

Ex-Post Evaluation of Japanese Grant Aid Project
“Project for the Construction of Primary Schools (Phase IV)”

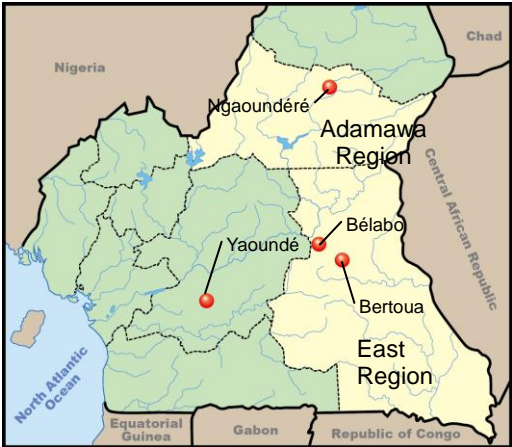
External Evaluator: Hiroshi Okukawa, KRI International Corporation

0. Summary

This project was carried out to improve the learning environment through the construction of school infrastructure and the provision of educational furniture and equipment in the East and Adamawa regions belonging to the “Education Priority Zones” where pupils were obliged to study in a poor environment owing to the lack of school facilities to accommodate rapidly increasing number of pupils after the introduction of free primary education policy. As a result of the ex-post evaluation, the relevance of the project is evaluated to be high because it is significantly pertinent to the development policy of Cameroon aiming to achieve universal primary education by 2015, the development needs to improve the poor learning environment, and the Japanese aid strategy for Cameroon. Its effectiveness and impact is also high as approximately sixteen thousand children have been newly provided with adequate learning environment and the clean and safe school facilities have influenced the minds of students’ parents who are now sending their children to school more enthusiastically. Meanwhile, the efficiency of the project is fair because the “soft component” was prolonged and the project period slightly exceeded the plan although the project cost was within the plan. As far as the sustainability of the project effects is concerned, no serious problems are pointed out considering the fact that simple, solid, and durable school buildings were constructed and that careful daily cleaning is given to them. However, while financing for ordinary maintenance of the facilities is heavily relying on the membership fees of the Parent-Teacher Association, there is a tendency of decrease in the number of its members and the collected fees. Therefore, taking it as a slight problem, the project sustainability is considered fair.

In light of the above, this project is evaluated to be satisfactory.

1. Project Description



Project Locations



School Buildings Constructed in the Project

1.1 Background

The Government of Cameroon aimed to realize universal primary education as a top priority in the Poverty Reduction Strategy Paper (PRSP) adopted in 2003. In the Education Sector Strategy Document revised in April 2006, it established principal goals of reducing geographical disparities and improving the quality of education and has been striving for 100% completion rate in primary education and class size of 50 pupils by 2015. To achieve the goals, the Ministry of Basic Education (MINEDUB) estimated the need for the construction of 23,000 classrooms and the training and employment of 37,000 teachers by 2015 and therefore, has been building classrooms and training teachers with the assistance of donors and other development partners. Japan assisted the projects for the construction of primary schools through three phases including nine stages from 1997 to 2007 and constructed 1,199 classrooms in 91 sites in 18 cities of seven regions.

However, the rapid increase in the number of pupils after the introduction of the free primary education policy in 2000 exceeds the capacity of the established school facilities. For example, in 2008, against the target of constructing 2,249 new classrooms in primary schools, only 1,456 were actually constructed, so that the learning environment in a large number of schools remained unfavorable such as double shift education, overcrowded classrooms, and utilization of overage facilities. The Adamawa and East regions targeted by the project were the third and fourth most overcrowded in classrooms out of all the ten regions in Cameroon and suffering from severe lack of classrooms. Furthermore, at the school sites for which the assistance had been requested, the percentage of solid classrooms with sufficient light and size (against the standard of the MINEDUB¹) was less than 30%.

To improve the circumstances, the Government of Cameroon requested the Japanese government for a grant aid project for the construction of facilities (including reconstruction and additional construction at existing school sites) and the provision of educational equipment and materials in three regions, namely Adamawa, East, and Northwest. Responding to the request, the Japan International Corporation Agency (JICA) carried out a preliminary study in July 2007 onwards and a basic design study in July 2008 onwards. On the basis of the results of these studies, this project assisted the construction of classrooms at the targeted ten sites in Adamawa and East regions.

1.2 Project Outline

The objective of this project is to improve the learning environment by constructing school infrastructure and providing educational furniture and equipment at ten primary school sites in Adamawa and East regions.

Grant Limit / Actual Grant Amount	1,098 million yen / 866 million yen
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¹ Standard of the Ministry of Basic Education: larger than 9 m x 7 m = 63 m² on the inside

Exchange of Notes Date/ Grant Agreement Date	March 2009 / March 2009
Implementing Agency	Responsible Organization: Ministry of Basic Education Implementing Organization: Division of Planning, Projects, and Cooperation, MINEDUB
Project Completion Date	April 2011
Main Contractor	Dai Nippon Construction
Main Consultant(s)	Matsuda Consultants International Co., Ltd./ Atelier d'Architecture et d'Urbanisme Co., Ltd. (JV)
Basic Design	July 2008–March 2009
Detailed Design	April 2009–August 2009
Related Projects	“Project for the Construction of Primary Schools” (FY1997-1999) ² “Project for the Construction of Primary Schools (Phase II)” (FY2001-2003) “Project for the Construction of Primary Schools (Phase III)” (FY2005-2007) “Project for the Construction of Primary Schools (Phase V)” (FY2011)

2. Outline of the Evaluation Study

2.1 External Evaluator

Hiroshi Okukawa, KRI International Corp.

2.2 Duration of Evaluation Study

The present ex-post evaluation study was carried out as follows³:

Duration of the Study: September 2013–August 2014

Duration of the Field Study: November 24, 2013–December 9, 2013

March 2, 2014–March 9, 2014

² Japanese fiscal year (FY) starts in April and ends in March of the subsequent year.

³ Under the ex-post evaluation, a beneficiary survey was conducted to evaluate the effects of the project. 265 informants participated in the survey, including 32 head teachers, 101 teachers, 83 pupils, 41 parents, and 8 school council members. As research techniques, questionnaire, interview, and focus group discussion were utilized. Ten school sites were targeted in the project and each of them has more than one head teacher who manages an institution called “school group”. In fact, if a school group receives more than 1,000 pupils, it is divided into two groups for the sake of efficient school management. The ten targeted school sites have 34 school groups in total, out of which 32 are using the classrooms constructed in the project. Therefore, the beneficiary survey was carried out with the people connected to those 32 school groups.

3. Results of the Evaluation (Overall Rating: B⁴)

3.1 Relevance (Rating: ③⁵)

3.1.1 Relevance to the Development Plan of Cameroon

At the time of the basic design study, educational development was given importance in PRSP adopted in April 2003 under the section of “Strengthening Human Resources and the Social Sector” which was one of the priority strategies for poverty reduction. The provision of basic education for the entire nation by 2015 was therefore aimed in accordance with the Millennium Development Goals (MDGs). The Education Sector Strategy Document 2006 also aimed to achieve the universal primary education by 2015 and set forth the objectives including (1) reduction of disparities and achievement of 100% enrollment and completion rates, (2) improvement of efficiency and quality of educational services, (3) establishment of effective partnership with different social actors, and (4) improvement of the governance of the education system. The Action Plan to materialize the Education Sector Strategy included the construction of 3,000 new classrooms and the rehabilitation of 1,300 existing classrooms every year from 2007 to 2009.

