Second National Workshop on "Capacity Building for CDM implementation in Cuba"

SUMMARY

1. Introduction

The UNEP Risoe Center (URC) International Project: "Capacity Building for Clean Development Mechanism (CDM) Implementation in Cuba" includes, among its activities (activities 2 and 3), to hold a series of workshops intended for training the specialists and staff members from key Cuban institutions in order to promote the CDM in the country.

The second of these workshops for Project Activity 2 took place from 9th to 12th November 2010 in CUBAENERGIA, Havana.

The present report includes the achievement of the objectives set for it, the programme, the list of participants and lessons learned.

2. Achievement of the objectives

From the implementation of planned program, participation in the meeting of the expected stakeholders from different institutions, lecturers, conducted exercises and fruitful exchange achieved in the workshop, it can be concluded that set objectives were met:

- Presentation of the current situation of the CDM in Latin America and the Caribbean, the current situation of programmatic CDM as well as its prospects and challenges in Cuba.

- Refresher exercises to familiarize the participants with the requirements for CDM projects were conducted. This included the study and analysis of the different stages of the project, the baseline scenario, additionality, general processes to estimate emission reductions, CDM PoA feasibility and lessons learned.

- The emphasis of the workshop focused on practical group exercises, and training was conducted on the basis of two case studies previosly developed for two priority sectors of the country. Through guided exercises, participants drew up a Project Idea Notes (PINs), estimated the baseline and emission reductions, developed a PIN-PoA and worked on the identification of a Program of Activity.

An exercise was conducted for the PIN development "CO_2 emissions reduction in the production of cement additives at Cementos Cienfuegos SA". Cementos Cienfuegos SA, which produces and markets cement and clinker, has worked these systems certified by the ISO standards. At present, this company runs actions to reduce negative environmental impacts mainly on the use of resources and emissions control.

The study of product life cycle has confirmed that CO_2 emissions represent 95% of the operations of that company considering the effect of climate change. One way to reduce CO_2 emissions is the use of cements with higher additive levels (zeolite as an additive) with the aim of reducing the amount of clinker, the main responsible for the emission resulting from the process of decarbonization of limestone and fossil fuel burning (coal, petcoke and diesel), doubly contributing to sustainable development and environmental respect.

Product's design works have begun in order to start its production (trial period) approximately at the beginning of April 2011. The aim is to implement the production of cement with additives which is difficult to reach because: there is no the funding required to implement the project since the country's investments are limited; it is required the design of the infrastructure of the cement production facilities (rehabilitation of silos, dust extraction systems and transportation for additional amount of additives), and companies consuming this type of cement do not have the required storage capacity.

The proposed project activity is the "first of its kind", since our country does not produce this type of cement so far. The amendments they intend to do represent a significant reduction in the consumption of nonrenewable fuels: 7 000 tons of petcoke at a cost of USD 781,410.00 and 30 tons of diesel at a cost of USD 15,407.00 and 3,300,000 kWh of power at a cost of 559,191.00 USD. At the production levels reached in 2009 (the best year after the general rehabilitation of the facilities), the total emission of carbon dioxide was 462 418.34 tonnes of CO2 a year. The project implementation can lead to a decrease in CO2 emissions of about 100 000 tons per year.

Another exercise for the PIN development was the PoA PINs "Swine Production in Cuba". This type of production has changed significantly over time. In 1990 the third stage of pork production development began. It was characterized by a transformation in the production structure where the non-specialized sector, made up of other government agencies, cooperatives and private producers gradually carry the most weight in pork production. This involved the development of actions that would improve the productivity of the non-specialized sector such as advice on issues related mainly to non-conventional food and food cultivation, health aspects and biosafety in general, the swine waste management and use and as a basic aspect, including this non-specialized population in the National Breeding Program.

Cuba develops a new strategy to increase pork production, which allows sustained growth and outstanding results in the substitution of food imports. Pork production has tripled, while the figures are still insufficient to ensure the demand of the population and food processing plants. According to reports from MINAGRI, pork sales to the State by the cooperative and agricultural sector in 2009 meant 70 percent of what is produced in the country.

