

Supporting National Action and Planning Initiative (SNAP)



**CLIMATE &
CLEAN AIR
COALITION**
TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS

2018 Annual Institutional Strengthening Workshop

Meeting Report



11 -12 October 2018
UN ESCAP, Bangkok

The following is a report from the Institutional Strengthening Workshop, organised by the Initiative “Supporting National Action and Planning (SNAP) on short-lived climate pollutants” of the Climate and Clean Air Coalition (CCAC).

This fourth workshop of the National Planning Initiative took place in Bangkok on **11 and 12 October 2018**. The objective was to strengthen countries’ capacity to scale up national action on short-lived climate pollutants (SLCPs) through the sharing of expertise, experiences and ideas.

Forty-eight (48) representatives from Developing Countries, together with about 30 experts from other countries, NGOs, Intergovernmental Organisations, involved in the Climate and Clean Air Coalition and its initiatives participated in the workshop.

During the first day, countries receiving support presented their progress in developing plans, and initial findings from their SLCP inventories and scenarios and exchanged on their challenges and lessons learnt. The second day was focused on lessons sharing on integrated inventories of greenhouse gases and air pollutants, institutional strengthening and mainstreaming short-lived climate pollutants in climate planning.

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Power point presentations are available at (CCAC Intranet login required):

<https://ccac.teamwork.com/#/projects/89042/files?catid=610176>

Or can be downloaded as a package with this link (no login required): <http://twk.pm/azur6pmjci>

DAY ONE – 11 OCTOBER 2018

1. Opening

The meeting was opened by Helena Molin-Valdés (Head of the Climate and Clean Air Coalition Secretariat) and Romina Picolotti (Institute for Governance & Sustainable Development), who highlighted the central role of the National Planning Initiative in the Climate and Clean Air Coalition. With the recent publication of the IPCC 1.5°C report, tackling short-lived climate pollutant is even more relevant than before as we need to look at all the options at hand if we want to achieve this target. Embedding short-lived climate pollutants (SLCP) mitigation in the climate mitigation can make a significant contribution in the near term.

2. Introduction

Elsa Lefevre (CCAC Secretariat) outlined the agenda and a round of introductions followed

3. Moving towards implementation: update from countries and discussion

Facilitator: Richard Mills, International Union of Air Pollution Association (IUAPPA)

Purpose: The purpose of this session was for countries who are in the process of finalising their plans to present an overview of their plan and how they intend to implement these plans. This will be followed by a discussion amongst countries on successes and lessons learnt.

3.1. Introduction

Elsa Lefevre introduced the objectives of session:

- Provide an update on progress of developing the National SLCP Plans
- Understand what objectives the Plans aim to achieve
- How the planning process has been set up
- What challenges has been faced
- How they plan to implement their strategies and how it will be monitored
- How the process will be sustained going forward

3.2. Country presentations of their National Plans and way forward

3.2.1. Nigeria: Bala Bappa, Federal Ministry of Environment

Nigeria objective's in developing their national plan on short-lived climate pollutants are to increase awareness and participation in SLCP issues, create a platform to discuss SLCP mitigation, identify desk officers in each MDA for SLCPs, apply analytical and assessment tools (LEAP-IBC) including training stakeholders from other MDAs, and disseminate information on best practises for SLCP mitigation.

A draft national plan has now been developed and has undergone peer review and comments are now being incorporated into the draft plans. This process allowed to identify major abatement measures. Targets have been set for each of the measures and have been reviewed by the Ministries, Departments and Agencies (MDAs) and NGOs. The two major implementers will be the Federal Ministry of Budget and National Planning and the Ministry of Environment. To take the actions in the National SLCP Plan forward requires that budget provision is assigned to the actions within sectoral MDA plans.