The ex-post evaluation searched Cameroonian development policies and education strategies established after the project implementation to confirm the relevance of the project at the time of the evaluation. The Cameroon Vision 2035, the national development strategy established in 2009, aims for Cameroon to become an emerging country by 2035 and stresses the importance of education for human resource development to foster the country’s economic development. It points out, therefore, the necessity of education infrastructure to accommodate the growing population. PRSP 2003 was revised and the Growth and Employment Strategy Paper (GESP) 2010-2015 was set forth in 2009. In accordance with the Cameroon Vision 2035, GESP acknowledges the importance of “education” in the framework of the human resource development as a growth strategy and strives for universal primary education by 2015 as Education Sector Strategy 2006 does. Furthermore, the Education Sector Strategy Document 2006 was revised and the Education and Training Sector Strategy Document 2013-2020 was published in August 2013. The latter keeps the reduction of disparities and improvement of access in primary education as a principal objective and plans to construct 1,500 classrooms every year from 2014 to 2016.

Moreover, the significance of Japanese assistance in the entire national plans for primary education development was explored through an interview with MINEDUB because the construction of primary schools has been financed not only by the Japanese Official Development Assistance (ODA) but also by a variety of sources including the Cameroonian government’s public investment, assistance of French government, Heavily Indebted Poor Countries Fund, and others. The director of the Division of Planning, Projects, and Cooperation (DPPC) appreciated the great contribution of the Japanese grant aid projects for school construction which led to the increase of Cameroonian pupils. As quantitative evidence to support it, the Preparatory Survey Report on the Project for the Construction

⁴ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁵ ③: High, ② Fair, ① Low

of Primary Schools (Phase V) in Cameroon shows that 132 classrooms constructed through the Japanese grant project in 2010/11 occupy 100% of the donor funded classrooms and 11% of the total 1,194 classrooms constructed throughout the country (including those financed by pooled funds) in the same period. It also tells that the 721 classrooms assisted by the Japanese grant projects in 2004/05-2010/11 occupy 44% of 1,621 donor-funded classrooms and 8% of the total 9,534 classrooms constructed in Cameroon in the same period. Therefore, it can be concluded that Japan's grant aid has contributed considerably toward materializing the Cameroonian development policy by taking a large part, as assistance from a single nation, in the primary school construction in the country.

Consequently, the relevance of this project to the development plan of Cameroon is high.

3.1.2 Relevance to the Development Needs of Cameroon

The targeted regions of Adamawa and East, belonging to the Zone of Education Priority (ZEP)⁶ together with the North and Far North regions, produce lower achievement in educational indicators such as class size⁷, student-teacher ratio, gender disparity in enrollment, and others. At the time of the basic design survey, the class size of the target schools was between 70 and 123 pupils, which far exceeded the national target of 50 and caused remarkable overcrowdedness. Furthermore, there were a large number of damaged school buildings or temporary ones owing to natural disasters and aging, out of which some had even risks of collapsing. Hence, the conditions of school facilities were very poor. In addition to the security problem, lack of desks and chairs forced many children to sit on the unsanitary floor during lessons, which was considered as a cause of children's infection. Lack of surrounding walls allowed general public to enter the school land and walk around the classrooms even during lessons. It sometimes disturbed the concentration of pupils and teachers. Therefore, there was a great need to construct or reconstruct classrooms to improve the learning environment of the pupils who were forced to learn under unfavorable conditions.

In the basic design study, it was agreed to select ten project sites which needed 12 classrooms or more according to the calculation of the required number of classrooms based on the actual number of pupils and standard class size (60 pupils/class in double shift) from 31 candidate sites where no obstacles to the construction works were observed with regard to the road access to the site for materials and equipment, legal right for land use, natural shape of the land, etc. The selected target sites had then 134 classrooms of which 108 were judged necessary to be reconstructed because they were heavily damaged, built on a weak structure, or lacking in size or brightness. Out of the 134 classrooms, 18 were considered as continuously usable if the Cameroonian side made a rehabilitation work, and only 8 were judged to have adequate conditions for use without additional work. It was decided to build 18 or 12 classrooms (three or two classrooms for each of the six school years) at a site in consideration of the average size of primary schools at the target areas and the capability to appoint

⁶ The government gives priority of budget allocation for educational development in ZEP to accelerate the improvement of education in areas considered less favorable than that of the other areas.

⁷ Quotient of the division of the number of all pupils by the number of all classes in a school: There are many schools adopting double shift education in which one class uses a classroom in the morning and another class uses the same classroom in the afternoon. Therefore, class size is used here as a more significant indicator than the pupil-classroom ratio.

new teachers. In the ex-post evaluation, the criteria for selecting the target schools and those for deciding the number of classrooms to be constructed have been examined and judged to be practically reasonable.

Meanwhile, since the objective of the project is to improve learning environment and overcrowdedness in the classroom was acknowledged as a problem, chronological change in class size was also examined in the ex-post evaluation. Consequently, a limited degree of improvement was observed comparing with the figures before the project implementation (see details in Section 3.2). During the basic design study, considering the population growth of school-aged children and the promotion of school enrollment encouraged by the construction of new school buildings through the Japanese grant aid, a good probability of the increase of pupils at the targeted schools was recognized among the stakeholders⁸. However, they did not expect that the increased demand for school enrollment could be entirely fulfilled by the implementation of this project. As a matter of fact, during the ex-post evaluation, interviewees in all the sites wished the construction of more classrooms, which shows that the need for enrollment was larger than what could be achieved by the project.

Thus, this project is relevant to the Cameroonian development needs for the improvement of the learning environment in terms of security, hygiene, and physical appropriateness concerning brightness, room size, etc., although the increasing demand for school enrollment, as another development need, could not be completely satisfied.

3.1.3 Relevance to Japan's ODA Policy

The development assistance of Japan for Cameroon deals mainly with the basic human needs including agriculture, education, and water supply and particularly, the assistance for the education sector constitutes its central part. To be more concrete, assistance for the improvement of access to primary education has been consistently provided by the first stage of the Project for the Construction of Primary Schools in 1997 through the recent Phase III of the project. Moreover, the Yokohama Action Plan developed in the Fourth Tokyo International Conference on African Development (TICAD IV) in May 2008 committed to “support construction and rehabilitation of school buildings and related infrastructure” of basic education toward the achievement of MDGs. Accordingly, Japan expressed a commitment to assist in the construction of 1,000 primary and lower secondary schools. ODA Country Data Book 2008 also states clearly that the assistance for primary education is given top priority in Cameroon.

In light of the above, this project has been highly relevant to the Cameroonian development plan,

⁸ The average population growth rate of the primary school aged children (6-11 years old) in 1993-2012 was 2.37% (calculated on the basis of World Bank's Databank). The average growth rates of children enrolled in primary education at the target areas in 2009-2012 were 6.18% at Ngaoundéré I and II Wards in Adamawa and 2.61% in Bertoua I and II Wards and Belabo (calculated on the basis of the questionnaire answers).

