

Republic of Benin

FY2018 Ex-Post Evaluation of Japanese ODA Grant Aid Project

“Project for Construction of Public Primary Schools in Benin (Phase V)”

External Evaluator: Keiko Kita, ICONS Inc.

## 0. Summary

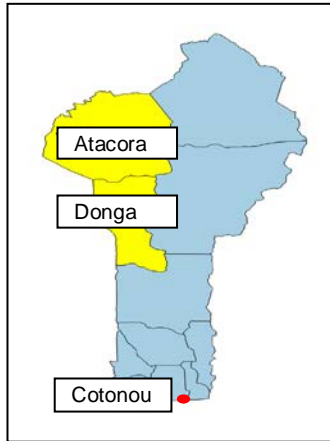
This project (hereinafter referred to as “the Project”) was launched to improve the learning environment of primary schools in Atacora Department (District) and Donga Department (District), located in the northwest of the Republic of Benin (hereinafter referred to as “Benin”), by rebuilding or expanding classrooms and thereby contributing toward the improvement of children’s learning effect<sup>1</sup>. The ex-post evaluation concluded that the relevance of the Project is high, based on the fact that the purpose of the Project is consistent with the Beninese Government’s development policies, its development needs, and Japan’s Country Assistance Policy for Benin. The efficiency of the Project is also evaluated as high because both the project period and the project cost were just as planned. Furthermore, the effectiveness and impact of the Project are evaluated as high. With regards to the two quantitative indicators of effectiveness, namely “increase in number of classrooms in good condition at target schools” and “increase in number of children who can study in classrooms in good condition at target schools,” the former was nearly achieved, and the latter was fully achieved. The effects of improving children’s attendance rates, reducing child overdensity per classroom, and increasing the number of enrolled children at target schools were also confirmed. Regarding the quantitative effect indicator “increase in number of school children—especially girls—encouraged to attend school by well-maintained toilets,” the evaluation did not find causal relations between the attendance rates of girl students and the maintenance of toilets. The ex-post evaluation confirmed that the Project has been contributing toward increasing school children’s motivation for learning and improving their learning effect, which were the qualitative indicators of impact set at the time of the evaluation. Other impact-level effects that were acknowledged at the time of the ex-post evaluation included increase in teachers’ motivation to teach, improvement in children’s awareness of and behavior regarding hygiene, and triggers for community development. The sustainability of the effects produced by the Project is evaluated as fair, because while institutional/organizational sustainability and financial sustainability are ensured to some extent, certain technical issues of operation and maintenance must be improved.

In light of the above, the Project is evaluated to be highly satisfactory.

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<sup>1</sup> As no impact was set at the planning stage, the impact was set for the ex-post evaluation based on the principle of the logic model: in the case of the Project, the expected long-term effect (the impact) is “school children’s motivation for learning is increased and their learning effect is improved” as a result of the outcome that is “the learning environment is improved.”

## 1. Project Description



Project Locations



Batoulou/D School in Donga, built by the Project

### 1.1 Background

In October 2006, the Beninese government formulated *Stratégie de Réduction de la Pauvreté*, a five-year national development strategy with the goal of promoting economic growth and reducing poverty. Strengthening human resource development was identified as one of its priorities. Accordingly, a ten-year development plan for the education sector, covering the 2006–2015 period, called *Le Plan décennal de développement du secteur de l'éducation* (hereinafter referred to as “PDDSE”) was launched to support all school-aged children in this period in completing the full primary education course by 2015, and led the government to provide free primary education<sup>2</sup>, and consequently, achieve success in higher gross enrollment rates. However, the development of school facilities could not keep pace with the number of children increasing each year, resulting in the restriction or termination of admission for certain grade(s). The deterioration of the learning environment for children was another negative effect: more children than the maximum number stipulated were accommodated in one classroom, or they were accommodated in vulnerable school buildings with thatched roofs or adobe walls. Several schools faced maintenance difficulties because their facilities were unstable, requiring frequent repair, and subsidies distributed by the government being insufficient to cover costs for repairs.

Considering these circumstances, the Beninese Government formulated a plan for the construction of public primary schools to provide equal quality primary education to all

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<sup>2</sup> Benin’s education system consists of preschool education (2 years), primary education (6 years), first half of secondary education (4 years), second half of secondary education (3 years), and higher education (2-7 years). Six years of primary education is compulsory.

school-age children as set forth in *PDDSE*, and requested the Japanese government to implement the plan. The Japanese government financially supported Benin with the construction of primary school buildings to contribute toward increasing gross enrollment rates, since 1996, through Grant Aid for the first three phases. In the fourth phase, Grant Aid for Community Empowerment<sup>3</sup> was introduced to expand existing schools in the central region where classrooms shortages were particularly serious. The fifth phase of the Project was also implemented through the same scheme.

## 1.2 Project Outline

The objective of the Project is to improve the learning environment of primary schools in Atacora and Donga, located in the northwest of the country, through rebuilding or expanding classrooms, thereby contributing toward the improvement of children's learning effect.