3.2.2. Colombia: Mauricio Gaitan & John Henry Melo, Ministry of Environment

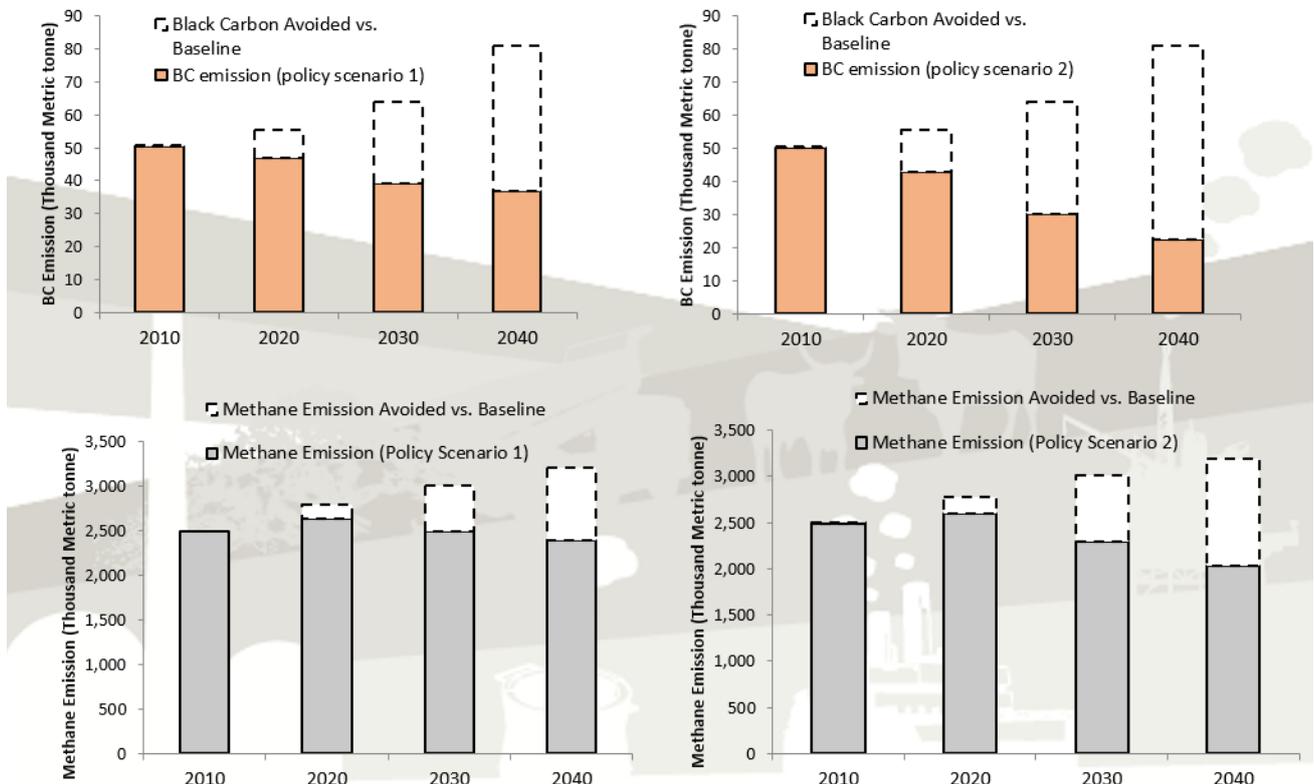
SLCP is an important issue because it links air quality and climate change and is a way of coordinating actions on both issues in Colombia. The National SLCP Strategy included a screening of existing actions and the strategy will be updated every 2 years. The aims going forward are to include black carbon (BC) in existing Monitoring Revision Verification (MRV) systems, to use the Multiple Benefits Pathways Approach, to strengthen institutions to consider SLCP mitigation, to identify what actions are available for the country, and communication of these issues is also important.

The SLCP Strategy compiles existing emission reduction goals: HFC reduction under Kigali Amendment, methane commitment under the NDC, BC/PM2.5 has the WHO AQ standard intermediate 3 objective as the goal for Colombia.

The BC inventory results show the magnitude of emission in major sources, it will from now on be updated every two years. It is then necessary to review the measures prioritised for the NDC in terms of their SLCP reductions, then to identify any new measures needed and establish contact with each sector for implementation.

3.2.3. Bangladesh: Masud Iqbal Shameem, Direction of Environment, Tanvir Ahmed, Bangladesh University of Engineering and Technology

The National Plan on SLCPs is in the final stage before the document is adopted. Implementing the measures identified could reduce significantly black carbon and methane emissions:



The mitigation measures have been translated into 6-7 activities for each sector. Coordination of the implementation and monitoring will be undertaken by an SLCP unit, established in the Direction of Environment. The steering committee will review the plan and update every 5 years

SLCP mitigation has been mainstreamed in existing policies:

- National Environment Law specifically mentions SLCPs
- 7000 brick kilns, 65% converted to improved technologies
- 2 million improved cookstoves distributed, 30m by 2030
- 5 m solar home systems installed
- Low sulfur fuel roadmap being implemented
- AWD pilot project ongoing
- Milk, meat and manure livestock project starting

Questions (Jordan, Philippines, Dominican Republic): Who is responsible for the work on cookstoves and what is the current status?

- The DoE is doing pilot activities to manufacture improved cookstoves and government is subsidising
- The gap in the cookstoves sectors is emission standards
- The main benefit from cookstoves is the health benefit from indoor air pollution. This is being helped to implement through subsidies and has momentum within the country and the switch to alternative fuels is being driven by economic development. For stoves with chimneys the emissions go outside which causes ambient air pollution but is better than the emissions being inside.
- The science is still not complete. Need experiments to see what the current emissions are and what standards are appropriate. Testing equipment and facilities are needed to develop standards. Cookstoves are not totally efficient but work is trying to improve the efficiency using local materials and fuels so that it is locally sustainable.
- Mexico highlighted that countries where interested in moving towards LPG as an alternative strategy because of the greater health benefits that would result from this.