Head teachers, teachers, and parents mentioned in the interviews that the construction of new school buildings encouraged local residents to send their children to the schools assisted by the project (there is no school district system in Cameroon) and therefore, the number of pupils were rapidly increasing there while that of other neighboring schools were decreasing. The same phenomenon was already reported by the ex-post evaluation of the first phase in 2005 and known by both Japanese and Cameroonian stakeholders.

development needs, as well as Japan’s ODA policy. Therefore, its relevance is high.

3.2 Effectiveness⁹ (Rating: ③)

3.2.1 Quantitative Effects (Operation and Effect Indicators)

The baseline values (at the time of the basic design study in 2008), target values (at the completion of the project in 2011), and attained values (at the project completion in 2011, and at the time of the ex-post evaluation in 2013) of the indicators set in the basic design study are presented in Table 1.

Table 1. Baseline, Target, and Attained Values concerning the Quantitative Effects of the Project

Indicator	Baseline (2008)	Target (2011)	Attained (2011)	Attained (2013)
Number of solid classrooms with adequate learning environment at the project sites	8	140	140	188
Number of pupils newly provided with adequate learning environment	N/A	15,840	15,996	16,537

Source: Beneficiary survey and observation during the site visit.

The target value of 140 classrooms was calculated according to the project plans as addition of 100 reconstructed and 32 newly constructed classrooms to the eight existing ones. The target value of 15,840 pupils was the product of multiplication of 60 pupils by 132 classrooms by two shifts, under the expectation that each of the 132 constructed classrooms would receive 60 pupils (MINEDUB’s standard class size in ZEP) twice a day in the morning and in the afternoon for the double shift education.

According to the result of the questionnaire survey with the Japanese Grant Project Implementation Unit of MINEDUB and the project sites with regard to the attained values of indicators at the project completion and at the time of the ex-post evaluation, it is confirmed that the two indicators have all achieved the targets since 132 classrooms were constructed as planned. The reason for the increase in the “number of solid classrooms with adequate learning environment” after the project completion is that 51 classrooms have been rehabilitated with the assistance of the World Bank and a non-governmental organization (NGO); 51 classrooms include three rooms that were judged to have adequate learning environment in the basic design study. Therefore, 188 classrooms (140 + 51 – 3) are considered as solid with adequate learning environment at the time of the ex-post evaluation. The attained values of the “number of pupils newly provided with adequate learning environment” are calculated as the number of pupils learning in the 132 classrooms constructed in the project in the same manner that the basic design study set the target. Meanwhile, 46 inadequate classrooms are still being used including six classrooms that have not yet been rehabilitated because of the budget constraints out of 18 classrooms considered as necessary to be, and 40 classrooms out of 108 that were supposed to be demolished after the project (i.e., to be replaced by new ones). The

⁹ Sub-rating for Effectiveness is to be put with consideration of Impact.

reason for the continuous use of the classrooms that were supposed to be replaced is that the increase of enrollment demands as described in the section for Relevance makes the schools unable to receive children without those inadequate rooms.

In addition to the indicators set in the basic design study, “class size” was considered as a supplementary indicator and its attained values at the project completion (2011) and at the time of the ex-post evaluation (2013) were examined. In fact, the description of the project background shows that resolving the overcrowdedness of pupils in the classrooms was recognized to be pertinent to the “improvement of the learning environment” which is the project objective. Consequently, it has been confirmed that the class size tends to decrease slightly. Meanwhile, when the ex-post evaluation was carried out, overcrowdedness in the classroom was continuing in some schools including four school groups (Sabongari 1A and 2B, and Quartier ENIA 1A and 2A) with the average class size of over 100; there was even a class with 208 enrolled pupils.

Table 2. Average Class Size in the Project Sites

Supplementary Indicator	Baseline (2008)	Attained (2011)	Attained (2013)
Class Size	95.2	91.2	82.7

Source: Beneficiary survey

Note: $(\text{Class Size}) = (\text{Entire population of pupils}) / (\text{Entire number of classes})$

The given figures represent the average value of all the classes in the project target sites computed as follows:

24,276 pupils / 255 classes in 2008; 27,353 pupils / 300 classes in 2011;

25,645 pupils / 310 classes in 2013

Through the questionnaire survey as well as interviews with stakeholders and observations during the site visit, the evaluator explored the number of classrooms, head teacher’s offices, storerooms, and toilet facilities, and the utilization of the educational furniture and equipment installed there (see Table 3). It was confirmed that the classrooms and head teacher’s offices were entirely utilized. It was also reported that over 90% of the installed furniture, including desks, chairs, bulletin boards, and shelves, was properly used. As an exception, a limited number of the provided blackboard erasers (18%) were used continuously; it was pointed out that only a piece of sponge had been provided as an eraser and was damaged in a short time. Some other equipment, such as rulers, were also seen broken, which was however, considered as inevitable loss due to ordinary utilization. There were also two school sites where the use of toilet facilities was suspended because of the lack of water supply.

Table 3. Number of Facilities and Equipment Installed and Utilized (At the time of the ex-post evaluation)

Facilities/Equipment	Number of Installed	Number of Utilized*	Ratio
Classroom	132	132	100%
Student desk and bench	3,960	3,927	99%
Teacher desk	132	131	99%
Teacher chair	132	131	99%
Ruler	132	109	83%
Set square (45°)	132	121	92%
Set square (60°)	132	113	86%

Protractor	132	121	92%
Compasses	132	125	95%
T-square	132	96	70%
Blackboard eraser	264	47	18%
World map	26	25	96%
Map of Africa	26	24	96%
Map of Cameroon	52	42	81%
Language board	26	(43*)	-
Science board	26	(243*)	-
Globe	26	26	100%
Head Teacher's Office/Storeroom	26	26	100%
Desk for head teacher	26	50	96%
Meeting table	26		
Chair for head teacher	26	26	100%
Visitor's chair	78	215	92%
Meeting chair	156		
Bulletin board	26	24	92%
Shelf	26	26	100%
Toilet facilities	10	8	80%

Source: Beneficiary survey

Note: A "storeroom" annexed to the head teacher's office is hardly considered as it is although teaching-learning materials are stored there. It appears to be viewed as an anteroom of the office rather than a storeroom. Therefore, the equipment is used without distinction between tables and chairs belonging to the head teacher's office and those of the storage. Therefore, the number of the equipment has been also counted collectively.

A language board and a science board involve a set of several teaching materials. When the respondent to the questionnaire wrote the answers, there was confusion as to how to count the number of materials. Therefore, the collected data cannot be considered as reliable.

3.2.2 Qualitative Effects

The qualitative effect expected in the basic design study was "strengthened system for management and maintenance of the schools infrastructure through the implementation of the soft component¹⁰." Through the beneficiary survey in the ex-post evaluation, it was confirmed that head teachers, teachers, pupils, parent-teacher association (PTA) members, and school council members are collectively managing and maintaining the school facilities and equipment under the supervision of the MINEDUB and its local delegations and that their awareness of the importance to keep the facilities in good conditions had been developed. Daily maintenance such as cleaning and sweeping is carried out by pupils in shifts under the supervision of teachers (see Figure 1) and a more intensive cleaning is done weekly in every school. Thus, the provided facilities and equipment are generally well maintained. Moreover, the focus group discussions (FGDs) showed that a certain degree of cooperation between school and PTA has been established, while different schools have



Figure 1. Daily Cleaning by Students

¹⁰ According to *Rapport de l'étude de concept de base pour le Projet de construction d'écoles primaires (Phase IV) en République du Cameroun*, p.78:

"Soft component" involves technical cooperation activities including provision of training and development of manuals concerning management and maintenance of school infrastructure that are carried out in parallel with the construction of school buildings and the installation of educational equipment.

different degrees, and PTA membership fees are the major source of funds for repairs when the necessity arises. Some evidences of the sustained results of the training in the soft component was also observed such as identical PTA membership fees within a city and one unified PTA in a site with more than one school groups. Meanwhile, the guides and manuals developed through the soft component are utilized at a limited level (detailed in Section 3.4.1). Therefore, it is difficult to generally assess the extent to which the soft component has enhanced the management and maintenance system for school infrastructure.