Grant limit / Actual Grant Amount	1,227 million yen/1,227 million yen
Exchange of Notes Date / Grant Agreement Date	December 2012 / December 2012
Executing Agency	Planning and Prospective Bureau (Direction de la Programmation et de la Prospective: DPP), Ministry of Preschool and Primary Education (Ministère de l'Enseignement Maternel et Primaire: MEMP)
Project Completion	December 2015 (when the last lot was completed)
Target Area	Atacora and Donga
Main Contractors	<u>Contractor:</u> Atacora (Group 1): Société des Entreprises KOGNONSA & Fils (EKF SARL) (Lot 1), SOGEI (Lot 2), Groupement "ARACOM - CERAT BTP" (Lot 3), ETORAY-BTP SARL (Lot 4) Donga (Group 2): SCACU SARL (Lot 5), ETORAY-BTP SARL (Lot 6), SOGEI (Lot 7) <u>Procurement of equipment:</u> Atacora (Group 1): NDC GROUP (Lot 1), SICONEC (Lot 2) Donga (Group 2): SICONEC (Lot 3), Groupement Ameublement LIBERA-CERAT BTP (Lot 4)
Main Consultant	Mohri, Architect & Associates, Inc
Procurement Agency	Japan International Cooperation System (JICS)
Outline Design	September 2011 – January 2013
Related Projects	<b>【Grant Aid】</b> <u>Project for Primary School Construction:</u> Phase I (September 1996), Phase II (June 1997), Phase III (September 2003), Phase IV (December 2007), and Phase VI (January 2018) <u>Project for strengthening capacity of training institution for primary school teachers in Djougou</u> (August 2011)

<sup>3</sup> Grant Aid for Community Empowerment is a grant aid program established in 2006 to support comprehensive capacity development of communities facing threats to human life and safe living such as poverty, hunger, and disease. To reduce costs while ensuring quality that meets local needs, the program is implemented using local contractors, equipment, and materials based on local specifications and designs.

## 2. Outline of the Evaluation Study

### 2.1 External Evaluator

Keiko Kita, ICONS Inc.

### 2.2 Duration of the Evaluation Study

This ex-post evaluation study was conducted with the following schedule:

Duration of the Study: August 2018 – December 2019

Duration of the Field Study: January 12, 2019 – January 31, 2019

## 3. Results of the Evaluation (Overall Rating: A<sup>4</sup>)

### 3.1 Relevance (Rating: ③<sup>5</sup>)

#### 3.1.1 Consistency with the Development Plan of Benin

The Project, which contributes to improving access and quality of education through the improvement of the school environment (project purpose), is consistent with the development policy of Benin both at the planning stage and at the time of the ex-post evaluation.

At the planning stage, it was confirmed that the Project was consistent with “*The third Growth Strategy for Poverty Reduction (2011–2015)*” that identified “access to basic education and improvement in quality of education” as an important area for the reinforcement of human resources. As per the *Government Action Programme (2016–2021)*, the development policy at the time of the ex-post evaluation, “Improvement of quality of education,” was regarded as one of the priority areas. *PDDSE (2016–2025)* has set a goal to construct approximately 13,500 classrooms (1,350 classrooms per year) to improve the learning environment.

#### 3.1.2 Consistency with Development Needs of Benin

The purpose of the Project is consistent with development needs of Benin at the time of the ex-post evaluation. At the planning stage, it was confirmed that Benin faced key challenges in improving the learning environment for children, specifically due to its serious shortage of classrooms and the overcrowding of classrooms due to increasing number of children associated with free primary education. *PDDSE (2006–2015)* set a target to construct 1,199 classrooms in primary schools annually till 2020, by which time the Project was confirmed to be of high priority for Benin. Atacora and Donga were selected as target areas for the Project as the average number of children per classroom exceeded the national average.

The shortage of classrooms in primary schools was still an issue at the time of the ex-post evaluation, for which *PDDSE (2016–2025)* targets the construction of approximately 13,500

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<sup>4</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>5</sup> ③: High, ②: Fair, ①: Low

classrooms over 10 years (1,350 per year). As Table 1 indicates, the results of the questionnaire survey administered to the Ministry of Preschool and Primary Education (Ministère de l'Enseignement Maternel et Primaire, hereinafter referred to as "MEMP") found that the average number of children per classroom in the two target departments was close to the national average, indicating that the problem of overcrowded classrooms has been improved.

Table1 Average number of children per classroom in public schools

Department	Average number of children per classroom
Atacora	39
Donga	41
Atlantique	45
Littoral	47
Borgou	42
Alibori	42
Mono	38
Couffo	40
Oueme	45
Plateau	38
Zou	41
Collines	39
National Average	41

Source: MEMP

### 3.1.3 Consistency with Japan's ODA Policy

The Project was consistent with Japan's aid policy for Benin from the planning stage. The purpose of the Project was consistent with "Human Resource Development," an important area related to the assistance policy for Benin that was developed in December 2012. Human Resource Development was also identified as a specific example to implement *Basic Education for Growth Initiative* (hereinafter referred to as "BEGIN") and was developed with the recognition that investment in education would be an effective tool to promote poverty reduction and economic growth in developing countries. *BEGIN* is a policy document that outlines the basic philosophy of Japan's support for the education sector, and identifies priority areas for its implementation.

Further, the Project is an embodiment of Japan's assistance for education in African countries that was expressed by the Japanese government at the 4th Tokyo International Conference on African Development (TICAD IV) held in May 2008. Significantly, Benin's Head of State has participated in all previous TICADs, which is significant in the sense that the country has expressed its acknowledgement of Japan's initiatives for Africa. Maintaining and strengthening a cooperative relationship with Benin that is regarded as important for Japan's policy for Africa through Official Development Assistance (ODA) will lead to the use of ODA as a diplomatic strategy.

### 3.1.4 Appropriateness of the Project Plan and Approach

The Project comprised the construction of school facilities and procurement of equipment. The exclusion of the soft component<sup>6</sup> from the Project framework was based on the assessment at the planning stage that target schools had been smoothly operated and well-maintained by their own staff with support from the community: school buildings and toilets were regularly kept clean by school children and their parents.<sup>7</sup> Financially speaking, MEMP allocated an annual budget to each public school and commune<sup>8</sup>, through the commune development fund called Fond d'Appuis au Développement des Communes (hereinafter referred to as "FADeC")<sup>9</sup>. A schoolmaster was assigned to be in charge of managing the allocated funds to the school, by maintaining account books. In addition, a parents' association voluntarily provides support to schools in need of it. With these findings, it was concluded that the soft component was not necessary because a school, in cooperation with the parents' association, was capable of cleaning and repairing facilities, and also because no special care would be required at school facilities for several years after completion of the Project.

