

Country Name	The Programme for Forest Information Management
Lao People's Democratic Republic	

I. Project Outline

Background	Laos had abundant forest with ecological diversity and about 70% of its land was covered by forests in 1940s. However, due to over exploitation by swidden cultivation and illegal logging, its forest ratio ¹ decreased from 49% in 1982 to 42% in 2002. In order to improve the situation, the government of Laos formulated the "Forestry Strategy to the Year 2020 of the Lao PRD" (FS 2020) in 2005 and targeted to recover the forest ratio to 70% by 2020. In addition, recognizing a countermeasure against global warming of the "Reducing Emissions from Deforestation and Forest Degradation in Developing Countries" (REDD ²) as a highly effective means of forest conservation, the government of Laos was preparing for applying REDD by actively participating in conferences and workshops related.			
Objectives of the Project	To enhance the capacity to establish basic forest data at the national level by constructing the Forest Resource Information Center (FRIC) in the capital city of Vientiane and procuring equipment as well as establishing system for collection and analysis of forest resource information, thereby contributing to promotion of forest conservation in Laos.			
Contents of the Project	<ol style="list-style-type: none"> 1. Project Site: Vientiane 2. Japanese side: <ol style="list-style-type: none"> 1) provision of grant necessary for construction of FRIC and procurement of equipment (PC, satellite imageries, geographical information system (GIS) software, imagery analysis software, etc.), 2) technical assistance/soft component of grant aid (on-the-job training (OJT) on satellite imagery analysis and field survey in sample plots, training for construction of a forest resource database, operation and maintenance (O&M) of facilities and equipment, and preparation for establishing a periodical forest resource information survey system) 3. Lao side: site for FRIC, logistical arrangements and clearances 			
Project Period	E/N Date	March 4, 2010	Completion Date	December 4, 2014
	G/A Date	March 9, 2010		
Project Cost	E/N Grant Limit / G/A Grant Limit: 475 million yen, Actual Grant Amount: 475 million yen			
Executing Agency	Department of Forestry (DOF), Ministry of Agriculture and Forestry (MAF)			
Contracted Agencies	Main Contractor: Visouda Construction Main Consultant: Kokusai Kogyo Co., Ltd. Agent: Japan International Cooperation System			

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

- The ex-ante evaluation set the target year on 2016, three years after the project completion which was planned in 2013, for the expected quantitative effects. However, since the project completed in 2014, the target year can be 2017. Therefore, this ex-post evaluation verified the achievement of the project objectives based on the data and information in from 2014 to 2017.

I Relevance

<Consistency with the Development Policy of Laos at the Time of Ex-Ante and Ex-Post Evaluation>

The project has been consistent with the Laos forestry strategy of FS 2020 and the approach of the government to implement REDD for forest preservation through experimental trading of carbon dioxide emission reduction at the time of ex-ante evaluation, and with the newly established acts and strategies including the Conservation Forest Decree (May 2015), the Village Forest Management Planning Guidelines (January 2016) and the National REDD+³ Strategy (drafting) at the time of ex-post evaluation.

<Consistency with the Development Needs of Laos at the Time of Ex-Ante and Ex-Post Evaluation>

The project is consistent with the needs of Laos. While the Forest Inventory and Planning Division of DOF was in charge of forest information management in Laos, its equipment such as PCs for satellite imagery analysis were 1990's with low processing capacities for proper analysis and management of data required by REDD. Global positioning system (GPS) devices for positioning were also outdated and their accuracy was insufficient for forest survey.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with the Japan's ODA policy for Laos at the time of ex-ante evaluation. In the "Country Assistance Program for Lao PDR" (September 2006), developing rural regions and sustainable use of forest resources including implementation of policies and institution building in the area of agricultural and forest preservation was raised as one of the six priority areas of Japan's assistance policies for Laos.

<Evaluation Result>

In light of the above, the relevance of the project is high.

