

Republic of Mali

FY2015 Ex-Post Evaluation of Japanese Grant Aid Project  
“Project for the Construction of Elementary Schools (phase III)”

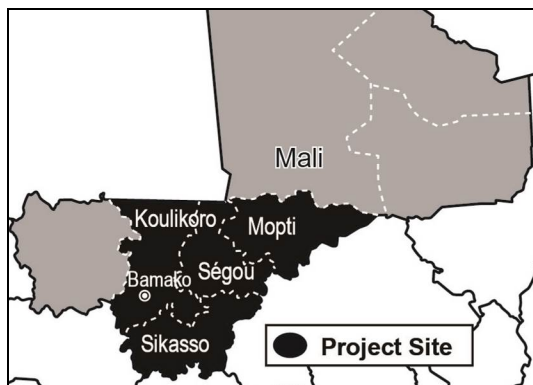
External Evaluator: Miho Kawahatsu, OPMAC Corporation

## **0. Summary**

The objective of this project was to mitigate overcrowding in classrooms, to assure better access to, and to improve the quality of, the sanitary learning environment in primary education in 4 targeted regions (Koulikoro, Ségou, Sikasso, Mopti) in Mali, by the construction of facilities, the procurement of classroom furniture and the strengthening of school management organizations for targeted primary schools, thereby contributing to improvement of access to, and educational environment in primary education in Mali. The relevance of this project is high as it is relevant to the Mali’s policies of emphasizing better access to primary education and development needs of improving the enrollment rates by construction of elementary schools in targeted 4 regions Mali both at the time of planning and the ex-post evaluation. Also, it is relevant to the ODA policy of Japan at the time of planning. On the other hand, although the project period was within the plan, changes in the specifications of construction materials meant that the project cost was more than the plan. Therefore, the efficiency of the project is fair. With regard to effectiveness, we have confirmed that the total number of pupils has increased, and at the same time, overcrowding has been mitigated to some extent. With regard to improvement of the teaching and learning environment, among other things, the upgrading of school facilities is highly appreciated by pupils’ parents as well as other people in the community of the target region of Koulikoro. Furthermore, as for school management, it is deemed that transparency in accounting and cleaning duties has notably improved. Motivated by the good reputation, the number of parents who hope to send their children and the number of children who hope to go to these schools have increased. This may have synergized with reducing the disincentives of girls’ education and also in enlightening the community about the importance of primary education. Furthermore, with regard to impact, a promotion of public morality among pupils has been manifested in their voluntary cleaning activities. Thus, the effectiveness and impact of this project are high. Regarding sustainability, the communities have organized themselves to carry out the operation and management activities. There is no problem in the technical aspects and the community have carried out simple repairs and cleaning on a daily basis. With regard to the financial aspect, although the cost of operation and maintenance has risen as a result of the project, it was confirmed that, as the community are willing to accept the cost burden, along with principle of benefit has been gradually shared among them. Therefore, the sustainability of the project is high.

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

## 1. Project Description



Project locations



School building "Baguineda-A" in Koulikoro

### 1.1 Background

In its Poverty Reduction Strategy Paper adopted in 2002 (Cadre Stratégique pour la Croissance et la Réduction de la Pauvreté: CSCRP), the government of Mali emphasized that education is one of the most prioritized sectors for development. As such, the goal of a gross enrollment rate in primary education of 95% by 2010 was set. In Mali, primary education consists of a total of 9 years of compulsory schooling combining a first cycle of 6 years with a second cycle of 3 years. As a result of the government's endeavors for improvements in the school environment of primary education, the total enrollment rate of the first cycle had increased to 74% in 2004. However, the enrollment rates have shown glaring gender and regional gaps. A major cause of the low enrollment rate is deemed to be the poor condition of school facilities and equipment. Although the share of the education budget in the state budget is relatively high in Mali, most of the funding has been disbursed for operating costs and little has been spent on the improvement of facilities and equipment. Thus, there has been an absolute shortage of classrooms leaving many schools no choice but to limit the admission of children. Moreover, existing school facilities and equipment, particularly in rural areas, have a safety issue as, not having been improved, they are mostly poor-quality and decrepit. Thus, access to primary education in rural areas has been a serious problem.

On the other hand, decentralization of the delivery of public services was put into effect by law in 2002, and since then state policy has facilitated the process of decentralization. In the education sector, jurisdictional power has been transferred to each local commune<sup>1</sup>. Specifically in this context, each school management committee<sup>2</sup> (Comité de Gestion Scolaire: CGS) must run local primary schools and play a responsible role in terms of the operation and maintenance.

<sup>1</sup> The smallest public administrative unit.

<sup>2</sup> Based on the Education Act and Law for the establishment of CGS in 2004 aligned with an overall decentralization policy, the establishment of CGS has been government-mandated as "all educational institutions should establish CGSs (3-year term) and this should be steered by the participation of educators, parents and other concerned parties."

It has been necessary that school management systems are strengthened to be responsible even for funding it by integrating local community into the activities.

As outlined above, the government of Mali has put priority on the increase of enrollment rate in the first cycle of primary education in rural areas. Having duly selected target communes in the light of scarcity of classrooms and urgency by area, the government of Mali sent a request to the government of Japan for grant aid for the construction of school facilities and the provision of school furniture, as well as for consulting support for the reinforcement of CGS. In response to this request, the project was implemented in 29 communes in the target 4 regions.

## 1.2 Project Outline

The objective of this project was to mitigate overcrowding in classrooms, to assure better access to, and to improve the quality of, the sanitary learning environment in primary education in 4 targeted regions (Koulikoro, Ségou, Sikasso, Mopti) in Mali, by the construction of facilities, the procurement of classroom furniture and the strengthening of school management organizations for targeted primary schools, thereby contributing to improvement of access to, and educational environment in primary education in Mali

### <Grant Aid Project>

E/N Grant Limit / Actual Grant Amount	809 million yen (I/II), 983 million yen (II/II) / 808 million yen (I/II), 980 million yen (II/II)
Exchange of Notes Date	June, 2006 (I/II) June, 2007 (II/II)
Implementing Agency	Ministry of National Education <sup>3</sup> , Department of Planning and Statistics (Ministère de l'Education Nationale, cellule de planification et de Statistique)
Project Completion Date	February, 2008 (I/II) December 2008 (II/II)
Main Contractor	Toda Corporation
Main Consultant	Fukunaga Architects-Engineers
Basic Design	January, 2006
Related Projects	[Technical Corporation] - Project for Support to School Management Committees, Phase I (2008-2011) - Project to Support for School Management Committees, Phase II (2011-2015)

<sup>3</sup> After project completion and before the ex-post evaluation, the name of the Implementing agency was changed several times. At the time of the ex-post evaluation, the name was the same as at the time of project planning.

