

Country Name	<b>Battambang Rural Area Nurturing and Development (BRAND)</b>
Kingdom of Cambodia	

**I. Project Outline**

Background	Agriculture is an important sector in Cambodia, but agricultural production is still low due to a number of factors, and one major factor is extension service delivery. Against such background, a JICA technical cooperation project, namely, “Battambang Agricultural Productivity Enhancement Project (BAPEP)” (2003-2006) was implemented. BAPEP aimed at establishing a rice-based farming system centered on the production of high quality rice seeds and strengthening of farmers organizations with Battambang Provincial Department of Agriculture (PDA), and successfully enhanced agricultural productivity in Kamping Puoy Area. This project was implemented to expand the outcome of BAPEP to other selected major rice-producing areas in Battambang.												
Objectives of the Project	Through improving agricultural techniques and methods for extension, implementing extension activities and collaborating other related parties, the project aimed at enhancing agricultural service delivery in the target communes <sup>1</sup> in Battambang Province, thereby improving the farming system in the target districts of the province. 1. Overall Goal: Farming system of farmers in the target districts in Battambang Province is improved. 2. Project Purpose: Agricultural service delivery to farmers is enhanced in the target communes.												
Activities of the Project	1. Project Site: Four communes selected from Battambang, Sangker, Ek Phnum and Thmarkol Districts in Battambang Province <sup>2</sup> 2. Main Activities: Training for extension workers and farmers; development of extension plans; experiment and demonstration on rice and non-rice crop cultivation; development of guidelines and extension materials; establishment of the systems of rice grading, certification, and monitoring for branding and marketing of rice; exchange of information with other projects; etc. 3. Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Cambodia Side</td> </tr> <tr> <td>1. Experts: 12 persons</td> <td>1. Staff allocated: 17 persons</td> </tr> <tr> <td>2. Trainees received: 5 persons</td> <td>2. Project office</td> </tr> <tr> <td>3. Equipment: office equipment, laboratory equipment (microscope, cabinet, etc.), agricultural equipment (threshers, rain gauge, etc.)</td> <td>3. Utility cost for the project office</td> </tr> <tr> <td>4. Local cost</td> <td></td> </tr> </table>			Japanese Side	Cambodia Side	1. Experts: 12 persons	1. Staff allocated: 17 persons	2. Trainees received: 5 persons	2. Project office	3. Equipment: office equipment, laboratory equipment (microscope, cabinet, etc.), agricultural equipment (threshers, rain gauge, etc.)	3. Utility cost for the project office	4. Local cost	
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Project Period	November 2006 - March 2010	Project Cost	(ex-ante) 300 million yen, (actual) 316 million yen										
Implementing Agency	Ministry of Agriculture, Forestry and Fisheries (MAFF) and Battambang Provincial Department of Agriculture, Forestry and Fisheries (PDAFF) * Provincial Department of Agriculture (PDA) was renamed as PDAFF in 2016 by Prakas (Ministerial Ordinance) No. 609 dated on September 27, 2016 of MAFF.												
Cooperation Agency in Japan	None												

**II. Result of the Evaluation**

< Special Perspectives Considered in the Ex-Post Evaluation >

Alternative indicator for the Overall Goal Indicator 1 (“Average rice yield per unit area increases.”): This indicator does not specify whose yield should increase. The most direct logical consequence of the achievement the Project Purpose is an increase in yield of farmers who adopted the project’s techniques in the target communes. However, since such specific data and commune-level data was not available, we used the district-level data as an alternative.

1 Relevance
<p>&lt;Consistency with the Development Policy of Cambodia at the Time of Ex-Ante Evaluation and Project Completion&gt;</p> <p>Agricultural and rural development is positioned as an important area for poverty reduction in Cambodia’s development policies such as the “Rectangular Strategy” (2004), and the “National Strategic Development Plan (NSDP)” (2006-2010) as well as the “Rectangular Strategy” (2009-2013).</p> <p>&lt;Consistency with the Development Needs of Cambodia at the Time of Ex-Ante Evaluation and Project Completion &gt;</p> <p>There were needs for improvement of agricultural productivity through enhancement of the extension service delivery as mentioned in “Background” above. Throughout the project implementation period, rice-based farming continued to be an indispensable part of rural people’s livelihoods, and their demands for improvement of the farming system remained high in Battambang, which was the largest rice-based farming area.</p> <p>&lt;Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation&gt;</p> <p>Japan’s Country Assistance Program for the Kingdom of Cambodia (2002) held a theme, “sustainable economic growth and poverty reduction,” under which agricultural and rural development and improvement in productivity were aimed. This project is a measure to attain this end.</p> <p>&lt;Evaluation Result&gt;</p>

<sup>1</sup> A commune is an administration unit under a district.

