Burkina Faso

Ex-Post Evaluation of Japanese Grant Aid Project

The Third Project for Construction of Primary Schools

External Evaluator: Jun TOTSUKAWA, Sano Planning Co., Ltd.

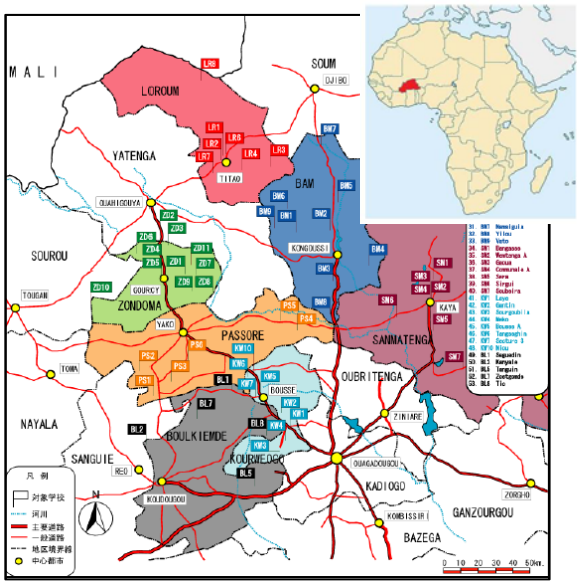
0. Summary

Burkina Faso including the target area of the project suffered from the significant lack of classrooms and extreme concentration of students per class. Thus, building new classrooms in the project was highly consistent with the needs of Burkina Faso. The implementation of the project reduced the average number of students per classroom from 102 to 59.8, thereby improving the educational environment by far. The accommodations for teachers also provided under the project contributed to a higher retention rate of teachers and the school wells provided improved the water sanitation environment at school. Furthermore, the project brought about incentive effects of encouraging children to go to school and other positive impacts, such as stimulating motivation for learning and reducing the number of repeaters of the same grade.

On the other hand, in the aspect of sustainability, since the responsibility for school maintenance was recently transferred from the central government to the commune, the support mechanism of the administration has weakened. While routine maintenance is handled individually by the parents' association and other parties concerned, which shows good performance basically until now, large-scale repair needs in the future will be likely to ask structural as well as financial challenges.

Overall, the project is evaluated to be highly satisfactory.

1. Project Description



Project Locations

Tanguin Elementary School

(Province of Boulkiemdé)

1.1 Background

Burkina Faso succeeded in raising the overall ratio of enrollment in primary schools from 30% in 1990 to 47.5% in 2002, as a result of its initiatives to drastically improve the educational environment, with national development priority given to the improvement and promotion of primary education. The enrollment ratio was, however, stagnated below the average among the Sub-Saharan African countries, which was 86%. Thus, the country was expected to make further improvements in the educational environment.

With this background, the government made a "Ten-Year Basic Education Development Plan (PDDEB) 2001-2010" as a high-level program, under which it strived for the betterment in the educational environment by constructing and repairing classrooms, training teachers, and so forth. In order to achieve the goals posted in the Ten-Year Plan, however, additional investment was required. According to the calculations made in the plan, which sets 2001 as the base year, 20,000 more classrooms, 4,000 more accommodation buildings for teachers, and 7,000 more school wells were needed, in order to achieve a primary school enrollment ratio of 70% in the target year, 2010, as opposed to 42.7% in the base year, and to improve the literacy rate from 26% to 40% during the same period.

In addition, the lack of classrooms directly means overcrowds of students per classroom; at the schools included in the project, the average number of students per classroom exceeded 100, creating an extremely harsh condition for schooling.

The project, therefore, aimed at providing new/rehabilitated classrooms, accommodations for teachers and water supply facilities (school wells) to those schools suffering from overcrowds of students under severe conditions in temporary classrooms.

1.2 Project Outline

The objective of the project is to provide school facilities and school equipment in seven provinces in the country, thereby improving the basic education environment there.

Grant Limit / Actual Grant Amount	1,732 million yen / 1,731 million yen
Exchange of Notes Date	July, 2005 (Phase 1), September, 2006 (Phase 2)
Implementing Agency	Ministry of Basic Education and Literacy (current Ministry of National Education and Literacy)
Project Completion Date	February, 2008
Main Contractor(s)	Konoike Construction Co., Ltd.
Main Consultant(s)	Fukunaga Architects-Engineers and IC Net Ltd. (JV)
Basic Design	December, 2004
Related Projects (if any)	The First Project for Construction of Primary Schools (Grant Aid : 1995) The Second Project for Construction of Primary Schools (Grant Aid : 1997-1998)

2. Outline of the Evaluation Study

2.1 External Evaluator

Jun TOTSUKAWA, Sano Planning Co., Ltd.

2.2 Duration of Evaluation Study

The ex-post evaluation study was undertaken on the following schedule:

Duration of the Study: October 2010 – October 2011

Duration of the Field Study: January 31, 2011 – February 19, 2011

2.3 Constraints during the Evaluation Study

Due to the worsening of the security situation in the country, the second field study, originally scheduled for May 2011, was cancelled. As a result, the final confirmation on the results from the beneficiary survey and the collection of additional information were carried out via subcontracting to local consultancy.

3. Results of the Evaluation (Overall Rating: A[1])

3.1 Relevance (Rating: ③[2])

3.1.1 Relevance with the Development Policy of Burkina Faso

At the time of planning the project, the government of Burkina Faso had formulated the Ten-Year Basic Education Development Plan (PDDEB) as a pillar policy for the education sector. The Plan defines an action plan and associated specific numerical targets necessary for promoting primary education in the country, for the ten years from 2001 to 2010.