	<p>[Grant Aid ]</p> <ul style="list-style-type: none"> <li>- Project for Construction of Elementary Schools, Phase I (1998)</li> <li>- Project for Construction of Elementary Schools, Phase II, 1/3, 2/3 (2002), 3/3 (2004 )</li> <li>- Project for Construction of Elementary Schools, Phase IV (2011)</li> </ul>
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## 2. Outline of the Evaluation Study

### 2.1 External Evaluator

Miho Kawahatsu, OPMAC Corporation

### 2.2 Duration of Evaluation Study

Duration of the Study: October, 2015 – November, 2016

Duration<sup>4</sup> of the Field Study: 14 March, 2016 - 18 March, 2016

### 2.3 Constraints during the Evaluation Study

With regard to the field study of this ex-post evaluation, in response to a terrorist attack on November 2015, a JICA's official ban on travel to Mali was imposed and the external evaluator was unable to visit. Therefore, a local Malian consultant was commissioned to undertake the tasks of interviews with the Implementation agency and collecting information through the field survey. Also, it was decided to take a safety control measure of JICA that the field study would be carried out only in Koulikoro among the 4 regions, due to security concerns in rural regions following the coup d'état in 2012. Under the stewardship of the external evaluator, each analysis of locally collected information and data was discussed and the background detail examined in face-to-face team meetings held in neighboring Senegal. It should be noted however, that data for individual target schools could not be obtained from the Implementing agency and evaluation on effectiveness had to be made using estimated figures calculated from aggregate data reported by education support service centers at district level (Centre d'Animation Pédagogique: CAP<sup>5</sup>). Also, the Implementing agency pointed out that since the coup d'état in 2012, the reliability of method of data collection as well as data credibility have been questionable. Thus, for sake of data consistency, data after 2011 was excluded.

It should also be noted that as this project was completed in 2008, the ex-post evaluation should have been conducted in 2011. It was postponed because of security concerns.

<sup>4</sup> As stated in 2.3 Constraints during the evaluation study: the evaluator could not make the planned visit during the period; the duration of the field survey of this evaluation study was set to be the period of the field survey conducted in target areas in region of Koulikoro by a local Malian consultant.

<sup>5</sup> CAP at the district level is under the jurisdiction of central government, and also under the direct supervision of Academy of Education (Académie d'Enseignement: AE, it is located in nine regions and Bamako): regional agency of central government. The main responsibility of CAP is to conduct surveillance of communes under its charge, to provide technical assistance on education such as training, and to exercise supervision.

### 3. Results of the Evaluation (Overall Rating: A<sup>6</sup>)

#### 3.1 Relevance (Rating: ③<sup>7</sup>)

##### 3.1.1 Relevance to the Development Plan of Mali

The overall development policies of Mali are contained in its Growth and Poverty Reduction Strategy Paper (Cadre Stratégique pour la Croissance et la Réduction de la Pauvreté: CSCRP), and the importance of education had been consistently addressed, in the CSCRP (2002-2006) and the CSCRP (2007-2011). Furthermore, the current CSCRP (2012-2017) which was also in effect at the time of the ex-post evaluation also emphasizes the upgrade of the delivery of public service in education reflecting the national development plan. It can therefore be said that, the necessity of the improvement of education has continued to be addressed. Besides this, in the Action Plan for the Emergency Priorities of the Government (Plan d'Actions Prioritaires d'Urgence du Gouvernement 2013-2014: PAPU) which was adopted after the coup d'état in 2012, there was further prioritization of the reconstruction of the education sector including the construction of educational facilities.

With further regard to specific policy on the education sector, a Ten-Year Education Development Programme (Programme Décennal de Développement de l'Education 2000-2010: PRODEC) had the target of constructing 18,000 classrooms in a decade in order to achieve a 95% gross enrolment rate in primary education by 2010. Also, the Education Sector Investment Programmes (Programmes d'Investissement Sectoriel de l'Education: PISE) were formulated as consecutive multi-year plans. In PISE I (2001-2005) which was implemented before the project planning, the primary aim was the furtherance of the institutionalization of school management through the establishment of the CGS, the decentralization of educational public administration, and better access to education. After project completion, while PISE II (2006-2009) was underway, access to primary education continued to be an important challenging issue. While the priority of PISE III (2010-2013<sup>8</sup>) gradually shifted from quantity to quality, access to primary education remained a high priority objective, with the highlighted improvement of the completion rate<sup>9</sup>.

Stricken by the coup d'état of 2012 as well as natural disasters such as floods triggered by abnormal climate, the fragile education sector, particularly in rural areas, has been in crisis<sup>10</sup>. Emergency measures were therefore adopted in the transitional program until the

<sup>6</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>7</sup> ③: High, ②: Fair, ①: Low

<sup>8</sup> The period of PISE III was extended for a year until 2013 because of a political crisis sparked by the coup d'état of 2012.

<sup>9</sup> Japan International Cooperation Agency, *Study Report on the Basic Education Sector by Country, Mali* (in Japanese), August 2012. p9. [http://open\\_jicareport.jica.go.jp/pdf/12083283.pdf](http://open_jicareport.jica.go.jp/pdf/12083283.pdf)

<sup>10</sup> It was reported that more than 125,000 school children in the north have moved to neighboring countries or to southern Mali and that nearly 44% of the internally displaced children dropped out of school. Although the project did not target any northern regions, people in the north may have migrated to adjacent Mopti and Ségou and these target regions may have been adversely affected.

formulation of the as-yet-unreleased PRODEC II, all of which has aimed at the recovery<sup>11</sup> of the education sector since 2014.

In light of the above, this project, which aimed at the expansion and improvement of primary education facilities, was highly relevant to Mali's development policy and education policy at the time of project planning and the ex-post evaluation.