Some of the environmental impacts of this production are: air pollution, loss of biodiversity, pollution of water as a result of direct discharges of waste to the environment without adequate treatment to receiving bodies of river basins, dams that are used for irrigation or consumption; therefore, it is one of the most watched activity by environmental authorities. Swine faeces, a significant environmental pollutant, can generate valuable resources by processing them, since recycle procces of a part of the energy and their nutrients contribute to make production sustainable. This technology can replace wood with biogas, avoiding the destruction of forests and significantly reducing CO2 emissions. Biogas is an inexpensive and renewable fuel which is used in motor vehicles mixed with gas for lighting and for industrial and domestic uses.

Biogas production uses the matter considered as a waste and produces a high-quality fertilizer as a by-product. Due to these benefits, it has a great importance in developing countries, while in industrialized countries; this fuel has attracted an increasing attention since it can contribute to reduce the current dependence on oil. Swine Research Institute of Cuba has developed and built fixed-dome and tubular polyethylene digesters for the treatment of swine waste.

Today, in the 111 state swine farms are concentrated a number of animals close to 4.5 million units generating 1000 tons of excreta per day. Taking into consideration that a cubic meter of biogas contains approximately 60% of methane and produces about 2.2 kWh, with an efficiency of 40%, the estimated potential would be about 115 MWh / day, which was the reason to assess the development of a CDM PoA PIN for this sector. National authorities in the pig sector are aware of the possibilities offered by the programmatic CDM as a possibility to visualize components of climate contribution for actions to improve the level of swine production units and they look for a technical opinion that enables them to determine the feasibility for developing a PoA in this sector.

For these exercises to develop PIN and PoA-PIN, the CDM-PIN and CDM-PoA-PIN formats for

use in the country were used and some questions contributing to their development, were raised. The exercises have been very important for Cuba's CDM Portfolio, since the PIN "CO_2 emissions reduction in the production of cement additives at Cementos Cienfuegos SA" could be reviewed and improved and it is now part of Cuba's PINs Portfolio. It is in the Cuba's Seller Profile in the CDM Bazaar at the UNEP Risoe Centre. As for the PIN PoA "Swine Production in Cuba", the exercise helped to conceptualize this project idea and also to encourage the implementation of programmatic CDM projects in the country.

3. Program implementation

The planned program for the workshop was successfully completed and it took place on 9th,10th, 11th and 12th November.

Eight lectures were given and five exercises were conducted, with a rich exchange between exhibitors and participants. The total actual time spent on lectures, presentation of the exercises, group work, presentation of solutions to the exercises and questions and answers were 22 hours.

The topics were the following:

- Current situation of CDM in Latin America and the Caribbean (1 hour).
- CDM Project Life Cycle (1 hour).
- Baseline scenario in the CDM (1 hour).
- Estimation of emission reductions under the CDM (1 hour).
- Additionality in the CDM (1 hour).
- Programmatic CDM and its current situation (1 hour).
- Lessons learned and CDM PoA feasibility assessment (1 hour).
- Programmatic CDM, lessons and challenges for Cuba (20 minutes).
- Presentation of the group exercise session (40 minutes).
- Group work (12 hours).
- Presentation of the developed exercises (1 hour).
- General exchange and Questions (1 hour)

The exercises were:

Develop a PIN for CDM projects. Reduction of CO2 emission in producing cement with additives in Cementos Cienfuegos SA

Demonstrate additionality and identify the baseline scenario, estimate the baseline in a CDM project concept. Case study: Treating pig excrement in pig farms.

An example of the estimation of emission reduction in the electricity generation by using rice husk was showed.

Conceptualisation exercise for developing PoAs (PIN-PoA). Presentation and Case Study: Pig production in Cuba

Conceptualisation exercise for developing PoAs (PIN PoA). Presentation and Case Study: Pig production in Cienfuegos.

The program is shown in Annex 1.

4. Participants in the Workshop

Twenty participants from institutions and enterprises belonging to six Bodies of State Administration (OACE) of Cuba attended the Workshop.

The represented OACE were: Ministry of Science, Technology and Environment (CITMA), Ministry of Basic Industry (MINBAS), Ministry of Agriculture (MINAG), Ministry of Sugar Industry (MINAZ), Ministry of Construction (MICONS), Ministry of Transport (MITRANS). All participants represent institutions that are directly related to the CDM implementation in the country.

The Workshop included the participation of three foreign international experts, two from the URC, Dr. Miriam Hinostroza and Dr. Mauricio Zaballa, and the regional expert consultant Dr. Oscar Coto, contracted by URC to provide technical support to the Project. Two Cuban experts from the CDM Technical Office located at CUBAENERGÍA also participated.