According to one of the Japanese consultant, the Project managed to minimize problems of Grant Aid for Community Empowerment, namely, a slower process of construction and lower technical ability of constructors than the general grant aids, and at the same time, it tried to maximize advantages of the scheme, namely, significant cost reduction to increase efficiency and contribution to develop capacities of communities by following specific measures:

- (1) Selection of Local Constructors: The criteria for selecting tenders (including organizational scale and equipment) are set by the Beninese government, and the amount that can be ordered is determined based on the level. Using 6 levels (where 1 is the highest), the Project raised the bid criteria to Level 3. In addition, by reducing the number of lots ordered and having an appropriate scale, the Project encouraged large companies to participate in bidding.
- (2) Selection of Target Schools: Schools that required special construction methods for large-scale construction and foundation work leading to increased costs, and schools that were difficult to access in the rainy season leading to construction delays were excluded from the Project's list of target schools.

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<sup>6</sup> JICA guideline on soft component defines the soft component of a grant aid as technical support to management of constructed facilities and utilization of equipment for a smooth start-up.

<sup>7</sup> Parents' associations are permanently established in each school, and maintain schools in cooperation with a schoolmaster. Parents' associations hold regular meetings at the beginning and end of the school year to approve school activity plans, report on expenses, teaching materials, etc. Meetings are also held when problems arise. The Board of Directors consists of 9-13 elected members (Chairperson, Vice-Chairperson, Secretary, Accountant, Infrastructure Officer, Accounting Auditor, etc.) with a term of 2-4 years.

<sup>8</sup> A commune is an administrative unit below a department. There are 9 communes in Atacora Department and 4 communes in Donga Department.

<sup>9</sup> Article 97 of the Law No. 97-029 on Benin's local government organizations stipulates that the commune will be responsible for the construction, maintenance, and repair of public facilities for early childhood and primary education, and that the national government will provide the necessary resources.

- (3) Construction Plan: In the Project, target schools were divided into two groups, with the construction period of the second group planned so as to avoid the rainy season; a 4-month break in construction existed between the first and second groups. The Project also attempted shortening the construction period by constructing at multiple sites simultaneously. In practice, some suppliers common to both the first and second groups overlapped during preparatory works, somewhat delaying the process initially for the second group, but the delay was quickly recovered.
- (4) Project Management Structure: During the implementation of the project, Japanese consultants were assigned to the country for the long-term direct supervision of local consultants on a daily basis.
- (5) Procurement of Equipment: Concrete materials were procured domestically.
- (6) Technical Transfer: In addition to increasing employment opportunities for local human resources, as part of quality control, the Project contributed in developing the capacity of engineers through mock-up (full-scale model) exercises at the workshop.

In light of the above, the Project has been highly relevant to Benin's development plan and development needs, as well as Japan's ODA policy. The project plan and approach adopted were also appropriate. Therefore, its relevance is high.

### **3.2 Efficiency (Rating: ③)**

#### 3.2.1 Project Outputs

The Project has supported 47 schools in 2 target departments with construction of classrooms, schoolmasters' rooms, warehouses, and toilets, and procurement of furniture. As shown in the planned and actual project outputs in Table 2, the actual number of target schools reached 47, as opposed to the planned target of 43 schools (at the time of the Detail Design)<sup>10</sup>. The slight increase was a result of an increase in remaining funds caused by a gap in bidding as well as the scaling-down or cancelation of original components that were found to be supported by other development partners. Additional schools were selected based on the needs of Benin's authorities. As shown in Table 3, the number of equipment (procurement of furniture and built-in furniture) at the completion of the Project were the same as those at the time of the Outline Design<sup>11</sup>.

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<sup>10</sup> The Project is categorized as a grant aid with the procurement agent service. The value of Outputs was estimated at the time of the Detail Design (DD).

<sup>11</sup> The amount of equipment per facility at the time of Draft Design is unknown. However, because quantity at the time of Outline Design (OD) and at the time of the completion of the Project is the same, the quantity at the time of OD is referenced.

Table 2 Facilities established by the Project (Plan and Actual)

	Plan			Actual		
	Total	Atacora	Donga	Total	Atacora	Donga
No. of Schools	43	27	16	47	27	20
No. of Classrooms	182	102	80	203	107	96
No. of schoolmasters' rooms and warehouses	25	13	12	27	14	13
No. of Toilets	231	141	90	257	145	112

Source: Documents provided by JICA

Table 3 Equipment procured through the Project (Plan and Actual\*)

	Furniture	Built-in furniture
Classrooms	Desk and chair for 2 persons (25), Desk for teachers (1), Chair for teachers (1), Blackboard (mobile) (1)	Blackboard (fixed) (2), Storage with door (1)
Schoolmaster's office	Desk (1), Chair (1), Conference chair (4)	Storage with door (1)
Warehouse	-	Storage without door (2)

Sources: Documents provided by JICA

\*Planned and actual amounts are the same.

### 3.2.2 Project Inputs

#### 3.2.2.1 Project Costs

The actual project cost (Grant Agreement: G/A) was 1,227 million yen, the same as the planned cost, whereas the actual cost to the Beninese Government was 97% of the planned expenditure. The total amount of the actual project cost, including expenditure by the Beninese government<sup>12</sup>, was 1,230 million yen and was equivalent to 100% of the planned cost.