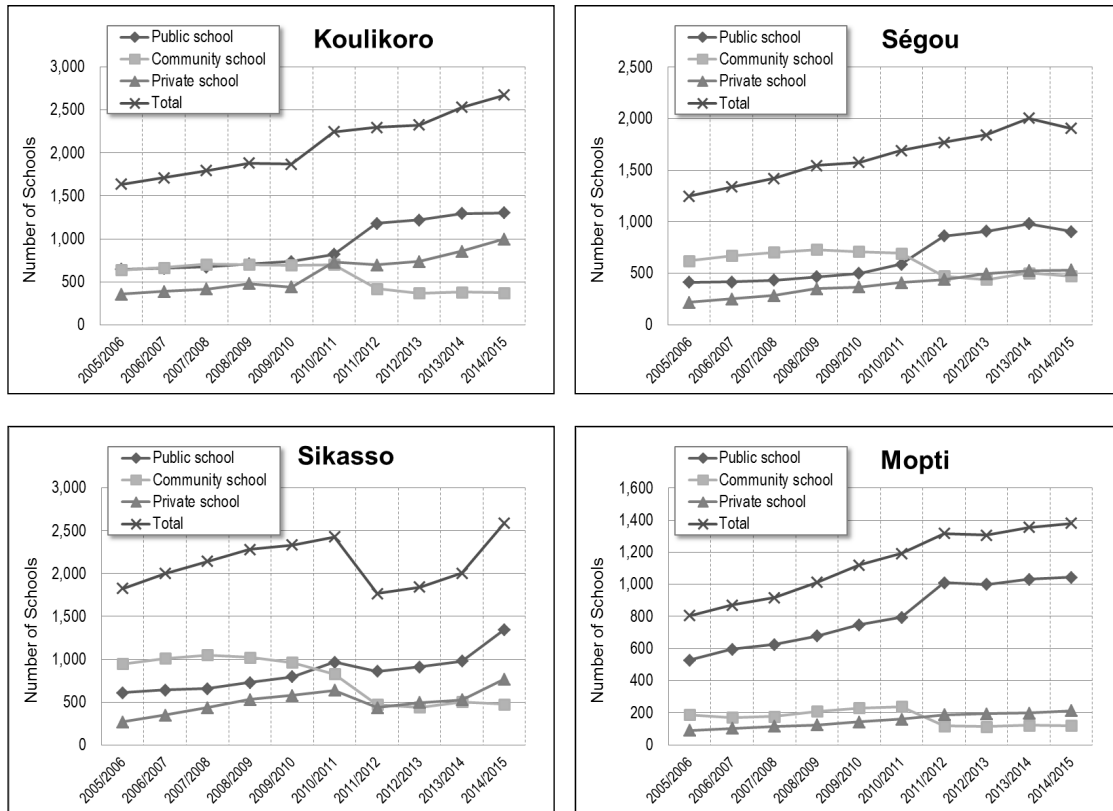
### 3.1.2 Relevance to the Development Needs of Mali

Data obtained from the Implementing agency for the 4 target regions during the period of 2005 to 2015, showed a common trend where, although the number of public and private schools doubled, the number of community schools<sup>12</sup> was on average down by half. This reflects government policy on the conversion to public schools. It also implies that over the decade importance has been consistently attached to the policy of strengthening the supply of public schools.

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<sup>11</sup> During the recovery period after the coup, in order to achieve the Education For All (EFA) goals, policy direction began to change for the reinforcement of the systems for policy implementation such as decentralization along with the strengthening of school management. Priority was also given to training, recruitment and the support of teacher salaries, and better communication and dialogue between all stakeholders was promoted. (Ministère de l'Éducation Nationale, *Rapport d'évaluation Nationale de l'Éducation Pour Tous (EPT) 2015, Payes: Mali*, Novembre 2014, pp4-5).

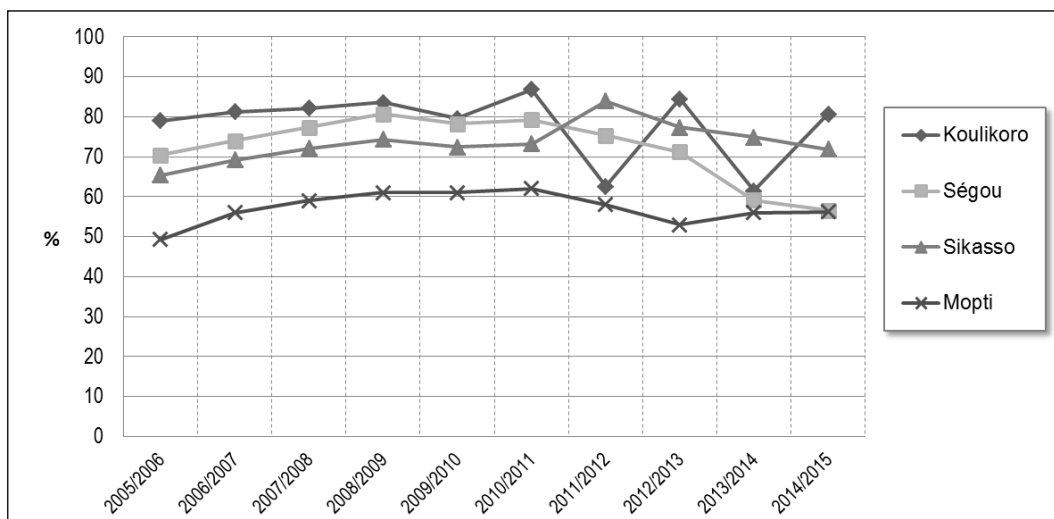
<sup>12</sup> According to the Basic Design Report, where there was no public school in the neighborhood, a "community school" was built by donors or the community as necessary. There were many community schools in the past as the government encouraged their establishment. However, there was no governmental compensation for expenses incurred even in poor rural areas and community had to hire all teachers. More to the point, there were also some cases where the government transferred publicly recruited teachers to community schools. If those community schools then met a certain standard, they were permitted to become public schools.



Source: Compiled by data obtained from the Implementing agency based on *Annuaire Statistique de 2005-2006 à 2014-2015 de la Cellule de Planification et de Statistique du Secteur Education (CPS-SE) du Mali*

Figure 1: The Number of Elementary Schools by Type in 4 Target Regions (2005-2015)

Trends of the gross enrollment rates of primary education over the decade show a difference by region. The rates of Koulikoro fluctuated at the relatively high level of around 80% and showed a slightly increasing trend. The rates of Ségu showed an aggravating trend. The rates of Sikasso did show an improvement but on average throughout the decade, remained almost at the same level. The rates of Mopti remained at the relatively low level of 60%. In any case, none of the 4 target regions had achieved the gross enrollment rate in primary education of 95% by 2010, the national goal set by PRODEC. Meanwhile, the average rate of increase in the population of children aged 7 to 12 in these regions was 4-6%, and consistently continued to increase. In addition, the gender gap in enrollment rate remained at more than 10 % except in Mopti.



