New Mechanisms Express

November 2011

— Promoting New Market Mechanisms for Climate Change Mitigation —

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1 MOEJ's Initiatives in Africa

Outline of BOCM Initiatives in Africa

The Ministry of the Environment, Japan (MOEJ) is proposing an approach to reducing greenhouse gases (GHGs) in partnership with host developing countries through the Bilateral Offset Credit Mechanism (BOCM). The BOCM will serve as a means of conducting joint mitigation activities that are based on bilateral arrangements, and is envisioned as a framework to complement the existing Clean Development Mechanism (CDM). Mitigation projects that are not easily put into action under the CDM should be implemented swiftly and with a wider scope under the BOCM. Feasibility study projects※ have been adopted in Africa for this fiscal year in the Republic of South Africa and the Republic of Angola. Capacity building is also underway in 13 countries.

BOCM Potentials in Africa

Potentials in Africa

Africa has experienced high economic growth in recent years, and forecasts indicate that this growth will gain further momentum in the future. However, there are concerns that stronger economic growth will come with increased GHG emissions. Moreover, while Africa originally enjoyed rich forest resources, these resources are vanishing due to changes in Africa's social and industrial structures. Thus, mitigation of climate change in Africa is an issue for the entire international community. Nonetheless, it is difficult to conclude that the CDM is functioning well in Africa, as only approximately 2% of all registered CDM projects are in Africa (as of October 2011, 72 projects of the total 3,556 registered projects).

MOEJ has expectations that the BOCM has potential as an approach to climate change mitigation in the rapidly developing Africa. MOEJ believes the BOCM will make a significant contribution not only to climate change mitigation but to sustainable development in Africa.

Outline of the FS underway in South Africa

The BOCM FS being implemented in the Republic of South Africa (Implementing entity: Recycle One, Inc.) is supporting energy efficiency improvement in a beverage plant. Specifically, the FS applied an utility simulator for the subject factory, and analyzed its utility consumption and potential for improvements. Based on the results, the FS has revealed that the utility consumed at the factory can be reduced by 30 to 40%.

During the course of the FS, energy efficiency experts have provided guidance that is directly applicable to this field and proposed proven and implementable solution. Such guidance and proposal have resulted in higher efficiency in terms of both time and cost. The FS's activities are also promoting energy efficiency and a methodology of measuring GHG reduction using the unit value method.

Outline of the FS underway in Angola

The BOCM FS being conducted in the Republic of Angola (Implementing entity : Aarata Sustainability Certification Co.) is a two-pronged project. It is comprised of an REDD+ component seeking to restore vegetation over approximately 65,000 ha of abandoned industrial forest, and a component involving use of wood chips from the same forest as alternative fuel for cement plants in Angola. It is anticipated that these components will reduce CO_2 and generate employment.

By matching climate change mitigation technologies to the policy priorities of target countries, it is possible to establish a series of links between carbon-sink projects and emission reduction projects. In other words, under the BOCM, it becomes possible to select projects that meet specific needs of a country and then maximize the latent capabilities of the country.

※ For the outlook and details of the Feasibility Studies on New Mechanisms and CDM/JI in FY2011, please visit : http://www.mmechanisms.org/e/program/

Capacity-Building in Africa

Outlines of Capacity-Building

MOEJ is conducting a program to support the capacity-building for MRV Systems (implementing entities: INGÉROSEC, Climate Experts, OSUMI, and UNICO) in 13 countries in Africa (Democratic Republic of the Congo, Egypt, Ethiopia, Ghana, Kenya, Morocco, Mozambique, Nigeria, Senegal, South Africa, Tanzania, Uganda, and Zambia). The program involves organizing workshops on themes that are matched to conditions in each country.

※ An example of the Energy saving Industry process used in the first Workshop handouts (above) and Discussion by Participants (below)

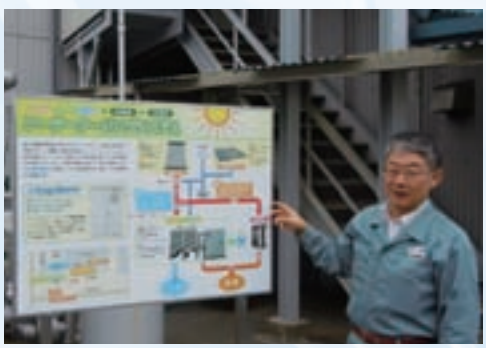
Objectives and Contents of Capacity-Building

MOEJ holds these workshops to contribute to sustainable development in African countries with an eye to climate change mitigation and transfer of technologies that should be firmly rooted onsite. The workshops are designed to help build systems for calculating emission reductions as well as measurement, reporting, and verification (MRV), and to uncover possibilities for candidate projects. At the first workshop, MOEJ intends to present an evaluation system that is conducted through a PDCA cycle, and tie these activities to the cultivation of local industries. In addition, rather than conducting the workshop in a lecture format, a brainstorming approach will be adopted by involving case studies that identifies local needs so as to promote initiative among participants.

