Country:	*Cote d'Ivoire*	**Request identification number:**	*2014-011/CIV-01*

Title:	*Development of a strategy to reduce air pollution in the District of Abidjan to contribute to efforts to reduce the adverse effects of climate change.*

1. Project Summary

In Côte d'Ivoire, air pollution and adverse climate change impacts are some of the major constraints in the economic development policy agenda. In fact, international policy makers, practitioners and research community are fairly recognizing that a combined air quality focused on the short-lived climate pollutants (SLCP[1]) and climate change Long-Lived GreenHouse Gases (LLGHG[2]) strategies provide substantive co-benefits in terms of mitigating the warming effects resulting from the black carbon, tropospheric ozone, etc. Nevertheless, a well-thought air quality and climate change policy strategy should be set in order to unmask the cooling effect which is a positive pillar for mitigating health issues resulting from the aerosols emissions. In fact, sulfates, an aerosol, tend to cool the warming effect but are causing health issues because there are air pollutants.

To dealing with health, environmental and socio-economic direct and indirect effects of such air pollution and LLGHG emissions, several ministries and state institutions in Cote d'Ivoire have decided to take action to improve the living conditions of the populations by promoting a combined strategy for leveraging the air quality and climate change issues. Its quarterly bulletin, the Ministry for Health is increasingly concerned about the proliferation of lung and skin diseases. In addition, the Ministry for Land Transport has established a fact of aging fleet of Autonomous District of Abidjan. As for the Ministry in charge of industry, there is a multitude of industrial zones emit strong emission of greenhouse gas emissions.

To face such facts, the Ministry for the Environment has considered appropriate to establish a mechanism to monitor the SLCP and LLGHG. To this end, he initiated through its Directorate in charge of this theme (DQEPR: Quality Branch of Environment and Risk Prevention), a pilot project leading to the development of a strategy for reduction of the SLCP and the LLGHG emissions in the Autonomous District of Abidjan.

This request will help to develop an action plan that helps to mitigate jointly air pollution and climate change issues in the District of Abidjan.

[1] Short-lived Climate-forcing Pollutants (SLCPs) include i) particulate matter and precursor gases (soot, nitrate, sulfate, ammonium, organic carbon and other compounds such as sulfur oxides and nitrogen oxides), ii) ground-level ozone and its precursors such as nitrogen oxides, carbon monoxide and volatile organic compounds, iii) methane and iv) hydrofluorocarbons (HFCs).

[2] Long-lived greenhouse gases (LLGHG)

2. Overview of the assistance

2.1 Outcome (objective of the assistance)

The objective of this request is to support Abidjan to develop an action plan that helps to establish a solid and comprehensive Measurement, Reporting and Verification (MRV) of air pollution and climate change matters in the District of Abidjan. So to have a guidance document describing all actions to be undertaken including the technologies to be established to deal with air pollution.

2.2 Outputs (results of the assistance)

This strategic guidance document, will deliver the following outputs:

- Stakeholder connection and partnership
- Vulnerability analysis resulting from the SLCP and LLGHG (mapping risk areas, health and socio-economic impacts, etc.)
- mapping installations of equipment for measuring, reporting and verifying the SLCP and LLGHG emissions;
- Technical recommendations for the establishment of a sound and comprehensive SLCP- and LLGHG-oriented MRV strategy for the District of Abidjan;
- Building capacity framework to sustain and enhance the MRV strategy

2.3 Technological focus

This technical assistance will explore and contribute to the establishment of well-thought SLCP- and LLGHG-oriented MRV strategy in the District of Abidjan in order to design sound policy orientations and instruments which will frame the national ongoing low emission development strategy. It will also put forward guidelines for the implementation of the clean development policy initiated by the State of Côte d'Ivoire.

3. Description of the Assistance

3.1 Activities

Activity 1 – State-of-the art on the SLCP- and LLGHG issue of the District of Abidjan

This first activity will shed light on the current initiatives, policies and research-actions undertaken by policy-makers, experts, community and all relevant stakeholders that aim to mitigate or to monitor the both the SLCP and LLGHG in the District of Abidjan**.**

Activity 1.1 – In connection with the NDE to set up a clear and feasible work plan for the request implementation.

Activity 1.2 – Stakeholder consultation and engagement of relevant stakeholder working or having interest in the SLCP- and LLGHG.

Activity 1.2.1. - Stakeholder meetings to identify and assess the existing or planned efforts (policies, community initiatives, research-actions, etc.), the equipment level (functionality, characteristics, issues, etc.) and their impacts
Activity 1.2.2. – Evaluation of the needs based on the prior assessment of existing technologies and research

Activity 2. – Vulnerability analysis (Hotspot points) in close collaboration with the CCAC

The main objective of this activity is to identify a number of hotspots points in the District of Abidjan which will be considered as the pilot sites for all the MRV of SCLP and LLGHG. Therefore, a survey (fieldwork and desktop research) will be undertaken with a close collaboration with relevant stakeholders (researchers, local vulnerable comminute, etc.). Consequently, the impacts of emissions effects of SLCP and LLGHG emission will be analyzed throughout selected sectors (i.e. transport) and local district (i.e. Youpogon).

