issues of sustainability, but we acknowledge that these appear to be related more to institutional "growing pains" associated with the CCAC and SNAP's period of rapid expansion since its founding.

B. SNAP Background and Context within the CCAC

The CCAC was launched on February 12, 2012 by the Governments of Bangladesh, Canada, Ghana, Mexico, Sweden and the United States¹, along with the United Nations Environment Programme (UNEP). Its first ministerial level meeting in April 2012 was held during the celebration of the 40th anniversary of the UN Conference on Human Environment. Its founding was a direct result of the key findings of the joint 2011 UNEP/WMO² report; “*The Integrated Assessment of Black Carbon and Tropospheric Ozone*.” This report includes the contributions of some 50 international experts and assesses the state of scientific knowledge related to the anthropogenic emission of a set of “short-lived climate forcers” (SLCFs) known to contribute to near-term global warming and shifting local weather patterns. These SLCFs share a demonstrated atmospheric warming or cooling effect on global climate and can negatively affect human health, agriculture, and ecosystems through local and regional impacts on air quality. The report’s contributors note that “it is increasingly recognized that, although changes in air quality and climate typically occur at different temporal and spatial scales, many aspects of these issues are closely linked.”³ The conclusion establishes a clear link between the global-scale issues of climate change and local air quality.

The UNEP/WMO joint report went beyond the scientific understanding of the role and impacts of SLCFs in atmospheric chemistry and includes an assessment of numerous emission mitigation options. It also assesses a set of more practical measures that could be widely implemented at the national level with existing technology.

A.1. Development within the Context of the Launching of the CCAC

The CCAC and its SNAP Initiative were launched in 2012. The intent of the organization and its membership (Partners), as cited in the CCAC’s Annual Report for 2015/2016, is to support activities and initiatives guided by four principal strategies. These strategies also contribute to the CCACs Priority Objective: The “widespread adoption and implementation of policies, regulations and practices to substantially reduce SLCPs”.⁴ The CCAC’s overall mission, objectives, and the structure of the Coalition’s various sub-bodies are outlined in the *Framework for the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (HLA/SEP2014/4A)* which was eventually approved by the CCAC’s High-Level Assembly (HLA) in 2014. The HLA is the CCAC’s representative governing body. The framework describes the CCAC as “a voluntary international framework for concrete and substantial action to accelerate efforts to reduce SLCPs, with an initial focus on methane, black carbon, and many hydrofluorocarbons (HFCs), in ways that protect the environment and public health, promote food and energy security, and address near-term climate change and air pollution.” The framework and objectives guide the goals and activities of 11 CCAC Sector and Crosscutting Initiatives, including SNAP. The actual framework agreement entered into force on February 16, 2012 and is scheduled to “sunset” on February 16, 2022. The Working Group or High-Level

¹ The US also became a UNFCCC Annex 1 Party after it was signed on behalf of the US by Pres. George H.W. Bush on June 12, 1992 and following US ratification on Oct. 12, 1992. It entered into force for the US on March 28, 1994. Pres. William J. Clinton later signed the UNFCCC Kyoto Protocol on Nov. 12, 1998, but the US never ratified. Pres. Barack Obama signed the UNFCCC Paris Agreement on April 22, 2016. US acceptance was declared (as ratification) on Sept. 3, 2016 and it entered into force for the US on Nov. 4, 2016.

² The United Nations Environment Programme (UNEP) and The World Meteorological Organization (WMO).

³ UNEP/WMO, *The Integrated Assessment of Black Carbon and Tropospheric Ozone*, 2011, page 1.

⁴ CCAC, *5-Year Strategy Plan (2020)*, HLA/DEC2015/02a, December 2015

Assembly has the authority to extend the “sunset” date. The intent of the organization and its membership, as cited in the CCAC’s Annual Report for 2015/2016, is to support activities and initiatives guided by these four principal strategies:

- ***Catalyze Ambitious Action*** - Develop, enhance and implement new national and regional actions by executing the CCAC’s initiatives, enhancing capacity and building partnerships with public and private stakeholders;
- ***Mobilize Robust Support*** - Engage directly with decision-makers and raise public awareness to enable policymakers to act on SLCPs;
- ***Leverage Finance at Scale*** - Generate enabling conditions for financing SLCP actions, strengthen and streamline financial flows through engagement of development banks and agencies, and catalyzing private sector investment; and
- ***Enhance Science and Knowledge*** - Improve scientific understanding of SLCPs to enable prioritization of mitigation actions and develop metrics to quantify mitigation benefits.

A.2. Purpose of the Crosscutting SNAP Initiative CCAC Organizational Structure

Although there is a wide and growing international scientific consensus around the deleterious impact of anthropogenic SLCP emissions at the regional- and global-scale on climate change and variability and air quality, the implementation of effective and shorter-term mitigation measures having a significant near-term impact will depend on the commitment of national-level institutions. The CCAC approach assumes that rapid SLCP reductions will best come from national governments partnered with other key stakeholders, including the private sector and civil society, in order to incorporate SLCP mitigation considerations into the national decision-making process related to policy setting, technology choices, economy programming, development planning, and budget formation. The first annual CCAC/SNAP progress report in 2012 identified a number of “main challenges” that were seen as impediments to this national-scale action, especially in many developing countries with rapidly emerging economies⁵:

- *Lack of awareness of the SLCP issue amongst the key government departments and stakeholders in the country;*
- *Lack of knowledge of SLCP emission sources, the magnitude of relevant emissions, and the potential for mitigation that hinders the ability to make informed decisions;*
- *A lack of institutional capacity to coordinate the implementation of SLCP measures;*

⁵ CCAC, *First Annual Initiative Progress Report*, Reporting Period August 2012-September 2013, NOV/MAY2013/8 Final.

- *Scattered, uncoordinated action implementing measures that achieve the near-term climate, health, and ecosystem benefits and no or limited planning that would embed SLCP policies within national strategies, plans and programs; and*
- *A lack of consideration of the role that regional and other international processes and agreements could play in the mitigation of SLCPs.*

As a starting point and in an effort to overcome existing barriers to action, the first HLA in April 2012, which included representation from the Government of the United States, collectively endorsed the formation of one of the first CCAC initiatives; *Supporting National Planning for Action on Short-lived Climate Pollutants (SNAP)*. This first HLA also authorized a first allocation of funds (US\$ 630,000) from the CCAC Trust Fund to support a Phase I “rapid startup” of SNAP initiative activities covering a rather brief eight-month implementation period (August 2012 to March 2013). Since its founding, the focus of SNAP, which is intended to complement the seven more sector-specific CCAC initiatives, has been to:

- *Raise awareness of SLCP impact and mitigation strategies;*
- *Enhance and develop new national and regional actions, including identifying and overcoming barriers, enhancing capacity and mobilizing support;*
- *Promote best practices and showcasing successful efforts; and*
- *Improve scientific understanding of SLCP impacts and mitigation strategies.*

A.2.1. Structure of CCAC Programming: 11 Sector and Crosscutting Initiatives

More practical aspects of CCAC programming are implemented through a series of 11 initiatives which are separately managed, but that all focus on reducing SLCP emissions globally by promoting local action. This includes the SNAP Initiative. All program activities of the 11 Initiatives are Working Group-approved, are developed and implemented by CCAC Partners, seek to engage as many stakeholders as possible, and are oftentimes partially or fully funded by the CCAC Trust Fund. As noted by the CCAC, “these 11 initiatives were chosen to ensure rapid delivery of climate and clean air benefits by reducing key short-lived climate pollutants, including methane, black carbon and hydrofluorocarbons (HFCs).”⁶ As noted in Table 1, seven of the CCAC initiatives relate to SLCP mitigation in a single sector, while the other four, including SNAP, are crosscutting initiatives spanning the other sectors. A wide range of CCAC Partners, Actors, and stakeholders participate in one or more of the 11 initiatives in various roles.

Table 1 - The 11 CCAC Sector-based and Crosscutting Initiatives⁷	
Sector-Based	Crosscutting

⁶ CCAC website at <http://www.ccacoalition.org/en/initiatives>.

⁷ Based on key informant interview.

Initiatives (7)		Initiatives (4)
Reducing BC Emissions from Heavy-Duty Diesel Vehicles and Engines	Mitigating SLCPs from Municipal Solid Waste	<i>Supporting National Planning for Action on SLCPs (SNAP)</i>
Addressing SLCPs from Agriculture ⁸	Reducing SLCP Emissions from Household Cooking and Domestic Heating	Regional Assessments of SLCPs
Accelerating Methane and BC Reductions from Oil and Natural Gas Production	Promoting HFC Alternative Technology and Standards	Financing Mitigation of SLCPs
Mitigating BC and other Pollutants from Brick Production		Urban Health Initiative
<i>Source: CCAC Framework for the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants</i>		

A.3. Current Objectives of the SNAP Initiative

All CCAC/SNAP Initiative program activities have been supported by financial resources coming from the CCAC Trust Fund through a series of five approved funding requests or through in-kind contributions of technical cooperation and assistance, including the U.S. EPA. Each activity is implemented as a joint collaboration between a wide range of CCAC Partners and non-partner organizations, institutions, and other stakeholders (Actors) who are guided by the main objectives of the CCAC/SNAP Initiative described in Table 2. The overall goal of the SNAP Initiative, through the activities supporting these objectives, is to develop the national-scale institutional and technical capacity among CCAC Partner countries required to develop and implement national plans supporting a rapid and large-scale implementation of SLCP mitigation actions.

⁸ This Coalition includes program sub-components related to livestock and manure managements, open burning, paddy rice, and the enteric fermentation by domesticated ruminants.

Table 2 - CCAC/SNAP Main Objectives	
Objective	Description
Objective 1	Support the development of national SLCP planning processes by: (a) facilitating action in countries by embedding SLCPs in on-going activities and policies; (b) building capacity to coordinate issues related to SLCPs at the national scale to identify national priorities; and (c) providing regionally coordinated support for institutional strengthening in participating countries.
Objective 2	Enhance tools and approaches to support key steps of the national planning process through: (a) the development of emission scenarios and (b) estimation of benefits of emission reductions to help in prioritizing different measures for SLCP reduction.
Objective 3	Foster linkages and collaboration between national SLCP planning with global and regional processes, initiatives and approaches.

Source: CCAC, Framework for the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants

A.3.1. CCAC/SNAP National Action Plan (NAP) Development and Institutional Strengthening (IS) Overview (Objective 1)

A.3.1.1. CCAC/SNAP Objective 1 - National Action Plans (NAPs)

Under Objective 1, SNAP program activities focus on national-scale SLCP assessment and action. This includes developing SLCP mitigation planning processes at the national scale and on strengthening the technical and organizational capacity required at the national scale to coordinate SLCP action by government agencies, civil society, and private sector actors. Since 2013, CCAC/SNAP has worked with eight countries (see Table 3 for the countries in Groups I, II, and III) to support the development of National Action Plans (NAPs) and in parallel, using the lessons learned to refine a standardized approach that can be used by a larger number of countries. These guidelines, *Supporting National Action on Planning on Short-Lived Pollutants (SNAP)*, were developed by SEI and released in final version in 2016. They describe a step-by-step approach that guides national teams in NAP development and in the national-scale implementation of mitigation measures:

- *Step 1 - Set up the national planning process and engaging stakeholders*
- *Step 2 - Raise awareness about SLCPs*
- *Step 3 - Assess SLCPs in the national context*
- *Step 4 - Identify opportunities to reduce SLCPs and estimate benefits of emission reductions*
- *Step 5 - Develop national plan with priorities for SLCP abatement*
- *Step 6 - Mainstream the SLCP planning process in national processes and structure*
- *Step 7 - Monitor and evaluate implementation of SLCP reduction measures*

The eight Partner countries now developing NAPs with CCAC Trust Fund support joined the program at different points in time and are at different stages. (Table 3). The Evaluation Team developed an online survey targeting the designated lead SLCP government agencies in each of the eight countries and survey questionnaires were completed (one per country) in March/April 2017. The questionnaire is included as Appendix 4.