Source: Compiled by data obtained from the Implementing agency based on *Annuaire Statistiques de 2005-2006 à 2014-2015 de la Cellule de Planification et de Statistique du Secteur Education (CPS-SE) du Mali*

Figure 2: The Gross Enrollment Rates of 4 Target Regions

According to responses from the Implementing agency, Ministry of National Education, target schools were selected in communes where there had been a serious problem in access to primary education at the time of project planning. It was reported, that in regions of Koulikoro and Mopti in particular, there were many children out of school not only because there were few schools but also because of hardships due to the long commute to school from home. There were still serious needs in these regions at the time of the ex-post evaluation.

Therefore, from the time of the project planning to the time of the ex-post evaluation, the project was consistently relevant to the development needs for the construction of elementary schools and the improvement of the gross enrollment rates of the 4 targeted regions in Mali.

### 3.1.3 Relevance to Japan's ODA Policy

In efforts of Education for All (EFA) and the Millennium Development Goals, both of which were adopted in 2000, the Government of Japan announced the “Basic Education for Growth Initiative (BEGIN)” at the Kananaskis G8 Summit in 2002. This was a commitment to support for basic education in developing countries. Japan's assistance policy for the development of the education sector in Africa in particular was clearly demonstrated through proactive endorsements for the improvement of access to basic education in the Tokyo International Conference on Africa Development (TICAD) series.

According to the Japanese Ministry of Foreign Affairs ODA Country Data Book (2006), the basic policy of ODA toward Mali was to positively consider implementation of Grant Aid and Technical Cooperation Projects in the basic human needs and basic infrastructure



sectors in order to support democratization and economic reform. The basic education sector was set as a priority area for cooperation.

The project was therefore relevant to Japan's ODA policy.

This project has been highly relevant to Mali's development plan and development needs, as well as to Japan's ODA policy. Therefore, its relevance is high.

### 3.2 Efficiency (Rating: ②)

#### 3.2.1 Project Outputs

Details of the planned and actual outputs of the project are shown in Table 1 below.

Table 1: Comparison of Planned and Actual Output of the Project

#### ① Construction of school facilities

	Target regions	Schools		Classrooms		School buildings		School toilets (gender-segregated)	
		planned	actual	planned	actual	planned	actual	planned	actual
I/II	Koulikoro	20	19	81	78	25	26	25	26
	Ségou	13	13	60	60	20	20	20	20
	Subtotal	33	32	141	138	47	46	47	46
II/II	Ségou	13	12	57	54	19	18	19	18
	Sikasso	8	8	39	39	13	13	13	13
	Mopti	14	13	68	60	22	20	22	20
	Subtotal	35	33	162	153	54	51	54	51
Grand total		68	65 (3▼)	303	291 (12▼)	101	97 (4▼)	101	97 (4▼)

Source: Reference document provided by JICA and the Basic Design Report.

#### ② Procurement of school furniture

	Target regions	desk/chair sets, pupils		desk/chair sets, teachers		desk/chair sets, principals		chairs for principals' offices		lockers	
		planned	actual	planned	actual	planned	actual	planned	Actual	planned	actual
I/II	Koulikoro	1944	1872	81	78	12	12	24	24	93	90
	Ségou	1440	1440	60	60	5	5	10	10	65	65
	Subtotal	3384	3312	141	138	17	17	34	34	158	155
II/II	Ségou	1368	1296	57	54	5	5	10	9	62	59
	Sikasso	936	936	39	39	6	6	12	12	45	45
	Mopti	1584	1440	66	60	8	7	16	15	74	67
	Subtotal	3888	3672	162	153	19	18	38	36	181	171
Grand total		7272	6984	303	291	36	35	72	70	339	326

Source: Reference document provided by JICA and the Basic Design Report

③ The number of selected target schools for the soft component<sup>13</sup>

	Koulikoro	Ségou	Sikasso	Mopti	Total
I/II	5	4	0	0	9
II/II	0	2	2	3	7
Total	5	6	2	3	16

Source: Reference document provided by JICA and the Basic Design Report

Note: the soft-component was implemented as planned.

The outputs of the soft-component, the support of CGS, were intended to be the following;

- Concretization of the roles and responsibilities of the CGS
- Clarification of the roles of each member
- Formulation of “school management plans”
  - Drafting of activity plans
  - Applying and concluding agreements with Communes
  - Introducing equipment ledgers
  - Introducing accounting ledgers

A revision of the original scope meant the cancelling of three schools, one school for the I/II and 2 schools for the II/II;

Cancellation for the I/II (effective as of October 24, 2006)

New classrooms for one target school in Koulikoro were constructed by a local commune before project implementation.

Cancellation for the II/II (effective as of October 26, 2007)

Three new classrooms at one target school in Ségou were constructed by a local commune, so that there was no need to implement the project.

At one target school in Mopti, due to a heavy rain that continued for months, an arterial roadway was deluged, and the site was inaccessible from the outside.

In addition, there were following modifications;

There were 22 changes in the construction areas of project sites for the I/II scope and five changes in the construction areas for the II/II scope. Also, in response to a decrease in the domestic supply in Mali due to a decline in construction demand, the specification for roof substrate member was changed for the sake of easier domestic procurement. Bearing in mind the necessary strength of building materials for the given construction period in terms of local procurement, it can be judged that this change was appropriate. There were changes in the specification of fittings along with a Malian request that the design be changed from

<sup>13</sup> All the schools were selected on the basis of one-school-per-commune. The criteria used were as follows: (1) scale of school (more than the average number of pupils in each and every grade), (2) physical access (in order to carry out monitoring and follow-up), (3) existing facilities that should be continued to be used, (4) past record of management activities of CGS.

single swing doors and windows to double swing doors and windows.

With regard to the outputs that were to be undertaken by Malian side, a Senegalese subcontractor responsible for local construction of the project recollected that the community themselves voluntarily participated in the removal of decrepit school buildings and in fence installation. Thus, it was confirmed that the tasks of the Malian side allocated at the time of project planning, such as the removal of decrepit school buildings and fence installation, were mostly carried out as planned.