While the Plan identifies 1) qualitative improvement and quantitative expansion of basic education, 2) decentralization of education systems, and 3) upgrading the planning, implementing and supervising capabilities of the Ministry of Basic Education and Literacy as three priority agenda, special priory was given to 1) qualitative improvement and quantitative expansion of basic education.

The project under review, which provided new classrooms and incidental facilities, such as accommodations for teachers and toilets, contributes directly to the "qualitative expansion of basic education" advocated in the Ten-Year Plan. At the same time, a development of educational environment is expected to bring about an indirect impact of improving education quality. In this regard, the project is deemed as highly relevant with the foremost goal of the government stated in its policies in the educational sector.

Based on these points, the project is evlauted as highly relevant with the policies of the government of Burkina Faso.

For reference, as of the time of ex-post evaluation in 2011, a next long-term plan, following the

[1] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

[2] ③ : High, ②: Fair, ①: Low

aforementioned Ten-Year Plan, is being discussed; no specific details are determined officially yet.

3.1.2 Relevance with the Development Needs of Burkina Faso

(1) The development needs at the time of project planning

Although the enrollment ratio in primary education in Burkina Faso increased from 30% in 1990 to 47.5% in 2002, it still remains at an extremely low level compared with the average in Sub-Saharan Africa, 86%.

The country was chosen as a recipient of grant under the World Bank's Fast Track Initiative (FTI[3]), and with the previously-cited "Ten-Year Basic Education Development Plan" as the basis, it had been striving to improve the environment for basic education. Nevertheless, the educational environment remained severe in rural areas particularly: for example, the number of students per classroom exceeded 100 and all classrooms were temporary thatched buildings. The effort of the government could not succeed in showing the tangible improvement of the educational environment.

For these reasons, the project aimed to contribute to improving the educational environment by constructing and rehabilitating classrooms as well as providing incidental facilities, is deemed as highly relevant with the development needs of Burkina Faso.

(2) The development needs at the time of the ex-post evaluation

Since the initiation of the PDDEB, progress has been made in constructing and rehabilitating classrooms and improving the enrollment ratio nationwide. The numerical targets, with the target year being 2010, promoted in the Ten-Year Plan—the total enrollment ratio of 70% and 20,000 classrooms to be constructed—have been accomplished by the country and donors.

Still, there are quite a few primary schools, particularly in rural areas, that use thatched buildings as temporary classrooms. Thus, demand for new classrooms, whether constructed or rehabilitated, remains high. In the meantime, due to the increasing enrollment ratio, the number of classrooms needed is on the rise, too. At the present, the additional classrooms constructed are merely to absorb the increased number of students. This is why the following table indicates increased numbers of classrooms with relatively constant numbers of students per classroom. As the enrollment ratio is expected to increase further, constructing classrooms and other incidental facilities at primary schools remains as a substantial need of the country.

Table 1 Number of students and enrollment ratio over time

	2000/'01	2005/'06	2006/'07	2007/'08	2008/'09	2009/'10
No. of students	901,291	1,390,571	1,561,258	1,742,439	1,906,279	2,047,630
Public school	792,880	1,200,681	1,349,228	1,514,217	1,635,036	1,757,568
Growth rate (yoy)	-	-	12.3%	11.6%	9.4%	7.4%
Total enrollment ratio %	42.7	60.7	66.6	72.5	72.4	74.8
Net enrollment ratio %	34.3	47.7	53.1	59.4	57.9	57.4

Source: Statistics on basic education and documents by the Ministry of Basic Education

[3] Abbreviation for Fast Track Initiative, which is an international framework with an aim to obtain a 100% coverage of primary education by 2015. It provides assistance in four aspects: fund, capacity, data, and policy. Participants are 19 donor countries including Japan.

Table 2 Number of classrooms and number of students per classroom over time

		2000/'01	2005/'06	2006/'07	2007/'08	2008/'09	2009/'10
No. of classrooms		17,456	26,444	28,425	31,809	35,129	40,056
	Public	-	22,088	24,203	26,694	28,946	31,492
	Private	-	4,356	4,222	5,115	6,183	8,564
Growth (Total No. of classrooms)		-	-	1,981	3,384	3,320	4,927
No. of students per classroom (national average)		51.6	52.6	54.9	54.8	54.3	51.1

Source: Statistics on basic education and documents by the Ministry of Basic Education

3.1.3 Relevance with Japan's ODA Policy

The project provides support for education sector which "Japan Official Development Assistance (ODA) Charter" (August, 2003) defines as one of the high priorities to work for.

At the same time, Japan had defined its assistance to Burkina Faso as to "put emphases on assistance mainly in the education, water and healthcare areas that directly contribute to a higher standard of living of the nation, in view of the severe poverty in the country.[4]"

Accordingly, assistance in the educational sector complies with one of the key agenda in Japan's assistance to Burkina Faso, and hence the project is evaluated relevant with Japan's ODA policies.

In conclusion, this project is highly relevant with the country's development policies, development needs as well as Japan's ODA policy; therefore, its relevance is high.

3.2 Efficiency (Rating: ③)

3.2.1 Project Outputs

The project provided classrooms and other facilities at 52 primary schools in seven central, northern and western provinces of Burkina Faso, namely, Loroum, Zondoma, Passore, Bam, Sanmatenga, Kourweog and Boulkiemde.

Table 3 Project outputs

	Plan	Actual
Schools included	53 schools	52 schools
Newly-constructed classroom	168	156
Headmaster's office (with storage)	37	35
Accommodation for teachers	105	96
Water supply facility	41	41
Toilet building	40	39
School equipment	All schools included	All schools included
Maintenance manuals for school water facilities	All schools included	All schools included
Setting up of well operation and maintenance committees or reinforcing existing committees	41 schools	41 schools

[4] Quoted from "Official Development Assistance Country Data Book 2004." By-country policy for assisting Burkina Faso is not defined.