Future Prospects

The second workshop, which is scheduled for November, will seek to uncover even more concrete projects. Capacity-building within the program to support the building of MRV systems has only just begun, and thus we will need to be continued. Furthermore, while capacity-building is being provided to 13 countries in Africa at the present time, MOEJ expects to link these with the BOCM so that the effects thereof are eventually realized.

2 Activities of Environmental Technology Missions



Overview of Environmental Technology Missions

MOEJ dispatches Environmental Technology Missions to host countries having high priority in terms of potential for new projects and cooperation related to market mechanisms. The missions identify seeds of feasibility study projects for the following fiscal year and beyond. They also conduct mitigation potential surveys to study ways of communicating information on Japan's advanced environmental and energy technologies, jointly with host country stakeholders.

Activities and Prospects for Technology Transfer and Deployment

As an initial step, MOEJ will conduct environmental missions targeting Cambodia, Lao PDR, and Thailand. These missions will be conducted together with the host countries and seek to ascertain local needs concerning mitigation potential and environmental technologies. Here, MOEJ considers prerequisites to be respect for social capital development and honoring the environmental improvement policy in the partner country, as well as transfer of technologies that are highly compatible with the country's goals. Specifically, the missions will prepare technology lists that provide information on technologies that are transferrable to the local region. At the same time, they will approach enterprises that can execute technology cooperation in the partner countries. In this way, the missions are starting concrete approaches for technologies and services that support such areas as waterworks and sewerage, transport, waste, and the housing sector, etc.

3 BOCM Feasibility Studies in the Transport Sector

Potentials in the Transport Sector

For CDM projects, transport has been seen as a difficult sector due to complicated procedures of monitoring, and setting of boundaries etc. However, the development of transport networks is already recognized in developed countries as a vital and effective means of curving down GHG emissions since they generate positive effects that include, for example, improved local transport conditions and modal shifts when numbers of subway passengers grow. Accordingly, BOCM feasibility studies are currently developing methodologies for quantifying amounts of reduced GHG emission brought by the development of transport networks in developing countries.

Feasibility Study of the New Market Mechanism on Introduction of Mass Rapid Transit (MRT) in Jakarta (Indonesia), Hanoi and Ho Chi Minh City (Vietnam)

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Identifying Transport Projects that are Highly Beneficial for Operators

Our FS project focuses on studying methodologies for quantifying the amounts of GHG emissions that are reduced as a result of modal shift. It involves four projects that are aimed to introduce MRT in three cities; namely, Jakarta, Hanoi, and Ho Chi Minh City. In CDM methodology for the transport sector, various requirements, including the frequency of data collection and accuracy of collected data, tend to place a significant burden on operators. Thus, in this project, we intend to minimize the burden on operators and enhance incentives for them to proactively study BOCM by developing a methodology that can calculate reduced emissions while ensuring a certain degree of accuracy. We know that developing a simple yet highly reliable methodology for the transport sector will be challenging. However, it is our hope that by succeeding here, we can increase opportunities for application of BOCM in the transport sectors of other ASEAN countries as well.

Feasibility Study of the New Market Mechanism on Development of an MRT Network in Bangkok, Thailand

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A Reduction Methodology for the Transport Sector with High Portability

This FS project focuses on the MRT network in Thailand's capital city of Bangkok. While the conventional CDM approach has been to set the scope of GHG emissions reduction linearly, the BOCM approach is an attempt to calculate reductions in entire networks in accordance with actual conditions. We are approaching our FS from two aspects. The first involves estimation of transport demand. Specifically, we estimate emission reduction amounts from the difference between sum totals of CO_2 emissions obtained from transport demand estimates for two scenarios: one in which an MRT line exists and one in which it does not. And the second is an approach based upon the existing CDM methodology (ACM0016) and improves it so that quantitative calculations can be made even in many developing countries. The railway sector has been a tough area for CDM. However, we are hopeful that we can successfully overcome the various technical issues (including calculation of reduction amounts) through BOCM and satisfy both the economic and social development needs in the target region and the need for global climate change mitigation actions.