Table 4 Project cost covered by the Beninese government

(Unit : FCFA\*)

Item	Amount		
	Planned	Actual	Difference
Site maintenance (Removal of trees, etc.)	7,660,400	7,256,000	404,400
Bank charges	7,705,750	7,705,750	0
Total	15,366,150	14,961,750	404,400

Source: The planned amount is from documents provided by JICA, and the actual amount is from documents provided by MEMP

\*Franc CFA

#### 3.2.2.2 Project Period

The actual project period was estimated to be 36 months, starting from the date of the

<sup>12</sup> Calculated from the IMF exchange rate using the average rate (1 FCFA = 0.207 yen) during the implementation period (January 2013-December 2015).



procurement agent contract (January 2013 – December 2015); this was 100% equivalent to the planned period.

From the above, because both the project cost and the project period were as planned, the efficiency of the Project is high.

### 3.3 Effectiveness and Impact<sup>13</sup> (Rating: ③)

#### 3.3.1 Effectiveness

##### 3.3.1.1 Quantitative Effects

As shown in Table 2, the actual number of classrooms constructed by the Project is 203 classrooms, an increase of 21 classrooms from the planned number of 182; accordingly, the achievement rate is 112%. According to MEMP, all classrooms constructed in the Project were in good condition at the time of the ex-post evaluation; moreover, 77 classrooms that were in good condition before the start of the Project had also been maintained in good condition. Accordingly, the total number of the classrooms in good condition in the target schools, that is the quantitative effect indicator, reached 280 (203 classrooms constructed by the Project plus 77 classrooms that existed before the Project) , which was above its target.

For another quantitative effect indicator, “increase in number of children who can study in classrooms in good condition at target schools,” it is fair to conclude, with available data, that the Project nearly reached the target: against the target of 12,950 children, the actual number was 11,578 children in total (7,164 in Atacora and 4,414 in Donga), in the 44 schools in both departments , and is equivalent to 89% of the target number. These data exclude 1 school in Atacora and 2 schools in Donga whose data were unavailable at the time of the ex-post evaluation.

Table 5 Quantitative Effect

	Baseline (2011/2012)	Target (2018/2019)	Actual (2018/2019)
No. of classrooms in good condition in the target schools.	77 classrooms	259 classrooms (182 classrooms constructed by the Project + existing 77 classrooms)	280 classrooms (203 classrooms constructed by the Project + existing 77 classrooms)
No. of children who can study in classrooms in good condition at the target schools.	380 children	12,950 children (259 classrooms × 50 children)	11,578 children (No. of children studying at 44 schools where data was available out of 47 schools constructed by the Project)

Source: The baseline and target figures are from documents provided by JICA, and the actual figure is from MEMP

<sup>13</sup> Sub-rating for Effectiveness is to be included with consideration of Impacts.

Other effects confirmed at the time of the ex-post evaluation are as follows:

(1) Reduction of child overdensity per classroom

Official data obtained from MEMP covers all public schools in the two departments, not exclusively the schools targeted by the Project. According to data, the child overdensity per classroom in public schools in Atacora and Donga departments was reduced to the national average at the time of the ex-post evaluation. An improvement in overdensity was also observed on site visits<sup>14</sup>.

Table 6 Number of children per classroom

(Unit: Person)

	2012/2013	2017/2018
Atacora	42.6	39.7
Donga	42.8	41.5
National average	43.2	41.7

Source: MEMP

(2) Increase in the number of enrolled children at target schools

As a result of the questionnaire survey conducted at the department education office of Atacora and Donga at the time of the ex-post evaluation, it was confirmed that the number of enrolled children in the target schools has increased since the completion of the Project. This finding is supported by the results of interviews with schoolmasters visited during the ex-post evaluation. They said that an increasing number of children have wished to go to the school constructed by the Project and that they have accepted as many of those children as possible. Some school inspectors<sup>15</sup> also noted that after the school was built by the Project, many children who had previously attended schools in other areas returned to the school departments. It should be noted that the ex-post evaluation neither observed nor reported that the number of school-age children changed significantly in communities around schools visited during the evaluation.

<sup>14</sup> During the ex-post evaluation, 11 schools were visited in Atacora and Donga:

Atacora: Ourbouga/C, Koutchagou/B, Oroukayo/C, Touga, Gammon-Kinnin/B, Tchanhoun-Cossi/A, Mamossa-Pehunco/D (7 schools in total), Donga : Atchankpa-Kolah, Batoulou/D, Gnambaga, Barikini (4 schools in all)

<sup>15</sup> An inspector office is set up in each commune as a subordinate organization of the department education office. An inspector office is responsible for monitoring and supervising school activities and reporting them to the department education office.

Table 7 Trends in enrollment at the target schools

(Unit : Person)

	2012/2013	2017/2018	Increased number of children (rate of increase)
Atacora *	6,390	7,164	774 (+12%)
Donga**	3,784	4,773	989 (+26%)

Source: MEMP

\*Data on 25 of 27 schools in 2012/2013 and 2017/2018

\*\*Year of 2012/2013 data on 1 out of 20 schools are unknown (Data on 19 schools were available)

### (3) Improvement of attendance rate of children at target schools

Interviews conducted with stakeholders of the schools visited during the ex-post evaluation found that the improved learning environment has contributed to an increase in attendance rate of children at those schools. Children's motivation to attend school has increased because, now, they can learn indoors protected from rain and wind.

#### 3.3.1.2 Qualitative Effects

At the time of the ex-post evaluation, no comment demonstrating a causal relationship between clean toilets and increased girls' attendance rate were obtained from any of the stakeholders, namely schoolmasters, teachers, children, and their parents. Key questions were, "Relieved from worrying about the toilet, have girls who had refrained from going school come back to school after completion of the Project?" and "Has there been a reduction in the number of girls who leave for home to use their own toilets but do not return to school during school hours?"