<sup>2</sup> Voat Kor (Wat Kor) Commune in Battambang District, Kampong Preah Commune in Sangker District, Preaek Luong in Ek Phnum District, and Boeng Pring Commune in Thmarkol District.

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

## 2 Effectiveness/Impact

### <Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose was achieved by the time of project completion. More than 50% of the farmers participating in Farmers' Field Days (FFDs) applied salt water seed selection and hot water disinfection, a technique introduced under this project, and the seed rate was reduced in the targeted areas (Indicator 1). Regarding the marketing of the Battambang Brand Rice (Battambang Aromatic Rice), more than 50% of farmers joining in FFDs were aware of the brand (Indicator 2a). Although the number of rice millers certified as the brand rice suppliers did not reach the target, the quality of rice of uncertified rice millers satisfied the standard set in the rice grading and certification system established by the project involving the Battambang Rice Promotion Committee (BRPC), and they became capable of producing the Battambang Aromatic Rice (Indicator 2b).

### <Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have partially continued to the time of ex-post evaluation. Several techniques introduced under the project are still extended to the farmers in the targeted areas and those techniques have been applied in other projects such as "Agricultural Productivity Promotion Project in West Tonle Sap (APPP)" (JICA technical cooperation, 2010-2015) and "Agriculture Service Program for Innovation, Resilience and Extension (ASPIRE)" (IFAD, 2014-2021). However, the degree of publicity of the Battambang Aromatic Rice among farmers is limited after project completion due to the budget shortage and no function of BRPC (see below), according to PDAFF (while the rice is still marketed to other provinces). Furthermore, there is only one rice miller currently supplying the Battambang Aromatic Rice. The other rice millers have already shut down the business for unknown reasons.

### <Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal was partially achieved by the time of ex-post evaluation. The average rice yield increased as the farmers have used the quality seeds, followed the recommended techniques, and diversified the agricultural production (Indicators 1 and 3). The Battambang Aromatic Rice has been marketed to Phnom Penh and other provinces (Indicator 2). However, PDAFF and BRPC are no longer in charge of the grading, certification, and monitoring system for the brand rice as the reform in 5th mandate of government in 2013 by transferring such tasks to the newly-established Ministry/Provincial Department of Industry and Handicraft (PDIH). According to PDAFF, Ministry/PDIH may be still using at least some ideas of the grading and certification system developed by the project, although which ideas or principles that are used was not clearly demonstrated. It should be nevertheless noted that the idea of brand rice was taken over to the Ministry of Commerce (MOC) and the same species of the Battambang Aromatic Rice have been selected by the Cambodia Rice Federation together with the MOC as two of the four branded rice as the Cambodian Aromatic Rice (premium rice) for export.

### <Other Impacts at the time of Ex-post Evaluation>

No negative impacts of the project were observed. The above-mentioned development of the concept and export of the Cambodian Aromatic Rice could be pointed out as a significant positive impact of the project. Regarding a positive impact on gender, the project promoted women participation, for example, the training of trainers and chief extension officers, resulted in the percentage of women participants being at least 50% (According to the law, a third is supposed to be women in the community leader).

### <Evaluation Result>

Therefore, the effectiveness/impact of the project is fair.

### Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results			
(Project Purpose) Agricultural service delivery to farmers is enhanced in the target communes.	Indicator 1: More than 50% of the farmers who participate in the workshops, seminars, and Farmers' Field Days (FFDs) organized by the project adopt at least one of the improved techniques listed below. (i) Salt water seed selection (ii) Reduced seed rate (iii) Vegetable seedling (iv) Other techniques introduced by the project	Status of the Achievement: achieved (continued) (Project Completion) According to a survey, 53% of the farmers who participated in FFDs had applied "salt water seed selection and hot water selection." They reduced seed rate from 90kg/ha in 2007 to 66kg/ha in 2009. 42% of farmers who joined FFDs followed BRAND-recommended fertilizer application. (Ex-post Evaluation) Status of extension activities in the target communes			
		District/ Commune	Techniques/ methods introduced by the project and still extended to farmers	% of farmers reached per year for extension	% of farmers who actually adopted the techniques
		Battambang/Wat Kor	Salt water seed selection, reduced seed rate, vegetable seedling, appropriate fertilizer usage techniques	Around 70%	Around 60%
		Sangkac/Kampong Preah			
		Ek Phnom/Praek Luong	Salt water and hot water, reduced seed rate, vegetable seedling, appropriate fertilizer usage, and line-transplanting techniques		Around 70%
		Thmor Kol/Boeung Pring	Salt water seed selection, reduced seed rate, vegetable seedling, appropriate fertilizer usage, land levelling, water supply, and rice disease techniques		Around 50%
	Indicator 2: Marketing environment of rice has improved. (a) At least 50% of the participants of the final Farmers' Field Day session recognize Battambang Brand Rice. (b) At least five (5) rice	Status of the Achievement: mostly achieved (not continued) (Project Completion) (a) The survey in July 2009 showed that 56% of the farmers (182 participants) who participated in FFDs were aware of Battambang Aromatic Rice. (b) Three rice millers were certified as Brand Rice suppliers by BRPC. Three more millers were not certified due to lack of rice polishing machines. The expert examined the quality of rice sampled from those rice millers, and it was found that the quality of their rice satisfied the standard and the rice millers had the capacity to produce Battambang Aromatic Rice. (Ex-post Evaluation)			

	millers are certified as Battambang Brand Rice suppliers.	(a) The degree of publicity of Battambang Aromatic Rice among participating farmers is limited after project completion. (b) There is only one rice miller currently supplying Battambang Aromatic Rice.																																																																				
(Overall Goal) Farming system of farmers in the target districts in Battambang Province is improved.	Indicator 1: Average rice yield per unit area increases.	(Ex-post Evaluation) achieved Average yield of rice (unit: ton/ha) <table border="1"> <thead> <tr> <th>District</th> <th>Type</th> <th>2009</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Battambang District</td> <td>Dry</td> <td>4.0</td> <td>3.4</td> <td>3.9</td> <td>4.0</td> <td>4.5</td> <td>4.6</td> </tr> <tr> <td>Wet</td> <td>3.0</td> <td>2.8</td> <td>2.7</td> <td>3.1</td> <td>3.2</td> <td>3.4</td> </tr> <tr> <td rowspan="2">Sangker District</td> <td>Dry</td> <td>2.0</td> <td>3.5</td> <td>3.7</td> <td>3.9</td> <td>4.0</td> <td>4.1</td> </tr> <tr> <td>Wet</td> <td>2.0</td> <td>2.7</td> <td>2.6</td> <td>2.6</td> <td>3.2</td> <td>3.5</td> </tr> <tr> <td rowspan="2">Ek Phnum District</td> <td>Dry</td> <td>4.0</td> <td>0.0</td> <td>3.6</td> <td>3.7</td> <td>3.8</td> <td>3.8</td> </tr> <tr> <td>Wet</td> <td>2.0</td> <td>2.7</td> <td>2.5</td> <td>2.8</td> <td>3.0</td> <td>2.9</td> </tr> <tr> <td rowspan="2">Thmarkol District</td> <td>Dry</td> <td>3.0</td> <td>3.9</td> <td>4.0</td> <td>4.0</td> <td>4.1</td> <td>4.2</td> </tr> <tr> <td>Wet</td> <td>2.0</td> <td>2.9</td> <td>2.7</td> <td>3.2</td> <td>3.5</td> <td>3.6</td> </tr> </tbody> </table>	District	Type	2009	2013	2014	2015	2016	2017	Battambang District	Dry	4.0	3.4	3.9	4.0	4.5	4.6	Wet	3.0	2.8	2.7	3.1	3.2	3.4	Sangker District	Dry	2.0	3.5	3.7	3.9	4.0	4.1	Wet	2.0	2.7	2.6	2.6	3.2	3.5	Ek Phnum District	Dry	4.0	0.0	3.6	3.7	3.8	3.8	Wet	2.0	2.7	2.5	2.8	3.0	2.9	Thmarkol District	Dry	3.0	3.9	4.0	4.0	4.1	4.2	Wet	2.0	2.9	2.7	3.2	3.5	3.6
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Indicator 2: Battambang rice is marketed as Battambang Brand Rice.	(Ex-post Evaluation) partially achieved The Battambang Aromatic Rice is graded, certified, and marketed to Phnom Penh and other provinces although PDAFF and BRPC are no longer in charge of them after 2013.																																																																					
Indicator 3: Agricultural production is diversified.	(Ex-post Evaluation) achieved Agriculture production has been diversified since project completion. The farmers have continued growing rice and vegetables, and the yield has increased. PDAFF has actively promoted the agriculture diversification. The promoting factors are soil quality, size of the land plot, and different types of vegetable usage. The extension activities introduced by this project have contributed around 70% to the agriculture diversification such as through capacity building of the officers, quality seed usage, and the provision of good techniques.																																																																					

Source: Terminal Evaluation Report; interview with PDAFF and former extension officers

### 3 Efficiency

The project cost slightly exceeded the plan, while the project period was as planned (ratio against the plan: 105% and 100%, respectively). The Outputs of the project were produced as planned. Therefore, the efficiency of the project is fair.