Gender-segregated school toilets  
at “Sho” in Koulikoro



Inside of a classroom  
at “Bouadougou” in Koulikoro

### 3.2.2 Project Inputs

#### 3.2.2.1 Project Cost

As stated above, by mutual consent with the Government of Mali, three schools out of the original plan of 68 target schools were cancelled. In the case of two of these schools, local communes built the same number of classrooms that were planned by the project. Also, considering the urgency for school enrollment of children living in the communes, the change was appropriate, adverse effects of the exclusion of the three schools being thus kept at a minimum. Nevertheless, it should be borne in mind that there was a difference in approach of construction between the local commune and the project. The project had the comprehensive approach of project design to improve primary education, in terms of the method of construction, the specification of construction materials, gender-segregated toilets, school furniture specification, and the support of the CGS. Therefore, even though the same number of classrooms was constructed, issues such as effectiveness and sustainability derived from the different approach would be different. Therefore the three schools were excluded from the scope of the project in the ex-post evaluation study.

Furthermore, according to documents for the project planning such as the Basic Design Report, it was calculated that the cancellation of the three schools (four classroom

buildings) reduced the total project cost by about 58 million yen. Thus, deducting that amount from the E/N grant limit of 1,792 million yen, the planned project cost can be revised to 1,734 million yen.

As the actual cost borne by the Japanese side was 1,788 million yen, it exceeded the planned project cost (103%). This was mainly because of the change to the accessible specification of the roof substrate member in response to a decrease in domestic supply in Mali due to a decline in construction demand.

As there was no record of the disbursement of the 20 million yen of the Malian financial burden agreed on at the time of the project planning, it was difficult to confirm the total actual cost and a comparison against the total planned cost was not possible.

#### 3.2.2.2 Project Period

The planned project period was a total 30 months at the time of planning throughout I/II and II/II, after the time of the E/N. The project was implemented from June 2006, the time of the E/N, until December 2008. Thus the actual total project period was 30 months as planned.

Although the project period was within the plan, the project cost exceeded the plan. Therefore, the efficiency of the project is fair.

### 3.3 Effectiveness<sup>14</sup> (Rating: ③)

#### 3.3.1 Quantitative Effects (Operation Indicator)

At the time of project planning, the pupil intake at the target schools<sup>15</sup> and the number of pupils who had to study in makeshift and/or decrepit classrooms were identified as operation indicators and the target values were originally set as below. However, as the original scope was revised from 68 schools to 65 schools, the baseline values and target values were also reset as below.

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<sup>14</sup> Sub-rating for Effectiveness is to be put with consideration of Impact.

<sup>15</sup> According to the Basic Design Report, while the target value of the pupil intake was calculated based on the ideal government standard benchmark of 50 pupils per classroom, the baseline value was the actual total number of pupils enrolled in the target schools. As the Government of Mali attaches paramount importance to the enrollment rate of primary education in rural areas (improving access), whether or not there is an increase of the number of pupils enrolled in the target year against the target value should be taken into consideration. As far as the government standard is concerned, although the standard of 50 pupils per classroom is considered adequate, the maximum number of pupils per classroom is 72.

Table 2: Comparison of the Target and the Actual of the Operation Indicators

	Baseline	Target	Actual <sup>(#5)</sup>		
	2005 <sup>(#1)</sup>	2009	2008	2009	2010
	Year of project planning	1 year after Completion	Project Completion year	1 year after Completion	2 years after Completion
① pupil intake at the 65 target schools	23,135 <sup>(#2)</sup> (23,946)	25,750 <sup>(#3)</sup>	(34,854)	(33,981)	(33,398)
② number of pupils who had to study in makeshift /decrepit classrooms	6,100 <sup>(#4)</sup>	0	0	0	0

Source: Estimated from CAP data obtained from the Implementing agency

Note \*1: With regard to the original baseline value (of 2003) set against the target value at the time of project planning, data for 2003 was unavailable as there was no number of pupils specified for 9 schools out of the target 65 schools. Thus, it was considered appropriate to adopt data in 2005 as the baseline value.

Note \*2: As the original target of 68 schools and 303 classrooms at the time of project planning was reduced to 65 schools and 291 classrooms, the baseline value of the pupil intake was accordingly revised to 23,135 pupils. The deducted amount for the cancellation of the three schools based on the corresponding data was recorded in the Basic Design Report

Note \*3: As stated above, the actual number of target schools was reduced from the original plan and the target value of the pupil intake is revised by applying the original calculation method described in the Basic Design Report. As 515 classrooms were actually constructed by the project and then this is multiplied by the government standard of 50 pupils per classroom, the target value of pupil intake is 25,750 pupils.

Note \*4: The number of makeshift or decrepit classrooms to be replaced is calculated by a subtraction of the number of classrooms which continue to be in use from the total number of classrooms of all target schools. As the number of target schools was reduced, the baseline number is 6,100 pupils: 122 (the number of classrooms to be replaced) multiplied by 50 pupils.

Note \*5: All actual figures shown in parenthesis are estimated figures from aggregated CAP data that corresponds to each target school.

With respect to the actual data of the operation indicators, it was impossible to obtain individual figures for pupil intake at all the target schools. As an alternative, it was decided that an estimation of data for all the target schools would be made based on accessible census data from the Ministry of National Education<sup>16</sup>. A series of estimated figures was calculated using the average number of pupils of several communes aggregated by the corresponding CAP. Furthermore, multiplying each average number of pupils per classroom by the actual number of classrooms at the target schools from the project completion year to the target year gave 34,854 pupils in the project completion year and 33,981 pupils in the year after completion. This notably exceeds the given target value. Also, regarding the number of pupils who had to study in makeshift or decrepit classrooms, all the classrooms identified in 2005 were duly replaced by the project; thus it can be concluded that the original target was achieved.

<sup>16</sup> Extract all the CAP data for the average number of pupils per classroom corresponding to the 65 target schools throughout the target period. And then obtain the estimated number of pupils in the 65 target schools by year, by multiplying the respective CAP data by each of the actual number of classrooms of the target schools before and after project. The method to be adopted was verified as the estimated number by the CAP in 2005 was 23,946 pupils which can be considered an approximation of the actual number of 23,135 pupils at the time of project planning.

### 3.3.2 Quantitative Effects (Effect Indicator)

The three indicators ①,②,③ in Table 3 were set as effective indicators to measure the effectiveness of the project and the target values for each were given. As below, by the same token as for the operation indicators, the baseline and target values were reset for the ex-post evaluation.