#### 3.3.2 Impact

##### 3.3.2.1 Intended Impact

As the impact level effect indicators were not set at the planning stage, indicators were set for the ex-post evaluation based on the logic model: school children's learning effect is improved (quantitative effect) and children's motivation for learning is increased (qualitative effect).

### (1) Increase in children's learning effect

Interviews with teachers, children, and their parents revealed that children's learning effect has increased due to an escalation in attendance rate of children and learning time, as well as improvement in teachers' motivation as a result of the improved learning environment. In particular, the rate of children who had passed the examination for primary school graduation, which was reported by a schoolmaster at a school visited in Atacora during the ex-post evaluation, is sufficient enough to support interview results. One example is Oroukayo/C

School, which was successful in increasing the rate from 58% in 2015/2016 to 88% in 2016/2017. In 2015/2016, although the national average was only 30%, which resulted in the government raising the minimum score for passing, this school achieved the highest rate in the departments. Another example is Ourbouga/C School, which successfully increased the rate from 70% in 2016/2017 to 76% in 2017/2018. The then schoolmaster was promoted to be an inspector in recognition of this achievement.

#### (2) Increase in motivation for children's learning

According to teachers and parents of school children, these facilities that enable children to study in less-crowded indoor classrooms, with comfortable desks and chairs, has resulted in increased concentration levels in the children. This observation was supported by the results of the interviews with children. Some children said they had faced difficulties in copying notes from the board in their notebooks due to no desk being available or stable, and/or because their elbows would hit the child sitting next to them, as the space was tightly packed. All notebooks observed during the visit were well written.

### 3.3.2.2 Other Positive and Negative Impacts

#### (1) Impact on Natural Environment

In light of the JICA Guidelines for Environmental and Social Considerations, the Project is classified as Category C, which has almost no impact on the environment and society. Interviews conducted at department education office, inspector offices, and with schoolmasters, at the time of the ex-post evaluation confirmed that there was no negative impact on the natural environment related to school construction.

#### (2) Resettlement and Land Acquisition

Interviews conducted at department education offices, inspector offices, and with schoolmasters, at the time of the ex-post evaluation confirmed that no negative impact on resettlement and land acquisition occurred because schools had been constructed on land owned by members of the parents' association in order to avoid conflicts with residents.

#### (3) Other Positive Impacts

##### ① Improvement of teachers' motivation toward teaching

All teachers interviewed said they were pleased and proud to have been assigned to a clean and beautiful school constructed by the Project, which has contributed to decreased rates of lateness and absence of teachers.

##### ② Improvement of children's hygiene awareness and behavior

Children and parents have started to clean classrooms and toilets more carefully, with an intension to maintain neatness in school facilities. Interviews with schoolmasters, teachers, children, and their parents confirmed that there are an increasing number of children who take a shower before coming to school; that pay more attention to their clothes; and wash their hands thanks to a water tank installed in front of the school toilet.

③ Contribution to community development

According to department education offices, people started to settle near schools after their construction, thereby leading to the construction of health facilities and markets.

(4) Other Negative Impacts

No negative impact was observed or reported

From the above, the Project has almost achieved its objectives, and therefore its effectiveness and impact are high.

## **BOX: How Has the Project Contributed to Vulnerable People?**

### **【Promotion of girls' education】**

The ex-post evaluation confirmed that the Project has contributed to improving the school enrollment and attendance rates; however, at the same time, it was revealed that the high dropout rate of school children, especially rural girls, has remained a serious problem in Benin for a long time. The dropout rate increases as the school year progresses; one reason for this is that the girls get married. The marriage of girls under the age of 18 (and women who are over 18 but still studying) is prohibited in Benin, but few locals have understood this law. As a result, not a few girls enter primary school with a considerable delay in their school age. Therefore, the phenomenon of getting married and leaving school while studying in primary school occurs.

Poverty is another reason for the high drop-out rate. Several women are sent to work in the capital city Cotonou, as well as Nigeria, to feed their family members. With support from NGOs and other development partners, MEMP has introduced the free education system for girls for the 6 years of primary education and the first 3 years of the 7 years of secondary education (3 years for the first cycle and 4 years for the second cycle), and provided school girls with free school uniforms, texts, and lunches. Together with these measures to support households financially, MEMP has been implementing activities to advocate girls' education to parents of school-aged girls. However, despite these efforts made by the government, the drop-out rate of girls remains high in the country.

Under such circumstances, the stakeholders of schools have highly appreciated the Project for its contribution in promoting female education. Some members of the parents' associations who had monitored the process of constructing school buildings said that, having observed Japanese female consultant(s) assigned to the Project instructing male colleagues at the construction sites, they came to visualize a successful future for educated women and understand the importance of education for their daughter(s). A schoolmaster in Donga said that residents in the department are strongly influenced by Islam, which makes it difficult to convince them of the importance of female education, but the Project successfully brought awareness to the community by including a role model for a working woman during the project period.

### **【Consideration for Inclusive Education】**

The school building constructed by the Project is equipped with a ramp at the entrance of the classroom, so that children with disabilities can use wheelchairs. Some schoolmasters highly appreciated this consideration as a comparative advantage of the Project, saying that although no school-aged children with physical disabilities have been identified in the school district, designing infrastructure for children with disabilities not only changes the school personnel's level of awareness, but will also offer the chance to provide inclusive education (a mechanism for learning together with or without disabilities) when needs arise in the future.

### **3.4 Sustainability (Rating: ②)**

#### **3.4.1 Institutional / Organizational Aspects of Operation and Maintenance**

At the planning stage, the parents' association was responsible for the operation and maintenance of the school, and it was expected that this system would be sustained at the end of the Project. Ex-post evaluation confirmed that the system was sustained and that the parents' association performs its duties as expected. The information on the structure of the parents' association, roles of the members, and its main activities was collected through a questionnaire survey administered to the department education office of Atacora and Donga—where the information on all 27 target schools in Atacora and 19 out of 20 target schools in Donga were available—and interviews with schoolmasters and associations' members of 11 schools visited during the ex-post evaluation.