In addition, the extensive improvement of “security” and “cleanliness” of the school is a qualitative effect of the project that was pointed out in all schools. Before the project implementation, there were pupils sitting on the floor due to lack of chairs and their clean cloths before coming to school became dirty with mud and dust when they go back home. While such unsanitary environment may have caused infectious diseases before, mortared floors and appropriate desks and benches have been provided and a hygienic learning environment has been created. Furthermore, the walls surrounding the school premises constructed by the Government of Cameroon are playing a role to prevent strangers from trespassing and pupils from leaving school without permission.

3.3 Impact

3.3.1 Intended Impacts

The project impact (indirect effects) expected through the basic design study involves the following three points:

- The construction of a head teacher’s office and a storeroom that can be also used as a teachers’ room will enable to maintain educational materials and administrative documents in an adequate manner, which will improve the management capacity of the school.
- The construction of hygienic toilet facilities separated for boys and girls will contribute to the preservation of hygiene and health of students and the creation of a favorable environment for girls will improve the enrollment of girls in education.
- The provision of basic educational materials and the construction of adequate school infrastructure will enable effective classroom management and provision of education of higher quality.

The following is the result of the ex-post evaluation with regard to the intended impacts. Firstly, it was confirmed through the observation and the FGD during site visits that the educational materials including those provided in the project were kept in the storeroom attached to the head teacher’s office¹¹, properly maintained mostly by the head teacher and effectively utilized in class. Secondly, the improvement of hygienic conditions as a result of the construction of toilet facilities and that of girls’ school enrollment was explored through the beneficiary survey and the answers to the questionnaire are presented in Table 4. According to their answers, it is obvious that the construction of toilet

¹¹ A large number of teachers claimed that a cabinet installed in each classroom would have much higher usability than the integrated storage in the headmaster’s office because they can easily store and manage the teaching materials and cleaning tools for daily use. It is a suggestion worth considering for future project design.

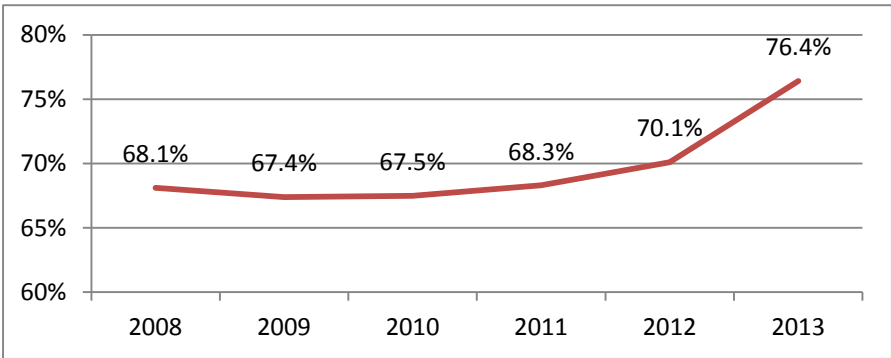
facilities has contributed to the improvement of hygienic conditions. As far as the influence of the construction of clean toilets reserved for women on the girls’ access to education is concerned, more than 70% of the respondents answered that it had been “much” or “slightly” improved although less people answered “much improved” than those who did so to the question about the improvement of hygienic conditions. In fact, while the construction of toilet facilities was merely one of the various factors influencing the girls’ school enrollment, the boy-girl ratio of the pupils improved from 1:0.92 in 2009/10 to 1:0.98 in 2013/14 (average value in 32 school groups in the project sites).

Table 4. Answers to the Questions on the Impact of Toilet Facilities Construction

Impact	Hygiene Conditions		Girls’ Access	
	No. of Response	Percentage	No. of Response	Percentage
Much Improved	25	78%	18	56%
Somehow Improved	1	3%	5	16%
No Change	0	0%	1	3%
Adverse Impact	0	0%	0	0%
Others	0	0%	2	6%
No Answer	6	19%	6	19%

Source: Beneficiary survey

With regard to the improvement of education quality by the use of the provided facilities and equipment, it was considered whether the project effects brought about a change in the pupils’ learning achievement through collecting the target schools’ results in the Primary Education Certificate (CEP¹²) examinations for reference purposes. Consequently, the increasing tendency was observed as represented in Figure 2. Taking into account a variety of factors influencing the improvement of learning achievement, a deliberate decision should be made to say that the improvement of test results is an impact of the project. Meanwhile, one can reasonably conclude that a certain degree of positive impact has been given on the education quality because it is convincing to explain that a better learning environment has increased the participants’ concentration on the lessons and brought about higher learning achievement.



Source: Beneficiary survey

Figure 2. Project Target School’s Results in CEP Examination

Moreover, through FGD, several head teachers and teachers pointed out that the improved

¹² Certificat d’Etudes Primaires

learning environment caused the decrease of pupils’ repetition and dropout. To confirm their statements, results of the questionnaire survey were analyzed and the average values of repetition rates and dropout rates for the 32 target schools for 2009/10 before the project completion and those for 2012/13 just before the ex-post evaluation were compared as provided in Table 5. While no apparent improvement in the repetition rate can be identified, decrease in dropout rate can be seen comparing the values before and after the project. However, as it was done with the CEP examination results, the decrease in dropout rates should also be treated for reference purposes only because the learning environment improvement by the project cannot be its sole reason.

Table 5. Chronological Comparison of Repetition and Dropout Rates

(Unit: %)

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Repetition Rate						
2012/13	15.1	12.2	16.2	16.7	14.5	13.2
2009/10	13.5	12.3	15.2	14.6	14.2	19.5
Dropout Rate						
2012/13	4.9	4.4	4.3	4.9	4.4	4.2
2009/10	7.0	7.2	5.9	5.0	7.3	8.2

Note: Average values (arithmetic mean) of repetition rates and dropout rates of the target school groups according to the data collected through questionnaire survey.
 Repetition rate: Proportion of pupils from a cohort enrolled in a given grade at a given school year who repeat in the same grade in the following school year
 Dropout rate: Proportion of pupils from a cohort enrolled in a given grade at a given school year who are no longer enrolled in the following school year

3.3.2 Other Impacts

Impacts on the Natural Environment

Any negative impacts on the natural environment owing to the construction work have not been identified.

Land Acquisition and Resettlement

In one site, it was reported by the head teacher during an interview that there was a neighboring house using a school external wall as part of its own and the boundary problem with that neighbor was in dispute (Quartier ENIA Primary School). At the time of the ex-post evaluation, while the issue did not adversely affect the education in a direct manner, they were waiting for a judicial decision about the boundary.