3.2.4. Ghana: Peter Dery, Ministry of Environment, Science Technology and Innovation

Ghana has now produced its national action plan on short-lived climate pollutants, as well as a resource mobilisation strategy. The LEAP-IBC dataset has been produced and used for other climate planning processes. SLCPs have been included in the GHG inventory and in the Biennial Update report (BUR). The process for including SLCPs in the NDC is ongoing. SLCPs have been included in the mandate of the national climate change committee.

Based on the LEAP-IBC scenario and benefits analysis, the full implementation of the measures included in Ghana's National SLCP Plan could avoid over 2500 premature deaths associated with air pollution in 2030 and reduce Ghana's contribution to global temperature increases by 55%.

The Resource Mobilisation Strategy identifies that \$500 million are needed to implement the identified measures. Funding will need to come from government, donors/development banks and the private sector. It is necessary to get SLCPs included in the budget guidelines so that then they can be included in institutional budgets.

There is a number of policy reforms needed, such as implementing vehicle emission standards and low-sulfur fuels, implementing the Kigali amendment, developing a cookstove labelling system, etc.

3.2.5. Côte d'Ivoire: Ange Benjamin Brida, CIAPOL

The SNAP process began in 2015 and the entry point was air quality. The first draft NAP document has been produced and is in the last discussion phases before approval. Biomass, solid waste and transport are the major sources of black carbon. Rice cultivation, landfill and domestic sector are the main sources of methane. The reduction potential of existing policies and commitments was assessed using LEAP-IBC, before identifying additional measures that could reduce further SLCPs. This analysis is a catalyst for the revision of the NDC before 2020.

3.2.6. The Maldives: Aminath Maiha Ahmeed, Ministry of Environment

Given that the Maldives did not have a national air quality strategy, it was decided that the SLCP planning process would lead to the development of a National Action Plan on Air Pollutants. The Institutional Strengthening support had allowed the Ministry to start working on air quality. This process is helping strengthen the mandate of the Ministry and builds the basis for the work of the new administration.

This plan builds on the commitments of the Nationally Determined Contribution (NDC) of the Maldives under the Paris Agreement and other existing policies and shows the air pollution reduction potential of these actions. It identifies additional actions that will further improve air quality in the Maldives. One of the challenges of the Air Quality team is to put in place an air pollutant monitoring network.

4. Developing the national plan and ensuring stakeholder ownership: update from countries and discussion

Facilitator: Johan Kuylensstierna, SEI

Purpose: The purpose of this session was for countries who are in the process of developing their plans to present an overview of their plan and how they intend to implement these plans.

4.1. Introduction

Johan Kuylensstierna (Stockholm Environment Institute) and Elsa Lefevre (CCAC Secretariat) briefly introduced the objective of the session:

- Update on the status of development of national plan and of the next steps; set up of the planning process; advantages and challenges encountered
- What are the national plan objectives and targets; what will the plan look like once finalised; what did the process already allow them to achieve
- A few key findings on the SLCP profile of the country and mitigation potential
- What links have or will be established with other national planning processes, especially the Climate and Air Quality plans.
- The consultation process put in place to define the national commitment on SLCPs

4.2. Updates from countries on the development of their national plans

4.2.1. México: Abraham Ortíz Álvarez, INECC

Mexico included a reduction target of black carbon in its NDC in 2015. With the support of the SNAP Initiative Mexico is now looking at which specific measures will allow to achieve this reduction target, while undertaking an assessment of the cross-linkages between the national climate and air quality plans, to avoid trade-offs and ensure maximum benefits. The team closely worked with the BUR team to ensure that short-lived climate pollutants were covered in the inventory.

4.2.2. Chile: Carmen Gloria Contreras, Ministry of Environment

Chile included a chapter on SLCPs in their NDC. A first black carbon inventory was produced in 2013 and was subjected to peer review by international experts, since then black carbon has been included in the national GHG inventory. The aim now is to include BC into the updated NDC and to propose a quantified BC emission goal. 4 cities have joined the Breathelife campaign.

4.2.3. Togo: Kossivi Essiomle & Sankoutcha Boulewé, Ministry of Environment

Togo does not have an air quality abatement strategy, and therefore the National SLCP Planning process was used to develop such an 'National Plan on Air Pollution and SLCP Mitigation'. The plan includes the mitigation measures included in the NDC, as these have substantial air pollution and SLCP emission reduction potentials, and additional air pollution-focused abatement measures. Specific actions plans are

being developed for each mitigation measure related to residential, transport, electricity generation, agriculture, agroforestry have been identified.