Common activities of the associations of all 11 schools visited include regular cleaning of school buildings and the yard, and a bi-annual meeting to discuss problems related to school operations and maintenance, and on expenditures to solve the problems. The schoolmaster and teachers of the school also participate in the bi-annual meeting. In addition, when any problem with operation and maintenance develops, parents' association meetings are convened by the schoolmaster. School activities are supervised by the inspector's office, which reports to the department education office.

Target schools of the Project have been struggling with a shortage of teachers, and this remains a yearlong challenge nationally. MEMP stated that no development partner has provided support in resolving this issue, and in light of its own economic circumstances, the Beninese government does not have a clear future outlook or plan for countermeasures. To cope with this situation, each school has managed to hire a person from their community as a temporary teacher. Table 8 shows the shortage of full-time teachers<sup>16</sup> at target schools in both departments.

In such situations, where the shortage of teachers continues, the operation and maintenance system at the time of the ex-post evaluation is not high, but with the efforts of the school, the issue has not significantly influenced operation and maintenance of the school. Under these circumstances, and without specific measures in place to tackle the problem of teacher shortage, it is most likely that the current initiatives taken by schools will continue.

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<sup>16</sup> Benin's elementary school consists of 6 classrooms (1 class per grade, 1 classroom each). In principle, a total of 6 people, including one schoolmaster and 5 teachers, are assigned.

Table 8 Gaps in number of teachers between actual and required (Year of 2017/2018)

Atacora	Gaps in number	Donga	Gaps in number
Koussocouingou/B	2	Gnambaga	0
Koupagou 1	2	Akekerou	4
Koutchagou/B	3	Nima/A	2
Touga	2	Batoulou/D	2
Nanagade/B	3	Monmongou	0
Oukpintihoun	3	Ague-Garba	2
Sakountienou	4	Atchakitame	2
Materi/D	4	Atchankpa-Kolah	2
Gouande/C	4	Bougou/A	5
Yondisseri/B	3	Kilir/D	6
Tchanthoun-Cossi/A	3	Sassirou/B	0
Tcharigouangou	2	Bakou/B	0
Sangou	2	Bakoufowa/B	0
Mamossa	3	Bapari/D	0
Gamon-Kinnin/B	3	Gah/C	0
Karigourou/B	2	Gah/B	0
Oroukayo/C	0	Djakpingou/B	4
Euc/c Kouande	0	Iyo	0
Sekogourou/B	0	Barikini	1
Pehuncho/D	0	Tepaba/E	0
Sinnawourarou/B	0	Total	30 (10 out of 20 schools)
Gberasson/B	1		
Kotopounga/B	No information		
Bokrona-Pouya	0		
Yokossi/C	0		
Ourbouga/C	0		
Boriyoure/C	0		
Total	46 (17 out of 27 schools)		

Source: Department education offices

### 3.4.2 Technical Aspects of Operation and Maintenance

Damage to roofs, ceilings, and furniture was confirmed in almost all schools visited during the time of the ex-post evaluation. A Japanese consultant in charge of the Project said that no crack and/or deflection in furniture<sup>17</sup>, or leaks from ceilings<sup>18</sup>, had been observed at the time of the warranty inspection. The causes of these problems can rarely be identified; they might be attributed to construction, quality of building materials, aging of building materials, or a combination of these factors. Furthermore, the consultant opined that the repairs cannot be handled by residents and schools, and that it is necessary to secure a maintenance budget and outsource repair work to a local contractor.

Nevertheless, most schools have taken emergency measures to contain damage to the roof with the help of carpenters in the community, although the deterioration of the ceiling was not

<sup>17</sup> Solid wood was used in accordance with Benin's standard design, but the wood may not have been sufficiently dry.

<sup>18</sup> A corrugated metal (0.23mm) was used for the roof in accordance with Benin's standard design; however, the metal roof broke, which made it easy for rainwater to collect and cause the ceiling to deteriorate.



addressed. This is because the schools believed that not only was the repairing of roofs and ceilings beyond the capacity of local constructors, but also the necessary equipment could not be procured locally. On the other hand, MEMP's viewpoint at the time of the ex-post evaluation was that the local constructors would manage to repair broken roofs and ceilings, and that the necessary equipment for repair could easily be replaced with local products. These views are the same as those held by Japanese consultants, indicating that schools have neither to understand, nor be aware of, the proper repair method and procedure of procurement of the equipment.



Photo 1: Deterioration of the ceiling due to rain leak



Photo 2: Deflection and cracks of furniture

Problems with the ceiling and desks / chairs were found at almost all of the schools visited during the ex-post evaluation.

### 3.4.3 Financial Aspects of Operation and Maintenance

Financial sources for school operation and maintenance include the government subsidy (annual budget for school operation)<sup>19</sup>, the fund to support commune development, donations from the parents' association, and MEMP funds allocated to the municipal governments for school construction and repair<sup>20</sup>. A questionnaire survey administered to the department education office of Atacora and Donga revealed that there were no significant differences in the revenue situations of each public school between 2012/2013 and 2017/2018, and that the revenue of some target schools increased from 2012/2013 to 2017/2018. Interviews conducted at schools that were visited revealed that they have been operating and maintaining school activities in cooperation with the parents' association. There was no report on financial difficulties.