Unintended Positive/Negative Impact

Parents’ increased motivation to send their children to school and pupils’ increased motivation to come to school were observed as a result of the construction of “clean and safe” school buildings. Accordingly, the number of children who wish to go to the project target schools has increased and the actual number of pupils has also become larger; in the ten target sites, there were altogether 24,276 pupils in 2007/08 (basic design study) and 26,732 in 2013/14 (ex-post evaluation). In a certain number of schools, some issues were also pointed out such as decreased number of pupils in neighboring

schools, refusal of enrollment because of excess over the school capacity, and continuous overcrowdedness in classrooms. Meanwhile, it was also reported that in accordance with the competition principle, some of the neighboring schools with a decreased number of pupils were making efforts to provide better education to gain more pupils. These impacts have been produced because of high appreciation for the schools provided with Japan’s grant aid which are neighboring other schools in the same highly populated town where a child has access to more than one school as no school designated areas bind him/her. Therefore, despite a certain number of issues including the decrease of pupils in neighboring schools, the current situation is generally considered as a positive impact of the project.

As mentioned earlier, as a result of the project implementation, the number of solid classrooms with adequate learning environment has exceeded the target of 140 and approximately 16,000 pupils have been newly provided with adequate learning environment. Furthermore, the provided school facilities and equipment are well maintained and utilized. Hygiene and security have improved in comparison with the conditions before the project and the improved conditions have consequently motivated pupils and their parents on schooling. Although there are some issues caused by the concentration of admitting applicants to the project target schools, several neighboring schools strive to improve their education to resolve the problem. In light of the above, this project has largely achieved its objectives. Therefore, its effectiveness and impact is high.

3.4 Efficiency (Rating: ②)

3.4.1 Project Outputs

At the ten project sites in the two regions, facilities, educational furniture, and educational equipment have been provided according to the plans developed in the basic design study (see Tables 6, 7 and 8).

Table 6. Number of Facilities Provided in the Project

	Adamawa	East	Total
No. of Sites	5	5	10
Classroom	66	66	132
Head Teacher’s Office	14	12	26
Storeroom	14	12	26
Toilet	5	5	10

Source: Questionnaire survey with MINEDUB

Table 7. Number of Educational Furniture Provided in the Project

Room	Item	Number per Room	Total Number
Classroom	Student desk and bench	30	3,960
	Teacher desk	1	132
	Teacher chair	1	132
Head Teacher’s Office	Desk	1	26
	Chair	1	26
	Visitor’s chair	3	78
	Bulletin board	1	26

Storeroom	Shelf	1	26
	Table	1	26
	Chair	6	156

Source: Questionnaire survey with MINEDUB

Table 8. Number of Educational Equipment Provided in the Project

Item	Number	Total
Ruler	1 / classroom	132
Set square (45°)	1 / classroom	132
Set square (60°)	1 / classroom	132
Protractor	1 / classroom	132
Compasses	1 / classroom	132
T-square	1 / classroom	132
Blackboard eraser	2 / classroom	264
World map	1 / school group	26
Map of Africa	1 / school group	26
Map of Cameroon	2 / school group	52
Language board	1 / school group	26
Science board	1 / school group	26
Globe	1 / school group	26

Source: Questionnaire survey with MINEDUB

With regard to modifications during the detailed design study from the plans in the basic design study, there were some changes in locations of classroom buildings and toilet facilities in the primary schools of Bamyanga, Sabongari, Belabo, Quartier ENIA, Tigaza, and Tademe, which were all for the sake of facilitating the use of the facilities in response to the request of the schools. As far as a modification during the construction work after the detailed design study is concerned, the base material of the blackboard was changed from mortar to plywood. It was in accordance with the change of the MINEDUB's standard specifications for a blackboard from mortar to plywood for the sake of improved learning environment and efficient classroom management. The effects produced by the modification of the blackboard specifications were explored through an interview with the construction management (CM) consultant and the observations and interviews during the site visit. According to the CM consultant, the change into plywood is considered as quality improvement because there is a high risk of uneven surface if mortar is used. However, in FGD during the site visit, most of the schools complained that the plywood blackboards were too slippery to write on with a chalk and requiring more frequent repainting than before. This issue will be discussed further in the section of "Sustainability" in this report.

In parallel with the construction of infrastructures and the provision of equipment, soft component was carried out from April 16, 2009 to April 25, 2011 and its output was produced as follows:

<Guides and Manuals>

- Guide to School Management and Maintenance (Booklet)
- Guide to School Management and Maintenance (Video)
- Guide to School Management and Maintenance (Cartoon)
- Manual on the Maintenance of School Infrastructure

- Manual on Material and Financial Accountability
- Model Account Book for Public Primary School
- Manual on the Inspection of School Facilities
- Check Sheet for the Inspection of School Facilities

Table 9. Current Status of Documents Produced in the Soft Component

	(Number of Schools)				
	Use Daily	Rarely Use	Lost	Not Received	No Answer
Guide (booklet)	9	8	0	4	11
Guide (video)	6	11	0	6	9
Guide (cartoon)	7	13	0	12	0
Maintenance Manual	10	2	0	9	11
Account Manual	5	4	0	11	12
Model Account Book	1	3	0	13	15
Inspection Manual	1	1	0	13	17
Inspection Sheet	2	1	0	12	17

Source: Beneficiary survey

<Training Programs>

First Training: February-March 2010

Second Training: November-December 2010

Table 10. Number of Participants in the Training Programs Organized in the Soft Component

Government Official	Head Teacher	Teacher	Commune Head	Parent	Student	Total
23	28	327	17	689	367	1,451

Source: JICA's document

Comparing the plans in the basic design study and the actual output of the soft component, the “Manual on Material and Financial Accountability” and “Model Account Book for Public Primary School” were developed additionally to the initial plans. One originally scheduled training program was divided into two according to the PTA’s annual activity cycle for the sake of greater effectiveness of the training. Meanwhile, only a few hours could be allotted to the training at each of the venues. Table 10 shows the total number of participants in the two training programs. As presented in Table 9, it should be remarked that the manuals were utilized in a considerably low level; although the “Manual on the Maintenance of School Infrastructure” is used most frequently among them, yet only about 30% of the head teachers answered that it was “used daily”. Moreover, not a small number of head teachers were ignorant about the distribution of the materials and answered that they had “not received” the manuals. Among those who did not answer the question about the current state of the manuals, many were actually not aware of them. Participants in FGD pointed out that one of the reasons why they did not know about the distribution of the materials was that many former head teachers had not handed them over to their successors. Therefore, because of the low level of awareness of the guides and manuals among head teachers and classroom teachers, profound discussions could not be conducted in the ex-post evaluation as to reasons for limited utilization, need for improvement, and others. As a

document provided by JICA points out insufficient duration for soft component and need for continuous training, it is suggested, as a background of the poor awareness, that two training programs for a few hours were not sufficient to ensure the sustainable utilization of the developed guides and manuals.

3.4.2 Project Inputs

3.4.2.1 Project Cost

While the amount of the grant limit for this project according to the Exchange of Notes (E/N) was 1,098 million yen, the actual grant amount was 866 million yen. Referring to a document provided by JICA, it is confirmed that the project cost estimated in the detailed design study had decreased from 1,098 million yen on E/N to 1,035 million yen because of the drastic appreciation of the yen against the euro¹³ that occurred during the global recession after the Lehman Shock in September 2008. Because the actual grant amount was even less than the latter, the CM consultant was asked whether the quality of the construction had been secured. Consequently, it was confirmed that the lowered cost was due to the contractor's efforts and there was no problem in the quality of their work. Therefore, it is concluded that the project cost is lower than planned.