Table 3 - CCAC Partner Countries supported by CCAC/SNAP activities		
	SNAP Program Activity	Partners (14)⁹
Phase I	Group I Country Partners - NAP development since 2013 and Institution Strengthening since 2016)	Mexico
		Ghana
		Bangladesh
		Colombia
Phase II	Group II Country Partners - NAP development since 2014 and Institutional Strengthening since 2016	Côte d'Ivoire
		Nigeria
	Group III Country Partners - NAP development since 2015 and IS since 2016)	Morocco
		Peru
	Additional Country Partners - IS since 2016)	Chile
		Ethiopia
		Jordan
		Liberia
		Maldives
		Togo

A.3.1.2. CCAC/SNAP Objective 1 - Institution Strengthening (IS)

The *Institution Strengthening (IS)* activity is a second Objective 1 program component that was added in 2014. The IS activity focuses on national-scale action, but it includes support for a narrower range of activities. A *Second Phase of National SLCP Planning (SNAP II)* funding request (summarized in Appendix 9) was approved by the CCAC/WG, but was amended after the CCAC Steering Committee requested a shift in the allocation of the budgeted sources. The original funding request included support for an additional four countries to develop NAPs, but the amendment reduced the number of new NAP countries to two and diverted a portion of the funding to the separate IS activity. This narrower range of activities (see Table 4) is intended to further strengthen the capacity of designated national government agencies charged with overseeing SLCP action. This new activity provided additional support to the eight countries developing NAPs, but also added an additional six: Chile, Ethiopia, Jordan, Liberia, Maldives, and Togo. The ongoing IS program focuses more on the organizational and institutional foundations required for SLCP mitigation at the national level and less on the technical aspects of developing full national SLCP emission inventories, assessing potential mitigation options, and developing full NAPS.

Table 4 - CCAC/SNAP national-scale Institution Strengthening program elements

⁹ In April 2016, based on a CCAC/WG-approved SNAP funding request, four additional developing country Partners (Chile, Maldives, Philippines, and Togo) will receive NAP development support and another 8 countries (Benin, Cambodia, Central African Republic, Kenya, Mali, Moldova, Paraguay, and Uruguay) will join the IS component. As of May 2017, project activities had not begun and was still under discussion with the countries selected and the UNEP Regional Offices.

Activity	Sub-activities
1- Develop and manage an effective coordination structure that promotes attention on SLCPs and provides a sustainable increase in institutional capacities to promote SLCP mitigation	1.1 - Set up the project structure
	1.2 - Manage the National SLCP Unit
	1.3 - Coordinate SLCP activities in the country
2 - Engage key national stakeholders in SLCP mitigation	2.1 - Mobilize main stakeholders
	2.2 - Raise awareness internally and externally
3- Promote financing, mainstreaming and implementation of SLCP mitigation measures	3.1 - Foster the sustainability of the SLCP mitigation effort at the national level
	3.2 - Embed SLCPs into national planning processes
4 - Foster participation in CCAC activities/ initiatives and other intl. initiatives and fora	N/A
<i>Source: CCAC/SNAP Basic National Implementation Plan: Institutional Strengthening Support guidelines</i>	

A.3.2. CCAC/SNAP Toolkit Overview (Objective 2)

Objective 2 of the CCAC/SNAP program has focuses on developing and refining a set of enhanced analytical tools for assessing national-scale SLCP pollutants. The set of tools, referred together as the “SNAP Toolkit,” has evolved over the course of the project and is now used by national agencies and others to:

- *Quantify national SLCP emissions by source and by sector (emission inventories);*
- *Assess the range and impact of alternative emission reduction strategies;*
- *Calculate the potential benefits of national-scale SLCP reduction; and*
- *Compare various mitigation scenarios.*

The results coming from the SNAP Toolkit guide national policy-makers and other key actors on planning and implementation of appropriate SLCP mitigation actions. All eight of the CCAC/SNAP supported country partners developing NAPs are using advanced versions of this toolkit.

Table 5 - Objectives for US-supported LEAP/IBC and BenMAP-CE development	
Program Area	Program Objective
Extensions to the LEAP Benefits Calculator	1 - Complete the modeling of PM and ozone sensitivities for all countries globally
	2 - Extend the benefits calculator to include the impacts of indoor air pollution
	3 - Conduct an assessment to evaluate the net impact of CCAC mitigation measures across program areas and national action plans
Extensions of the BenMAP-CE	1- Add features to improve the user experience particularly for CCAC partners
	2 - Incorporate updates that enhance the technical capability of the model
Training workshops and benefits tool application	Support deployment of the tools, principally through workshops and site visits to promote user testing and training
Source: IAA for DoS: REF S-OES-13-IA-0023	

LEAP/IBC - The SNAP Toolkit has two major components. The first is the Stockholm Environment Institute's (SEI) *Long Range Energy Alternatives Planning System (LEAP)*.¹⁰ Since the LEAP model was first developed in 1980, it has grown into an advanced integrated energy planning and climate change mitigation tool that allows users to structure available energy-related data, create national-scale energy balances, project current and future energy supply and demand scenarios, and evaluate the impacts of alternative energy policies.

The LEAP tool uses available emission factors and activity data from international sources, such as the International Energy Agency and the U.N. Food and Agriculture Organization (FAO), and local country-specific sources. It also incorporates population data and can set historic, baseline, and future mitigation scenarios at the country-level for all the SLCPs, including black carbon. Identifying key SLCP sources at the national level, quantifying their emissions, and then projecting future emissions using the LEAP model is the first step in any national-scale analysis.

The second component of the LEAP/IBC tool is the *Integrated Benefits Calculator (IBC)*. In the early stages of the SNAP Initiative (2013), the U.S. EPA worked with SEI to develop a simplified "rapid benefits assessment module," which later grew into the "IBC" portion of the LEAP/IBC tool. Through a contract with the Research Triangle Institute and Industrial Economics, the U.S. EPA provided in-kind support to a GEOS-Chem¹¹ Adjoint modelling scientist at the University of Colorado to incorporate country-specific meteorological and pollution data that can be used to estimate the health, agricultural and climate impacts of SLCP mitigation policies. This IBC was actually linked to the LEAP model in 2015. When SEI provides the LEAP-IBC tool to individual countries, it is pre-loaded and then updated with default emissions data coming from several international sources, including some data from the International Energy Agency (IEA) and the U.N. Food and Agriculture Organization (FAO). These country-specific data have been made available to 10 of the 12 SNAP-supported country partners. The LEAP/IBC tool is used to model emission reduction policies and then estimate local-scale concentrations of particulate pollution and ozone, and then to demonstrate the

¹⁰ In 2017, this was renamed *LEAP SLCP Integrated Benefits Calculator*.

¹¹ Goddard Earth Observing System (GEOS) of the NASA Global Modeling Assimilation Office (GMAO).

potential benefits of various mitigation scenarios on human health, crop production, vegetation, and national-scale climate impacts.¹²

BenMAP-CE - The *Benefits Mapping and Analysis Program - Community Edition* is a customized health benefits and economic evaluation tool developed and used by the US/EPA. BenMAP-CE is more complex than the IBC and allows a more comprehensive approach to modeling the potential health benefits and economic values associated with changes in particulate pollution and ozone concentrations.

Training related to the SNAP Toolkit has been extensive and is ongoing. According to the CCAC 2015-2016 annual report, “the SNAP initiative supported 594 person-days of training through two webinars and 15 in-person trainings. This includes training on the BenMAP and LEAP-IBC tools that comprise the SNAP toolkit, experience sharing, peer to peer exchanges, national inception meetings and trainings, a side event on the margins of COP 21, and a LAC¹³ regional workshop. Participants in SNAP training activities, included 605 individuals, including participants from Bangladesh, Benin, Cambodia, Canada, Central African Republic, Chile, Colombia, Côte d’Ivoire, Dominican Republic, Ethiopia, Ghana, Guinea, Jordan, Lao PDR, Liberia, Maldives, Mexico, Moldova, Morocco, Nigeria, Peru, Philippines, Maldives, Togo, United Kingdom, United States and Uruguay.”

A.3.3. CCAC/SNAP Objective 3 Program Overview

One particularly effective element of the SNAP program has been its ability to develop linkages and enhance collaboration between national SLCP planning and mitigation action, CCAC initiatives, and global and regional processes, initiatives and approaches. In addition to the regional IS workshops for national study teams, peer-to-peer partner events, and other multi-country technical training, SNAP continues to establish linkages to an expanding number of regional and global initiatives and institutions. This includes a wider collaboration with city-level action through major networks of cities and local governments, including Local Governments for Sustainability (ICLEI), C40, the Global Fund for Cities Development (FMDV), and Clean Air Asia. The *BreatheLife* campaign is another expanding program partially funded by CCAC and led by WHO and UNEP to support cities and individuals improving urban air quality. The CCAC has also linked to the Global Methane Initiative supporting a coordinated global-scale action on SLCP mitigation.

A number of CCAC Inter-Governmental Organization (IGO) Partners are now incorporating SLCP considerations into their own programming. This includes the World Bank, an early CCAC Partner, that has outlined a program plan for the *Integration of short-lived climate pollutants in to World Bank activities: A Report Prepared at the Request of the G8* (June 2013).

The national activities and institutions developed by the CCAC and SNAP also directly impact the implementation of three major international climate change and air quality agreements. The 2015 Kigali amendment of 1987 Montreal Protocol includes a new commitment to quantify, mitigate, and reduce or eliminate the production of HFCs. The SLCP assessments developed by a

¹² Development of emissions data for more countries and higher resolution modeling, especially for African countries, is planned.

¹³ Latin America and the Caribbean Region.

number of SNAP countries have also incorporated their SLCP emission inventories and mitigation plans into the National Determined Commitments (NDCs) called for under the 2015 Paris Agreement. Also, with the increasing scientific understanding of the complex role of Black Carbon¹⁴ on both climate change and air quality, the SNAP has begun a program expansion into developing BC-related emission inventory and assessment tools. This shift is evident in the sixth SNAP funding request that was approved by the WG as a concept in April 2017 (see Appendix 9). The approved concept will now be developed into a full proposal. This shift also fosters a link between SNAP countries conducting BC emission inventories and the UNECE Convention on Long-Range Transboundary Air Pollution (1979).

B. Purpose of the Evaluation, Methodologies, and Range and Scope of the Evaluation

Purpose - The purpose of the evaluation of the Climate and Clean Air Coalition (CCAC) is to determine developing country progress on national -level Short-Lived Climate Pollutant (SLCP) mitigation actions by the countries participating the CCAC's SNAP Initiative.¹⁵ In November 2016, the Department of State's Bureau of Oceans and International Environmental and Scientific Affairs (DOS/OES) contracted the Dexis Consulting Group to conduct an evaluation of the CCAC, focused specifically on one of 11 initiatives: *Supporting National Planning for Action on Short-lived Climate Pollutants (SNAP)*. The Government of the United States is a founding Partner of the CCAC and has provided continuous financial and in-kind technical and material support for this program since its founding in 2012. The U.S. has been an active participant in several of the 11 CCAC initiatives of the CCAC, remains active in the CCAC governing body (HLA), and participates in technical, oversight, and management sub-groups.

Evaluation questions - In order to assess the progress of the SNAP Initiative within the CCAC, the evaluation described in this report seeks to answer the following questions:

- **Evaluation Question #1 (EQ1)** - *What is the history of the development of the crosscutting SNAP Initiative within the context of the CCAC, including support from the various administrative structures of the CCAC for the SNAP initiative as well as the strength of country engagement in the initiative over time?*
- **Evaluation Question #2 (EQ2)** - *Relative to the objectives of the SNAP initiative (as stated above), identify progress in the form of national-level SLCP mitigation policies, programs, or actions (including drafted plans, specific actions, etc.) made by developing country SNAP participants.*

Methodology - The SNAP evaluation was conducted by a four-person team of Dexis staff and outside contractors under the supervision of the Dexis Consulting Group's Monitoring, Evaluation and Learning (MEL) Division based in Washington, D.C. The program evaluation, which was conducted between November 2016 and July 2017, consisted of these three distinct phases:

¹⁴ Madeline Ostrander, *The Race to Understand Black Carbon's Climate Impact*, article from Climate Central, May 20, 2017.