Table 3: Comparison of the Target and the Actual of the Effect Indicators

	Baseline	Target	Actual <sup>(*)4</sup>		
	2005 <sup>(*)2</sup>	2009	2008	2009	2010
	Year of project planning	1 year after Completion	Project Completion year	1 year after Completion	2 years after Completion
①Number of schools (combined classes)	31	0	--	--	--
②Number of pupils at 49 schools with an overcrowding issue <sup>(*)1</sup>	77.3 <sup>(*)3</sup> (69.1)	53.5 30.9%▼ (66.2) (4.1%▼)	(67.6)	(66.2)	(64.9)
③Number of schools (two shift system)	7	decrease	--	--	--

Source: Estimated from CAP data obtained from the Implementing agency

Note \*1: Although there was no detailed explanation of the “overcrowding issue” in the Basic Design Report, we defined it as a condition where the number of pupils per classroom is more than 50. Bearing in mind the cancellation of three schools, we extracted 49 schools in this category from the comprehensive data list in the Basic Design Report. Thus, 77.3, the average number of pupils per classroom of the 49 schools was set as the revised baseline value.

Note \*2: Although the ex-ante evaluation sheet of the Basic Design Report shows that the baseline value used the data for 2003/2004, according to the actual data list of the Report, some schools which had been counted in the baseline value did not even exist at the time. It was found that the data at the time of project planning in fact was for 2005 and the baseline year was therefore redefined as the year of project planning, 2005.

Note\*3: According to the “method of calculation of the required number of classrooms” described in the Basic Design Report that was adopted to take into consideration the actual number of pupils in 2005, as specifications for classrooms and school furniture of the target schools were uniformly fixed, if the 50 pupils per classroom as a constant was used to calculate the required number of classrooms, regardless of the actual number of pupils in each school, the construction work would have been disproportionately concentrated on those schools with an overcrowding issue. Thus, in order to give an average, an acceptable number of 72 pupils per classroom was used to determine the final number of classrooms for certain target schools. This was applied to 81 classrooms. Therefore, taking into consideration 81 classrooms, the target value (the average number of pupils per classroom) of all 515 classrooms (the total actual number of classrooms in the target schools) is revised as 53.5.

Note\*4: All actual figures shown in parenthesis are estimated figures by aggregated CAP data that corresponds to each target school.

With regard to the actual data of effective indicators, by the same token as for the operation indicators, it was impossible to obtain numbers of pupils for individual target schools. We therefore calculated estimated figures using the average number of pupils of each of several communes aggregated by the corresponding CAP. However, this implies that because the average is for all schools under the jurisdiction of each CAP, the data is not limited to that from the target schools. It is most probable that the number calculated using CAP data does not give an accurate picture of the situation as is shown in Table 3. As an alternative, therefore, it was decided that the rate of change would be used instead in order that the degree and direction of change towards resolution of the overcrowding issue might be perceived. Judging from the estimated actual number, overcrowding was only slightly

improved, and there was a failure to achieve more than a 30% improvement of the target value. This suggests that the target schools put an absolute priority on increase of pupil intake. Consequently, the problem of overcrowding has not been resolved and the government goal of 50 pupils per classroom has not been achieved.

On the other hand, the relative degree of contribution by the project with a comparison of the estimated numbers was examined with the assumption that project implementation had not taken place and that the target schools had admitted the same estimated number of pupils as a result of priority on the need for enrollment. As shown in Table 4 below, without project implementation, the result would have been 107 pupils per classroom, a worsening of 55.1%, had the 65 target schools accepted the same estimated number of pupils. Even though the increase of pupils and resolution of overcrowding can be considered mutual exclusive consequences, both were met half way by the project. Thus it can be said that the project was effective in mitigating overcrowding against the actual enrollment need of the target schools.

Table 4: Case Comparison of the Target, the Actual, and the Counterfactual of Overcrowding

	Baseline	Target	Actual		
	2005	2009	2008	2009	2010
	Year of project planning	1 year after Completion	Project Completion year	1 year after Completion	2 years after Completion
Project Target	77.3	53.4 (30.9% ▼)	--	--	--
Project Implemented (Actual)	69.1	66.2 (4.1% ▼)	67.6	66.2	64.9
No Project (Counterfactual)	69.1	107.2 (55.1% ▲)	109.5	107.2	105.1

Source: Estimated from CAP data obtained from the Implementing agency

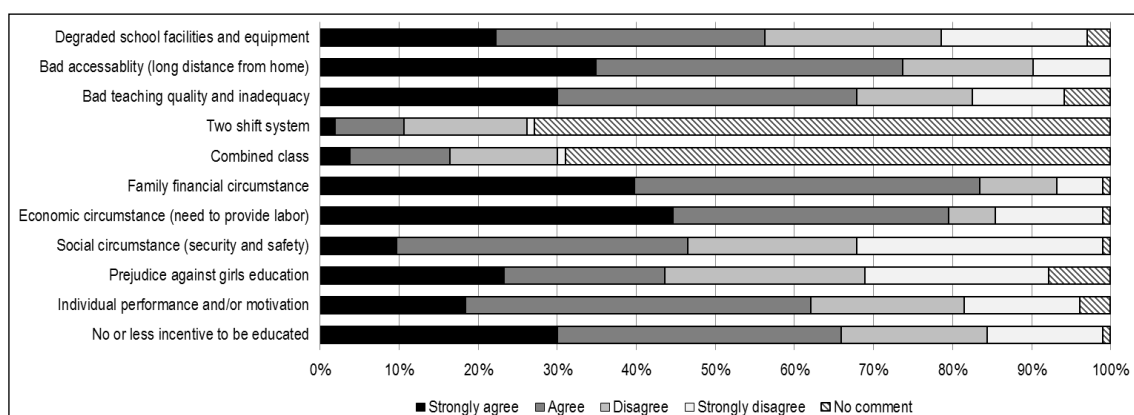
Although we confirmed that none of the 16 target schools in Koulikoro currently adopt either the two shift system<sup>17</sup> or combined classes<sup>18</sup>, as we could not obtain data of any other of the individual target schools, it was judged that the setting of the “Number of pupils at 49 schools with an overcrowding issue” in Table 3 was appropriate as a sole criterion among the effective indicators. For the record, however, in the beneficiary survey<sup>19</sup> conducted in 16

<sup>17</sup> Different from full-time school, the system divides the school session into 2 blocks scheduled per day, in the morning and the afternoon. Two groups of pupils share the same school facilities at different times. This is a measure taken to deal with an increasing number of pupils.