Additionally, the Basic Design Study Report confirms the efforts for cost reduction put forth by devising the construction design as follows:

- Size of the classroom is the same as that in Phase III which is smaller than that in Phases I and II¹⁴.
- Instead of the multipurpose room that was not frequently utilized, a storeroom annexed to the head teacher's office which can be also used as an anteroom for teachers' meeting is provided.
- Floor area of the toilet facilities is reduced.

The principal measures taken by the Cameroonian side included (1) leveling of construction sites, (2) removal of existing constructions, (3) preparation of tentative classrooms, (4) provision of water supply in the project sites, (5) construction of external walls, (6) planting trees on the slopes, (7) rehabilitation of existing classrooms, (8) allocation of counterpart budget for the soft component, and (9) payment of bank commissions, which were estimated to cost approximately 121 million yen in total. Those were virtually all carried out as planned according to the interviews with the CM consultant and the implementing agency of the Cameroonian government.

However, it is revealed that only Belabo Primary School has functioning waterworks out of the ten project sites while a JICA document reports that all the eight sites had been supplied with public water as scheduled. The others are all facing a problem of water shortage because of the lack of public water supply owing to damaged pipes, unpaid bills, water theft, etc. (see Table 11). Those schools rely

¹³ The exchange rate for 1 euro was 163.84 yen at the time of the basic design study (August 2008), and 137.80 yen at the time of the detailed design study (July 2009) according to a JICA document.

¹⁴ Internal size of the classroom was 9.3 m x 7.2 m in Phases I and II and 9 m x 7 m in Phases III and IV.

on well water from inside or outside the school premises but cannot obtain sufficient water. Furthermore, it is also known that 46 classrooms that existed before the project are continuously used without rehabilitation despite the fact that six of them were judged necessary to be repaired in the basic design study and 40 were supposed to be demolished after the project completion. Incidentally, it was confirmed through the site visits that the external walls had been completed in all sites at the time of the ex-post evaluation while the construction of the wall gate and plastering and painting of the walls had not been finished at Burkina Faso Primary School when the warranty inspection was carried out.

Table 11. State of Water Supply in Each School

Region	School Site	State of Water Supply	Public Water Supply Planned
Adamawa	Bamyanga	It is connected to the public water supply but cut off occurs frequently. Since July 2013, a neighboring household has been stealing water by connecting their tap to the school's pipe without permission. Police is investigating it.	✓
	Burkina Faso	It used PVC pipes which became damaged one year after the installation and is out of order. A functioning borehole is available in the school premises.	
	Gada-Mabanga	No public water is supplied. It relies on a well built with the assistance of the Government of Turkey.	
	Sabongari	The installed waterworks were destroyed through vandalism at the end of 2011/12 and are out of order since then.	✓
	Mabanga	The water pipes have been damaged and out of order since June 2011.	✓
East	Belabo	It is connected to the public water supply that is functioning without problems.	✓
	Bertoua	It has not been connected to the public water supply. Water for cleaning the school infrastructure is bought with PTA's fund.	✓
	Quartier ENIA	It is connected to the public water supply but cut off occurs frequently throughout the area.	✓
	Tigaza	Because of the low quality of the water pipes, they are damaged and out of order. Water supply was sometimes stopped because of unpaid bills.	✓
	Yadame	Water supply is not available since 2011 because the water meter is broken.	✓

Source: Beneficiary survey

3.4.2.2 Project Period

The basic design study made a project plan to last 23 months including the detailed design study but the actual implementation period exceeded 24 months. From the consulting contract on April 16, 2009 to the completion of the construction on November 10, 2011, it took 18.8 months and was even shorter than 20 months according to the plan of operation for the project. However, since the soft component scheduled for 20 months was actually carried out for 24.3 months (April 16, 2009 – April 25, 2011), the entire duration of the project is counted to be 24.3 months. According to the interview with CM consultant, the reasons for the prolonged implementation include a longer editing period of the Guide to School Management and Maintenance (Video) by inserting the scenes of the completion ceremony carried out on February 19 and 25, 2011, and a longer proofreading period for the products in response to the requests from Cameroonian partners. Therefore, the entire project period was longer than planned (106% of the plan).

As described above, the project produced the planned outputs including the provision of facilities, educational furniture, and educational equipment as well as the implementation of the soft component. With regard to the project inputs, while the actual grant amount was 866 million yen and much less than the grant limit of 1,098 million, the project period was 24.3 months and longer than the planned 23 months because of the prolonged implementation of the soft component. Although the project cost was within the plan, the project period exceeded the plan. Therefore, efficiency of the project is fair.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

Under the supervision of MINEDUB and its delegated educational administrations in each locality, school council¹⁵ consisting of representatives of school, pupil's parents and community, PTA, and head teachers collectively manage and maintain the infrastructure and equipment of a primary school.

At the central level, the "Japanese Grant Project Execution Unit" consisting of six officers and four supporting staff (total ten staff members) is established under DPPC of MINEDUB. The unit carries out the measures to be taken by the Cameroonian side as counterpart organization in the grant projects for school construction and it also assists the maintenance of the school facilities previously provided through the grant projects. Local administrative organizations include Regional Delegation of Basic Education, Divisional Delegation of Basic Education, and Sub-divisional Inspectorate of Basic Education at the levels of region, division, and sub-division, respectively. Their status is "delegation" of MINEDUB so that they are primarily information transmitters to the central authorities which make important decisions. Therefore, once a school needs large-scale rehabilitation of its infrastructure which it cannot handle by itself, a request should be sent from the head teacher, sub-division, division, region to MINEDUB which makes decision on the budget allocation to each individual case.

By law¹⁶, commune has the responsibility of management and maintenance of primary schools. However, commune's current involvement in school management is limited to the distribution of minimum packages (sets of indispensable materials for school management¹⁷) to schools at the beginning of every school year, using the budget allotted by MINEDUB. Although a school council is expected to play a role of mobilizing various local stakeholders in school management including maintenance of facilities, the institutional arrangement introduced by the government has not been fully understood at the school level so that the school councils are functioning only in a limited degree¹⁸. Accordingly, PTA and head teachers are the principal players and the minor repairs are

¹⁵ According to the Decree No. 2001/041 of 19 February 2001 concerning Organization of Public Schools and Attributions of the Responsible in School Administration, a school council consists of six ex-officio members (head teacher; president, secretary and treasurer of PTA; representative of commune; and local representative of the Ministry of Finance) and 12 elected members (representatives of teachers, pupils, pupil's parents, local organizations, traditional authorities, etc.)

¹⁶ Law No. 2004/018 of 22 July 2004 Providing the Regulations Applicable to Communes

¹⁷ A minimum package contains chalks, blackboard paint, first aid kit, accounting forms, notebooks, office supplies, basic learning materials, etc. By the influence of the local election in September 2013, the distribution of packages had considerable delay.