¹⁵ *Revised Statement of Work: Evaluation of the Climate and Clean Air Coalition (CCAC)*, August 2016

Phase 1: Desk Review and Data Collection to address EQ1 (Nov. 2016 - Jan. 2017) - This phase of the evaluation included a search and review of documentation related to the CCAC and SNAP, including project proposals, progress reports, special assessment, implementation plans, CCAC meeting proceedings, country factsheets and reports, media articles, workshop presentation slides, guidelines and training materials, and USG Interagency Acquisition Agreements (IAAs) and related reporting. This evaluation phase also included a series of telephone or Skype® interviews with key informants directly involved in the SNAP Initiative from the Department of State's OES/ECG, the SNAP Initiative Coordinator at the UNEP Secretariat in Paris, the U.S. EPA, and other key implementing Partners such as the Stockholm Environment Institute (SEI), the International Union of Air Pollution, Prevention and Environmental Protection Associations (IUAPPA), and the Institute for Governance and Sustainable Development (IGSD) (see Appendix 5). These discussions were based on a general interview framework reviewed and approved by the OES/ECG and were conducted by the Evaluation Team Leader, the Senior Climate Change Policy Advisor, a Dexis MEL Specialist and a Dexis Project Associate. The activities completed by the Evaluation Team during this phase 1 were to:

- *Identify what year the SNAP initiative was launched and when it was launched in the context of the development of the 11 CCAC initiatives;*
- *Determine the operational setting of the SNAP initiative within the CCAC;*
- *Identify the ways in which the SNAP initiative convenes, communicates with, or otherwise engages its developing country members;*
- *Determine whether funding from DOS and other CCAC member countries has been or is being made available to the SNAP initiative;*
- *Identify the range of countries or other representatives that have participated in the SNAP initiative annually; and*
- *Confirm the current objectives of the SNAP initiative.*

Phase 2: Data Collection to Address EQ2 and Data Analysis (January - May 2017) - During this evaluation phase, additional country-specific qualitative data was collected through an online survey questionnaire completed using Survey Monkey® between March 29 to April 7, 2017 by all 14 countries currently participating in SNAP. Follow-up interviews were also conducted with several country SLCP teams. The result of the 14 survey responses and a summary matrix are included as Annex 1 of this report.

For this Phase 2, the Evaluation Team:

- *Deconstructed the SNAP objectives to capture more detail relative to each objective and produce revised/expanded versions of the SNAP objective progress tracker template (Chart 1) and the developing country summary meta-tracker matrix (Chart 2);*

- *Revised and finalized the draft data collection instruments produced in phase 1 (i.e. structured online survey and semi-structured interview protocols) to reflect an expanded understanding of the SNAP objectives;*
- *Collected primary data using online surveys and key informant interviews with representatives from the developing countries that have been engaged by SNAP to understand how the initiative has engaged and worked in these countries to date and gather suggestions for the SNAP Initiative going forward;*
- *Undertook a systematic analysis of survey and interview data to identify and group specific quotes from interviews, documents, progress reports, and notes for evidence supporting the achievement of SNAP objectives; and*
- *Used the survey analysis results to populate Chart 1 for each developing country examined.*

Phase 3: Final Report Analysis and Writing (April - July 2017) - This final phase of the evaluation synthesized the survey results from Phases 1 and 2. This phase of the evaluation was led by the Evaluation Team Leader and supported by the Senior Climate Change Policy Advisor, the Dexis MEL Specialist, and a Dexis Project Associate. The Evaluation Team completed a final report and held a final presentation of the results for OES/ECG staff in Washington, DC on June 8, 2017.

The evaluation benefitted from the sheer volume and range of available documentation about the CCAC and SNAP, including the extensive archive hosted by the CCAC website. It enabled the evaluation team to more clearly understand the complex nature and history of the CCAC and SNAP, and to identify how the various program components interacted with each other over time. The reviewed documentation, interviews with high-level informants, the country-scale questionnaire, and follow-up interviews with many SNAP country teams, provided a great deal of information on the SNAP program being implemented at the country level. One main disadvantage of the evaluation approach was that the evaluation team was not able to review sub-project agreements (contracts) signed between the country teams and the UNEP Regional Offices to understand the tasks, expected outputs, and the implementation schedules for each country-level program. We also found no evidence that any activity monitoring and evaluation mechanism was ever established at the country level that might later be used to assess project implementation measured against any pre-defined list of qualitative and quantitative indicators.¹⁶

The format of this final evaluation report is based on the outline cited in the *Revised Statement of Work: Evaluation of the Climate and Clean Air Coalition*. The format used here is also slightly modified as the information requested for Section F of the report was to examine the progress made on SLCP mitigation by the developing countries supported by the SNAP Initiative, but has been modified to incorporate a section related to Conclusions and Recommendations.

¹⁶ It should be noted, however, that according to the 2016 CCAC Annual Report, the CCAC initiated an impact assessment exercise to develop a standard set of outcome, output, and impact indicators that will be applicable to all 11 initiatives, and will include indicators intended to better quantify SLCP emission reductions resulting from Coalition-sponsored activities.

C. SNAP Administrative Operations

To support the day-to-day administration of the CCAC, UNEP’s Division of Technology, Industry and Economics (DTIE) in Paris hosts the CCAC Secretariat. This Secretariat supports the organization and planning of international meetings for the various CCAC bodies (i.e., HLA, WG, and SC), provides direct support to the 11 CCAC initiatives, and coordinates related advocacy, outreach, and communications. It also serves as the communications link between the CCAC and a network of national-level government officials identified by CCAC State Partners as designated national focal points. The UNEP/CCAC Secretariat functions, operations, and responsibilities are mandated by the Coalition and defined in the *Framework for the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (HLA/SEP2014/4A)* that was approved by the CCAC’s HLA in September 2014. There are 17 staff positions in 2017 dedicated to the CCAC Secretariat, including management, administrative, and initiative coordinators:

Table 6 - CCAC Secretariat Staff (June 2017)	
Administration and Management staff	<ul style="list-style-type: none"> • Head of Secretariat¹⁷ • Administrative Support Team (2 persons) • Financial Management Officer • Programme Management Officer
Program/ Initiative support staff	<ul style="list-style-type: none"> • Science Officer and Regional Assessment Initiative Coordinator • Partnership and Programme Officer • Partner and Events Coordinator • Communications Officer • Website Manager • Associate Programme Officer and SNAP Initiative Coordinator • Finance Initiative Coordinator • Heavy Duty Diesel Vehicles and Engines and HFC Initiatives Coordinator • Oil and Gas Initiative Coordinator and Global Methane Partnership Administrator • Waste Initiative Coordinator • Urban Health Initiative and Household Energy Coordinator • Special Advisor/Demonstrating Impacts
<i>Source: CCAC Secretariat</i>	

The CCAC Secretariat is also mandated to manage a CCAC Trust Fund on the behalf of the Consortium. Since its founding in 2012, this Trust Fund has held direct fund contributions coming from 14 past and current State Partners, including the United States. All program allocations from the fund, which are approved annually by the WG, are based on the recommendations from the Steering Committee (SC). The Working Group (WG) also supports the general administrative, management, and evaluation costs of the Secretariat. By far, the largest portion of the Trust Fund, approximately 85%, provides direct financial support to the 11 CCAC initiatives (including CCAC/SNAP) based on HLA-approved funding requests.

¹⁷ Recruitment of the first Head of the Secretariat began in June 2012.

Table 7: Donor Contributions/ Pledges to CCAC Trust Fund (2012-2017)	
Contributions	USD
United States	18,244,574
Canada	17,435,068
Norway	17,427,172
Japan	6,167,000
Sweden	5,272,393
European Commission	3,526,049
Switzerland	2,018,199
Denmark	1,817,224
Netherlands	625,828
Italy	554,896
Germany	544,827
France	500,279
Australia	148,134
Finland	112,740
Subtotal contributions	74,394,383
Pledges	USD equivalent
Canada (10 million CAD)	4,000,000
Norway (6,000,000 NOK)	698,326
Sweden (2,000,000 SEK)	230,000
Germany (100,000 EUR)	113,000
Subtotal pledges	5,041,326
Total Contributions and Pledges	79,435,709
<i>Source: CCAC Secretariat (June 2017)</i>	

C.1. Links of SNAP to the Administrative Structures of the CCAC

The CCAC is a voluntary international framework intended to accelerate efforts to reduce global SLCP emission. It is guided on policy, technical, operational, and funding issues by a specialized organizational structure (described below) that oversees, supports, and guides program activities, including national- and regional-scale SNAP activities.

Table 8 - CCAC Organizational Structure	
CCAC Body	Function
High-Level Assembly (HLA)	High-level meetings of all CCAC Partners
Working Group (WG)	Oversees the Activities of the CCAC (All Partners)
Steering Committee	Oversees support and makes recommendations to the WG and HLA
Scientific Advisory Panel	Tracks the emerging knowledge related to SLCPs, responds to targeted technical questions, and informs the decision-making process
Secretariat	Oversees/coordinates overall action, support Partners, supports development and coordination of initiatives, and manages the Trust Fund
Initiative Lead Partners	Coordinates and oversees the development, implementation, and reporting of their respective initiatives
<i>Source: CCAC first annual progress report, 2013</i>	

The *High Level Assembly of Partners* (HLA) is the organization’s representative governing body that is comprised of delegates (referred to as “Partners”) from all qualified and accepted CCAC member countries (52), including the United States, a range of regional and international organizations (17)¹⁸, and a large number of specialized non-governmental organizations (45). It meets at least once a year in an open session for all Partners to oversee and guide the strategic direction of the Coalition. All Coalition decisions, including the acceptance of new Partners, the election of officers, operating and administrative budgets, the composition of sub-groups, meeting schedules, and the CCAC’s programmatic activities, are made through the consensus agreement among the State and Regional Economic Integration Organization (REIO) Partners. There have been eight HLAs since April 2012, with the most recent in November 2016. A ninth is planned for Bonn, Germany in November 2017 during UNFCCC/COP 23.¹⁹

A *CCAC Working Group* (WG) is made up of representatives from all Partners and oversees the CCAC’s cooperative and operational activities. The WG meets at least twice per year to review and evaluate the various functions, roles, authorities, and responsibilities assigned to a smaller Steering Committee. The biannual meetings also foster Partner collaboration, advance overall CCAC programming, and formulate specific recommendations for consideration by the HLA. Two WG Co-Chairs, one State Partner and one REIO Partner, are elected by the Partners and serve staggered terms of two years.

A separate advisory body, the *CCAC Steering Committee* (SC), is composed of a smaller number of CCAC Partners and provides more regular oversight of Coalition-sponsored activities and initiatives. The SC is made up of nine scientists who are nominated and WG-approved and who provide programmatic and operational recommendations related to Consortium and initiative strategies, budgets, and assessment of the funding proposals prepared by 11 CCAC Initiatives (including SNAP).

¹⁸ Includes the Asian Development Bank, World Bank (IBRD), Inter-American Development Bank, Nordic Environment Finance Corporation (NEFCO), OECD, and United Nations agencies (i.e., UNEP, UNDP, FAO, UNIDO, WMO, WHO and the WMO).

¹⁹ CCAC, *Summary of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) 20th Working Group Meeting and Science-Policy Dialogue*, April 25-27, 2017 in Santiago de Chile, Chile.

A second advisory body, the *CCAC Scientific Advisory Panel (SAP)*, provides expert advice related to science of SLCPs, air pollution, and near-term climate change. This Panel also tracks the latest scientific findings, provides expert scientific and technical advice to the 11 initiatives, including how the emerging science could affect existing CCAC policies or programs. This also includes information related to the costs and benefits of various mitigation options and how the implementation of recommended policies and practices can more effectively and sustainably scale-up mitigation measures to reduce SLCP emissions and impacts. As requested, the SAP also provides scientific advice and related assessments to the WG. The SAP is comprised of up to fifteen experts from a wide variety of technical fields related to SLCPs and are selected by Coalition for two-year terms. In 2014/2015, the SAP included 14 scientists and the UNEP Chief Scientist serving as an *ex officio* panel member.

C.1. SNAP Governing Structure

C.1.1. SNAP Governance Structure

Each of the 11 initiatives supported by the CCAC, including SNAP, has a program structure that supports implementation of the activities outlined in each approved funding request. The CCAC Secretariat based in the UNEP offices in Paris provides administrative oversight of the SNAP Initiative on behalf of the CCAC Steering Committee. The Secretariat staff include a dedicated SNAP Initiative coordinator. The Secretariat provides administrative support for the implementation of the SNAP activities and develops contracts supporting national teams through UNEP Regional Offices and directly with other organizations providing technical assistance and training.

Lead Partners - Each initiative has one or more of volunteer Lead Partners that coordinate and oversee the development, implementation, and reporting on behalf of the CCAC that are associated with the approved activities funded either through the CCAC Trust Fund or through the in-kind contributions of technical and human resources coming from any CCAC Partner or Actor. In assuming this voluntary role, each Initiative's Lead Partner ensures that the development and design of funding proposals take a collaborative and consultative approach, and to the extent possible, maximize the inclusion of all relevant Partners, Actors, and key stakeholders.

