Regional: Capacity Building for the Efficient Utilization of Biomass for Bioenergy and Food Security in the Greater Mekong Subregion

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Capacity Building for the Efficient Utilization of Biomass for Bioenergy and Food Security in the Greater Mekong Subregion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Number</td>
<td>44474-012</td>
</tr>
<tr>
<td>Country</td>
<td>Regional</td>
</tr>
<tr>
<td>Project Status</td>
<td>Closed</td>
</tr>
<tr>
<td>Project Type / Modality of Assistance</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>Source of Funding / Amount</td>
<td>TA 7833-REG: Capacity Bldg for the Efficient Utilization of Biomass for Bioenergy and Food Security in the Greater Mekong Subregion</td>
</tr>
<tr>
<td></td>
<td>US$ 4.00 million</td>
</tr>
</tbody>
</table>

**Strategic Agendas**
- Environmentally sustainable growth
- Inclusive economic growth
- Regional integration

**Drivers of Change**
- Governance and capacity development
- Partnerships

**Sector / Subsector**
- Agriculture, natural resources and rural development - Agricultural policy, institutional and capacity development
- Energy - Renewable energy generation - biomass and waste
- Health - Health system development

**Gender Equity and Mainstreaming**
- Effective gender mainstreaming

**Description**
Since 2007, the GMS Working Group on Agriculture (WGA) has supported the GMS countries to carry out a study on strategies and options for biofuels and rural renewable energy development in the GMS. The study resulted in the development of a GMS Strategic Framework and Action Plan for Biofuels and Rural Renewable Energy (RRE) that was endorsed during the Fifth Meeting of the Working Group on Agriculture (WGA-5).

To support the implementation of the Framework and to realize the full potential of this sector, this regional capacity development technical assistance (R-CDTA) is required to conduct prefeasibility studies, and to develop human and institutional capacity including that of the private sector. Under the R-CDTA, new technologies developed and adopted in the rural context elsewhere will be pilot tested to acquire knowledge for scaling up in the proposed regional investment project in the ADB pipeline.

**Project Rationale and Linkage to Country/Regional Strategy**
To support the implementation of the Core Agriculture Support Program Phase II (CASP II), the GMS countries requested ADB to prioritize regional cooperation assistance in bioenergy to diversify the region's energy options and to enhance food security, including technology transfer from more advanced GMS countries to Cambodia, Lao PDR, and Viet Nam (CLV). In response to this request, this R-CDTA is confirmed for 2011. This R-CDTA is also consistent with the Country Partnership Strategies (CPS) of Cambodia, Lao PDR and Viet Nam.

**Impact**
The expected impact of the R-CDTA is improved access to clean bioenergy and enhanced food security.

**Project Outcome**

**Description of Outcome**
The R-CDTA’s outcomes include enhanced capacity for efficient utilization of biomass for scale-up production of clean bioenergy and organic soil amendments.

**Progress Toward Outcome**
The physical activities were completed on 31 December 2015. The TA achieved its intended outcome and generated economically viable and climate-friendly investment models that fed into proposed regional projects under the GMS Regional Investment Framework, particularly the GMS climate-friendly agri-business value chain.

**Implementation Progress**

**Description of Project Outputs**
Output 1: Subregional framework for bioenergy development with food security concerns mainstreamed.
Output 2: Capacities of government institutions, service providers and rural communities to support bioenergy development.
Output 3: Knowledge products and business models for ensuing investment project from pilot projects and studies.
Output 1: The TA enhanced regional cooperation on bioenergy development. The initial mechanism for facilitating high-level dialogue and ultimate adoption of common standards was the 1st GMS Forum on Harmonization of Bioenergy and Food Security Standards in July 2012 wherein the harmonization roadmap was devised and agreed. A follow-on national policy forum in each country provided a venue for policymakers and government key stakeholders to discuss policies and opportunities relevant to their country. Policy working groups in each country were formed and were responsible to prepare policy road maps for standards, certification and labelling for biomass related technologies and climate friendly agriculture based on the outcome of the national forum. In Lao PDR, the government approved the Laos Organic Rice Standard and a guidebook was prepared to assist with the adoption of the standard. However, in Cambodia, no further work stemming from the roadmap could be undertaken as standards have not been approved by the government when the TA closed in December 2015.

Output 2: While climate-friendly biomass investment projects were pilot tested for wider implementation, the indicators were not achieved because the project aimed to test business models for future scale-up and not to construct specific number of bio-digesters, biochar kilns and improved cookstoves or to test these particular technologies.

Output 3: The TA strengthened capacity for efficient use of biomass. The various gender-sensitive regional and national training initiatives, including production of four training videos in local languages, positively enhanced the institutional and technical capacity of key stakeholders. Training initiatives enhanced the capacity of 5,292 trainees including 512 government officials, 980 service providers and 3,800 lead farmers. Of these trainees, 2,591 were women (49%).

Output 4: The TA effectively developed and disseminated knowledge products (KPs). Some of the KPs produced and disseminated were: soils and biomass amendments, biochar filters for biodigesters, biochar testing and analysis, agricultural biomass resource assessment in Cambodia, Lao PDR and Vietnam and business models for scaling-up. While the TA was not implemented as planned, requiring minor changes in implementation arrangements and extension of the TA completion date, this did not adversely impact on the delivery of TA outputs.

TA 7833-REG

Milestones

<table>
<thead>
<tr>
<th>Approval</th>
<th>Signing Date</th>
<th>Effectivity Date</th>
<th>Closing</th>
</tr>
</thead>
</table>

Financing Plan/TA Utilization

<table>
<thead>
<tr>
<th>ADB</th>
<th>Cofinancing</th>
<th>Counterpart</th>
<th>Total</th>
<th>Cumulative Disbursements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov</td>
<td>0.00</td>
<td>4,000,000.00</td>
<td>600,000.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Project Page: https://www.adb.org/projects/44474-012/main
Request for Information: http://www.adb.org/forms/request-information-form?subject=44474-012
ADB provides the information contained in this project data sheet (PDS) solely as a resource for its users without any form of assurance. Whilst ADB tries to provide high quality content, the information are provided "as is" without warranty of any kind, either express or implied, including without limitation warranties of merchantability, fitness for a particular purpose, and non-infringement. ADB specifically does not make any warranties or representations as to the accuracy or completeness of any such information.