Developing the plan has been done through i) stakeholder consultation, ii) expert recruitment, iii) analysis and drafting the plan, iv) second consultation workshop, v) sent for review to lead partners, vi) revising plans based on comments. It should be finalised by the end of 2018. The upcoming challenge will be to identify the financing sources for the implementation of the plan.

4.2.4. Peru: Luis Villasana & Eliana Silva, Ministry of Environment

The aim of the National SLCP Planning process in Peru is to develop sectoral roadmaps that outline how SLCP mitigation measures can be implemented within the major source sectors. The National SLCP Unit is located within the air quality division and has begun to participate in the multi-sectoral task force discussions on the NDC. This allowed the team to engage with the sectorial ministries as well as raise awareness on SLCPs within this group by showing the results of the mitigation measures using LEAP to show co-benefits of measures. A process for developing an integrated inventory of GHGs and SLCPs to use a consistent methodology for all pollutants is under development. The analysis of Peru's NDC has shown mitigation measures are not defined in detail which makes it difficult to model mitigation measures in LEAP tool.

Transport, residential and agriculture sectors will be the focus, but additional measures for other sectors are also needed.

4.2.5. Morocco: Karim Ben Abes, Ministry of Environment

The National SLCP Planning process in Morocco has not yet started. The main objective is to reinforce national capacity to develop first BC inventory in Morocco and enable finance for BC mitigation.

4.2.6. Philippines: Albert Magalang, Climate Change Office, EMB-DENR

The National SLCP Planning process in the Philippines has not yet started. The LEAP tool was used to develop Philippines NDC, and therefore there is already substantial potential at the analysis level for a consistent assessment process for climate planning and SLCP mitigation analysis. In 2016 there was a stocktaking exercise on SLCPs, a presentation on SLCPs to a senate hearing.

The objectives of the process are: Develop inventory and assessment on SLCPs, develop institutionalisation and organisational structure, include SLCPs in the NDC and link air quality and climate processes.

4.3. Emerging models of national SLCP planning

We can draw from the various examples key elements of success:

- Coordination and integration between climate change and air quality direction (alignment of the inventory, consideration of the existing commitments, clear plan for increasing) – example of Côte d'Ivoire who manage to increase this link over the process
- Assess existing commitments, but also identify where there is a potential to go further – examples of Ghana, Bangladesh
- Mobilisation of key ministries to gather data, develop the action and ensure buy in for implementation – example of Nigeria, where many consultations were held and a strong involvement of the planning ministry)
- Strong consideration on how the plan will be implemented (inclusion of measures related to the implementation of the plan, assign responsibilities) – examples of Colombia that included a set of cross-cutting actions and Côte d'Ivoire that intend to include in NDC.
- Plan for the monitoring and evaluation – example of Bangladesh's Monitoring and Evaluation plan
- Consider how to finance the implementation – example of Ghana's resource mobilisation strategy

Specific circumstances in country led to different paths for the planning process and some countries managed to achieve to a stronger degree some of these elements.

4.4. Discussion

Main points discussed included:

- Planning at national scale creates the enabling framework, but it's important to promote action at sub-national scale.
- As part of the planning process, it's important to consider how implementable the measures prioritised will be from the start (and their cost). It is also key to consider where the "plan" will fit in the national institutional landscape, what type of process and document will be most useful.
- From the inception phase it is important to:
 - Map stakeholders and current actions
 - Engage with sectorial ministries and create a coordination mechanism
 - A strong collaboration with the health sector is needed
 - Have a clear communication strategy
 - Think about the format of the outcome of the process and what other processes it needs to link to for it to be efficient and recognised (stand-alone plan, recommendations included in other plans, etc.)
- It is important to understand the cost of implementing the actions, and to allocate at least some national budget for the implementation
- Mainstreaming the SLCP priorities in other plans often seems the most effective way.
- With its focus on promoting the implementation of SLCP measures, the CCAC realised that in terms of planning it required to look at both air quality and climate plans, and that an integrated approach looking at both and the co-benefits was useful to understand benefits and possible trade-offs and help scale up action.
- Coordination mechanism must be included in national budget lines

Waste: key SLCP mitigation options to include in SLCP national plans and NDCs (Anja Schwetje, GIZ)

The 2017 Bonn HLA agreement communique states the importance of diverting waste from landfill. This emphasis on diversion is due to the fact that drastic methane emission reduction can't be achieved by just capturing the methane from landfills. Moving from an unmanaged to a managed landfill increases emissions as it concentrates waste in an anaerobic environment and even when there is a system in place to collect gas, it's never possible to fully capture it. The largest reduction potential is if we divert waste from landfill. To divert waste, there is a need to improve collection and recycling, which would also avoid CO₂ and BC because uncollected waste is often burned. It is therefore important to include objectives related to the diversion of waste in national plans to facilitate access to financing.