Feasibility Study of the New Market Mechanism on Development of Urban Transport in Vientiane, Laos

Mr. Toshio Kimura (left)
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A Comprehensive Approach to Greater Urban Transport Efficiency

We have had a long relationship with Vientiane thanks to our involvement in formulating its Master Plan on Comprehensive Urban Transport in Lao PDR. This FS project is a continuation of an FS project started in FY2010. During FY2011, we have been gathering data necessary for more concrete project implementation and calculating GHG reduction amounts for specific vehicle speeds. What is singularly known as the "transport sector" has characteristics that vary depending on circumstances in each country. Thus, in this project, we are attempting to find the transport systems that fit best with conditions in Vientiane; classifying what we find into short-, medium-, and long-term perspectives in line with the master plan; and working to resolve related issues sustainably and in a step-by-step manner. It is predicted that nearly half of the world's population of the future will live in cities. This makes the transport sector a highly important field. We know that there are many challenges that must be overcome, and we look forward to tackling them on the way to future success.

4 Learning from J-VER Experience

The J-VER System and its Characteristics

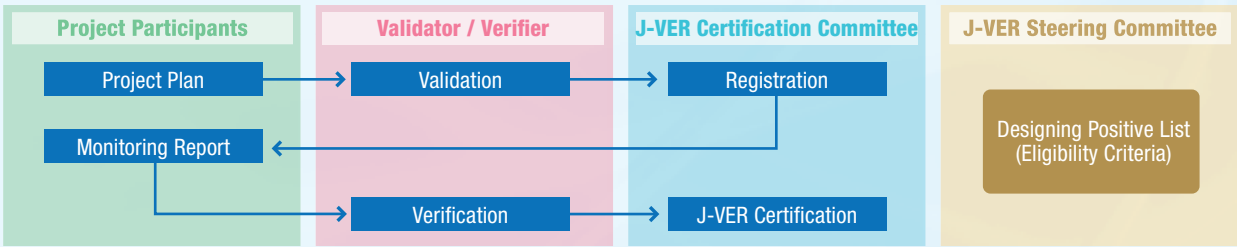
In November 2008, MOEJ launched an offset credit scheme that verifies GHG emission reduction and sink amounts generated in Japan and issues offset credits (J-VER : Japan-Verified Emission Reduction.) J-VER is designed as a highly reliable credit that is based on ISO International Standards. It can be applied to independent carbon offset programs or used in systems for calculating, reporting, and disclosing GHG emission reductions based on Japan's Law Concerning the Promotion of the Measures to Cope with Global Warming.

As of September 2011, 160 projects are registered with the J-VER scheme and, of these, 98 have received J-VER certification. Total certified credit generated thus far amounts to 139,317 t-CO_2.

Learning from J-VER experience

The J-VER scheme was designed creatively by paying attention to problematic points under the CDM and introducing a positive list of methodologies. It was also designed to save labor in demonstrating the additionality of individual projects by establishing a number of conditions called "eligibility criteria" and then verifying projects' conformity with them. These characteristics of the J-VER scheme are attracting considerable interest from other countries. Thus, MOEJ believes that diffusing and promoting experiences and know-how gained from the J-VER scheme to other countries can help advance international cooperation vis-à-vis climate change mitigation through market mechanisms.

Flow Chart of J-VER Scheme



The J-VER scheme: http://www.4cj.org/jver/e/

5 Launch of the Official New Mechanisms Information Platform

In November 2011, the New Mechanisms Information Platform gained official status. The platform now provides the latest information on new mechanisms, including moves by the Government of Japan and initiatives by key organizations.

New Contents

Moves by the Government of Japan

The platform presents the government 's philosophy regarding the BOCM, the status of its BOCM studies, and initiatives being taken by various government bodies.

Government Support Programs

The platform presents activities of government programs concerning new mechanisms that are implemented based on partnership and cooperation (feasibility studies, capacity building, communication of information, etc.).

Activities by Key Organizations

The platform presents activities reports, useful information materials etc, issued by organizations involved with the climate change area, such as IGES, GEC, and OECC.

The New Mechanisms Information Platform: http://www.mmechanisms.org/e/

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