The list of participants is shown in Annex 2.

5. Organizational aspects and lessons learned.

The Workshop was organized by CDM Technical Office in Cuba and took place at its headquarters in the Centre for Information Management and Energy Development (CUBAENERGIA). This institution provided a strong logistical support, which determined the good development of the event's organization.

Mr. Daniel Lopez Aldama, Director of CUBAENERGIA and Dr. Miriam Hinostroza, Manager of URC Energy and Carbon Finance Program participated in the opening session of the workshop.

In the closing session, each participant received a certificate and a CD-ROM with lectures, basic information on the MDL available in the Technical Office and other documents provided by the URC.

A survey was conducted and it showed a high level of satisfaction of the participants in the Workshop, who highlighted the quality of lectures, conducted exercises and the organization of the meeting. All their opinions and recommendations have been taken into account to plan the Third Workshop on ¨learning by doing¨ principle, under which its program was defined.

6. Conclusions

The Second Workshop planned under the Activity 2 of UNEP Risoe Centre (URC) International Project: ¨Capacity Building for Clean Development Mechanism (CDM) Implementation in Cuba¨, was held according to the planned program and set objectives were successfully met.

It has helped to increase the technical ability of Cuban specialists in sectors with potential to develop CDM projects since it has contributed to the assessment of these projects. Today Cuba has a portfolio of potential ideas of CDM projects and it was possible to identify and design other ideas through exercises conducted at this workshop, for example the PIN "CO2 Emissions Reduction in the production of cement additives at Cementos Cienfuegos SA" was included in the list of PINs of Cuba's CDM Portfolio and it is now in the Cuba's Seller Profile in the CDM Bazaar at the UNEP Risoe Centre.

Based on the lessons learned, the content and ways to implement the Programme of the Third Workshop, scheduled to be in March 2011, have been defined.

Annex 1. Workshop Program

Time	Activity	Description	Responsible
1st Day: 09/11/2010			
8:15-8:30	Registration of participants Welcome speech		Yalile Alfonso, CDM Technical Office, CE Daniel López, CE Director Miriam Hinostroza, URC
8:30-11:00	Session I. CDM Projects		
8:30 - 9:30	CDM and its current situation in the Caribbean	Current status of CDM Pipeline, with an approach to the situation in the Caribbean and Central America	Iván Relova, CDM Technical Office, CE
9:30 -10:30	Life cycle of CDM projects	Overview of technical concepts taught in the First National Workshop. Elements for the structure of CDM projects, its project cycle and lessons learned	Mauricio Zaballa, URC
10:30-11:00	Questions and Answers session	Space to ask and answer questions	URC/CE
11:00-11:30	Coffee break		
11:30-14:30	Session II. Exercise for developing PIN		
11:30-11:45	Presentation of group exercises session	This session presents and sets out the case study developed in Cuba for the exercise on formulating PIN in the cement sector.	CE with technical support of URC
11:45-14:00	Group work	Structuring a PIN in groups. The two groups will work the cement case.	Oscar Coto, Consultant URC, URC y CE.
14:00-14:30	Presentation of developed PINs.	Each group makes a presentation	Selected by every group
14:30	Lunch		
2nd Day: 10/11/2010			
8:30-11:00	Session III. Baseline, estimates and CDM additionality		
8:30 – 9:15	The baseline scenario in the CDM	What are the most common parameters contained in the methodologies? What are the small scale, normal scale methodologies for? How do they differ? An overview of existing methodologies, through the CDM Pipeline? Situation of the available methodologies "Methodological Tool" to identify methodologies to be applied.	Mauricio Zaballa, URC
9:15 - 10:15	General processes to estimate emission	Dynamics for the estimation of emission reductions under the	Oscar Coto, Consultant URC