For approved SNAP funding request No. 5, the Lead Partners identified are the Governments of Mexico and the Kingdom of Morocco, UNEP, the Stockholm Environment Institute (SEI), the International Union of Air Pollution Prevention and Environmental Protection Associations (IUAPPA), the Molina Center for Energy and the Environment (MCE2), and the Institute for Governance & Sustainable Development (IGSD).

Implementers - "Implementers" support the actual approved SNAP activities and in the case of SNAP, there are several Partners. In some cases, some organizations, institutions, and other stakeholders (Actors) that are not CCAC partners can also assume the role of "Implementer" and often provide specialized technical and expert support for certain activities. Table 9 illustrates the range of program activities and implementers described in the funding request No. 5.

Table 9 - Activities/Implementers - Approved SNAP funding requests No. 5	
SNAP Component 1 - Supporting the development of national SLCP planning processes	
Activity 1: Strengthening institutional capacity in five further countries and support national planning for action on SLCPs in two countries	
Activity 1.1 - Increasing the number of countries receiving institutional strengthening support under the SNAP initiative	National SLCP agencies in Benin, Cambodia, Central African Republic, Kenya, Mali, Moldova, Paraguay, Uruguay. Oversight provided by UNEP Regional and the SNAP Lead Partners.
Activity 1.2 - Support the achievement of a national SLCP planning and priority-setting exercise in (four) additional countries	National SLCP agencies in Chile, Maldives, Philippines, and Togo, with technical support and oversight provided by SEI, UNEP Regional Offices and other implementers.
Activity 1.3 Strengthening the sharing of experience on SLCP mitigation planning and implementation	IGSD, IUAPPA, MCE2, SEI, UNEP Regional Offices, SEI
SNAP Component 2 - Tools and approaches to support key steps of the national planning process	
Activity 2 - Upgrades to the SNAP LEAP IBC Toolkit	
Activity 2.1 - Developing the LEAP-IBC for use at city scale	SEI
Activity 2.2 - Calibrating the toolkit for about 100 countries	
Activity 2.3 - Increase the level of training to support CCAC initiatives in the use of the SNAP toolkit	
SNAP Component 3. Interactions between national SLCP planning and regional and global processes to scale up the implementation of SLCP actions	
Activity 3.1 - Regional Toolkit Training and Planning workshops in Africa and Latin America and the Caribbean (LAC)	IGSD, IUAPPA, MCE2, SEI, UNEP Regional Offices, SEI
<i>Source: SNAP Initiative Funding Proposal; Involving additional countries in national planning and institutional strengthening and further SNAP toolkit development and training. (April 2016).</i>	

C.2. Funding for the SNAP Initiative

Since 2013, SNAP activities supporting the three main SNAP objectives have been implemented through a series of five separate approved funding requests and funded through the CCAC Trust Fund. It should also be noted that as this evaluation report was being completed, a sixth SNAP funding request submitted as a three-page concept note was approved by the HLA in April 2017. The project's funding level was also approved, as it is awaiting the final step in the approval process; the submission of a full project proposal for SC review and approval. Each of the six pending or approved SNAP funding requests is described in greater detail in Appendix 9.

The implementation of all SNAP program activities supported by Trust Fund resources is based on project proposals and concept notes (described as “funding requests”) submitted for review and approval. This project cycle has recently been streamlined to account for sheer number of proposals submitted each year by the 11 initiatives. Until late-2016, funding for all initiative activities was based on the preparation, submission, technical review, and approval of full project

proposals submitted in a prescribed format. Separate full proposals were developed by each initiative after a consultative process engaging a range of relevant Partners, Actors, and other key stakeholders.

For the first five approved SNAP funding requests, the Stockholm Environment Institute (SEI) was the more prominent Lead Partner in this collaborative process. After submission of a completed funding request, each underwent a technical review by outside experts that guided any necessary revisions. With a favorable SC review, the fully developed proposals were then sent to the WG for final consideration and approval. After WG approval and an approved allocation of Trust Fund resources, the CCAC Secretariat signed contracts with UNEP Regional Offices for implementation and support of national level programming, UNEP developed separate contracts with organizations providing technical assistance and for SNAP, the lead agency for technical assistance is SEI, but the real day-to-day management of the country projects is done by the UNEP Regional Offices.

In 2016, the WG approved a streamlined funding cycle. Rather than submission of full proposals, the separate CCAC Initiatives now submit two-page concept notes to the Secretariat that are then shared with SC and with all Partners for review and comment. These concept notes, review comments, and SC recommendations then go to the WG for consideration. If approved, the concept note is linked to a set WG-approved maximum level of funding and initiatives are invited to submit full proposals. The full proposals undergo an outside technical review and then submitted to the SC for a final approval. This streamlined approval process stops at this point and does not require any further WG consideration.²⁰

Table 10 - CCAC Trust Fund allocations to CCAC/SNAP by year and by activity in millions of US\$					
Year	National Action Planning	Institutional Strengthening	Interaction with global and regional processes	Total	% of total CCAC Trust Fund Allocation
2012-2013	2.6	-	-	2.6	21%
2013-2014	2.6	2.0	-	4.6	18%
2014-2015	3.3	2.0	-	5.3	17%
2015-2016	3.7	2.6	0.5	6.8	15%

Source: CCAC Annual Reports

C.3. How SNAP convenes, communicates, and engages Partners

Since CCAC’s founding in 2012 with just six State Partners and one international agency, there has been a rapid increase in the number of state and non-state Partners and Actors. The *Guidelines and Rules of Engagement for Coalition Partners, Actors and Implementers - Compilation of Decisions*, which were updated on November 5, 2014 based on WG decision WG/JUL2014/17, defines the “engagement” of State and non-State entities in the CCAC. At

²⁰ Key informant interview.

present, participation in the CCAC, referred to as “engagement” rather than “membership,” is open to any State of the United Nations or regional economic integration organization (REIO), such as the European Union, and is able to “join” the Consortium as a “CCAC Partner.” A “Partner” is defined as any eligible state or non-state entity that is “officially engaged in the Coalition’s purpose, functions, and activities.” Partner status is also open to international governmental organizations (IGOs), such as UN agencies and regional Development Banks, non-governmental organizations (NGOs), private sector entities, and other intergovernmental or regional organizations. Application letters for eligible Partners are addressed to the Executive Director of UNEP and then considered and approved by the deliberations of HLA based on the recommendations of the CCAC Working Group. The CCAC Secretariat communicates with country Partners through designed national focal points in each country.

D. Chart 1 - Textual Summary for Each SNAP Developing Country Partner

This section of the report provides a country-by-country summary of NAP-supported activities for those developing country partners in the process of completing a full NAP, participating in the SNAP Institutional Strengthening component, or both. The information provided is based primarily on the questionnaire responses provided by each country team, SNAP Country Fact Sheets, the CCAC annual report for 2016, and where applicable, additional information collected during interviews. Each summary is intended to describe country-level SNAP activities that are ongoing, planned, or completed. The country summaries begin with the eight Partners receiving SNAP support to develop a full NAP and that are also participating in SNAP’s IS component. A second set of six countries are not currently developing a NAP, but are participating only in the IS activity. The completed Chart 1 for each country is included in this report as Appendix 1 and Chart 2, which is a summary of all the questionnaire responses, is included as Appendix 2.

D.1.1. Mexico (NAP and IS)

Mexico is a CCAC founding Partner and one of the first four countries to participate in SNAP Phase I. It has received support from the first four approved SNAP funding requests for both institutional strengthening and for NAP development. The designated lead government agency is the National Institute of Ecology and Climate Change (INECC). According the 2016 CCAC Annual Report, Mexico has activities in progress or planned as part of other CCAC initiatives: Bricks, Diesel, and HFCs, Oil and Gas, and Waste Initiatives. Mexico has also pledged to target SLCPs in their INDC.²¹

At the time of this evaluation (April 2017), INECC was in the process of establishing a national SLCP task force and a stakeholder consultation mechanism. The SLCP national team has received SNAP technical assistance through several training events and workshops, including for LEAP/IBC model and for emission factors from MCE2. The UNEP Regional Office provides IS for INECC and the Environment Ministry. The country team reports that it has developed the institutional capacity to coordinate SLCP actions and to complete, review, and revise national

²¹ Initial National Determined Contribution (INDC) submitted as part of the 2016 Paris Agreement under the 1992 United Nations Framework Convention on Climate Change (UNFCCC).

SLCP action plans. INECC is currently developing an awareness raising strategy and has produced informational pamphlets (in Spanish) and other materials related to the brick sector. They have conducted radio interviews and used media, public meetings and/or open meetings with stakeholders to raise SLCP awareness among Ministries, the population, and other key stakeholders. The team has completed a SLCP baseline assessment and a national-scale SLCP assessment of BC and CH₄, and plans further refinement of their existing HFC emissions inventory.

The national team has used the SNAP toolkit to compile and assess 15 years of emissions data from several national GHG inventories, assessed a range of mitigation options, and used LEAP/IBC to set SLCP mitigation priorities. Strategies for implementing priority mitigation measures and policies are under development based on the size of the emission sources and the potential health impacts. They have developed “first order” national SLCP action plan (NAP)²² that was reviewed by stakeholders (2013). SLCP mitigation actions identified have also been incorporated into a Low Emissions Development Strategy (LEDS) and into national air quality management policies and programs. According to the CCAC Factsheet for Mexico, the emissions baseline developed during the CCAC/SNAP Program also contributed to an *Integrated Assessment of Short-lived Climate Pollutants in Latin America and the Caribbean* (May 2016).²³ This is the first regional-scale SLCP assessment completed for the Latin America and Caribbean (LAC) region.

A strategy to embed national planning across government agencies is under development and a planning workshop was organized to engage stakeholders and to define their roles in NAP implementation. Aspects of NAP have incorporated SLCPs into national policy, including a *General Law on Climate Change* (2012) and a *Special Programme on Climate Change* (2014). The 2012 legislation brought together 13 ministries and “mandated the development of measures, such as a national SLCP strategy, a climate change program, a climate change fund, a national registry for emissions and reductions, and a technical institute for climate change.”²⁴

Mexico’s ongoing mitigation measures target BC from traditional cookstoves, emissions from brick making, diesel engines in the transportation sector, and CH₄ emissions from the oil and gas sector and agriculture. According to a SNAP fact sheet, Mexico was the first country to set specific national BC reduction targets as part of their NDC.

A monitoring and evaluation (M&E) plan was developed during Phase I and implementation is to be refined in Phase 2. The existing M&E system regularly monitors implementation of the NAP and includes a national BC carbon monitoring network using monitoring equipment in several cities to track concentration changes as mitigation measures are implemented. Progress in national SLCP mitigation has been reviewed every year by the Environment Ministry, and in the future, other stakeholders will be included in the review process.

²² MCE2 and INECC, *Supporting National Planning for Short-lived Pollutants Initiative in Mexico*, part of CCAC/SNAP Initiative, Sept. 2013, <http://www.ccacoalition.org/en/resources/mexico-national-planning-document-short-lived-climate-pollutants>

²³ UNEP and CCAC, *Integrated Assessment of Short-lived Climate Pollutants in Latin America and the Caribbean: Improving Air Quality while contributing to climate change mitigation*, May 2016.

²⁴ Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants, *Summer 2013 Newsletter*.

Other collaborators, stakeholders, and partners - The Molina Center for Energy and Environment (MCE2) and the Ministry of Environment. Collaboration will expand to other Ministries and with SLCP mitigation planning activities extended to municipal and state levels.

D.1.2. Ghana (NAP and IS)

Ghana is another founding Partner of the CCAC and one of the first four countries to participate in the CCAC/SNAP Phase I program. The designated lead agency in Ghana is the Ministry of Environment, Science, Technology and Innovation (MESTI) and it is participating in both SNAP's NAP development and IS activities. Ghana has pledged to target SLCPs in their NDC and also has activities in progress or planned as part of other CCAC other sectoral initiatives: Agriculture, Household Energy, Diesel, HFCs, Waste, and Health²⁵. A cross-departmental taskforce meets every quarter and brings together experts in health, air quality, climate change and ozone, and stakeholders from the Ministries of Energy, Transport, Agriculture, and Lands and Natural Resources (Forestry Commission). SEI assisted the Ghana team to update work completed with an earlier version of the LEAP/IBC tool and to assess initial findings. The team has participated in SEI-supported IS and was trained by the U.S. EPA on LEAP/IBC and BenMAP. It has supported LEAP/IBC modeling, the identification of SCLP mitigation actions, and the analysis of the potential mitigation benefits.