【Difference between actual outputs and planned outputs】

Of the 53 schools included in the plan, one had already had projects ongoing based on the commune's budget. This one was excluded from the scope of the project, accounting for the decrease in the number of schools included.

3.2.2 Project Inputs

3.2.2.1 Project Cost

The estimated cost and actual project spending are compared in the table below. The actual spending was lower than the estimated cost.

Table 4 The planned and the actual cost of the project

	Plan	Actual
The First Construction Project	866 million yen	865 million yen
The Second Construction Project	866 million yen	866 million yen
Total cost	1,732 million yen	1,731 million yen (99.9% of the plan)

【Difference between the planned and actual cost of the project】

The actual project cost incurred was 10 million yen less than the initial cost estimate. The expected surplus, in conjunction with the diminished scope of the project, was mostly absorbed by price hikes in roofing materials, cement, and other raw materials and fluctuations in exchange rates (approximately 8% yen depreciation against euro) since the planning; as a result, the actual spending turned out to be at about the same level as the plan.

【Reference : Comparison between the preceding projects and similar projects of other donors】

1) Comparison between this project and the preceding projects (The First Project and the Second Project)

A comparison between the actual (construction) costs of the project under review and those in the First Project (1995) and the Second Project (1997-98) reveals that the cost was reduced while keeping the required specifications.

The cost reduction was mainly realized by shifting the procurement of materials from imports (e.g., glass blocks) to full local procurement. Also, while the RC process (reinforced concrete architecture) was adopted in the first and second phases, the concrete block masonry method was applied in the third phase in accordance with the local standard, in view of the low risk of earthquakes in the country. The change also contributed to the reduced cost.

Table 5 Comparison of the project cost (among Japan's assistance projects—1st to 3rd Projects)

	Cost per unit floor area
	Total cost (1,000 yen/m^2)
The First Construction Project	77.4

The Second Construction Project	91.4
The Third Construction Project (the target of this ex-post evaluation)	73.0

Note 1): The figures for the First and the Second were derived by dividing the EN-based amount proportional to the floor area of classrooms and other facilities on the basic design basis; thus, they may be slightly different from actual values.

Source: Basic Design Study Report

2) Comparison with other donors' assistance and projects by the government of Burkina Faso

At the time of the project, other donors were making contributions to a basket fund and the government of Burkina Faso was constructing schools using the fund. Thus, there are no similar primary school construction projects provided by other donors.

Moreover, comparing school construction costs between the project and those by the government of Burkina Faso is not straightforward, since quality of materials, i.e., cost of materials, is not the same. For example, schools provided by the government have pent roofs, one-sided sloped roofs, unlike those provided by the project[5]. With this specification, the cost is lower as fewer materials are used. It has, however, demerits in resistance to wind and rain-tightness. Furthermore, the government-constructed schools tend to be damaged sooner because of the poor quality of aluminum and other materials employed. The evaluator actually saw during the field study quite a few primary schools whose roofs have been stripped by strong winds.

3) Others

In the project's design, ceiling boards of classrooms were replaced by insect screens in order to prevent bats from inhabiting under roof, which was identified as an issue in the preceding projects. In this regard, the cost remained neutral as the cost to be reduced by removing the ceiling boards was traded off by the cost for insect screens, but this countermeasure has proven effective. The specifications for classrooms are highly reputed, in general, by Burkinabe. ("In general" is added here since some point out that it is hot in the rooms and sound-insulation is not sufficient.)

3.2.2.2 Project Period

The planned implementation schedule and actual implementation period of the project under review are compared in the following table. The project period was shorter than planned.

Table 6 Planned and actual project periods

Project	Plan	Actual
Phase 1	July 2005- March 2007 (21 months)	July 2005-March 2007 (21 months)
Phase 2	September 2006-March 2008 (19 months)	September 2006-February 2008 (18 months)
Entire implementation period	August 2004-February 2008 (Total: 33 months) (Total months for the two phases	August 2004-November 2007 (Total: 32 months) (Total months for the two phases combined:

[5] The school buildings provided in the project have gable roofs, as shown in the photo on the first page.

	combined: 40 months)	39 months) (vs. Plan: 96% and 98%, respectively)

【Diffrerence between the schedule and the actual period】

The project was completed almost as scheduled. There is no disparity between the plan and the actual performance. Incidentally, most of the roads in the project sites are unpaved. These roads get sunken during the rainy season, thus making access extremely difficult. During the implementation of the project, torrential rain, heavier than expected, delayed the progress of the project, but due to the fervent efforts and coordination of the construction contractor and local vendors, the completion schedule was kept. It must be noted that even during the ex-post evaluation, the Burkinabe government and other official parties expressed appreciation for this.

In light of the above, both the project period and project cost were mostly as planned; therefore the efficiency of this project is high.

3.3 Effectiveness[6] (Rating: ③)

3.3.1 Quantitative Effects

The actual values of indicators until now are as follows:

As for quantitative effects, the data taken in the initial target year 2008 and the latest data as of the ex-post evaluation (2010) were compared in order to verify the accomplishment.

As described later in the "Impact" section, the primary schools provided by the project are well-accepted by local communities and a greater number of students than expected are enrolled. For this reason, although the target number of students per classroom was achieved in 2008, the year of the completion of the construction (target year), it was again exceeded at the time of the ex-post evaluation. Concerning the demand fulfillment rate of accommodations for teachers, on the other hand, the data could not be compared on equal footing since the basis of calculating the target value and the value itself at the time of planning were unavailable[7]. Nevertheless, it is presumable that it has gone below the target level, as the number of teachers has increased in accordance with the increase in the number of students.