Activity 2.1 – Fieldwork and desktop surveys
Activity 2.2. – Analysis of health, socio-economic direct and indirect effects of the *SLCP- and LLGHG emissions* of selected sectors and local in the District of Abidjan

Activity 3 – Design and demonstration of the MRV strategy

Activity 3.1. - Conceptualization of a first draft of strategy
Activity 3.2. – Pre-validation workshop of the MRV strategy (outreach component)
Activity 3.3. – Testing/demonstration of the MRV strategy
Activity 3.4. –Elaboration of the final MRV strategy

3.2 Expertise required

List the expertise required to successfully implement the assistance and reach the expected objectives.

- *SLCP- and LLGHG* **monitoring, reporting and verification**
- **Technology needs assessment (identification, prioritization, barriers analysis, investment plan)**
- **Design of regional strategy**
- **Stakeholder engagement capacity**

2.3 Main partners

Ministère de l'Environnement, de la Salubrité Urbaine et du Développement Durable	- Ensure the full implementation of all the technical assistance of the CTCN
la Direction de la Qualité de l'Environnement et de la Prévention des Risques (DQEPR)	- Coordinate the overall implementation of this request
District Autonome d'Abidjan	- Facilitate the identification of stakeholders and ease the survey process of risk vulnerability - Provide information on current or planned policies in terms of SLCP and LLGHG mitigation and MRV

	initiatives
Federation des Réseaux et Associations de l'Environnement et du Développement Durable (**FEREADD**)	Will be consulted to provide information both during the assessment of the community vulnerability, the design and the testing phase of the MRV
CIAPOL (Anti-pollution Center of Côte d'Ivoire)	- Contribute along the whole process (state-of-art, vulnerability assessment, MRV design)

2.4 Synergies

Identify past and ongoing public and private sector initiatives at the local, national or regional level that the response will specifically build on and/or link to.

To face the air pollution issue, several policy initiatives have been undertaken by the Minsitry of Environment. First, the Government of Côte d'Ivoire has officially set up the Anti-pollution center (CIAPOL- CENTRE IVOIRIEN ANTIPOLLUTION) throughout the official act named DECRET N° 91-662 DU 9 OCTOBRE 1991. The main role of this centre are :

- to identifiy causes of air, marine and coastal pollution,
- to carry out appropriate monitoring systems and scientifical analysis to prevent or to fix pollution impacts.
- To inform policy-makers and communities about sustanaible and cost-effective strategies of prevention or reduction of the poluution issues.

Since 1991, the centre has initated a range of program such as the plan Pollumar with the technical assitance of Canada to prevent accidental pollution of marine and coastal ecosytem. Despite of the existing efforts run local experts, there is a strong need for setting an adapted system of MRV of SCLP and LLGHG to better identify vulnerable points (hotspots) in the District of Abidjan and to follow such communities and areas in well-thought information system so that tailored prevention and reactive strrategies could be better elaborated to limit the air pollution and climate change impacts.

2.5 Timeline

	Activity	Weeks																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Output 1: State-of-art of quality air efforts in Côte d'Ivoire	Activity 1. State-of-the art on the *SLCP- and LLGHG* issues of the *District of Abidjan*																								
	1.1 – *In connection with the NDE*																								
	1.2 – *Stakeholder consultation and engagement* of relevant stakeholder working or having interest in the *SLCP- and LLGHG*																								
	1.2.1. –Stakeholder meetings to identify and assess the existing or planned efforts (policies, community initiatives, research-actions, etc.), the equipment level (functionality, characteristics, issues, etc.) and their impacts.																								
	1.2.2. – Evaluation of the needs based on the prior assessment of existing technologies and research																								
Output 2: Mapping and Prioritization of sector and area intervention	Activity 2. Vulnerability analysis (Hotspot points) in close collaboration with the CCAC																								
	2.1 – Fieldwork and desktop research																								
	2.2. – Analysis of health, socio-economic direct and indirect effects of the *SLCP- and LLGHG emissions* of selected sectors and local in the District of Abidjan																								
Output 3: national strategy of quality air monitoring and assessment	Activity 3 – Design and demonstration of the SLCP- and LLGHG-oriented MRV strategy																								
	3.1.- Conceptualization of a first draft of strategy																								
	3.2. -Pre-validation workshop (outreach component																								
	3.3. – Testing/demonstration of the MRV strategy																								
	3.4. Elaboration of the final MRV strategy																								