An awareness-raising strategy is under development and the team plans to use local media, public meetings, and meetings with stakeholders to raise SLCP awareness. Although there appears to be a number of key ministries engaged, Ghana's questionnaire response notes that additional awareness building will be required for newer high political authorities coming into office after a December 2016 change in government.

The Ghana team is now developing a revised baseline SLCP assessment that is in a review process. The ongoing review will update a mitigation scenario assessment and revise country-specific mitigation measures. BC and CH₄ inventories are also under review and the team is using the SNAP toolkit to further develop mitigation options in the energy and non-energy sectors. In SNAP Phase I, Ghana developed a draft NAP with an emissions inventory, estimates of the potential emission reduction benefits, and identification of a range of priority SLCP mitigation measures. The team has planned a larger multi-sectoral stakeholder review when the draft NAP revision is completed.

A strategy to embed SLCP national planning across government agencies is being developed and a workshop to engage stakeholders is planned. The Ghana Environmental Protection Agency, the Ministry of Transport, the National Petroleum Authority, the Ministry of Health, and Energy Commission are also implementing some SLCP emission reduction measures, but no SLCP considerations have yet been incorporated into any national laws or policies. In the near future however, the NAP is expected to be a strategic document for the Ghana EPA and MESTI.

Other collaborators, stakeholders, and partners - Environmental Protection Agency (EPA), Ministry of Health, Ministry of Agriculture, the Energy Commission, Ministry of Transport,

²⁵ CCAC, *Climate and Clean Air Coalition Annual Report 2016*,

Ghana Broadcasting Corporation, Ghana Clean Cookstove Alliance, Ghana Standards Authority, Ghana Statistical Service, Ministry of Energy, and Forestry Commission.

D.1.3. Bangladesh (NAP and IS)

Bangladesh is also a CCAC founding member and another of the four countries participating in the SNAP Phase I program. The designated lead agency is the Department of Environment within the Ministry of Environment and Forests. A 2015 SNAP factsheet notes that Bangladesh is “a model demonstrating how early attempts to reduce SLCPs have led to transformative policy decisions, climate friendly legislation, increased financing for mitigation efforts, and technology transfer at all levels of society.”²⁶ The 2016 CCAC Annual Report notes that Bangladesh also has activities in progress or planned in other CCAC sectoral initiatives: Agriculture, Bricks, Diesel, HFCs, Waste, and Finance initiatives.

The Department of Environment, which is a technical and regulatory government agency, is responsible for all air quality and climate change issues. It works with a range of national and international climate change and air quality experts, including officials within the Department of Environment and in the Ministry of Environment and Forests. The lead agency developed a NAP through a consultative process that engaged national-level stakeholders and experts. This stakeholder process also helped the Department of Environment map available expertise and national capacity development needs, and guided NAP implementation. The national team was supported by UNEP and SEI and received outside technical assistance for NAP development from CCAC and SEI. It also participated in SNAP organizational training (2017) and received additional outside technical support in the use of the SNAP toolkit.

SLCP focal points at ministries and departments have been identified and are engaged as an inter-departmental task force. For NAP preparation, the team used an extensive and coordinated consultative process with key stakeholders. The IS activity is in a very early stage. Further support may be required to consolidate and strengthen NAP implementation and to incorporate SLCPs into the NDCs.

An SLCP awareness-raising strategy is under development and will be further elaborated as part of SNAP/IS. Workshop materials have been added to the Ministry of Environment and Forests and the Department of Environment websites. Local media was invited to participate in a number of meetings held during the NAP development process. National-level seminars and workshops were held at the start of the project that included the Ministers for Environment and Forests, Secretaries of Ministries, and other high-level officials.

A baseline SLCP assessment and an identification of the main SLCP emission sources were completed in 2013. An assessment of legal and institutional frameworks is also under development. Country-specific mitigation measures and a preliminary assessment of sectoral emission reduction were completed in 2013. Sixteen SLCP mitigation actions have been identified. The national team will use the SNAP toolkit to develop a refined assessment of mitigation options as part of the Institution Strengthening activity.

²⁶ CCAC Annual Report 2015, page 48.

The earlier NAP version will be revised, expanded and reviewed as part of the ongoing IS initiative. Bangladesh has developed a National Integrated Livestock Manure Management (ILMM) Policy and Action Plan to control CH₄ and other SLCPs. The Ministry of Agriculture and Ministry of Fisheries and Livestock are working on CH₄ reduction. A national low sulfur fuel “road map” was prepared for Bangladesh Petroleum Corporation and other mitigation actions are targeting brick manufacturing and rice parboiling associations. The Department of Environment, with the support of UNDP, the ADB, and the World Bank, has been working with an association for brick manufacturing owners to improve kilns to reduce BC emissions. With GIZ support, the Department of Environment has been developing improved rice parboiling system (IRPS) to reduce BC emissions. There is an action plan in place to improve 30 million traditional cook stoves by 2025. Working with IDCOL, a public funding agency, the government has provided five million household solar energy units as part of its low carbon development path. Aspects of national SLCP plan have incorporated into national policy/laws/ regulations, including a Livestock Manure Management Policy, a draft National Environment Policy (2017), and a Brick Manufacturing and Kiln Establishment Control Act (2013).

Other collaborators, stakeholders, and partners - The questionnaire response lists more than 25 government agencies, universities, and other stakeholders. A full list is cited on Bangladesh’s Chart 1 in Appendix 1.

D.1.4. Colombia (NAP and IS)

Colombia is another CCAC State Partner and one of the first four countries participating in SNAP Phase I. The designated lead SLCP agency is the Ministry of Environment and Sustainable Development and activities are implemented by the Directorate of Climate Change (DCC) and the Directorate of Sectoral and Urban Environmental Issues (DAASU). The 2016 CCAC Annual Report notes that Colombia has activities in progress or planned as part of other CCAC sectoral initiatives: Bricks, Household Energy, Agriculture, Diesel, HFCs, Oil and Gas, and Waste initiatives. SEI provided LEAP/IBC training for an indicative BC emissions inventory and on the SNAP/SLCP National Planning Guidance document. The U.S. EPA provided BenMap training (2017). According to their questionnaire response, Colombia now has the capacity to integrate SLCP considerations into national decision making related to air quality and climate change and intends to build SLCP institutional capacity at the country’s regional level. An SLCP awareness raising strategy is under development, but some events have already been held.

In 2016, the SLCP Unit organized a LEAP/IBC training workshop for different national stakeholders and three other national/international workshops were held to “scale up” work of other national SLCP initiatives (oil and gas, bricks, and cookstoves). Press briefings and publicity banners were developed and CCAC-financed project results were published, including the national emission inventory describing the brick sector. Other SLCP awareness raising materials, including websites and videos, are also under development. In 2016, three events were held to raise awareness and provide information related to opportunities available within each of the SLCP initiatives (i.e., the Oil and Gas Methane Partnership, household energy, and brick

production). A project kick-off meeting was held in June 2015²⁷ and a ministerial-level meeting was being planned for the late-May 2017.

An indicative BC emissions inventory and a baseline assessment for CH₄ and HFCs have been compiled. The team also completed an assessment of the legal and institutional frameworks associated with CH₄ and HFCs and identified the primary sources: (a) CH₄ from bovine enteric fermentation and from regional solid waste landfills and (b) HFC-134a used by the commercial and the transport sector. A national- and regional-level assessment of mitigation scenarios and benefits was completed and the national assessment includes BC, CH₄, and HFCs. The team is now applying the LEAP/IBC tool to explore potential mitigation options.

The team has developed a first draft of a strategy for mitigation measures and policies. The preliminary list of planned actions intends to: (a) improve SCLP information management for decision-making and integrated inter-institutional mitigation strategy; (b) adopt tools to estimate SCLP reduction co-benefits; (c) strengthen institutional capacity to promote emission reductions; (d) develop methodologies to capture and replicate successful SCLP mitigation actions; (e) increase the visibility of actions/initiatives/programs/projects; and (f) highlight the contribution of SCLP mitigation actions towards sustainable development goals. The first draft NAP has been available within Ministry of Environment and Sustainable Development for comment and review, and a revised NAP was planned for the first semester of 2017.

A strategy to embed SCLP national planning across government agencies has been drafted, which defines lines of action by sector and seeks to integrate SCLP emission reductions within regional-scale climate change planning. The SCLP national advisor participated in workshops that included the Colombian LCDs (the regionalization process) and sectoral inter-ministerial working groups. Some stakeholders, including government agencies, are implementing elements of NAP that focus mainly on major BC and CH₄ sources. For example, FEDEARROZ, which is a rice producers' association, is working on CH₄ emission reductions from paddy rice production and Colombian Ministries are prioritizing mitigation actions based on the NAP as part regional-scale planning. Colombia has also launched the AMTEC (*Adopcion masiva de tecnologia*) program to promote improved technologies and practices for rice production based on principles of sustainability and social responsibility. They are also working to integrate SCLP mitigation strategies into existing policy frameworks, including the National Air Quality Policy and National Climate Change Policy.

Other collaborators, stakeholders, and partners - The questionnaire response lists more than 25 government agencies, universities, and other stakeholders. A full list is cited on Colombia's Chart 1 in Appendix 1.

D.1.5. Côte d'Ivoire (NAP and IS)

²⁷ SCLP/IS Workshop presentation, 2016, (French/English <https://www.youtube.com/watch?v=HzOe7xnfmjU>)

The designated lead government agency is the Ivorian Anti-Pollution Centre (*Centre Ivoirien Anti-Pollution*) within the Ministry of Salubrity, Environment, and Sustainable Development (MINSEDD/CIAPOL). This agency links national climate change and air quality issues. An SLCP national team began NAP development in 2014 with technical and funding support from the second SNAP approved funding request. It participates in SNAP/IS, and as noted in the 2016 CCAC Annual Report, Côte d'Ivoire has activities in progress or planned in other CCAC sectoral initiatives; Diesel and Waste. Côte d'Ivoire is also currently an elected State Partner on the CCAC/SC. The National CCAC Focal Point and the National CCAC Coordinator hold regular SLCP Advisory Group and Task Force meetings and conduct bilateral consultations with other key stakeholders.

UNEP has provided overall management of the SNAP project, including support for a national kick-off meeting, webinars, and regular meetings to advise on implementation. The IUAPPA also supported the project's kick-off meeting and provided training in air quality management and on the use of the SNAP toolkit. SEI developed the LEAP/IBC template for Côte d'Ivoire and trained the core team and key stakeholders in its application. The U.S. EPA has contributed to the development of SNAP toolkit template for Côte d'Ivoire and provided BenMAP-CE training. The SNAP/IS activity helped establish a national SLCP coordination structure within the existing national government. The *Centre Ivoirien Anti-Pollution* (CIAPOL) is seen as critical for future national SLCP action as the NAP is being further developed and implemented. The Ministry of Environment has also created an Environmental Information System to collect the environmental data needed to inform national-level planning and policy making.

An SLCP awareness raising strategy is being developed but there has already been local media coverage on SLCPs and CCAC-related activities, including an article on SLCPs in CIAPOL Magazine and a SLCP Policy Brief on the waste sector. An institutional film is being developed and a project kick-off meeting was scheduled (May 2017). The national SLCP team is developing a baseline assessment that includes associated legal and institutional frameworks. GEVALOR (*Association pour la Gestion durable et la valorization de déchets et des matières premières minérales*), working in association with GoodPlanet and ETC Terra, completed a baseline assessment of waste sector emissions which also developed a number of city-scale mitigation scenarios applicable to Abidjan. The SLCP team is using the SNAP toolkit to explore various mitigation scenarios and estimate the associated benefits of mitigation. The main SLCP sources identified are the open burning of waste, traditional cookstoves, industrial processes, and oil refineries.

The national team is examining mitigation measures related to reducing the sulfur content of fuels, the wider use of diesel particulate filters, more efficient transport technology and urban planning, wider adoption of new efficient cooking, heat generation, and cooling systems, a ban on the open burning of waste, and improved waste recycling system. A draft NAP is being developed and a review by key stakeholders is planned. A country- and city-scale air quality improvement strategy has also been completed. A strategy to embed the SLCP planning across several relevant government agencies is in process and involves the Ministry of Environment (NDCs and the Air Quality Act), the Ministries of Planning, Energy, and Transport, and the National Agency for Urban Salubrity (ANASUR), and the National Refinery (SIR).