¹ Forest ratio is the ratio of forest land to total land area. Forest area is defined as the area covered by forest of canopy density over 20%, tree height over 5m and area over 0.5ha. (Source: Ex-ante Evaluation Sheet, 2010)

² REDD is an international framework through which developing countries are rewarded financially for any greenhouse gas emissions reductions achieved associated with a decrease in the conversion of forests to alternate land uses. (Source: The REDD Desk, <https://theredddesk.org/what-redd>)

³ REDD became REDD-plus (REDD+) in 2010, to reflect the new components including "policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries." (Source: The REDD Desk, <https://theredddesk.org/what-redd>)

2 Effectiveness/Impact

<Effectiveness>

The project has achieved its objectives by enhancing the capacity to establish basic forest data at the national level by constructing the building of FRIC, procuring equipment, and establishing system for collection and analysis of forest resource information in Vientiane. Utilizing equipment procured and the system established by the project, along with continuous assistance of JICA through the technical cooperation projects “Capacity Development Project for Establishing National Forest Information System for Sustainable Forest Management and REDD+” (2013-2015) and “Sustainable Forest Management and REDD+ Support Project” (2015-2020), FRIC has updated 1/25,000 scale nationwide basic forestry maps using satellite imageries of RapidEye and ALOS⁴ by 2016 (Indicator 1), prepared structured forest inventory data based on the results of the National Forest Inventory Survey (2010-2011) and its guidelines by 2015 (Indicator 2), and completed benchmark maps (forest type maps) for REDD in 2017 (Indicator 3). Quality and accuracy of the maps and inventory data have been maintained high with the assistance of Japanese experts of the projects. The maps and data are fully utilized for monitoring forest situation, estimation of the amount of greenhouse gas emission, and for REDD+ preparations.

<Impact>

Recognizing REDD+ as an opportunity for forest conservation and better livelihood of the people depending on forests, the government of Laos established the National REDD+ Task Force and is actively working on various activities for REDD+ including formulation of the National REDD+ Strategy by 2018, revision of the FS 2020 by 2019, and documentation of Emission Reduction Program for obtaining fund from the Carbon Fund of the Forest Carbon Partnership Facility (FCPF)⁵. According to the Deputy Director of Forest Inventory and Planning Division of DOF, the basic forestry maps, forest inventory data and benchmark maps (forest type maps) produced in the operation environment improved by the project are major and indispensable resources for these activities. Although the forest ratio has not been increased yet because forest recovery depends on various requirements and takes long time, the project has made a significant contribution to the improvement of the foundation for forest recovery in future. No resettlement and land acquisition, and no other negative impact has been caused by the project.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is high.

3 Efficiency

Although the project cost was within the plan (the ratio against the plan: 100%), the project period exceeded the plan (the ratio against the plan: 166%) due to the specification selections, tax exemption procedures and delivery required for the additionally procured equipment. Outputs were produced as planned. Therefore, the efficiency of the project is fair.

4 Sustainability

<Institutional Aspect>

There was no significant change neither in organizational structures nor in responsibilities and mandates of FRIC since the time of ex-ante evaluation of the project, and the number of staff members has been slightly increased (Table 2). Out of 14 staff members trained by the project, 4 of them have been transferred to other divisions of DOF and 2 of them are currently studying abroad. Therefore, the number of staffs trained by the project staying in FRIC is 8, resulting some increase of work-load on the staff while it is manageable according to the interviews with the staffs of FRIC. Two staff members studying abroad are supposed to return to their jobs in 2019 and expected to make an active contribution to FRIC. There is no prospect of changing the institutional structures of DOF and FRIC in the near future.

Table 2. Number of Staff of FRIC

Year	2014	2015	2016	2017
Total number of staff members of FRIC	14	14	17	17
Number of technical staffs of FRIC	12	12	15	15

Source: DOF

<Technical Aspect>

According to the Deputy Director of FRIC, since the completion of the project in 2014, technical capacity of the staff of FRIC has been improving through the on-the-job and off-the-job training provided by the technical cooperation projects assisted by JICA. Besides, every time before a field survey, FRIC has organized training for local surveyors on forest inventory, GIS, and remote sensing with the support of the projects assisted by the World Bank, Dutsche Gesellschaft für Internationale Zusammenarbeit⁶ (GIZ) and the Food and Agriculture Organization (FAO), thus the technical level of surveyors has also been improving. While technical sustainability has been founded on these improvement of the staffs' technical capability, according to the Deputy Director, the training for new staffs of FRIC, and the translation of the O&M manuals and O&M schedule prepared by the project from English to Lao language are needed. Some of the manuals were translated, but quality of the translation was not satisfactory so that they have not been fully utilized.