DAY TWO – 12 OCTOBER 2018

5. Developing integrated greenhouse gases and air pollutants inventories

Facilitator: Chris Malley, SEI

Purpose: The purpose of this session is to provide an opportunity to countries receiving the Institutional Strengthening support to provide an update of their progress and exchange on their challenges and to discuss the development of integrated inventories.

5.1. Emission inventory development using LEAP-IBC: data needs, methodology, objectives

Speaker: Chris Malley, SEI

Support for the development of a Black Carbon (BC) emission inventory is a relatively new activity in the SNAP initiative, developed in response to 2016 HLA commitments. 19 countries are currently developing their emission inventory with support from the initiative.

In May, the CCAC Scientific Advisory Panel (SAP) produced a [working paper addressing BC inventories](#) in preparation for IPCC expert meeting. The conclusions from meeting are that improving SLCP and BC inventories are necessary to have a comprehensive picture, understand climate change and drive climate policy. Developing a black carbon inventory should not be a separate activity and doesn't require to reinvent a methodology. Much of the existing guidance is relevant for SLCP inventories and a lot of the required activity data is common. Another recommendation from the expert meeting is that SLCP and GHG emissions should be reported in mass units for each pollutant, not combined in CO₂ equivalent.

The SNAP initiative is now working with 19 countries through a series of regional workshops and one-on-one trainings. LEAP is used to develop the inventory and can then be the basis for further analysis (projections in the future, estimates of impacts) using LEAP-IBC. The output will be an integrated inventory, providing estimates for black carbon emissions, but also co-emitted pollutants, greenhouse gases and air pollutants, as they are needed to understand the impacts. In addition, sources of climate and air pollutants are similar, therefore it is more efficient to characterize all sources together

LEAP-IBC provides a default methodology for estimating emissions from all major energy and non-energy sectors, informed by international guidance on inventory development from IPCC and EMEP/EEA.

Developing an inventory is a process, it needs to be improved and updated and it is important to consider for what purpose it will be used.

5.2. Development and application of black carbon emission inventories: Perspectives from research in the Arctic

Speaker: Niko Karvosenoja, Finnish Environment Institute

Finland is an Arctic nation with a population of 5.4 m, good air quality but some local problems particularly with residential combustion. BC emissions can have large impacts because of the northern location of the country. Finland has developed its inventory systems over the last 20 years. The Finnish Regional Emission Scenarios (FRES) model is an integrated policy analysis tool that contributes to Finnish Integrated Assessment Modelling framework. It includes all major air pollutants, SLCPs and GHGs and calculates major sources and area sources at 250m² resolution. It also provides health impacts, climate impacts and environmental impacts. The focus is on projecting future emissions and assess the potential of various mitigation measures. The scenarios developed analyse different ambition levels – information campaign v. some regulation vs. banning urban wood use.

They are using several tools in combination to understand ambient concentrations, the spatial distribution of emissions and their impacts; and combining emission scenarios with health impact analysis to determine the

impact of different policy changes. Finland has developed specific regional emission metrics for BC and other SLCPs.

The key messages are:

- To develop a national BC inventory, it is important to have representative emission factor estimates, especially residential fuel combustion as emission factors vary significantly between combustion appliance types and countries. PM_{2.5} good starting point, as BC is a fraction of total PM
- For scenario analysis: estimates of activity and technological future pathways are needed
- To support health impact analysis, it is important to understand spatial distribution (i.e., location of metrics)
- Global metrics available for climate impacts, but also look at local and regional metrics
- It is important to include co-emitted pollutants

Discussion

- How did Finland decide which BC metrics to use? (Uruguay)

In the beginning, they used global metrics that are used in different studies. Due to location in north and importance of Arctic impacts on snow, they then began to develop region-specific metrics with Norwegian climate modellers.

- The major challenge in developing inventories for BC is that there is a difficulty getting data for the models. Can you elaborate on how to get quality activity data? (the Philippines)

Finland started with a default model (IIASA GAINS) to understand main source sectors. They included default source sectors developed in consultation with national experts and began to get better understanding of emission factors and refine model framework based on that information. It is important to have some national emission measurements for key sources. The GAINS framework is applicable to other countries.

- Does Finland have a specific quantified BC emission reduction goal? What is your recommendation for measuring impact on temperature change? (Chile)

The point of using climate metrics to estimate the impact of SLCPs is that it is possible to estimate climate impacts for small changes in emissions that is not possible using global models. Finland is a small country with small emissions, but they want to understand the contribution of black carbon due to the location of emissions close to the Arctic.