Other collaborators, stakeholders, and partners - Ministry of Environment, Ministry of Planning, Ministry of Health, Ministry of Transport, Ministry of Energy, Ministry of Economy, Ministry of Agriculture, National Agency for Urban Salubrity (ANASUR), Laboratory for Atmospheric Physics and Fluid Mechanics (LAPA-MF) at Felix Houphouet Boigny University, Côte d'Ivoire Alliance for Clean Cookstoves (CIACC), Chamber of Trade and Industry (Public-Private Partnership), and Autonomous District of Abidjan (Local Decision Making Body).

D.1.6 Nigeria (NAP and IS)

Nigeria is a CCAC founding Partner and another of the first four countries participating in the CCAC/SNAP Phase I program. The National SLCP Office is hosted by the Renewable Energy Programme in the Federal Ministry of Environment and is the designated lead agency. It is responsible for coordinating the identification, preparation, development, implementation, monitoring, and evaluation of SLCP mitigation projects and strategies at the national level for all CCAC-related initiatives, including SNAP/IS. The 2016 CCAC Annual Report notes that Nigeria also has activities in progress or planned in other CCAC sectoral initiatives; Diesel and Waste.

The SLCP office coordinates the involvement of stakeholders from: (a) line Ministries for Environment, Petroleum, Agriculture, Works and Housing, Transport, Health, Women Affairs, and Finance; (b) the National Planning Commission; (c) regional bodies; and (d) international organizations. Many of these stakeholders are part of the SNAP Advisory and Task Force teams implementing SNAP programming related to air quality and climate change. This national SLCP Advisory/Working Group membership includes Directors (or equivalent) from Line Ministries and key stakeholder organizations.

The Lead Partner, SEI, provides technical guidance and coordinates LEAP-IBC training. The UNEP Regional Office for Africa coordinates and supervises the overall implementation of SNAP and IUAPPA supports SNAP/IS implementation. The SNAP/IS Coordinator and the SNAP Support Consultant have participated in two LEAP-IBC training sessions and in a capacity building and IS workshop organized by SEI and CCAC Secretariat.

An SLCP awareness raising strategy has been developed and the national SLCP Coordination Office participates in local and international SLCP workshops. Development of a baseline SLCP assessment is in progress. The SNAP Support Consultants and the national SNAP/IS Coordinator have been trained on the LEAP/IBC Tool and are currently working on associated assessments. The national team is also in the process of identifying and quantifying the major SLCP emission sources. Development of strategy implementation of mitigation measures and policies is also in progress and the SLCP office is developing a draft NAP.

A strategy to embed SLCP national planning across government agencies has been developed as part of the engagement with frontline Ministries. The Ministry of Petroleum, for example, is enforcing a gas flaring prohibition law and the Ministry of Environment is implementing a national cookstove improvement scheme. The Ministry of Agriculture is promoting improvements in herd productivity and integrated manure management. The inclusion of SLCP mitigation actions in the National Development Plan is pending.

Other collaborators, stakeholders, and partners - The questionnaire response lists 58 government agencies and other stake holders. The full list is cited on Nigeria's Chart 1 in Appendix 1.

D.1.7. Morocco (NAP and IS)

Morocco is a Lead Partner in the CCAC/SNAP and is participating in both NAP development and in the SNAP/ IS. The designated lead agency is the *Ministère de l'Environnement* (Ministry of the Environment). The NAP development activity is supported by the fourth CCAC/WG-approved funding request and the national team is in the early stages of the NAP development process. According the 2016 CCAC Annual Report, Morocco has activities in progress or planned as part of two other CCAC sectoral initiatives; Bricks and Waste. Members of the national SLCP team have participated in a SNAP capacity building workshop and a national inter-departmental task force has been established that has had one meeting related to the Brick sector. According to the completed questionnaire, the national team needs additional training and technical assistance, as it does not yet have the capacity to undertake the development of a full NAP. The team has not completed an awareness raising strategy; however, it organized a national meeting in 2016 with 30 participants to raise awareness about the Brick sector. The start of NAP development activity is pending until contacts for support and technical assistance are finalized.

D.1.8. Peru (NAP and IS)

The designated lead agency in Peru for the air quality component is the Directorate-General of Environmental Management in the Vice Ministry of Environmental Management within the Ministry of the Environment. Climate Change issues are assigned to the Ministry of the Environment, but not to the Vice Ministry of Environmental Management. The questionnaire response notes that the coordination between climate change and air quality agencies is good, but they are not in the same vice-ministry and directorate. Experts that support the NAP process come mainly from the area of air quality.

The decision was made not to establish any inter-departmental SLCP task force, because a task force for the revision and preparation of the NDCs, consisting of 13 ministries (the "GTM task force"), had already been established. For this reason, the lead agencies have requested to join this existing task force to take advantage of the established working groups. The actual SLCP unit has been created within the Air Quality Department in the Ministry of Environment. According the 2016 CCAC Annual Report, Peru also has activities in progress or planned as part of other CCAC sectoral initiatives; Agriculture, Bricks, and Diesel. Experts are being consulted individually through meetings with various ministries and a group of organizations working on energy access. The team is expected to use the GTM task force working groups as a channel to consult with the different sectors, and the SLCP teams also plan to establish an inter-ministerial advisory committee and a technical committee.

The UNEP Regional Office supports the coordination, budget management, and contracting for technical assistance. SEI provides LEAP/IBC training and supports development of the emissions inventory and the US/ EPA supports BenMAP training. According to their questionnaire response, the country has the institutional capacity to coordinate the SLCP actions,

but notes that additional support may be needed because the institutional responsibility for air quality and climate change remain separate. The national team is in the process of developing an emission inventory and baseline assessment using the LEAP/IBC tool and will model and calculate reductions as part of their NDCs.

A communications plan was prepared that establishes activities in two phases: (a) Phase I will prepare an emissions inventory and identify emission reduction measure; and (b) Phase 2 will promote the inclusion of reduction measures in national and sectoral planning. SLCP information is being distributed through a dedicated Twitter® account and press releases are made available through the CCAC and the Ministry of the Environment websites. The team plans to create a LinkedIn® account, conduct a social networking campaign, hold meetings with journalists, and collect testimonials. A kick-off meeting was held in March 2016. The project will include an initial review of the institutional and legal frameworks, as well as an analysis of key stakeholders. A communications plan has been developed, but targeted workshops had not yet been conducted in the implementation phase.

D.2. CCAC/SNAP Developing Country Partners (6) participating only in the Institutional Strengthening

D.2.1. Chile (IS)

Chile is one of six countries participating in only the IS component of the current SNAP program and the designated lead government agency is the Ministry of Environment. The 2016 CCAC Annual Report notes that Chile has activities in progress or planned as part of other CCAC sectoral initiatives; Agriculture, Household Energy, Diesel, HFCs, Waste, and Health.

Chile's Minister for Environment, Marcelo Mena, was a Co-Chair of the CCAC until April 2017 and is seen as key to engaging other national stakeholders. Chile hosted the 20th meeting of the CCAC/WG on April 25-27, 2017, in Santiago, and at that event, Mr. Mena completed his two-year term as a CCAC Co-Chair.

The national SLCP team has collaborated with the Ministry of Transport, the Ministry of Finance, and the Ministry of Energy and has a strong collaborative relationship with the University of Chile and with the Center for Climate and Resilience Research. UNEP and U.S. EPA provided SNAP technical assistance and training.

The SNAP/IS program in Chile is in the early stages, but now supports four dedicated staff. The team has been implementing an awareness raising campaign with key stakeholders, including participation in the *BreatheLife* program. A strategy for mitigation is being developed, but as a first step, the team will build a national SLCP emissions inventory. The first workshop was completed during the CCAC/WG meeting to engage both local and international stakeholders. All recent team efforts have been directed towards planning the CCAC/WG meeting. SLCP mitigation actions will eventually be included in national development plan and in the annual investment and operational budget. SLCPs are already addressed in a National Plan on Climate Change.

D.2.2. Ethiopia (IS)

Ethiopia is one of the six countries added to the SNAP/IS activity. According to the 2016 CCAC Annual Report, Ethiopia has activities in progress or planned as part of other CCAC sectoral initiatives; Agriculture, Diesel, and Waste. It has designated a lead agency that is linked to other agencies and key stakeholders, and brings together climate change and air quality experts. The national team is in the early stages of the SNAP/IS activity. A national stakeholder consultative process has been established and members of the national SLCP team have participated in a SNAP capacity building workshop and have formed an inter-departmental task force. An awareness raising plan that includes media, public meetings, and open meetings with stakeholders is also under consideration. A kick-off meeting of representatives of stakeholder institutions was chaired by the focal agency's State Minister.

There is pre-existing strategy that includes SLCPs. The team's current task is to continuously encourage concerned sectors/agencies to incorporate SLCP considerations into existing plans. There is no strategy yet in place to embed SLCP considerations into national planning, but SLCP actions are included in national development planning and in the annual investment and operational budget. As part of Ethiopia's commitment to fighting climate change, national government agencies are required to consider CH₄ reductions in their regular plans.

D.2.3. Jordan (IS)

Jordan is one of the six countries added to the SNAP/IS activity. A dedicated unit for SLCP mitigation was established within the Ministry of Environment and has a clear ministerial mandate to scale-up action on SLCP mitigation, including the development of policies and regulations. The 2016 CCAC Annual Report notes that Jordan has activities in progress or planned as part of other CCAC sectoral initiatives; Diesel, HFCs, and Waste. A national SLCP Unit is in the early stages of the SNAP/IS activity and is in the process of hiring technical consultants to support the national SLCP baseline assessment. The unit also engages the Ministry of Transport, the Ministry of Health, the Ministry of Agriculture, and private sector actors as key stakeholders. The UNEP Regional Office supports the national team.

An awareness raising strategy is under development, but the SLCP Unit has already organized a stakeholder engagement workshop at the Ministerial level and has participated in other workshops and meetings related to climate change. These workshops have provided an SLCP orientation and defined the tasks for the Unit. The Unit has developed a strategy for implementing mitigation measures and policies and the national team works with other Ministries to include SLCPs mitigation in national NDCs.

The SLCP Unit in Jordan organized a stakeholder engagement workshop and is in the process of hiring consultants to support a national SLCP baseline study. The unit also engages the Ministry of Transport, the Ministry of Health, the Ministry of Agriculture, and private sector actors as key stakeholders.

D.2.4. Liberia (SNAP/IS)

Liberia is one of the six countries added to the SNAP/IS activity and their designated lead agency is the Liberia Environmental Protection Agency. According the 2016 CCAC Annual Report, Liberia has activities in progress or planned as part of the CCAC Waste Sector initiative. An inter-departmental task force has been formed and meets monthly, and the UNEP Regional Office provides the financial assistance and expert advice. SLCP Team members have participated in several SNAP workshops held during CCAC/WG meetings and have participated in an SEI air quality workshop (2016) and in a Brick sector workshop. A Climate Change office and the SNAP offices are co-located at the EPA and plan to set up a consultative process with key stakeholders.

A full communications strategy was developed by a national consultant that includes outreach materials, posters, participation in local talk shows, and meetings with other government agencies. A strategy to embed SLCP in national planning across government agencies is in development and an outreach workshop was organized to engage key stakeholders and the Environment Sector Working Group. SLCP mitigation considerations have been included in the national Agenda for Transformation (Aft) and, in 2017, Liberia finalized a national policy and response strategy for climate change adaptation and mitigation.²⁸

Other collaborators, stakeholders, and partners - Ministry of Agriculture, Ministry of Transport, Ministry of Health, Liberia Petroleum Refinery Company, Ministry of Commerce and Industries, Ministry of Public Works, Forestry Development Authority, Ministry of Finance and Development Planning, United Nations Youth Environmental Initiative, Liberia Rural Renewable Energy Agency, and ECOSToves Liberia.