<sup>18</sup> The combined classes are the organization of the pupils of two or more different grades into one classroom. This is a popular measure taken in sparsely populated areas where the enrollment rate and population of pupils are relatively low.

<sup>19</sup> According to the selection criteria at the time of project planning, with regard to access to primary education, it was assumed that all the target schools faced a similar situation. As such, in light of the current security concerns, the results of an on-site survey of local community conducted in relatively safe Koulikoro are considered to represent the project on the whole in the ex-post evaluation. Regarding the sampling of respondents prior to the survey, we could not obtain a list of residents in the target areas in Koulikoro but, through the Ministry of National Education, the survey was announced to 16 communes and schools. It was then conducted with both local communities, mainly parents and school officials, who accepted the invitation to be surveyed. As a result, there was a total of 103

target schools in Koulikoro, an inquiry was made about major disincentives causing incompleteness or dropping-out of school. As shown in Figure 3, these were perceived to be firstly “financial circumstances of the family” and “economic circumstances (need to provide labor)” and secondly “bad accessibility (long distance from home)” and “bad teaching quality and inadequacy”. With regard to prejudice against girls’ education, opinions were divided almost fifty-fifty. Regarding the two shift system and combined classes in this regard, 70% of respondents gave no comment while around 15% disagreed that they are obstructive. Furthermore, all respondents who disagreed that the two shift system is obstructive were from the areas of the 4 schools where the two shift system and combined classes were being operated at the time of project planning.



Source: Beneficiary survey

Figure 3: Reasons for Incompletion or Dropping-out of School

### 3.3.3 Qualitative Effects

The following qualitative effects were expected from the project at the time of project planning.

- (1) The school administrative facilities provided by the project to facilitate management of schools by principals, and meetings of teaching staff. Also, teaching tools and materials can be properly kept.
- (2) Pupils can study in a sanitary environment
- (3) Direct benefits of the soft-component
  - 1) Formulation of a comprehensive “School Management Plan” for school management as well as the operation and maintenance of school facilities and equipment.

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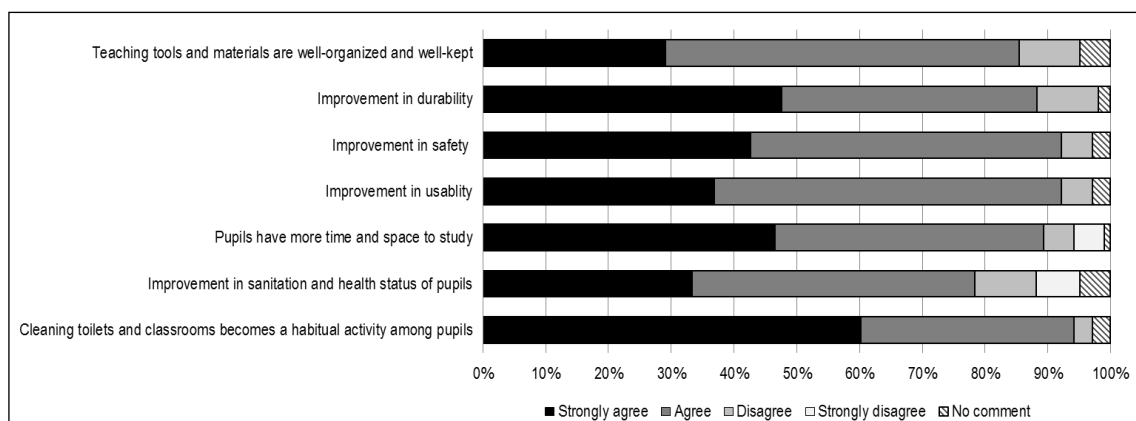
respondents, of which 16 were principals, 38 teachers and 49 parents of pupil(s) or parents of graduate(s). Also they were 50 CGS members and 53 non-CGS members, 24 female and 79 male. The main contents of the survey were as follows; (1) changes in both quality and quantity of the educational environment, (2) improvements in access to education as well as issues and problems, (3) use of the manuals by the project, issues and problems in school management (including relations with the community), (4) the impact of gender-segregation of toilets to girls’ education, issues and problems, (5) the impact of the project.



- 2) Formulation of a detailed “Activity Plan” aligned with the “School Management Plan.”
- 3) Documentation of important pending issues and corresponding budget amounts in order that schools (CGS) can send official funding requests to the commune.
- 4) Introduction of equipment and accounting ledgers to bring transparency in revenue and expenditure in the use of funds.

According to the results of the beneficiary survey shown in Figure 4, with regard to (1), “teaching tools and materials are well-organized and well-kept”, about 85% of respondents said that they “agree” or “strongly agree.” As for (2), “improvements in the sanitation and health situation of pupils” and “pupils have more time and space to study”, some respondents strongly disagreed, indicating that some schools may still be suffering from overcrowding and face the need for more classrooms. However, it was confirmed that the percentage of favorable opinions reached around 80%. On the other hand, at time of project planning, although it was assumed that the building of school toilets would be essential in contributing to the making of a sanitary environment, according to the results of the beneficiary survey that show a majority of respondents agreed most on “improvements in safety” and “improvements in usability.” This suggests that people in local communities highly evaluated general improvements in the environment through the upgrades of school facilities when comparing them to the makeshift and decrepit classrooms that existed before the project.