5.3. Development of a black carbon emission inventory for Costa Rica: Application in assessing black carbon mitigation options

Speaker: Patricia Campos, Ministry of Environment, Costa Rica

Costa Rica emission inventory is the result of collaboration between a team of scientists. They just completed its first BC inventory using IPCC guidance from 2012 and is currently undergoing political consultation. They used LEAP-IBC with the outputs of their TIMES model to calculate benefits/co-benefits. The goal of Costa is to achieve their commitments as parts of NDCs and understand how those efforts relate to the SDGs. They want to understand the relationship between emissions in sectors of national economy to identify policies that result in greatest level of benefits.

Costa Rica is developing its national metric system linked to the national environmental information system to create an integrated metric system ([SINAMECC](#)) to:

- Facilitate measurement of effects of actions
- Evaluate policies related to mitigation, adaptation, climate finance
- Provide information to promote transparency
- Enable decision making on NDCs using data-based process

- Support development of national reports

They plan to integrate SLCPs throughout entire system. The intent is to have a manageable interface mechanism that's easy to use for population to collect and store data and support analysis for decision making process.

The tools used for the analysis are:

- TIMES, an optimization model developed by the World Bank, calibrated and used on national level
- OSeMOSYS, currently used by planning department in Costa Rica and under development. It will be used for analysis of sectoral policies
- LEAP-IBC, there is a need to further establish how it can be linked and to fine-tune analysis
- The advantages/disadvantages of these tools:
- TIMES – calibrated for energy sector, but limited usability and not open source, cost data needs refining
- LEAP – Co-benefits estimation, high quality results/processing tools, can be integrated with other models, easy to use for SLCPs, but data for Costa Rica needs refining and not open source
- OSeMOSYS – Scalable, open source, modular development, but slower development process

The energy sector is responsible for 93% of BC emissions in Costa Rica (mostly from diesel use in transport sector, but biomass is also a significant source). Electrification, road works and telecommunication can reduce BC from transport sector. Within the non-energy sector forest, crop, grassland and waste burning activities are significant sources.

The next steps are:

- Refine LEAP-IBC data
- Define communication strategies
- Inform decision makers and make recommendations
- Formulate an engagement plan for stakeholders
- Integrate the non-energy sectors in SINAMECC

5.4. Discussion: Translating best practises to the development of integrated climate and air pollution emission inventories in CCAC countries.

Main discussion points included:

- Climate metrics used in Finland are incorporated into LEAP-IBC, so it is possible to have a similar approach. The transfer coefficients from EMEP are similar to GeosChem used for LEAP-IBC.
- The approach of Costa Rica linking different models that provide complementary information, is very interesting.
- Inventories must be regularly refined and updated, and it is important to ensure coherence between different inventories developed at national level (SLCPs, GHGs, air pollutants).
- Some countries are still using Tier 1 methodologies for some sectors, but it may not be suitable to reflect interventions in those sectors.

6. Scaling-up action on short-lived climate pollutants at the national scale: Update from Institutional Strengthening countries & inventory development

Facilitator: Romina Picolotti, IGSD

Purpose: The purpose of this session was for countries involved in the Institutional Strengthening programme

6.1. Introduction

This session was panel discussion with the representatives from the countries receiving the Institutional Strengthening support on the following:

- Objectives of the projects
- Their main achievements so far, including regarding the integrated inventories
- Challenges faced
- Raise any need for technical assistance or peer-learning

6.2. Panel discussion with countries on the implementation of the Institutional Strengthening projects & development of integrated GHG and air pollutants inventories (60 min)

6.2.1. Benin: Wilfried Biao Mongazi & Homagnon Gnonlonfoun, Ministry of Environment

The object of the Institutional Strengthening is to establish the project structure, increase awareness, mainstream SLCP in the national planning processes and the country's involvement in the CCAC process. The Team was formally appointed, a work plan and communication strategy were developed. Radio programmes related to SLCPs were broadcasted. A movie on black carbon impact on health is being developed. A national budget has been secured to complement the work supported by the project and develop the black carbon inventory.

6.2.2. Cambodia: Heng Nareth & Thiv Sophearith, Ministry of Environment

An SLCP Unit has been established under the air quality department of the ministry of environment and there are in total 8 staff supporting implementation. An inter-ministerial working group has been established that is chaired by the director general of the department of environment and in which many sectoral ministries and academia are represented. Two consultants will be recruited for the process, one for the development of a black carbon inventory and the other one to train staff in the provinces. The main objectives are to increase understanding and action on black carbon, action on methane being already well covered by the climate change direction and on HFC by the Ozone unit.