	reductions under the CDM	CDM	
10:15-11:00	Additionality in the CDM	Presentation of different tools of additionality in the CDM and its application	Oscar Coto, Consultant URC
11:00-11:30	Coffee break		
11:30-14:30	Session IV. Exercise on baseline, CDM estimations		
	Group exercise to identify baseline and additionality. Development of emission estimation in a CDM project concept	Participants, divided into two groups conduct a guided exercise (check-list developed by Oscar) to identify the baseline and make estimations for a CDM project.	Oscar Coto, Consultant URC, URC y CE
14:30	Lunch		
3rd Day: 11/11/2010			
8:30 - 11:00	Session V. Programmatic CDM		
8:30 - 9:30	What is the programmatic CDM? What is its current situation?	Introduction to programmatic CDM	Mauricio Zaballa, URC
9:30 - 10:30	PoAs Feasibility and lessons learned from early implementation of PoAs	Factors for determining PoAs feasibility and lessons learned in developing them	Oscar Coto, Consultant URC
10:30-10:50	Programmatic CDM Prospects in Cuba	Strengths and Barriers for Programmatic CDM Implementation in Cuba	Wenceslao Carrera, CDM Technical Office, CE
10:50-11:00	Presentation of the group exercise session	This session presents and develops the case study prepared in Cuba for formulating PIN PoA and PIN CPA in the pig sector.	CE with technical support of the URC
11:00-11:30	Coffee break		
11:30-14.30	Session VI. PoA Conceptualization Exercise		
	Group exercise to develop a PIN-PoA.	On the basis of a check-list drawn up by Oscar. The two groups will work in the pig sector case.	Oscar Coto, Consultant URC, URC y CE
14:30	Lunch		
4th Day: 12/11/2010			
8:30- 11:00	Session VI (Continued)		
8:30-11:00	Group work to identify CPAs of PoA.	On the basis of a check-list drawn up by Oscar. The two groups will work in the pig sector case.	Oscar Coto, Consultant URC, URC y CE
11:00-11:30	Coffee break		
11:30-12:30	Session VI (Continued)		
	Session VII: Presentation of results and conclusions		
12:30-13:30	Presentation of the	The explanation to the	CE , URC y Oscar Coto,

	results by groups to advisory panel	decision-makers in relevant agencies is meant to simulate for the internal approval of such projects by the CDM.	Consultant URC
13:30-14:00	Collective debate. Steps to be followed		
14:00-14:30	Presentation of the CD-ROM with the Workshop's proceedings Delivery of the certificates		Yalile Alfonso, CDM Technical Office, CE
	Closing speech		Daniel López, CE Director
14:30	Lunch		

Nota: Miriam Hinostroza, Mauricio Zaballa y Oscar Coto, UNEP Risoe Centre (URC)

Daniel López, Iván Relova, Wenceslao Carrera y Yalile Alfonso, CDM Technical Office, Cubaenergía (CE)

Annex 2. List of participants.

No.	Full name	Agency	Position
1	Yamila Navarro Sosa	MINBAS	Officer/Specialist
2	Dannae Carrera García	MINBAS	Specialist

3	Valentín Lazaro Rabelo Parra	MINBAS/UNE	Specialist
4	María A. Padrón Palomares	MINBAS/INEL	Consultant
5	María Lourdes Galán	MINBAS/CUVENPETROL	Specialist
6	Roberto Sosa Cáceres	MINAG/Biogás, Porcino	Centro Biogás Director
7	Yasser Miguel Díaz Capdesuñer	MINAG/Biogás, Porcino	Specialist
8	María Antonia Guyat Dupuy	MINAG/ Forestales	Head of Technology and Natural Products Department
9	Sobeida Reyes Mtnez	MICONS	Officer/Specialist
10	José Romero Cabrera	MICONS/Cementos Cienfuegos S.A.	Specialist
11	Adelberto Concepción Bravo	MICONS/Cementos Artemisa	Specialist
12	Felix Andrés Camilo Ramírez	MINAZ	Officer/Specialist
13	Fidel Domenech López	MINAZ/ICIDCA	CENGMA Director
14	Mónica Díaz Perramán	MITRANS	Officer/specialist
15	Yoel Suárez Lastre	Biomass, Cubaenergía, CITMA	Researcher
16	Diosdado Alonso García	Environmental Impact, Cubaenergía, CITMA	Specialist
17	José Mario Rivero	AENTA, CITMA	Specialist
18	Iván Relova Delgado	CDM Technical Office, Cubaenergía, CITMA	Specialist
19	Wenceslao Carrera Doral	CDM Technical Office, Cubaenergía, CITMA	Specialist
20	Yalile Alfonso Valdés	CDM Technical Office, Cubaenergía, CITMA	Specialist