Table 7 Accomplishment of target operation effect indicators

Indicator	Reference (2004)	Target (2008)	Actual performance (2008)	Actual performance (Latest:2010)
Total no. of students at all project schools	12,223		17,423	20,035
Total no. of students/ classroom at all project schools	102	61	59.8	66.3
Rate of filled vacancy for	18%	88%	82.2%	75.1%

[6] Effectiveness is evaluated taking impacts into consideration.

[7] The denominator of the reference and target values (150) set at the time of planning is the number of classrooms needed at the schools included in the project (The government's basic policy for school construction stipulates that the number of classrooms equals to the number of accommodations for teachers.) The necessary number of classrooms was determined by the basic design study team visiting the classrooms at all the primary schools included in the project and assessing the usability of existing classrooms. On the other hand, the Ministry of Basic Education does not have similar data after the completion of the project, which makes it impossible to compare on equal footing.

teachers accommodations at all project schools	(27/150)	(132/150)	(148**/180)	(151/201)

*: The denominator of the actual value of the demand fulfillment rate for accommodations for teachers indicates the total number of teachers (180 for 2008 and 201 for 2010.)

**: Of the 148 accommodation buildings, 96 were constructed under the project and the remaining 25 by the Burkinabe government or donors.

3.3.2 Qualitative Effects

The following five items are the qualitative effects expected to be brought about as a result of implementing the project, and all are confirmed to be done up to now. Item (5) will be detailed in the following section concerning impacts, as it seems more appropriate to be discussed as a part of impacts.

(1) The classroom environment is improved in accordance with an improved number of students per classroom by adding and rehabilitating classrooms.
(2) The teachers retention rate is improved by building accommodations for teachers.
(3) The sanitation environment is improved by providing toilet facilities.
(4) The water environment is improved by installing water supply facilities (school wells).
(5) The school management is improved as a result of adequate management of teaching materials and others by constructing the headmaster's office and classroom buildings with storerooms.

For effect (1) "Improvement of the classroom environment (improving the overcrowds situation), the effect has obviously presented itself as evidenced by the figures cited in the quantitative effect section are improved. Furthermore, in the beneficiary survey carried out during the ex-post evaluation, an overwhelming majority (approximately 90%) of the respondents expressed, "The overcrowds in classrooms has been mitigated compared with the past."

Table 8 Acknowledging the improvement in overcrowds (response from teachers and PTA)

	Improved significantly	Improved in general	No big change	Deteriorated	Uncertain	Total
No. of respondents	64	34	5	1	4	108
%	59.3	31.5	4.6	0.9	3.7	100.0

Note: Response from 81 teachers and 27 PTA members.
Source: Results from the beneficiary survey

Effect (2) "Improvement of teachers retention rate by constructing accommodations for teachers" is one of the items that were expected to be realized at the time of planning the project. Schools in rural areas, just like the project sites, are often staffed with relatively young teachers. However, due to a gap between the living environment and their hopes, they request for job transfer or simply quit the job, in many cases. For this, providing new accommodations for teachers was expected to serve as a motivation that boosts the retention rate. As a matter of fact, the beneficiary survey has confirmed the effect (more than 70% of the respondents or more than 90%, if the responses "Uncertain" are removed, acknowledged improvements.)

Table 9 Improving the teachers retention rate by newly-constructed accommodations (Response from teachers and PTA)

	Improved significantly	Improved in general	No big change	Deteriorated	Uncertain	Total
No. of respondents	56	25	4	4	19	108
%	51.9	23.1	3.7	3.7	17.6	100.0

Note: Response from 81 teachers and 27 PTA members.
Source: Results from the beneficiary survey

Concerning qualitative effect (3) "Improvement of the sanitation environment by providing toilet facilities", the sanitation environment has obviously improved by larger and apparently more sanitary facilities than previous ones. Also, the provision of toilet facilities had a secondary effect of promoting education on sanitation.

The marked effect is supported partly by the improved specifications for toilets based on the lessons learned in the preceding projects. In the First and the Second Project, as there was no external door, residents in the vicinity also used the facilities quite often, making it difficult to manage the toilet building. Thus, in the project, an addition of external doors, application of open-roof structure in view of students who hesitate to go to toilets because it is dark inside, and other changes were implemented. These changes to the specifications have contributed to the realization of the qualitative effect.

Table 10 Acknowledging the improvement of the sanitation environment through provision of toilet facilities (Response from teachers and PTA)

	Improved significantly	Improved in general	No big change	Deteriorated	Uncertain	Total
No. of respondents	65	15	6	4	18	108
%	60.2	13.9	5.6	3.7	16.7	100.0

Note: Response from 78 teachers and 18 PTA members.
Source: Results from the beneficiary survey

As far as effect (4) "Improvement of the water environment by installing water supply facilities" is concerned, the water supply facilities (school wells) were, except at two sites, properly utilized, proving that the provision of water supply facilities contributed to the improved water environment at the project schools. (It should be noted, however, that the operational status of the wells at Kelembali Primary School and Sourgoubila Primary School in Loroum Province was not confirmed. According to sources at the sites, the wells are dried up and not usable.) The improvement of the water environment will be more elaborately discussed in the following section concerning impacts of the project, in association with changes in the waterborne disease situation. This section hereafter, therefore, focuses on the effects of soft components carried out in conjunction with the provision of water supply facilities[8].

[8] The soft components were provided twice, in Phase 1 and Phase 2, with an input of 1.0MM (Japanese consultant)*2 and 1.7MM (local consultant)*2. The activities mainly focused on the establishment of the Committee of Well Operation and Maintenance and also covered the formulation of operational rules, helping secure funds, and establishment of a system for communicating with pump vendors. Any technical assistance for the implementation agencies of the central and local governments is not included (except collaborative efforts of the implementing agencies to participate in workshops for residents.)