6.2.3. Central African Republic: David Melchisédec Yangbondo, Ministry of Environment

The country joined the CCAC in 2015 and receiving the Institutional strengthening to reduce the SLCP. A coordination structure is set, an inception meeting was held with key stakeholders to strengthen the synergies with other programmes. Criteria to select and involve stakeholder was developed. A collaboration partnership with the University of Bangui was established to strengthen action on air quality. The country is also developing an integrated GHG and SLCP inventory and was part of the SNAP regional trainings in Abidjan and Nairobi. A recent challenge was a reorganisation within the Ministry of Environment and a change of focal point.

6.2.4. Jordan: Maha Abu Mowais & Doa'a Lutfi Al Derabani, Climate Change Directorate

The project in Jordan has two aims, to strengthen institutional capacity and to mainstream SLCPs into the planning process. A national SLCP Unit has been set up under the Mitigation of Climate Change directorate. The activities are: i) to set up an effective coordination structure, ii) engage Key stakeholders, iii) finance, mainstream and implementation of SLCP mitigation measures and iv) participate in CCAC activities

An awareness raising campaign has taken place and the concept of SLCP has been included in the curriculum of education. The main next step is to mainstream SLCPs into the next NDC.

6.2.5. Mali: Oumar Tamboura, Mali Météo

The SLCP team has been set up as part of Mali Météo and a database of all air quality and SLCP relevant projects has been developed. The team is working towards the objectives of the project: awareness, communication strategy development, resource mobilisation development, capacity building of national expert on GHG and SLCP inventory toward first BC development. SLCPs have been presented to multiple stakeholder groups and policy makers. The team is also developing its first black carbon inventory.

6.2.6. Moldova: Stela Drucioc, Ministry of Environment

The project has not yet started due to reorganisation in the ministries. Moldova intends to link the Institutional Strengthening support with the work they do under the LRTAP convention to strengthen its capacity for inventories. Experts doing the inventory will be trained to use LEAP-IBC. The project will also coordinate with other ministries to include SLCPs and raise awareness of decision makers.

6.2.7. Kenya: Alice Kaudia, Ministry of Environment

The project has not started yet, it will complement ongoing work related to air quality management. has received the SNAP support but has not started using the funds. The University of Nairobi and the Ministry of Environment have set a partnership with SEI to build capacity related to air quality management and there is high level support. As challenges funding, many actors which need to be harmonised. The High-level support involvement the President of Kenya to take the air pollution.

6.2.8. Uruguay: Magdalena Hill & Guadalupe Martínez, Ministry of Environment

Uruguay has experience with GHGs and Methane but lacked knowledge on black carbon. Their objective is to identify the measures that can reduce black carbon. Currently there are no standards for air quality in place except for industry and transport. Heaters and firewood are the main sources of black carbon and they now need to identify specific mitigation measures. The inventory work has been done jointly between the Air quality and Climate change division and the national inventory system. The aim is to integrate both. 50% of Uruguay's GHG emissions are methane, which is a specificity of the country. 106 measures were specified in their NDC for mitigation, adaptation and learning. The country intends to integrate in LEAP the full GHG inventory and make compatible with IPCC reporting and to create structure that allows scenarios to be modelled in LEAP.

7. Including short-lived climate pollutant action in climate related processes: an opportunity to increase ambition and to strengthen coherence with air quality & development agendas

Facilitator: Elsa Lefevre, CCAC Secretariat

Purpose: The purpose of this session was to provide concrete example of how “the multiple benefits pathway approach” & short-lived climate pollutants measures can be included in various climate related plans (Nationally Determined Contributions, long-terms climate strategies, MRV frameworks, etc.) to increase ambition, make the case for implementation and support implementation of other national development goals.

7.1. The Multiple Benefits Pathway Framework & integrated analysis: an entry point for mainstreaming SLCPs in climate planning

Speakers: Johan Kuylenstierna, SEI & Nathan Borgford Parnell, CCAC Secretariat

In addition to ambitious CO₂ mitigation, early and ambitious action to reduce short-lived climate pollutants (SLCPs) is essential to achieving the goals of the Paris Agreement and the Sustainable Development Goals. It

can contribute to limiting the temperature rise to 1.5°C above pre-industrial levels and avoid potential climatic tipping points and cumulative warming by slowing the pace of climate change in the near term. The lowest temperature increase path will also reduce air pollution impacts on health and crops.

The Multiple Benefits Pathway approach intends to provide a framework for assessing how to maximise the benefits in terms of climate, air quality, health and development.

A practical application of this framework requires to:

- Estimate emissions of all pollutant that affect climate and air quality to at least 2040, preferably to 2100;
- Assess warming impacts through temperature change, impacts on health from PM2.5, ozone and impacts on crop loss;
- Consider all policies affecting emissions instead of considering them in isolation.