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<sup>19</sup> The subsidy is used for purchasing chalk and small furniture as well as hiring teachers. The total budget is determined according to the number of grades. (FCFA150,000 × total number of grades)

<sup>20</sup> MEMP provides the municipal governments with FCFA 580,000 to schools for construction and repair. The amount can be increased if the municipal governments confirm the necessity based on a report submitted by the school. The application procedure is as follows:

- 1) A schoolmaster calls a parents' meeting to report problems in school operation and maintenance, and discusses solutions.
- 2) The schoolmaster compiles the outcomes of the meeting in writing and reports it to the inspector's office.
- 3) The inspector's office reviews the document and reports it to the department education office.
- 4) Necessary funds are procured from a municipal government through the department education office.

Few schoolmasters were unaware of the MEMP fund allocated to the municipal government and its application process. In the future, if schools are made completely aware of the fund, it will become a useful financial resource for school operation and maintenance, and will increase financial sustainability. In summary, although the issue of awareness of the fund remains, it is reasonable to conclude that a certain degree of financial sustainability has been secured at the time of the ex-post evaluation.

Table 9 Total annual amount: government subsidy and Commune development fund (FADeC)\*  
(Unit : FCFA)

Atacora			Donga		
	2012/13	2017/18		2012/13	2017/18
Koussocouingou/B	900,000	900,000	Gnambaga	Unknown	450,000
Koupagou 1	900,000	900,000	Akekerou	Unknown	934,540
Koutchagou/B	750,000	900,000	Nima/A	Unknown	5400,000
Touga	900,000	900,000	Batoulou/D	900,000	1,200,000
Nanagade/B	600,000	900,000	Monmongou	Unknown	750,000
Oukpintihoun	900,000	900,000	Ague-Garba	600,000	763,500
Sakountienou	900,000	900,000	Atchakitame	600,000	750,000
Materi/D	900,000	900,000	Atchankpa-Kolah	Unknown	750,000
Gouande/C	900,000	900,000	Bougou/A	900,000	900,000
Yondisseri/B	900,000	900,000	Kilir/D	900,000	900,000
Tchanthoun-Cossi/A	900,000	900,000	Sassirou/B	900,000	1,050,000
Tcharigouangou	900,000	900,000	Bakou/B	914,149	904,934
Sangou	900,000	900,000	Bakoufowa/B	900,000	900,000
Mamossa	900,000	900,000	Bapari/D	965,847	927,241
Gamon-Kinnin/B	900,000	900,000	Gah/C	900,000	907,155
Karigourou/B	900,000	900,000	Gah/B	964,859	907,155
Oroukayo/C	900,000	900,000	Djakpingou/B	Unknown	750,000
Euc/c Kouande	900,000	450,000	Iyo	830,530	969,760
Sekogourou/B	900,000	900,000	Barikini	913,600	900,000
Pehuncho/D	900,000	900,000	Tepaba/E	600,000	750,000
Sinnawourarou/B	900,000	1,050,000			
Gberasson/B	600,000	450,000			
Kotopounga/B	900,000	900,000			
Bokrona-Pouya	509,615	900,000			
Yokossi/C	999,666	949,121			
Ourbouga/C	900,000	900,000			
Boriyoure/C	972,375	1,205,636			

Source: Education Office in Atacora and Donga  
\*Actual expenditure was equal to annual budget both in Atacora and Donga.

#### 3.4.4 Status of Operation and Maintenance

The department education office in Atacora and Donga responded to the questionnaire survey, stating that all classrooms constructed by the Project have been in use, but it was observed at the time of the ex-post evaluation that one of the target schools visited was not used. The issue of unused classrooms is attributed to the fact that a teacher teaches multiple grades in one classroom due to a shortage of teachers and a decrease in the number of school children. It is supposed that children clean classrooms and toilets regularly, and it was observed at the time of

the ex-post evaluation that all schools visited were well maintained. Meanwhile, unused toilets and water tanks were observed in most target schools visited, in addition to the aforementioned problems with the ceiling and roofs.

The Project constructed seven toilets per school, but the ex-post evaluation confirmed that one out of 13 schools used all seven toilets regularly, while almost half the toilets remained unused in the other 12 schools. It was found that toilets that are used on a daily basis are locked, and children borrow a key from teachers when they want to use them. This is to prevent community members from using school toilets without permission. Further, two water tanks with faucets were assigned by the Project for washing hands, but all or a partial number of water tanks in half the schools visited during the ex-post evaluation remained unused because faucet handles had been removed from the tank. Some schools were not using a water tank even with the faucets functioning properly. Responding to why they were unused, some schoolmasters explained they did not know how to use them because there had been no instructions. Others responded that they did not know where to get the water for the tank<sup>21</sup>. As mentioned above, the ex-post evaluation also observed that there were problems with desks and chairs at all visited schools.

In consideration of the above, there are technical challenges in the operation and maintenance of the Project's effects; therefore, the overall sustainability is evaluated as fair.

## **4. Conclusion, Lessons Learned, and Recommendations**

### **4.1 Conclusion**

The Project was launched to improve the learning environment of primary schools in Atacora Department and Donga Department, located in the northwest of Benin, by rebuilding or expanding classrooms and thereby contributing toward the improvement of children's learning effect. The ex-post evaluation concluded that the relevance of the Project is high, based on the fact that the purpose of the Project is consistent with the Beninese Government's development policies, its development needs, and Japan's Country Assistance Policy for Benin. The efficiency of the Project is also evaluated as high because both the project period and the project cost were just as planned. Furthermore, the effectiveness and impact of the Project are evaluated as high. With regards to the two quantitative indicators of effectiveness, namely "increase in number of classrooms in good condition at target schools" and "increase in number of children who can study in classrooms in good condition at target schools," the former was nearly achieved, and the latter was fully achieved. The effects of improving children's attendance rates,

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<sup>21</sup> The Japanese consultant said that schools had received instructions on how to use the hand-washing tank when it was handed over, and that the structure of the hand-washing tank is simple, and can be used even with no instruction.

reducing child overdensity per classroom, and increasing the number of enrolled children at target schools were also confirmed. Regarding the quantitative effect indicator “increase in number of school children—especially girls—encouraged to attend school by well-maintained toilets,” the evaluation did not find causal relations between the attendance rates of girl students and the maintenance of toilets. The ex-post evaluation confirmed that the Project has been contributing toward increasing school children’s motivation for learning and improving their learning effect, which were the qualitative indicators of impact set at the time of the evaluation. Other impact-level effects that were acknowledged at the time of the ex-post evaluation included increase in teachers’ motivation to teach, improvement in children’s awareness of and behavior regarding hygiene, and triggers for community development. The sustainability of the effects produced by the Project is evaluated as fair, because while institutional/organizational sustainability and financial sustainability are ensured to some extent, certain technical issues of operation and maintenance must be improved.