As a result of a verification on the outcomes of the soft components associated with water supply facilities in the ex-post evaluation, the implementation was evaluated to be effective in the following three standpoints: 1) The Committee of Well Operation and Maintenance was established without fail; 2) The project provided support in obtaining consensus of local residents with respect to the use of school wells; and 3) A fund for maintenance was secured.

Outcomes from 1) setting up of the Committee of Well Operation and Maintenance and 2) obtaining of consensus

The setting up of a standalone committee dedicated to the operation of wells clarified the responsibilities concerning the maintenance of the wells. (The committee typically consists of 6 to 10 members, including the chair, vice chair, accountant, engineers, sanitarians, and so forth.) School wells are by definition officially available to serve school staff and students with priority, but at many schools they were also used by the residents in the community. Under such circumstances, it should be highly evaluated as a major outcome that the residents' assembly held as part of the soft components provided an opportunity to establish the rules concerning the use of school wells and deepened the understanding of the residents. (For example, Gantin Primary School in Kourweogo Province locks the well during the school off hours, but there is no dispute with the residents.)

3) Securement of the maintenance fund

Securing a fund dedicated to the operation of wells is highly effective over a short term. Considering the local culture in which it is difficult to attain agreement with making a reserve fund for any application that seems unnecessary or non-urgent, establishment of fund for maintenance as a precondition, was so effective. As a matter of fact, many schools have used their fund to repair the wells since the installation.

Additionally, the "School Well Operation and Maintenance Manual," created as part of the soft components, is a ten-page document which defines the structure and functions of the committee, importance of the reserve fund, precautions in terms of sanitation, necessity for maintenance, and other essential elements. The manual does not have the nature of providing answers to technical questions, probably because due to the low literacy rates in rural areas in the country and there was little expectation for manuals to play a significant role. It is deemed appropriate that the soft component activities paid attention more on workshops for direct interaction with residents, and kept the contents of the manual to bare minimum[9].

【For reference—verification of the effects of assistance)

[9] The awareness-raising workshop for residents was held in seven schools. One school was chosen in each of the seven provinces where the project schools are distributed. It was held with the attendance of provincial officials. Although the workshop was held at seven schools only, the other activities related to the assistance for wells, such as the setting up of the committee, were carried out at all the 41 schools.

The evaluator attempted to verify the effects of the soft components, regarding items 1) to 3) above, by addressing the board members of the well maintenance committee with a question of what they presume the operation of the school wells would have become of today without the assistance through the soft components, by carrying out the beneficiary survey.

In conclusion, they responded that if the soft components had not been provided, "There would have been no rule in relation to operation or even if a set of rules were in place, the operation would have been in a mess" (from approximately 60% of the respondents) and "There would have been no reserve fund or even if the fund was in place, the amount would not have reached 75,000 CFA, stipulated by the soft component, and the operation would have been in a mess" (from approximately 80% of the respondents.) On the other hand, the response to the question about the setting-up of the committee was numerically low, since the Burkinabe government now encourages setting up of a committee for a well in community, or virtually any type of wells. (Roughly 40% expressed "Even without the soft component, the committee would have been in place.")

Generally speaking, however, it is safe to conclude that most people appraise the soft components as to back up the operation of school wells in the financial and structural aspects[10].

Table 11 Supposition on the establishment and operation of the Committee of Well Operation and Maintenance (on an assumption that soft components were not provided)

	The committee would not have been established.	The committee would have been established but its organizational capability would have been lower than it is now.	The committee would have been established and its capability would have been about the same.	The committee would have been established but its organizational capability would have been higher than it is now.	Total
No. of respondents	13	2	1	11	27
%	48.1	7.4	3.7	40.7	100.0

Note: Response from board members of the Committee of Well Operation and Maintenance
Source: Results from the beneficiary survey

Table 12 Supposition on the establishment and operation of the Well Management Rules

	No rules would have been set up and the well management would have been in a mess.	No rules would have been set up but there would have been no problem in the well management.	There would have been rules but the management would have been in a mess.	There would have been rules and there would have been no problem in the well management.	Total
No. of respondents	10	4	8	5	27
%	37.0	14.8	29.6	18.5	100.0

Note: Response from board members of the Committee of Well Operation and Maintenance
Source: Results from the beneficiary survey

[10] In Tables 12-14, some responded that the situation would have been the same with their own efforts and without the assistance provided by the soft components. The reason for such response is probably that the board members of the committee are "chosen" and "trained" in the course of the project and they have developed confidence in their own ability, which made them think "We could have done it by ourselves." However, some parents' associations regard that as "overconfidence"; it is more like confidence without grounds. In any case, the above response is presumably as a result of such a background.

Table 13 Supposition on the establishment of reserve fund and management of the wells

	There would have been no reserve fund and the management would have been in a mess.	There would have been no reserve fund but there would have been no problem in the well management.	There would have been a fund yet the amount goes below 75,000CFA, and the management would have been in a mess.	There would have been a fund and there would have been no problem in the well management.	Total
No. of respondents	8	4	13	2	27
%	29.6	14.8	48.1	7.4	100.0

Note: Response from board members of the Committee of Well Operation and Maintenance
Source: Results from the beneficiary survey

In light of the above, this project has largely achieved its objectives, therefore its effectiveness is high.

3.4 Impact

3.4.1 Intended Impacts

As the result of implementing the project, the following impacts have been brought about.

(1) Incentives to enrollment

Through the construction of schools under the project, many parents who had no interest in enrolling children in primary schools started doing so. During the field study, the evaluator was told by a large number of parents that they were highly motivated to enroll their children by looking at the newly-developed schools. This is also endorsed by the growth rates of students at the project schools higher than the national average, as shown in the table below[11].