¹⁸ Cameroonian government started a pilot project to promote school councils in Yaoundé and Douala from 2014/15 according to the interview with the Japan Grant Project Execution Unit (instruction for promotion by inspectors, etc.)

funded by the PTA’s budget. Meanwhile, the number of parents participating in PTA tends to decrease¹⁹. This is because a number of parents want to evade the payment of the membership fee after hearing that “primary education is free.”

3.5.2 Technical Aspects of Operation and Maintenance

According to the Basic Design Study Report, this project is to “provide basic facilities and equipment for primary schools based on the plans to construct simple and solid infrastructure according to the local standards for methods and specifics so that special techniques and skills are not required for their operation and maintenance.” At the time of the ex-post evaluation, the observations during the site visits did not reveal any severe damage that might require assistance from the government and the FGD did not point out any technical difficulties concerning the operation and maintenance. Provided that the infrastructure incurs severe damage requiring large-scale rehabilitation, it is inferred that local construction companies are technically eligible to deal with it under the supervision of the officers in charge of infrastructure in the Regional Delegation of Basic Education because the construction is in accordance with the local standards for methods and specifics.

As a relatively slight problem concerning technical matters, through FGD during the site visits, teachers in eight sites out of the ten pointed out that the blackboards provided in the project were so slippery that they wrote with difficulty. Some of them claimed that more frequent repainting was required. It was implied in FGD that the current practice of repainting would be technically inappropriate in terms of selection of material and method. It was also mentioned that the slipperiness depends on the



Figure 3. Blackboard regarded as slippery

quality of used chalks. The “Manual on the Maintenance of School Infrastructure” only indicates the need to repaint a blackboard annually with slate paint and does not specify the materials and methods to be used in detail. Therefore, it is concluded that the problem can hardly be resolved at the school level (see Figure 3).

3.5.3 Financial Aspects of Operation and Maintenance

The Japanese Grant Project Execution Unit of DPPC in MNEDUB assists in the maintenance of the schools previously constructed under Phases I through III of the Project for the Construction of Primary Schools using a part of the “counterpart budget for the grant projects” such as bearing costs for repainting walls. Likewise, it can make financial contribution toward ensuring sustainability of the schools built in this project. As a matter of fact, the counterpart budget was used to install power supply and lighting equipment after project completion (in the head teacher’s offices, classrooms, and

¹⁹ All the parents of pupils are eligible to join PTA. Meanwhile, as their decision should be made on a voluntary basis, the participation rate was from 10% to 50% at the time of the ex-post evaluation.

corridors in the East Region; in the head teacher’s offices and corridors in Adamawa Region). Table 12 shows the counterpart budgets (investment budget) in the last five years. Meanwhile, because a counterpart budget is prepared mainly for fulfilling the responsibilities of the recipient government in a grant project, the Cameroonian government may not be able to secure the budget if subsequent phases of the Project for the Construction of Primary Schools are not funded by Japan. Presently, necessity of large rehabilitations requiring funds from the central ministry is not expected since the school buildings constructed in the project are solid enough. Meanwhile, assuming that government funds are needed in the future, it is uncertain whether or not a counterpart budget will be secured then. If no counterpart budget is allotted, the schools constructed in this project will be treated in the same manner as the other public schools and a request for the funds to carry out important rehabilitation will be individually discussed at the central authorities.

Table 12. Counterpart Budget of the Japan Grant Project Execution Unit (Investment Budget)

Year	Amount (FCFA)	Equivalence in Japanese Yen
2013	475,284,520	100,285,034
2012	517,500,000	109,192,500
2011	186,500,000	39,351,500
2010	520,000,000	109,720,000
2009	535,463,157	112,982,726

Source: Japan Grant Project Execution Unit of DPPC in MINEDUB

Note: Equivalent values in Japanese yen are all calculated according to the JICA’s exchange rate for December 2013:
 1FCFA = 0.211 yen.

Meanwhile, the amount of the school management fund provided by MINEDUB on the basis of the number of pupils is so limited²⁰ that it is virtually used up to purchase materials and does not remain for the maintenance of facilities. The collected amount of the PTA membership fee that is used for daily maintenance of facilities tends to decrease. Background of this phenomenon includes MINEDUB’s ban on the collection of membership fees at the start of a new school year in order to avoid parents’ misunderstanding that the payment of a PTA membership fee is a condition of enrollment. Not a small number of parents ignore the necessity of PTA membership fee because they have heard that primary education is free. At all ten project sites, it was pointed out that the collection of membership fee was becoming harder and harder. There were even three sites where the number of parents who paid was only 10%-19% of pupils. The amount of the annual membership fee per pupil is 1,500-3,500 FCFA (317-739 yen)²¹ and a majority of school sites collect around one million FCFA (approximately 210,000 yen) in total. The costs covered by PTA fund include those for repair of broken doors and locks, repainting of blackboards and walls, and employment of guards and janitors. As far as repair and repainting are concerned, no cases in which the lack of budget caused severe problems could be identified. With regard to the guards and janitors, one government employee is appointed in each school site, but if more than one is needed, they are paid with the PTA fund.

²⁰ According to interviews during the site visits, the amount of school management fund per pupil is 225 FCFA in Bertoua City and 753 FCFA in Ngaoundéré.

²¹ In all the schools assisted through this project in East Region, the PTA membership fee is unified to be 3,500 FCFA. The exchange rate is 1 FCFA = 0.211 yen (JICA’s rate in December 2013).

Meanwhile, it was observed that the lack of budget has caused delay in payment in some schools and shortage of necessary staff in others, which requires due measures to be taken.

Not only maintenance of facilities but also employment of teachers is partially funded by PTA. In principle, teachers are employed by MINEDUB with its budget but in case of shortage, complementary ones are employed by PTA with a small amount of allowance. MINEDUB has a policy to reduce the proportion of teachers employed by PTA but it remains at around 15% without any significant decrease. Since the entire budget of PTA tends to decrease, employment of teachers becomes a burden and even some schools have delays in payment.

In consideration of these circumstances, because the collected PTA fund is decreasing while it actually bears a great deal of costs for school operation and maintenance, it is necessary to reduce the dependence on PTA fund through the government’s appointment of increased number of teachers and staff and its distribution of an increased amount of school management fund. In addition, financial restructuring is required at the school level, too.

3.5.4 Current Status of Operation and Maintenance

It was confirmed that head teachers, class teachers, and pupils had the strong will to keep using cleanly the school infrastructure provided in this project. For instance, in addition to the pupils’ everyday cleaning in shifts, a thorough cleaning is carried out at the end of every week by all the pupils. Therefore, the facilities and equipment are generally maintained in good conditions.

Meanwhile, there are several problems common to all schools. Door handles and locks of classrooms are so vulnerable that a large number of them are either left broken or replaced (Figure 4). The installed door handles lack durability that frequent use of the movable parts cannot be sustained. Since pupils’ frequent use of the door handles is inevitable according to the nature of the school, it is a concern that the handles have to be repeatedly damaged and replaced.



Figure 4. Vulnerable Door Handle

Moreover, many expressed their concern about preservation of the cleanliness of the toilets because it requires a lot of water which is in fact insufficiently supplied. At the time of the ex-post evaluation, there was even a school that had suspended the use of the toilets provided in this project because hygienic use of the toilets could not be guaranteed for lack of water (Yademe Primary School). The most frequent reason for insufficient supply of water involves the breakdown of equipment such as water pipes and meters. Besides, suspension and unavailability of public water supply cause the insufficiency.