In light of the above, the Project is evaluated to be highly satisfactory.

## **4.2 Recommendations**

### **4.2.1 Recommendations to the Executing Agency**

#### **(1) Considering how to use unused classrooms and putting the decision into practice**

The ex-post evaluation revealed that there were unused classrooms in target schools in Donga. A similar problem may have occurred in other schools, and therefore it is expected that MEMP must ascertain the current situation and immediately take countermeasures in cooperation with the department education offices. For example, children of a group school<sup>22</sup> on the same site will be able to utilize the unused classrooms, which, in sum, will contribute to solve problems of classrooms shortages and/or overcrowding classrooms.

#### **(2) Repairing roofs, ceilings, and furniture**

With support from department education offices, MEMP is expected to determine the status of the roofs and ceilings of target schools and initiate discussions on repair with schools that have damages. MEMP should give schools advice on the procurement of a local constructor with necessary skills for repair, and monitor the process of repair. For schools that have broken furniture such as desks, chairs, and blackboards, MEMP should inform schools on the availability of the MEMP fund allocated to the municipal governments for repair, and

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<sup>22</sup> It is a general rule in Benin that one primary school is composed of six classrooms (one classroom per grade), and that when the number of children increases in equivalence to 7 classrooms or more, a new school is constructed. However, in reality, when there are nine classrooms, the 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> classrooms are separated and established as a new school on the same site or a nearby site. In this case, the old school and the new school are collectively referred to as a group school. Schools belonging to group schools are named as school name + A, B, C ... in order of oldest establishment year, and one schoolmaster is assigned to each school.

application procedures to procure funding. If a school, in consultation with a parents' association, concludes that the school needs to apply for the MEMP fund allocated to the municipal governments, the department education office should provide support to schools with submitting documentation required by the municipal governments. The same measures should be taken when target schools acquire funds to prevent residents from using school toilets, solve problems with lose water tank faucets, and secure water for the tank.

(3) Immediately solving maintenance problems in Oroukayo/C primary school in Atacora

The poor state of the paint in the school building's exterior and the blackboard in Oroukayo/C primary school is a problem that needs to be solved immediately. To this end, MEMP, in cooperation with the department education office, is encouraged to grasp the problem that the school has faced and determine how and when to solve it. The implementation process is expected to be monitored and followed up as necessary.

4.2.2 Recommendations to JICA

None.

**4.3 Lessons Learned**

(1) Determining the number of classrooms based on the educational situation in the target country / region

The fact that Benin's compulsory education consists of six years of primary education, the number of classrooms to be constructed by the Project was determined based on the number of grades. However, in reality, one teacher teaches multiple grades in one classroom due to a decrease in the number of children as a result of high drop-out rates and a shortage of teachers, which were also identified by Beninese stakeholders as one of the reasons for unused classrooms and toilets. Lessons derived from this experience reveal "the number of classrooms to be constructed does not necessarily have to be one classroom per grade. Rather, by setting standards based on the educational circumstances of the target country or region, gaps in supply and demand can be reduced." According to MEMP, this lesson learned has already been applied to the plan of the Project for Construction of Public Elementary Schools in the Department of Atlantic (Phase VI), where the total number of classrooms to be constructed by the project (Phase VI) was determined in consideration of the number of children in each grade.

(2) Carefully considering the soft component from the viewpoint of sustainability

Based on findings at the planning stage of the Project that revealed no problems in the maintenance system in target schools, no soft component was included in the Project. This

decision resulted from the perspective that the facilities to be constructed and equipment to be procured by the Project would be easily maintained, including cleaning and repair, and that repair would not be necessary for several years after delivery. Some schoolmasters expressed the view that some maintenance issues seen at the time of the ex-post evaluation could have been avoided if the Project had included soft components. In contrast, the Japanese consultant believes that even if the Project had included soft components, the problems found in the ex-post evaluation were unavoidable. According to the Japanese consultant, many roof, ceiling, or furniture defects seen at the time of the ex-post evaluation needed to be repaired by specialists<sup>23</sup>, but development of manuals and implementation of training conducted as soft components do not usually include matters related to repairs caused by construction defects or building materials.

This experience indicates that although soft components contribute to increased sustainability in operation and maintenance and are therefore expected by recipient countries, decisions regarding whether or not soft components should be included in a project need to be carefully considered. This finding has been applied to a plan of the Project for Construction of Public Primary Schools in Benin (Phase VI). According to MEMP, the following phase should include soft components, but the support being limited to necessary aspects such as instruction on proper use and maintenance of toilets, including development of instructions on how to maintain toilets and conducting briefing sessions at target schools<sup>24</sup>.

END

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<sup>23</sup> However, given that these defects were not seen at the time of the Defect Inspection, it is not possible to fully confirm whether the cause of failure is attributed to construction, building materials and their aging, or multiple factors.

<sup>24</sup> Source: Preparatory Survey Report on the Project for Construction of Elementary Schools in the Department of Atlantic.