Table 14 Comparison between the number of students at 27 schools included in the beneficiary survey and the national average over time

	2006/07 (before the project)	2009/10 (Latest data)
27 schools surveyed	5,178	8,402
Growth rate (2002/03 - 2009/10)	—	62.3%
All schools in 7 provinces included in the project	282,281	377,104
Growth rate (2002/03 - 2009/10)	—	33.5%
Nationwide	1,561,258	2,047,630
Growth rate (2002/03 - 2009/10)	—	31.2%

Source: Beneficiary survey and materials provided by the Ministry of Basic Education

(2) Motivating students to learn

The improved learning environment has motivated students to learn; at least 90% of the students expressed that the upgraded schools facilities highly motivated them to study.

[11] One of the factors behind the increased enrollment ratio, the incentive effect of school lunch should be cited as an important background, apart from the awareness reform in parents. Incidentally, in the majority of the cases, school lunch is prepared by the parents' association (or mothers' association) based on subsidies of the government and grains and other foodstuff brought in by students.

Table 15 Recognition of students on their learning motivation

	Highly motivated	Somewhat motivated	Not changed	Worsened	Total
Level of motivation for learning heightened by upgraded school facilities	1,205 (88.1%)	113 (8.3%)	7 (0.5%)	42 (3.1%)	1,367

Note: All the respondents are the highest grade students, for ensuring a comparison between before and after the implementation.
Source: Results from the beneficiary survey

(3) Improved rate of successful examinees of primary education completion test and ratio of repeaters of the same grade

The success rate of primary education completion test at the project schools is, though slightly, higher than the national average. The ratio of repeaters of the same grade as well shows favorable figures compared with the national average.

Table 16 Change in the pass rate of graduation examination in primary education
(Average among 9 project schools in Bam Province)

	2007	2008	2009	2010
9 project schools (Bam Province)	71.3%	71.2%	76.1%	76.0%
National average	66.8%	58.5%	72.7%	65.9%

Note: No data were available other than those of Bam Province.
Source: Documents provided by the Ministry of Basic Education

Table 17 Change in the rate of repeaters of the same year over time
(Average among the 27 schools included in the beneficiary survey)

	2008	2009	2010
27 schools surveyed	10.9%	10.4%	6.9%
National average	11.6%	10.9%	8.7%

Source: Results from the beneficiary survey, Documents provided by the Ministry of Basic Education

(4) Impact on the management organization and capability concerning documents and teaching materials

With the storerooms to keep documents and teaching materials, the project schools appear to be now able to store and utilize teaching materials and documents in a proper manner. In the beneficiary survey targeting teachers, more than 90% of the responding teachers expressed that the organization and actual conditions concerning the administration of documents and teaching materials were improved. In addition, some teachers reported that it was not only the storerooms for documents and teaching materials but the lockers installed in classrooms that have contributed greatly to the management of documents.

3.4.2 Other Impacts

(1) Impacts on the Natural Environment

There was no positive or negative impact on the natural environment observed.

(2) Land Acquisition and Resettlement

Land acquisition and resettlement did not take place in this project.

(3) Other impact

1) Increase in the number of students in accordance with mounting popularity and name recognition

While the project brought about substantial positive impact in increasing the enrollment rate, as described above, in some schools, more children than initially envisioned have come, raising the number of students per classroom.

Incidentally, the government of Burkina Faso today limits the number of students per classroom to 80 at the maximum. When this upper limit is exceeded, a new school or new classroom must be constructed[12]. Accordingly, in a medium and long term, the number of students will expectedly be alleviated again, but for the time being, the number of students per classroom at the project schools is foreseen to continue to rise because priority is given to the temporary thatched classrooms spread across the regions.

2) Impact on waterborne diseases

The water supply facilities (school wells) provided under the project is presumed as to contribute to a lower incidence of waterborne diseases among children. Children spent time not only at schools but also in the neighborhood of their home and on commuting routes; thus, it is not very rational to link water supply facilities at schools directly with waterborne diseases, but at least it is worth noting that quite a few teachers and parents expressed this recognition. Before the implementation of the project, children reportedly drank water from the shallow wells in the vicinity of the school, meaning that they took in unsanitary water on the way to and from school. Consequently, it is at least safe to say that the project contributed somehow to the decrease in waterborne diseases.

Table 18 Impression of teachers and parents with changes in the incidence of waterborne diseases

	Decreased	Stayed the same (Not many from the past)	Stayed the same level (As many as before)	Increased	Uncertain	Total
No. of respondents	58	6	14	4	13	95
%	61.1	6.3	14.7	4.2	13.7	100.0

Source: Results from the beneficiary survey

In this way, the project had substantial impacts, such as incentives to enrollment and positive effects of motivating children to learn.

3.5 Sustainability (Rating: ②)

As for sustainability, the school facilities such as classrooms and water supply facilities (school wells) are evaluated separately.

[12] The Burkinabe standards for constructing educational facilities stipulate the number of students as 80 at the maximum, 60 for the standard, and 30 at the minimum (that is, the project sought the standard number of students.)

3.5.1 Structural Aspects of Operation and Maintenance

1) School facilities

(Government's aspect)

The responsibility for maintenance of school facilities has changed since 2010 within the framework of governmental organizations. The responsibility for maintenance and repair of school facilities has been delegated to communes or local authorities, by the Ministry of Basic Education and Literacy. However, the human resources and ability of communes are extremely limited. Without personnel at the Ministry dispatched for a short period of time, not much progress can be made.

In the meantime, the ministerial officials dispatched to provide support is mainly dedicated to drafting of budgets and preparation of documents. Assisting in and instructing on routine school facility maintenance work and similar kinds of tasks are given lower priority. As a result, the organization for providing guidance on the maintenance of school facilities and conducting continuous monitoring is evaluated as not to have high sustainability.