D.2.5. Maldives (SNAP/IS)

Maldives is one of the six countries added to the SNAP/IS activity and their designated lead government agency is the Ministry of Environment and Energy. The 2016 CCAC Annual Report noted that Maldives has activities in progress or planned as part of other CCAC sectoral initiatives; Agriculture, Household Energy, Diesel, HFCs, Waste, and Health. The SNAP/IS team has been supported by SEI and UNEP, including assistance in developing a ToR for a national baseline assessment consultant and assistance with the SLCP Unit's work plan. The project coordinator participated in a SNAP/IS workshop in 2016 to learn more about the opportunities and benefits of SLCP mitigation and to share the experience of other country teams.

A national-scale workshop was held with experts from the Ministry of Fisheries and Agriculture, the Maldives Road Development Corporation, the Health Protection Agency, the Ministry of Housing and Infrastructure, the Maldives Transport and Contracting Company, Maldives National University, UNDP, representatives from industry, the national media, and departments and agencies under the Ministry of Environment and Energy (Departments of Climate Change, Waste Management and Pollution Control, Energy, Environment, the EPA, and the

²⁸ Liberia EPA, *Liberia's Policy and Response Strategy on Climate Change Validated*, article from Liberia EPA website, 2017, <http://www.environment.gov.mv/v1/newsletter/>.

meteorological services). The workshop was facilitated by a team from the CCAC Secretariat and UNEP.

A monthly Ministry newsletter, *Pemphis*, released an edition dedicated to SLCPs and climate change²⁹ that was circulated throughout the Ministry, added to the Ministry's website, and shared through official social media channels. The Unit regularly produces awareness content in the local language and in English, and shares it using the Ministry "handles" on Twitter® and Facebook®. The Unit has translated the SLCP flyer prepared by the CCAC secretariat into the local language and distributed printed copies nationwide to other islands. A guest lecture on SLCP linkages to climate and health was given to students at the Maldives National University. PowerPoint® presentations in the local language were developed and presented at awareness sessions nationwide and on the Capital island.

The team regularly keeps high-level staff informed of all SNAP activities. The State Minister in charge of the Environment Department has committed to developing an air quality action plan to reduce black carbon emissions. A Ministerial-level meeting is planned after actions are identified and responsibilities allocated.

Other collaborators, stakeholders, and partners - Department of Waste Management and Pollution Control, Department of Climate Change, Department of Energy, the Maldives Meteorological Services, and the Maldives Environmental Protection Agency. Other stakeholders outside of government include the Waste Management Corporation and the Maldives Transport Authority.

D.2.6. Togo (IS)

Togo is one of the six countries engaged in the SNAP/IS activity and the designated lead government agency is the Ministry of Environment and Forest Resources. The 2016 CCAC Annual Report notes that Togo also has activities in progress or planned as part of other CCAC sectoral initiatives; Agriculture, Household Energy, Diesel, HFCs, Waste, and Health. Experts from relevant institutions are part of a Technical Committee established by the Ministry of Environment to monitor SNAP/IS project implementation. The UNEP Regional Office supports and guides SNAP/IS project implementation and IUAPPA assisted with a project launch event in October 2015. Team members have also participated in SEI training on the LEAP/IBC tool (2017).

The national SLCP team has developed and is implementing a communication plan, which includes production of an informational pamphlet and a radio program in collaboration with *Radio Lomé*. Two articles about the program were published in Togo. During the SNAP/IS project launch meeting, several radio and TV stations participated. Websites are also used to raise SLCP awareness. The team sent awareness raising letters to and later met with the Ministers of Health, Decentralization, Energy, Agriculture, Transport, Industry, Town-planning, and Economy. Strategies for mitigation measures and policies are not yet identified.

²⁹ Maldives Ministry of Environment and Energy, *Environmental Newsletter No. 55, Short-lived Climate Pollutants*, 2016.

Other collaborators, stakeholders, and partners - Ministry of Health, Ministry of Decentralization, Ministry of Energy, Ministry of Agriculture, Ministry of Transport, Ministry of Industry, Ministry of Town-planning, Ministry of Economy, University of Lomé, NGOs, and Civil Society Organizations.

E. Chart 2: Developing Country Matrix Summary

One component of the CCAC/SNAP evaluation was the design of 49-question survey instrument (Appendix 4) that was intended to capture the experience of the 14 national SNAP-supported SLCP teams in process of developing a NAP and/or participating in the IS component of the initiative. Two sets of guidelines informed the design of the survey instrument which was eventually delivered to each of the 14 study teams through the on-line software, SurveyMonkey®. The first set of guidelines, the *SLCP National Planning Guidance Document (2016)* developed by SEI, describes a step-by-step approach to coordinating, developing, implementing, and motoring a full country-scale NAP. Another set of SNAP/IS guidelines, *Basic National Implementation Plan - Institutional Strengthening Support*, describes a set of activities that are more narrowly focused on building the capacity of the national institutions needed to coordinate SLCP-related activities. Using these guidelines, a single survey instrument was designed to capture the experience of the national team participation in one or both of the SNAP activities. As requested, each of the 14 country teams submitted a single completed survey.³⁰ All 14 countries completed the questionnaire and the responses are captured in a Chart 1 for each country that is included in Appendix 1 of this report. The following assessment is divided into two sections; (1) eight countries developing a NAP and participating in the SNAP/IS program and (2) six countries participating only in the SNAP/IS program.

E.1. CCAC/SNAP Developing Country Partners (8) developing a full DAP and participating in SNAP/IS

NAP Development Step 1- Setting up the national planning process and engaging stakeholders. The surveys found that all eight of the countries (100%) have designated a government agency to lead the national planning process and to engage national stakeholders. In seven of the eight countries (88%), the lead national agency: (a) brings together other agencies/institutions and other stakeholders and (b) links the air quality and climate change issues and experts. Seven of the eight countries (88%) also reported that an inter-departmental SLCP task force had been formed. The single exception was Peru (see section D.1.8.).

The questionnaires also revealed the extensive training support provided through the SNAP program. All eight countries (100%) reported that their lead agency received direct technical assistance during the early phase of the national SLCP planning or during the IS activity. The most mentioned source of training was UNEP and SEI (both 88% of countries), IUAPPA (38%), USEPA (38%), MCE2 (25%), and “other” (25%). Six teams (75%) report having SNAP organizational training and/or outside technical assistance for early assessment of SLCPs, and

³⁰ The one exception was Bangladesh. That team submitted 2 survey responses that were later combined into a single response format by the evaluation team.

participated in a regional or international SNAP capacity building or training workshop. Six of the respondents (75%) believed that their country now has the institutional capacity in place to effectively coordinate SLCP actions. Seven of the eight respondents (87.5%) reported that at least one person on their national team had participated in a regional capacity building workshop on the use of the SNAP Tool kit (LEAP/IBC).

NAP Development Step 2 - Raising Awareness about SLCPs - The responses related to national SLCP awareness raising somewhat were more mixed. Only two countries (25%) reported having developed an SLCP awareness raising strategy, while another five countries (62.5%) noted that such a strategy was being developed. Nevertheless, five of seven respondents (71%) noted that SLCP awareness raising materials had been developed (i.e. pamphlets, posters, radio programs, web sites) and one (14%) was developing such materials. Six country teams (75%) used local media, public meetings and/or open meetings with stakeholders to raise SLCP awareness, while one country (12.5%) had such activities planned. Half of the national SLCP teams conducted a startup (kick-off) Ministerial-level meeting to promote a high-level political commitment to national SLCP activities, while two countries (25%) had such an activity under development.

NAP Development Step 3 - Assessing SLCPs in the national context - Two of the participating countries (25%) reported having completed a baseline SLCP assessment and another five teams (62.5%) noted that this task was in progress. Three teams (43% of the seven responses) noted that assessments included studies of legal and institutional frameworks and, for another three teams, the activity was under development. Three responses confirmed that major national SLCP emission sources had been identified and quantified and four countries (50%) noted that this task was ongoing.

NAP Development Step 4 - Identifying opportunities to reduce SLCPs and estimate benefits of reductions - Two countries (25%) confirmed that an assessment of potential mitigation scenarios and the benefits of mitigation had been completed, and another five (62.5%) reported that this activity was in progress. Five teams (62.5%) identified a set of country-specific mitigation measures and sectoral SLCP emission reduction options and two (25%), reported this activity was in progress. Seven of the eight countries (87.5%) reported that they are using the SNAP toolkit (LEAP/IBC) to assess various mitigation scenarios and benefits of mitigation. Seven teams (100%) have examined BC and CH₄ (7%), while only two countries (29%) included HFCs.

NAP Development Step 5 - Developing national plans with priorities for SLCP abatement - Two teams (25%) have developed strategies/workplans for the implementation of SLCP mitigation actions and policies and five (62.5%) are in the development stage. Two teams (37.5%) report having completed a draft national SLCP action plan and five (62.5%) note that this task is in progress. Fifty percent of the teams have received some SNAP training and outside technical support for this stage of the NAP drafting process. None of the teams have developed a revised action plan, but half (50%) noted that they believe their country has the organizational and technical capacity to complete and review national SLCP action plans.

NAP Development Step 6 - Mainstreaming the SLCP planning process in national processes and structures - Three of the country teams (37.5%) report having developed a

strategy to embed the SLCP planning across several relevant government agencies. One country has conducted a national workshop and/or outreach to engage stakeholders and to define their roles during the SLCP implementation phase, but another four (12.5%) indicated that this activity is still in the planning stage. Three countries report that aspects of the national SLCP plan have been incorporated into some national regulations/laws/policies and that SLCP actions have been included in the national development plan and in the annual investment and operational budget

NAP Development Step 7 - Monitoring and Evaluation - Only one country (12.5%) team reported having an M&E system in place to track implementation of SLCP reduction measures and is reporting progress in mitigation implementation. None of the teams indicated that the national plan resulted in any measurable and verifiable SLCP emission reductions.

E.2. CCAC/SNAP Developing Country Partners (6) only participating in SNAP/IS

Activity 1 - Develop and manage an effective coordination structure that promotes attention on SLCPs and provides a sustainable increase in institutional capacities to promote SLCP mitigation - All six country teams (100%) report that their country has designated one government agency to lead the national planning/institutional strengthening process and that the lead agency brings together other agencies/institutions and other stakeholders. All six SLCP teams also note that their lead agency brings together both the air quality and climate change issues and experts. The most mentioned source of training and technical assistance for this phase of the program was UNEP (100% of countries), SEI (33%), IUAPPA (17%), and US/EPA (17%). Five country teams (83.3%) report that at least one member participated in a regional or international SNAP capacity building or training workshops.

Activity 2 - Engage key national stakeholders in SLCP mitigation – Three of the teams (50%) confirm that a national-scale stakeholder and expert consultation process has been established. All six countries (100%) have formed an inter-departmental SLCP task force. Four teams (77.67%) have developed an SLCP awareness raising strategy and five teams (83.3%) have developed some form of SLCP awareness raising materials (i.e. pamphlets, posters, radio, programs, web sites). Five teams (83.3%) report that they use the media, public meetings and/or open meetings with stakeholders (e.g., Ministries) to raise SLCP awareness. Two teams have conducted a startup (kick-off) Ministerial-level meeting to promote a high-level political commitment to national SLCP activities and one (17%) reports this meeting is being planned.

Activity 3 - Promote financing, mainstreaming and implementation of SLCP mitigation measures - A single country team (17%) reports development of a strategy/workplan for implementation of SLCP mitigation actions and policies, but half of the teams (50%) are in the planning stages. Two countries (33%) have developed a strategy to embed SLCP planning across several relevant government agencies. Three teams conducted national workshops and/or outreach to engage stakeholders and to define their roles during the SLCP implementation phase and another three are in the planning stages. Four teams (66.67%) noted that SLCP actions have been included in the national development planning and in the annual investment and operational

budget. According to the questionnaire responses, none of the teams have completed a monitoring and evaluation plan to track implementation of SLCP reduction measures.

Activity 4 - Foster participation in CCAC activities/initiatives and other international initiatives and fora - One SLCP team (17%) reports having participated in inter-governmental consultations with other CCAC members, and another two (33%) are planning such an activity. None of the countries have developed any joint SLCP mitigation plans with other countries, however half the teams (50%) have requested some form of outside funding for the implementation of their priority SLCP mitigation measures. Two teams plan to solicit outside funding.