Distortion of wooden doors and shelves was frequently reported most probably because of the use of insufficiently dried timbers. There were even doors which could not be opened and closed easily. Since insufficient drying of timbers involves an issue of quality control in the construction work, more intensive control was required.

In light of the above, some problems have been observed in terms of institutional, technical, and financial aspects as well as current status of the operation and maintenance as to this project. Therefore, sustainability of the project effect is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was carried out to improve the learning environment through the construction of school infrastructure and the provision of educational furniture and equipment in the East and Adamawa regions belonging to the “Education Priority Zones” where pupils were obliged to study in a poor environment owing to the lack of school facilities to accommodate rapidly increasing number of pupils after the introduction of free primary education policy. As a result of the ex-post evaluation, the relevance of the project is evaluated to be high because it is significantly pertinent to the development policy of Cameroon aiming to achieve universal primary education by 2015, the development needs to improve the poor learning environment, and the Japanese aid strategy for Cameroon. Its effectiveness and impact is also high as approximately sixteen thousand children have been newly provided with adequate learning environment and the clean and safe school facilities have influenced the minds of students’ parents who are now sending their children to school more enthusiastically. Meanwhile, the efficiency of the project is fair because the “soft component” was prolonged and the project period slightly exceeded the plan although the project cost was within the plan. As far as the sustainability of the project effects is concerned, no serious problems are pointed out considering the fact that simple, solid, and durable school buildings were constructed and that careful daily cleaning is given to them. However, while financing for ordinary maintenance of the facilities is heavily relying on the membership fees of the Parent-Teacher Association, there is a tendency of decrease in the number of its members and the collected fees. Therefore, taking it as a slight problem, the project sustainability is considered fair.

In light of the above, this project is evaluated to be satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

- As it is frequently pointed out that the blackboard made of plywood is too slippery to write on with a chalk, the Japan Grant Project Execution Unit of MINEDUB is recommended to give the project target schools advice on the necessary solution after assigning its technical staff or commissioning external technicians to carry out technical investigation on the painting material and method for surface and on how to use and clean it. Information on the paint appropriate for repainting the blackboard has already been obtained from the CM consultant and conveyed to the unit by the evaluator so that it is required to confirm whether the same sort of paint is used or not. Furthermore, the unit should consider the necessity to inquire of paint manufacturers what measures must be taken in using, cleaning, and repainting the blackboard properly and instruct

the schools, accordingly.

- As many schools are facing the difficulty to secure enough water, the Japan Grant Project Execution Unit of MINEDUB is recommended to investigate the circumstances of those schools and give advice on the solutions. For instance, while the unit maintains that water bills are supposed to be paid by the State, there are schools that do not know it and find it hard to secure the cost for water according to the beneficiary survey in the ex-post evaluation. Therefore, informing the schools on it would be a first step toward the solution. Moreover, a number of broken PVC pipes connected to the main pipe for public water supply were observed and frequent suspension of water supply was pointed out as a matter of the entire area. Therefore, it is preferable that the unit take the initiative in discussing with the project target schools as to what measures should be taken, such as request to the communal authorities to bear the cost for replacing water pipes or, more radically, for digging a well.
- As the number of parents who pay the PTA membership fee is decreasing, with regard to the management and maintenance of primary schools, more important roles should be taken by the commune according to the law and by the school council that is supposed to involve various stakeholders in the locality. Therefore, MINEDUB is recommended to take measures to promote the participation of communes and school councils into the school management and maintenance, aiming to build a sustainable mechanism without depending entirely on PTA fund.

4.2.2 Recommendations to JICA

Not applicable.

4.3 Lessons Learned

- **Target setting in a project for school construction aiming at the improvement of the learning environment**

The objective of this project is to improve the learning environment and its effect indicators include the “number of solid classrooms with adequate learning environment” and the “number of pupils newly provided with adequate learning environment”. Meanwhile, an “adequate learning environment” was not clearly defined and it appears to be assumed that a classroom constructed according to well elaborated plans should automatically have an adequate learning environment. While it was understood in the ex-post evaluation that cleanliness and security of the school buildings contributed significantly to the creation of an “adequate learning environment”, those attributions had not been set as effect indicators. If lack of hygiene and insecurity had been viewed as major problems to confront in the project, the project design would be plainer because the achievement of its objective could be measured by the level of problem solution. Therefore, it is considered important to set quantitative or qualitative indicators measuring the achievement of a school construction project for the improvement of the learning environment by clarifying how the construction of schools can improve the learning environment on the basis of a thorough problem analysis at the project planning stage.

- **Necessity to estimate demand for enrollment in a school construction project for the improvement of the learning environment**

Not only in a project aiming at the improvement of access to education such as increased enrollment rate, but also in a school construction project for the improvement of the learning environment, it is important to develop a project plan including the number of classrooms to be assisted after estimating carefully the number of pupils and that of school-aged children in the future. This project was carried out in urban areas with large population where more than one school neighbor each other without designated school zones. Therefore, alleviation of overcrowdedness in classrooms could not be expected through the project implementation while the class size is one of the components forming the learning environment. Consequently, this project did not employ an effect indicator related to the alleviation of overcrowdedness (reduction of class size) unlike the preceding Phases I through III of the project. And the scale of assistance (i.e., number of classrooms to be assisted) was calculated on the basis of the number of pupils existing at the time of the basic design study without estimating the demand for enrollment at project completion. Consequently, because of the increased number of pupils, there remain overcrowded classes and several old school buildings supposed to be demolished are still used in the project target schools. Therefore, even though the main purpose of the project is not alleviation of overcrowdedness, it is suggested that estimation of the future demand for enrollment should be done as far as possible and reflected in the project plans. For this project, too, it would have been better to consider the extent to which this grant project of Japan could meet the future demand after estimating it by taking into account the population growth rate and the experienced influx of pupils from neighboring schools in the previous phases. Because class size is generally an important indicator to measure the learning environment, assuming that a school construction project causes a considerable increase of pupils and that of class size, the project might be evaluated to have given a negative impact on the learning environment. Thus, it should be avoided to calculate the number of classrooms to assist exclusively depending on the number of pupils at the time of the basic design study.

- **Possible synergy effect between a school construction grant project and a technical assistance project for school management in case of the need to improve the mechanism of school management and maintenance**

While the limitation is recognized in raising funds for school maintenance that depends on PTA as it has been done thus far, the establishment of school council is institutionalized by the Cameroonian government to manage and maintain a school with the assistance of various local stakeholders. However, it seems not to be currently functioning ideally. Under these circumstances, the soft component of this project did not only convey the techniques for the maintenance of facilities but also developed manuals and provided training with the ambitious aims of clarifying the distributed roles of PTA, commune, and school council and making these organizations more active. However, its results have not been fully established yet because of the limitations of the “soft component of a grant project” on time and scale; only two training

programs for a few hours were carried out. According to that experience, if the necessity arises for the assistance in institutional reform for several years, such as activation of malfunctioning school councils in this project, it is impossible for a soft component with limitation on time and scale to accomplish sufficient technical transfer. In that case, utilizing the result of the soft component effectively, there would be possibility to enhance the sustainability of the project effects by continuing technical transfer after the completion of the grant project through another cooperation scheme such as technical assistance project for instance.