(Aspect of school and parents' association)

Schools and parents' associations are in charge of routine maintenance of facilities. It was reported in the basic design study that the organizational power of the parents' association varies from school to school. However, in this field study, it was observed that almost all the parents' association spent their own membership fees on constructing walls for the accommodations for teachers by themselves, showing proactive involvement. Furthermore, there are some examples of classrooms constructed by parents' associations. Judging from these actual cases, many parents' associations are deemed as to have, though with some variations, certain levels of organizational power and ability to take action.

In addition to parents' associations, each school is required to set up a school steering committee (COGES) since 2008, according to the Law Concerning the Establishment of COGES (2008-236)[13]. It is expected that the synergy effect to be generated between COGES and the parents' association will lead to a more solid organization. At the time of ex-post evaluation, however, COGES was put in place only in certain regions (Kourweogo Province in this project), and hence the intended effect was not observed.

2) School wells

The Committee of Well Operation and Maintenance is responsible for maintaining school wells. The organizational structure (consisting of about 6 to 10 members, including the chair, vice chair, accountant, engineers, sanitarians, and so forth) is deemed appropriate. The roles assumed by the Committee of Well Operation and Maintenance, some of which will be described in the following section about the technical

[13] COGES was founded with the aims to "promote participation of residents", "improve the relationship between residents and schools" and "revitalize communities." It is characteristic in that the election for COGES members should be transparent and extensive and also that the residents themselves prepare a school activity plan. In other words, the outstanding feature is that it has a strategy to involve the entire community, not just the parents' association as is the case today, in the school management. (based on the documents from JICA's technical cooperation "Projet d'Appui aux Comites de Gestion d'Ecole (COGES)")

aspect, center on prevention of destruction and robbery of wells, communicating with external repair contractors, and collection of necessary repair costs. The current organization is considered sufficient for fulfilling these main functions.

3.5.2 Technical Aspects of Operation and Maintenance

1) School facilities

Schools and parents' associations are capable enough to handle routine maintenance work. Regarding extensive damage, on the other hand, repair needs to be outsourced to local contractors. In that case as well, since there are many local contractors involved in construction business in the country and furthermore the specifications adopted in the project are consistent with the specifications in the country, the technical aspects can be handled without a problem.

2) School wells

While the Committee of Well Operation and Maintenance is capable of carrying out very simple repair work, their basic policy is to rely on outsourcees regarding damaged wells. There are a large number of well repair vendors, and thus it is easy to find a vendor to deal with most kinds of repair work in the local community or the central city nearby.

Incidentally, the above-mentioned basic policy indicates the government's policy for maintenance of water supply facilities. In simple terms, it can be outlined as "The responsibility for technical matters relating to maintenance of wells should not be excessively left to local residents." Based on the past experience, the government is aware that maintenance work done by residents, who have no technical background, has frequently resulted in worsening the condition. The policy, therefore, reflects a realistic thought of the government, and is put in effect as "Water Supply Facility Maintenance Reform Act (2000-5/4/PRES/PM/MEE Decree)."

Based on the above, in the technical aspect, the Committee of Well Operation and Maintenance is expected to perform extremely basic work and communicate with external vendors. Judging from the past performance, there seems to be no problem to this end (See Table 16 below).

3.5.3 Financial Aspects of Operation and Maintenance

1) School facilities

Small-scale, routine repair and maintenance work has been carried out with membership fees of parents' associations. This scheme is deemed feasible also in the future, with respect to small-scale projects[14]. On the other hand, large-scale repair work depends on commune's budgets. Such extensive damage that hampers lessons from taking place is supposedly dealt with by the commun's budget. However, many communes presently place priority to rehabilitation of thatched classrooms and others, and thus budget allocation to a project school depends on the urgency of the repair. It should be added that the ratio

[14] It must be noted, however, that some do or can not pay the membership fees. Many associations recognizes the difficulty of equitable collection of fees as an issue to be addressed in the management of the association. (In the beneficiary survey, 8 out of 27 associations pointed at this as an issue.)

of independent financial sources to the total revenue of communes, in many cases, is fairly minimal, and in actuality the budget is comprised mainly of allotment of the national budget and funds provided under donors' programs[15]. Judging from the budget situation, when repair of large-scale damage is taken into consideration, the current financial situation is deemed as not sustainable at this point in time.

【For reference: commune-level initiatives】

In the midst of decentralization, the administrations of schools and communes are responsible for maintaining school facilities and wells. The size of a commune ranges from 100 to 300 km2, 5 to 15 villages, and 10,000 to 30,000 people, though it varies between suburban and rural areas.

The following gives an example of Bingo Commune (Boulkiemde Province), where Tanguin Primary School, one of the project schools, is situated. The budgets for construction of classrooms and rehabilitation of wells referred in the following table are quoted from the National Program of Land Management budget provided by the World Bank, with the final year being 2011. This budget accounts for a large portion of the commune's budget, but will most likely vanish in 2012 onward. The budget allocated to classroom rehabilitation is sourced by the commune's own budget.

Table 19: Actual spending by Bingo Commune (in association with classrooms and wells) Unit: CFA

		2008	2009	2010
Investment in all sectors		7,696,377	29,741,196	36,485,547
	Classroom construction	0	4,917,379	4,375,561
	Classroom rehabilitation	0	992,970	992,970
	Setting-up of wells	0	0	0
	Well rehabilitation	0	1,958,000	1,882,100

Note: "Investment in all sectors" in the top row covers not only the educational sector but all the sectors managed by the commune.
Source: Documents of Bingo Commune

2) School wells

The school wells provided by the project are more than three years old now. Therefore, it is likely that they will face breakdown more frequently from now on. Though at a minor level, many wells have undergone repair already (most of the cases were repairing joints and screws of the pedal.) As a result, 75,000CFA (approximately 13,000 yen), reserved in the soft components of the project, is already consumed to certain extents in most of the Well Operation and Maintenance Committees.