F. Conclusions and Recommendations

Overall, when considering the relatively short five-year life span of the CCAC/SNAP Initiative, it is clear that the program has made and continues to make significant strides in supporting global efforts to assess and quantify national-scale SLCP emissions, and in fostering national and local actions and policies that will mitigate SLCP emissions in the next decade. From a zero-starting point in 2012, the SNAP project has experienced very rapid growth in terms of its engagement with an increasing number and widening range of participating governmental, non-governmental, multi-national, academic, and private sector actors. We also conclude that SNAP has matured into an effective program, but it remains relatively young, and that the real global-scale impact of the initiative is still in its future. It seems to have completed its early development stage and has refined organizational approaches, an expert network supporting technical assistance and training, effective planning and implementation guidelines, and a refined computer-based assessment tool that can now be used by a much larger number of countries to replicate and expand SLCP mitigation efforts.

F.1. General Conclusions - SNAP Objective 1

F.1.1. NAP Development Activity (Objective 1) - Conclusions

NAP Development Approach - Since the beginning of the SNAP program in 2012, an effective standardized step-by-step approach to developing a NAP has evolved. This national-scale approach described in the *Supporting National Action on Planning on Short-Lived Pollutants (SNAP)* guidelines³¹ developed by SEI (2016) seems to be based on the lessons-learned from the early SNAP-supported country programs. The SNAP supported program in Mexico, which was one of the first four Phase I NAP countries, can be seen as a model of what can be accomplished with this approach and is a sign of the maturity of the SNAP Program³² (also refer to section D.1.1. of this report).

³¹ These SNAP guidelines can be found at: <http://www.ccacoalition.org/en/resources/guidance-document-national-planning-reducing-short-lived-climate-pollutants-snap>

³² The accomplishments of the Mexico SLCP program are summarized in a CCAC/SNAP factsheet: <http://www.ccacoalition.org/en/resources/factsheet-national-action-planning-slcps-mexico>

In assessing several of the country activities, including Mexico, Bangladesh, and Colombia, we note that the development and implementation of a NAP is a dynamic process where completed assessments and mitigations plans are continuously updated as improvements are made to the SNAP Toolkit, as additional data is made available, and when other national SLCP emissions sources are identified.

Training and technical assistance - Another key element of the NAP support program has been the quality and frequency of the technical assistance and training provided by SEI, UNEP, IUAPPA (organizational capacity building), and U.S. EPA (computer-based assessment tools). According to the results of the evaluation survey, all eight NAP country teams have participated in one or more training workshops, peer-to-peer events, and/or webinars, and have received some form of direct technical assistance at several stages of the NAP development process. SNAP has also developed a network of experts that can respond to country teams' technical questions on a continuous basis. This solid technical and organizational support appears to be one of the key elements contributing of the effectiveness of the SNAP program.

The current approach has also enabled the SNAP program to overcome many of the national-level programmatic challenges that it identified in the first year (refer to section A.2.).

F.1.2. Institutional Strengthening (Objective 1) - Conclusions

Approach - We conclude that the narrower focus of this program component on Institutional Strengthening presents several advantages. First, it seems to be a logical “first step” for developing countries that do not yet have the institutional capacity, the technical assets, or the organizational foundation needed to develop and implement a full NAP. This “pre-NAP” approach, where effective, certainly develops a more solid foundation for later NAP development. Second, the approach allows SNAP to build on the lessons learned by country teams participating in early national-scale SNAP programming. Third, the narrower focus and the smaller “size” of the program at the national level, allows SNAP use the available funding resources to engage a much larger number of countries.

Lead SLCP Agencies - Another key to the effectiveness of the SNAP program has been its ability to foster the establishment and lead SLCP structure in each SNAP country as a government agency. In 13 of the 14 countries, the lead designated SLCP government agency has brought together expertise that links the climate change and the air quality issues. This is particularly significant as government SLCP lead agencies at the national level will have greater influence and input on the policy decision-making process across other key Ministries related to the planning, budgeting, and regulations needed to drive SLCP mitigation action.

F.1.3. Enhanced Tools and Approaches (Objective 2) - Conclusions

We conclude that the refined SNAP Toolkit based on the LEAP model linked to the IBC appears to be an effective tool for developing national SLCP assessments and for exploring mitigation options. It is now being used by most of the SNAP-supported NAP and IS national SLCP teams and has been supported by an effective program of technical assistance and training that has

expanded its applications beyond the SNAP countries. As noted in the CCAC's Annual Report (2015-2016), the use of the tool has also been supported by numerous training events that have included more than 600 participants.

The flexibility of the SNAP Toolkit allows each country to either use preloaded country-specific activity data or incorporate existing data (and emission factors) from previous national assessments and emission inventories. The effectiveness of the tool can be measured by the sheer number of SNAP and non-SNAP countries that are currently using the tool and, as noted in the approved 2016 SNAP funding request, the goal of the current program is to “extend the applicability of the toolkit to 100 countries, making sure to prioritize those countries that are affiliated with the CCAC and its initiatives” and to “set up versions of the LEAP-IBC toolkit for each country by incorporating the relevant coefficients and adding national data for benefit estimation and also import some of the data available from international databases.”³³

The wider use of the SNAP LEAP/IBC tool will provide national results that are compatible and comparable with the results from other countries and contribute to a more refined understanding of global-scale SLCP emission estimates. The results will likely drive the wider implementation of more effective national mitigation strategies and policies.

F.1.4. General Conclusions - “The Big Picture” - SNAP Program Negatives

Sustainability - We conclude that as SNAP continues to grow, engaging a larger number of countries, and widening the scope of its activities (i.e., the growing emphasis on Black Carbon assessments and mitigation), the longer-term sustainability of program benefits in some developing countries should be a concern. This is particularly the case with the first 14 NAP and IS countries that appear to have benefitted from CCAC Trust Fund resources in each of the first five approved funding requests during 2013 to 2016. There does not appear to be a plan in place to “graduate” countries. We question whether or not the benefits of SNAP program will survive at the national level without additional outside funding support.

Transparency - Although there is great emphasis within the CCAC on the consultative process, the widest possible inclusion of stakeholders, a transparent project proposal review and approval process, and the large library of documentation available through the CCAC website, other aspects of SNAP project implementation seem a bit more translucent. For example, the evaluation team did not have access to details about the funding made available to each participating SNAP-supported country nor any progress reports that may have been submitted by country teams. We were also unable to assess the terms and conditions of any contracts or Memoranda of Understanding (MOUs) signed between the Secretariat, the UNEP Regional Offices, country teams, and the implementers providing technical assistance. This presented a limit on the ability of the evaluation team to compare project goals at the national level against actual performance.

Monitoring and Evaluation - None the countries supported by the SNAP program appear to have a M&E system in place to track and report project progress against anything like a standard

³³ CCCAC/SNAP, *SNAP Initiative Funding Proposal: Involving additional countries in national planning and institutional strengthening and further SNAP toolkit development and training*, WG/APR2106/10,(2016).

set of qualitative and quantitative indicators. We did note that the 2016 CCAC Annual Report, describes a “Demonstrating Impacts Framework” that was approved by the HLA in 2015 and that included four output, ten outcome, and five impact indicators.³⁴ This framework was also intended to measure and report project progress at the initiative level. The CCAC appears to have tested and refined the framework during the 2015-2016 period. Some results are summarized in the Annual Report as part of the “Partners in Action” section, but the project progress is reported in summary and presented without any indicator-by-indicator results or any mention of available means of verification. It appears that the application of the “Impact Framework” has not trickled down into the county programs. The lack of a structured M&E plan means that SNAP may not be capturing all the program benefits and lessons learned, and makes it more difficult for donor countries to assess how the funding support provided to CCAC Trust Fund was applied.

Administration- Some aspects of the administrative process of the SNAP program at the “start-up” phase of a country-level project appear somewhat cumbersome and may contribute to implementation delays. For example, we understand that country-level activities set for Funding Request 5, which was approved for Trust Fund support in April 2016, had not started by May 2017. It does appear, however, that some cumbersome program procedures related to the CCAC’s project proposal and review cycle (“funding requests”) have been streamlined (refer to section C.2.).

It does appear that many of the more cumbersome administrative procedures have more to do with organizational “growing pains” rather than any burdensome bureaucracy. As the program grows, the administrative and management structure that served the early period of the program well, may experience some difficulties adjusting to the growth of the program.

F.1.5. General Conclusions - “The Big Picture” - Positives

Overall, we conclude that the SNAP initiative is an extraordinary program, especially considering its effectiveness during its relatively short five-year life and the large number of organizational and technical moving parts.

SNAP Focus on Action - The NAP approach seems to be an effective approach that takes country teams through institution building, engaging stakeholders, conducting initial SLCP assessments, identifying best mitigation options, and implementing real mitigation measures and policies. The end goal of the program is to go beyond just having a better understanding of SLCP emissions and supports more concrete action to reduce SLCP emissions through more effective mitigation measures and policies. The organizational approach appears effective and SNAP can be considered a model for organizational collaboration driven by very good communication between implementing partners, the Secretariat, and country programs.

Minimal disrupting influences - This is a voluntary organization with well-defined goals and built on collaboration between a large number of organizations, agencies, and institutions focused on rapid action to mitigate climate change and improve air quality. Considering the scale of the SNAP program and the number of countries involved, the effect of any international political and policy complexities appears to be minimal.

³⁴ CCAC, *CCAC Annual Report -September 2015-August 2016*, (2016)

Training and Technical Support - As discussed previously, we conclude that one major factor contributing to the effectiveness of the SNAP program continues to be the high quality and wide range of training and technical assistance provided through the SNAP Implementers.

F.2. Key Recommendations

NAP Development - Throughout the life of the project, the number of countries developing NAPs has been increasing with each approved funding request. The first years of the SNAP program were certainly a time to experiment, develop new methods and approaches, and build on lessons learned. The program is now more mature and has developed the tools and approaches that would support a rapid expansion in the number of NAP countries. We recommend, however, that SNAP also focus on advancing the NAP development progress in the countries that are already in the program, especially the first four that have been supported since SNAP Phase I. Also, considering the limited resources available for NAP development, SNAP should consider targeting developing countries with more substantial SLCP emission levels.

SLCP Institution Strengthening (IS) - The IS program approach is effective in engaging an increasing number of countries and key national stakeholders. SNAP should continue expanding IS programming and develop additional technical resources (i.e., training-of-trainers) that could provide the training and technical assistance that will be required to support the expanding program.

Regional Approach - The effort to take a regional approach to promoting national SLCP action and awareness should continue to expand into other regions based on the positive results and lessons learned from this activity in the Latin America and Caribbean Region.

SNAP LEAP/IBC Toolkit - The initiative should continue to advance the utility of the SNAP Toolkit, including (as planned) the development of more advanced assessment tools and methods related to Black Carbon. The focus on developing urban scale assessment tools, improving the resolution of the SNAP Toolkit, incorporating a larger number of county-scale datasets for the larger number of SNAP and non-SNAP national teams should continue. This will improve the quantity and quality of national SLCP assessments and foster national SLCP emission mitigation measures.

Monitoring and Evaluation - As SNAP matures and expands, the initiative should establish a more robust M&E system to better capture and quantify the initiative's real benefits in terms of SLCP mitigation and in the implementation of activities. A system using qualitative and quantitative indicators with an established set of reporting guidelines should be built into national-scale project proposals and technical assistance contracts.

Sustainability - SNAP should continue to discuss measures to assure the sustainability of project benefits over the longer-term and include features to address sustainability issues in all project proposals and national programs. In many development-oriented projects, the availability of technical skills and political will are not the main determinants of sustainability at the national level, but rather sustainability depends more on a continued availability of financial resources to

support an active program. SNAP should also work with countries to develop locally-generated alternative sources of funding through local programs and policies that would support the SLCP institutions developed by the SNAP Program. A longer-term dependence on outside sources of income will likely erase program benefits when such funding ends.

Administration and Management - The oversight of country-level SNAP activities through the UNEP Regional Offices appears to be an effective approach as it decentralizes the management and administrative function, and makes available additional program resources supporting the country teams. We also recommend that SNAP and UNEP continue to review and revise its project administrative and management procedures with an eye to better accommodating the continuing rapid expansion of the SNAP program.

Awareness Building - It appears that many SNAP country teams have developed interesting and creative approaches to using traditional and internet-based social media to raise awareness about SLCP. We would recommend that SNAP build a catalog of the different approaches used as a guide for other national SLCP teams.

Additional Outside Funding - The ultimate success of the program will be measured by the reductions in SLCP emissions. Where possible and as appropriate, SNAP should work with SNAP national teams to develop national- and regional-scale plans and proposals related to specific mitigation measures that could be used to attract funding support from bilateral and multilateral donors.