2.6 Indicative budget

Activity 1. State-of-the art on the *SLCP- and LLGHG* issues of the *District of Abidjan*	Days	Unit cost	Total
2 experts (staff time)	10	500	5,000
1 national expert for the facilitation			1,000
1 fieldwork trip			
- DSA	5 days	2 x 244	2,440
- air ticket		2 x 1000	2,000
1 day meeting fees (25 national participants) : room rents, meals, transportation, administrative costs			4,000
I. Total Activity 1			***15, 440***
Activity 2. Vulnerability analysis (Hotspot points) in close collaboration with the CCAC			
2 experts (staff time)	15 days	500	7,500
1 national expert for running the survey			1,000
recruitment of 3 surveyors	2 days	3x 100	600
1 fieldwork trip			
- DSA	5 days	2 x 244	2,440
- air ticket		2 x 1000	2,000
Survey fees (administrative and logistics fees)	3 days		1,500
Total Activity 2			***15,040***
3.1.- Conceptualization of a first draft of strategy			
2 experts CTCN (staff time)	20	500	10,000
1 national expert for the facilitation			1,000
1 fieldwork trip			
- DSA	5 days	2 x 244	2,440
- Air ticket		2 x 1000	2,000
1 day meeting fees (25 national participants) : conference room rents, meals, transportation, administrative costs			4,000
Total activity 3			***19,440***
Total			***49,920***

2.7 Risk assessment

Identify risks that could jeopardize the realization of project outcomes and expected impacts, their probability and how the assistance will mitigate these perceived risks.

Risks	Consequence	Probability	Mitigation
Lack of competences	*Poor quality of the strategy*	*Weak*	*Identification of relevant experts both at national and international level (consortium partners)*

Weak stakeholder engagement	*Irregular meetings and inappropriate strategy*	*Weak*	*NDE will be dedicated at the first stage to identifying, selecting and motivating key stakeholders for this request*

2.8 Monitoring and Reporting

2.8 Monitoring and Reporting

ENDA Energie will coordinate the design of a comprehensive monitoring and evaluation system in which all planned activities are followed and documented throughout a set of well-defined indicators. Such indicators will consists of the following components:

- The performance level of the technical assistance requested: i.e. vulnerability analysis of X communities of the District of Abidjan are undertaken, the MRV system are approved, X local experts are trained in the design and implementation of the MRV, etc.
- The impacts of the technical assistance implemented. (i.e. reduction rate of pulmonary health issues of child under 5 years in District of Abidjan).

This process of M&E will be documented through regular technical reporting and in-field visits by ENDA Energie and relevant stakeholders.

3. Long-term impacts of the assistance

3.1 Expected climate benefits

- Sound system and strategy of monitoring and assessment of the air quality in Cote d'Ivoire
- well-grounded stakeholder engagement and commitment to improve the air quality level
- Contribution locally for the reduction of the global warming by 0.5°C by 2050
- Contribution for the reduction of premature death due the air pollution such as asthma, childhood pneumonia, low birth weight, etc.

3.2 Co-benefits

The new MRV strategy of the District of Abidjan will contribute to the national efforts of the Côte d'Ivoire regarding the GHG reduction strategies in Cote d'Ivoire. The national strategy will be a backstopping tool to inform decision making process regarding the sustainable development planning.

Policy-makers and local experts will have an opportunity to draft and implement green technology deployment based on the information gathered and provide by the MRV system. In fact, vulnerable communities will be better followed and political measures will be undertaken accordingly.

Therefore, the health status and economic development of the district of Abidjan will be much more improved in terms of green employment creation and good environmental awareness of stakeholders about the negative impacts of the air pollution and climate change effects.

3.3. Post-assistance plans and actions

Enlargement of the area- and sector-based risk assessment. The NDE could extend its monitoring coverage by setting additional measurement and monitoring area and sectors in order to provide substantial and significant information related to the air quality in Cote d'Ivoire and contribute better to the design of National Climate Change mitigation plan.

Formal agreement and signatures

Signatures of the requesting country

NDE	**Request Proponent (Optional)**
Name:	Name:
Title:	Title:
Date:	Date:
Signature:	Signature:

Signatures of the CTCN

For the CTCN Director	**For the Climate Technology Manager**
Name:	Name:
Title:	Title:
Date:	Date:
Signature:	Signature:

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Formal agreement and signatures

Signatures of the requesting country

NDE
Name: KOUABIO KUMASSI Philippe
Title: END COTE D'IVOIRE
Date: 10/12/2015

Signature:

Request Proponent (Optional)
Name:
Title:
Date:

Signature:

Signatures of the CTCN

For the CTCN Director
Name: JUKKA UOSUKAINEN
Title: DIRECTOR
Date: 10.12.2015

Signature:

For the Climate Technology Manager
Name: Patrick Nussbaumer
Title:
Date: 19 February 2016

Signature:

CLIMATE TECHNOLOGY CENTRE & NETWORK

CTCN Technical Assistance

Response Plan

I should be mentioned to that the MRV will be done in close collaboration with CCAC in SLCPs part.
three level of cooperation

- CCAC-CTCN secretariat
- ENDA SEI
- local teams within the task force: two focal points should be in the task force