In the soft components, it was recommended to continuously maintain the maintenance fund, but except a small number of cases, the recommendation was not observed. However, this cannot be helped in a way because it is more typical reaction in the local culture not to collect necessary expenses until repair is needed.

Table 20 No. of actual repair projects for school wells

	0	0	1	2	3	More than 3	Total

[15] Communes' own revenues are composed mainly of taxes levied on selling in the market and toll charges at checkpoints in association with movement of livestock and vehicle passage.

	(No need)	(Need existed but repair was not done.)					
No. of respondents	4	0	6	6	6	2	24
%	16.7	0.0	25.0	25.0	25.0	8.3	－

Source: Results from the beneficiary survey

Table 21 Balance of the well operation and maintenance fund (Unit: CFA)

	0-10,000	10,000-30,000	30,000-75,000	75,000-	Don't know	Total
No. of respondents	3	6	9	3	6	27
%	11.1	22.2	33.3	11.1	22.2	100.0

Note: The minimum balance of 4,500CFA, and the maximum was 105,000CFA.
Source: Results from the beneficiary survey

Whether it is feasible to collect necessary expenses for a well failure in the future depends largely on factors like the positional relationship between the school well and the community well, which can serve as an alternative, and organizational powers of the school and the parents' association. Therefore, there exists a certain risk because it is not clear whether a necessary amount of repair expenses can be secured in case of a severe failure to the well.

【For reference】

With respect to the above point, the evaluator tentatively collected information on the positional relationship between school wells and alternative wells as part of the beneficiary survey. As a result of interviews with officials at the Ministry of Education and Literacy and school staff, 500 m was seemingly the borderline for people to get water without bother. Thus, if an alternative well can only be found 500 m or more away from the school well, it is more likely that the parents' association and other contribute repair expenses, according to a surmise made by an interviewee.

Table 22 Distance to alternative wells to school ones (Unit: meter)

	0-300	300-500	500-700	700-1500	Total
No. of respondents	2	14	8	3	27
%	7.4	51.9	29.6	11.1	100.0

Source: Results from the beneficiary survey

3.5.4 Current Status of Operation and Maintenance

The structure of school facilities adopted is designed to withstand foreseeable natural disasters, whereas the adopted specifications allow maintenance based on the construction techniques used in Burkina Faso. Specifically, roof damage caused by strong wind is a typical case of damage to school facilities; the project employed a short rivet pitch for roof to realize higher durability than other schools in general. Additionally, even when a facility requires repair, all materials are procurable in the country. Thus, it is very unlikely that any problem should occur in procuring materials.

For school wells, likewise, the pedal pump type well was adopted because it is less prone to failure than other types and all the spare parts are available in the country.

In light of the above, both the school facilities and school wells are deemed as highly sustainable from the viewpoints of both durability and availability of spare parts.

Some problems have been observed in terms of structural and financial aspects of maintenance; therefore, sustainability of this project is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

Burkina Faso including the target area of the project suffered from the significant lack of classrooms and extreme concentration of students per class. Thus, building new classrooms in the project was highly consistent with the needs of Burkina Faso. The implementation of the project reduced the average number of students per classroom from 102 to 59.8, thereby improving the educational environment by far. The accommodations for teachers also provided under the project contributed to a higher retention rate of teachers and the school wells provided improved the water sanitation environment at school. Furthermore, the project brought about incentive effects of encouraging children to go to school and other positive impacts, such as stimulating motivation for learning and reducing the number of repeaters of the same grade.

On the other hand, in the aspect of sustainability, since the responsibility for school maintenance was recently transferred from the central government to the commune, the support mechanism of the administration has weakened. While routine maintenance is handled individually by the parents' association and other parties concerned, which shows good performance basically until now, large-scale repair needs in the future will be likely to ask structural as well as financial challenges.

Overall, the project is evaluated to be highly satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the implementing agency.

The task of maintaining school facilities has recently been transferred to communes, but the current level of ability of commune staff is extremely limited. Without the support of personnel dispatched from the Ministry of Basic Education and Literacy, it would be very difficult to carry out work smoothly. Therefore, it is essential to reinforce the ability of commune staff involved in the education sector, from a mid- and long-term perspective. As a preliminary step forward, the scopes of tasks assigned to the office of school inspectors[16] and the commune staff must clearly be defined. After setting the contents of work and the level expected of commune staff, it is recommended to carry out the above-mentioned capacity building efforts.

[16] Local administrative officers in charge of education.

4.2.2 Recommendations to JICA

None in particular.

4.3 Lessons Learned

1. The literacy rates in the areas included in the project are low in general. Under such circumstances, the project provided a ten-page "Manual for School Well Maintenance" as part of the soft components. The document provides bare minimum information and is not intended to provide answers to technical questions. This approach is considered realistic for a project in such areas with low literacy rates. In the light of this situation, the project rightfully focused on technical transfer through demonstrations at workshops.

Soft components typically take up preparation of manuals as one of the pillar outputs. However, depending on the literacy rate and other factors at the project site, it is considered more effective to provide technical assistance by handling the manual preparation task in a flexible way and allocating more time to demonstration.

2. It is only three to five years since the completion of the primary schools constructed under the project. Usually, a well (borehole) starts to exhibit various breakdowns five years after it was put in use, and the sustainable management ability is called into question[17]. Thus, in order to evaluate sustainability of managing "wells", ex-post evaluation should be conducted at right timing for assessing and judging the maintenance and repair conditions after the completion of the project.

[17] Based on an interview with an expert who is a member of the team for the "Project for Improving Water Supply Facility Management and Sanitation in Central Plateau Region in Burkina Faso" to provide assistance in operation and maintenance of community wells in the country.