<Financial Aspect>

Budget for O&M for FRIC has been kept at around 1.3 billion Kip, while the total amount of annual budget for FRIC has been on a declining trend along with the nationwide economic situation (Table 3). According to the Deputy Director of the Forest Inventory and Planning Division of DOF, the bare minimum of fund has been provided by the Government, and this situation is not supposed to be drastically changed in future. While the budget for O&M has been maintained at a certain level, it has not necessary been sufficient. Including the budget for human resource development such as for training as seen above, the fund for operation of FRIC heavily depends on the support from donors. Securing the national budget and continuation of the assistance from development partners are the concerns for financial

Table 3. Annual Budget for FRIC

Unit: billion Kip

Year	2014	2015	2016	2017
Total amount of budget	2.46	2.26	2.10	1.90
Budget for O&M	1.0	1.3	1.6	1.2

Source: DOF

⁴ RapidEye and ALOS are Japanese land observing satellites.

⁵ FCPF is a facility to assist countries in their REDD+ efforts by providing them with financial and technical assistance in building their capacity to benefit from possible future systems of positive incentives for REDD+. (Source: FCPF, <https://www.forestcarbonpartnership.org/>, as of August 2018)

⁶ German society for international cooperation

sustainability.

<Current Status of Operation and Maintenance>

Most of the facilities and equipment procured have been well-maintained and in full utilization, only with an adaptive maintenance conducted on an ad-hoc basis because the O&M manuals and schedule prepared by the project have not been fully utilized due to language problem. While it is a small part of the procured equipment, GPS devices and digital cameras were broken⁷ but not replaced due to financial constraints. Because of the rapid progress of technology, PCs and software procured have already become obsolete and needed to be upgraded.

<Evaluation Result>

In light of the above, some problems have been observed in terms of institutional, technical and financial aspects of the implementing agency. Therefore, the sustainability of the project effect is fair.

5 Summary of the Evaluation

The project has achieved its objectives by enhancing the capacity to establish basic forest data at the national level through the construction of the building, procurement of equipment, and technical training for the staff involved. Based on this capacity enhanced, with the continuous support from technical cooperation projects assisted by JICA, basic forestry maps, structured forest inventory data, and benchmark maps (forest type maps) for REDD have been prepared as planned indicating high performance of objective achievement of the project. As for sustainability, most of the facilities and equipment granted have been well-maintained and fully utilized with an adaptive maintenance conducted when needed. Technical level of staff has been improving with the assistance of development partners' projects. Since the fund for operation heavily depends on the financial support from development partners' projects, securing the national budget and continuation of the assistance from development partners are the concerns. As for efficiency, the project period exceeded the plan. Considering all of the above points, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations to Executing Agency:

- It is recommended for DOF to secure the budget to replace broken equipment and upgrade PCs and software.
- In order to make O&M manuals and O&M schedule functional, it is recommended for the staff of FRIC to improve the translation to usable level by themselves, and to start preventive maintenance with improved manuals and schedule.
- In order to sustain the technical level of FRIC, it is recommended for DOF and FRIC in collaboration with development partners' projects to take quick actions for providing education and training required to newly recruited staff of FRIC.

Lessons Learned for JICA:

- Along with the soft component of the project, with the technical cooperation project assisted by JICA, the forestry maps and database have been structured by utilizing the facilities and equipment procured by the project. This was a good example of a program approach which enhanced the project effects by formulating a collaboration of a grant aid project and a technical cooperation project. In this way, when it is hardly expected to realize adequate project effects only by a grant aid project, in order to make facilities and equipment procured fully functional and sustainable, collaboration with any technical cooperation project(s) is expected to be planned taking a program approach at the initial planning stage.



Forest Resource Information Center (FRIC)



Equipment for training/meeting

⁷ Ten out of eighteen GPS devices and five out of twelve digital cameras procured by the project are out of order as of July 2018.