### 4 Sustainability

#### <Policy Aspect>

There is an emphasis in the “Agriculture Extension Policy” (2015) that Agricultural Extension programs and activities are to be developed to address national, provincial, and district agricultural development needs and priorities. Also, the “Agricultural Extension Strategic Action Plan and Implementation Guideline for Policy on Agricultural Extension in Cambodia” (2018), which is to be aligned with the goals of the “Agriculture Master Plan 2030,” have relevant components related to human resource development, extension materials development, and extension services delivery.

#### <Institutional Aspect>

PDAFF continues to be responsible for agricultural extension. According to PDAFF, the number of staff (ten officers at the agriculture extension office and ten at the District Agricultural Office for extension activities) are insufficient to conduct the extension activities fully. However, there are Commune Extension Workers (36 persons) who can support the extension service. On the other hand, BRPC, which had been established by a Governors’ decree in 2008, stopped functioning after project completion when the Ministry/PDIH took over the function of rice grading and certification system and monitoring of that system as mentioned above.

#### <Technical Aspect>

Most of the extension officers who received technical transfer under this project and APPP still work on extension activities. With the support from other project activities such as ASPIRE (which has supported nine training courses so far), PDAFF has provided trainings on rice cultivation, vegetable, livestock to the extension officers and farmers, and on financial planning to extension officers. According to PDAFF, all the manuals developed under the project are being used by extension workers and farmers, and some of them have been updated.

#### <Financial Aspect>

At PDAFF, there is a fixed budget allocation from MAFF around 15 million Riel annually, and sometimes other project budgets are allocated for extension activities too. However, the amount is insufficient, and consequently, the extension activities are limited. In response to this issue, PDAFF will ask for more budgets from MAFF on extension activities and try to find the partnership with NGOs through Public-Private Partnership principles. BRPC has no functionality, thus no budget, either, after project completion. Regarding the Ministry/PDIH, although specific data is not available, it seems from the interviews with PDAFF that it has the budget for its operation including grading/certification work not focused only on rice.

#### <Evaluation Result>

Therefore, the sustainability of the effects through the project is fair.

### 5 Summary of the Evaluation

The project achieved the Project Purpose of enhancing agricultural service delivery by the time of project completion. The Overall Goal of improving the farming system has been partially achieved: rice productivity has improved through the continued extension services and application of the improved farming techniques, while the brand rice promotion as the Battambang Aromatic Rice has continued but attracted less recognition than during the project implementation period and BRPC stopped functioning for grading and certification of the brand rice. Nevertheless, there has been a significant positive impact that the brand rice concept introduced by the project has spread to nationwide and led to the export of the branded rice. Regarding the sustainability, problems were observed in the institutional and financial aspects mainly due to insufficient staffing and budget for extension activities. As for the efficiency, the project cost slightly exceeded the plan. Considering all of the above points, this project is evaluated to be partially satisfactory.

## III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- To further promote the Battambang Brand Rice, reactivation of BRPC in any form should be considered by joint working effort among PDIH, PDAFF, Battambang Provincial hall, BRPC's existing members and maintain representatives of farmers. In doing so, since PDAFF alone cannot monitor effectively as it specializes on the (rice) production, PDAFF and PDIH should work cooperatively to monitor the quality of the Battambang Brand Rice.
- PDAFF should request more budget from the government and mobilize support from other development partners to strengthen extension activities.
- PDAFF should keep updating the manuals developed by the project to fit the current situation of rice cultivation.

Lessons Learned for JICA:

- For future project design and implementation, JICA should take into consideration of securing the human resources and continued budget allocation to sustain project effects (extension activities in case of this project) through mutual discussion and agreement with government. The terminal evaluation of this project acknowledged that there should have been more intensive dialogue between stakeholders on how to reach the development goal. In the post project implementation, JICA should keep in touch with the implementing agency so that it can do an appropriate intervention when necessary (discussion for reactivation of BRPC in case of this project).