It is an opportunity to include mitigation measures with local benefits in the NDC; and to avoid incoherent strategies in the short and the long term and between climate and clean air. It also promotes integration and can help bring together various stakeholders with diverse objectives around strategies that meet multiple goals and commitments. Quantifying the multiple benefits can also help drive action and increase ambition.

Various tools exist to undertake such an analysis:

- Some countries have developed their own inventory and scenario tools
- The CCAC has supported the development of the LEAP-IBC tool and is working with 12 countries to help them develop such an analysis, with a focus on identifying how to reduce SLCPs.

Application of this approach with the SNAP countries show that there were in many countries important reductions of black carbon from planned NDC action that weren't quantified or GHG reduction from air quality measures.

Short-lived climate pollutants and NDC enhancement (Katie Ross, WRI)

Increasing the ambition of the top line GHG reduction target is not always relevant. There are other ways of enhancing the NDC including expanding the scope and coverage of the NDC or more detailed analytical work to include a greater level of detail on the policies and actions that will achieve the target. It is important to connect global goals with national development goals. Putting an objective or a measure in the NDC can help mobilise funding, give it importance and include it in a broader package of action.

Countries are encouraged to revise their NDCs by 2020, but long-term strategies are also being developed that connect climate and development. SLCP are an essential part of both.

WRI and Oxfam published a paper entitled [“Strengthening Nationally Determined Contributions to Catalyze Actions That Reduce Short-Lived Climate Pollutants”](#) presenting a set of options for how targets, policies, and actions on SLCPs can be incorporated in new or updated NDCs to support the achievement of global climate goals and national development objectives.

7.2. Including SLCPs in a long-term low GHG emission development strategies: the example of Canada

Speaker: Nathaniel Lewis-George, Environment and Climate Change Canada

Canada has developed their long-term low GHG development strategy that was released in 2016, it aimed to inform the conversation of how Canada can achieve climate goals. Economy wide modelling scenarios were developed to look at the possible pathways to achieve an 80% GHG reductions by 2050. Alternative policy scenarios were put forward and it was coordinated within the region with Mexico and United States strategies. Options in the following sectors were looked at: decarbonising electricity generation, forests,

agriculture, energy, waste and clean technology. The strategy also includes a chapter on non-CO₂ emissions including SLCPs and N₂O that drives the message of the CCAC and presents a feasible pathway to achieve an 80% reduction. This strategy was important to orient short term decision and make the link between short term and long-term.

7.3. Including SLCPs in the NDC, Biennial Update Report and National Communication: the example of Mexico

Speaker: Abraham Ortinez, INECC Mexico

Mexico have included a target on black carbon in their NDC and in their 6th National Communication. The SLCP team worked in close collaboration with the Climate Change team to ensure the coherence of the analysis.

Collaboration with the US and other countries in the region has be key in strengthening capacity for analysis, but there is still a need to improve information on emissions to know how to define the actions that will be taken forward and to understand the major sources. Challenges include ensuring that information on GHG and air quality management are consistent, and policies are coherent.

7.4. Including SLCPs in the Climate Monitoring and Verification Framework: the example of Ghana

Speaker: Peter Dery, Ghana

A climate reporting system was developed in Ghana in 2013 to report domestically and internationally on GHG emission, climate action and international support received. The EPA intends to also include short-lived climate pollutants. For their NDC, Ghana used the IPCC 2006 Guidelines and LEAP-IBC which are complementary. Ghana's BUR includes a chapter on SLCP. Specific actions from the National SLCP Plan need to be included in revisions to NDC so that we can report on them.

7.5. Discussion & exchange of experience

Main discussion points included:

- The need to convince institutions about the importance of adopting an integrated approach on climate and clean air.
- LEAP-IBC was mentioned as a useful tool to do this and to link different sectors around a common analysis. The possibility to assess co-benefits is helpful.
- The framing of the multiple benefits pathway approach was helpful to convince stakeholders, especially those working on climate change in some countries.
- It is useful to include SLCP reduction in NDCs but how it is included is important. The top line target must be GHG reductions but % reduction in other pollutants on a mass basis could be included (WRI)

8. Wrap-Up and Close of Meeting

Facilitator: Kouadio N'Goran, UN Environment

Kouadio N'goran thanked the participants for their contribution and noted strong progress since last year. Collaboration between the Air Quality and Climate Change direction is not always straightforward, but the multiple benefits pathways frameworks seem to be a useful concept at national level and many countries are now using this framing or willing to apply it.

Key elements of success in national planning efforts on short-lived climate pollutants seems to be a strong coordination structure, stakeholder engagement, careful assessment of the existing policies and gaps and detailed planning of additional action needed (including how resources can be mobilised).

Other organisers of the workshop thanked the participants, saluted progress and closed the meeting.

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