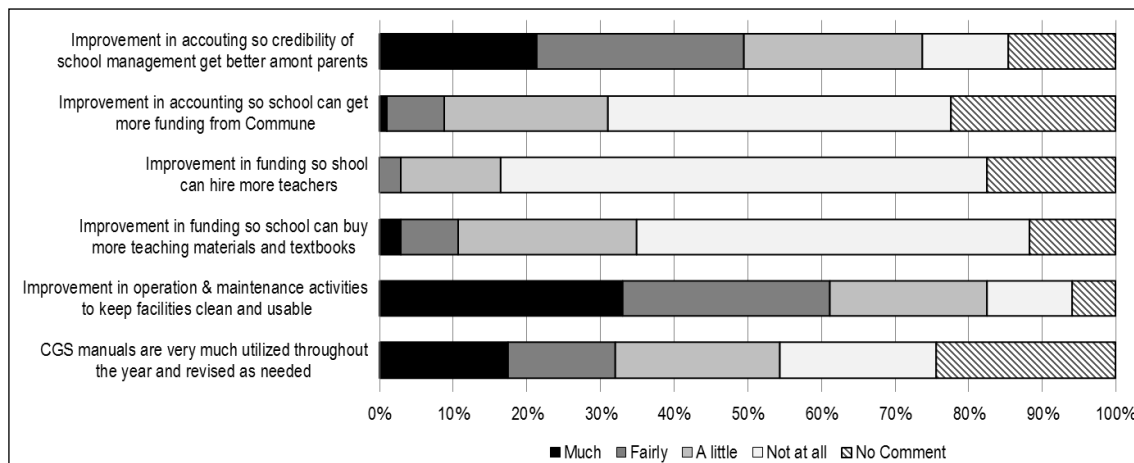
Incidentally, as the largest percentage of “strongly agree” was in relation to “cleaning toilets and classrooms becomes a habitual activity among pupils” (as a part of fostering a sense of public duty), this has to be evaluated as an unintended positive impact.



Source: Beneficiary survey

Figure 4: Improvement of the Educational/Learning Environment after the Project

In the hope of understanding (3) direct benefits of the soft component, as shown below, multiple-choice questions were given to respondents in the beneficiary survey. These were to confirm the nature and the scope of elicited contributions by the establishment of school management systems through the support of CGS with regards to the changes between before and after the project.



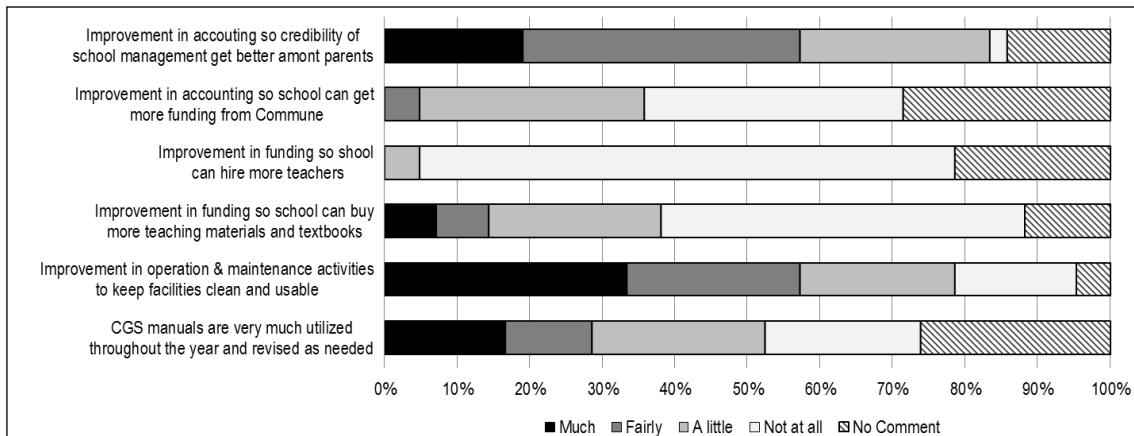
Source: Beneficiary survey

Figure 5: Improvement of School Management System after the Project

In terms of contribution to school management systems by the project, more than 80% positively responded that there had been “improvements in operation and maintenance activities to keep facilities clean and usable.” Regarding improvements in accounting, it was deemed that the trust of people in the local community, including parents, had been gained to a certain extent. Thus, it is considered that, with respect to improvements in operation and maintenance, a certain positive effect has been achieved. Furthermore, the nature and the scope of 1) to 4) above were also examined. As it may be the results of the Japan’s Technical Cooperation Project “Project for Support to School Management Committees, Phase I (2008-2011)” implemented in all elementary schools (about 1,500 schools) in the Koulikoro region, there was no striking difference in the responses between the 5 target schools (42 respondents) that were subject to the soft component as in Figure 6, and the other 11 target schools (61 respondents) as in Figure 7. All seemed to have shared difficulties in getting funding from outside sources such as the government. However, the percentage of positive responses is larger in the other 11 schools when it came to the question of whether or not they can hire more teachers through funding. As some of the respondents<sup>20</sup> had lived less than 10 years in the commune and as 4 respondents did not know the situation before the project, it is considered difficult to thoroughly clarify the actual differences. Be that as it may,

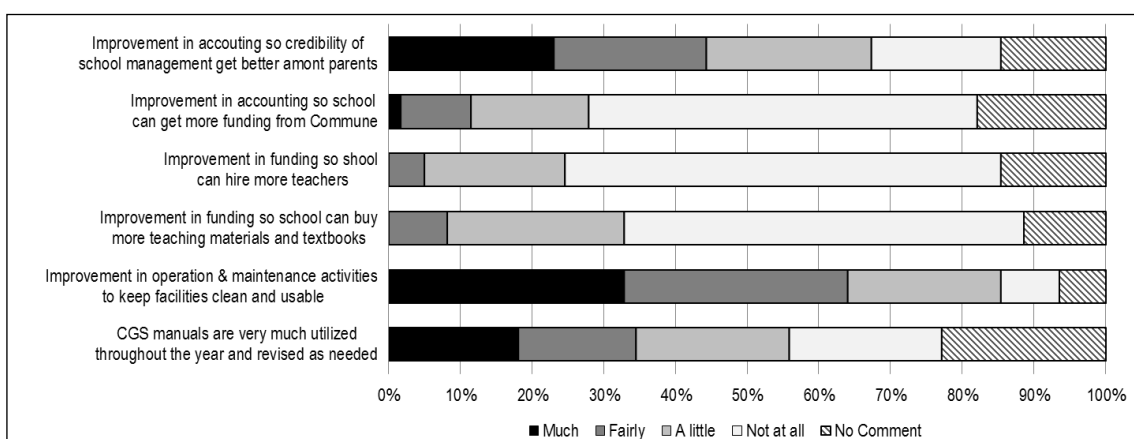
<sup>20</sup> Out of 103 respondents, 19 of them had not lived in the community for 10 years. It is most likely that they were not aware of any differences before and after the project.

both sides agreed that operation and management had improved very much. It can be inferred that the results of the survey are reflected as a synergic effect of the Technical Cooperation Project.



Source: Beneficiary survey

Figure 6: Effects of the Soft-component on School Management at 5 Target Schools



Source: Beneficiary survey

Figure 7: Comparison Case: School Management at 11 Target Schools without the Soft-component

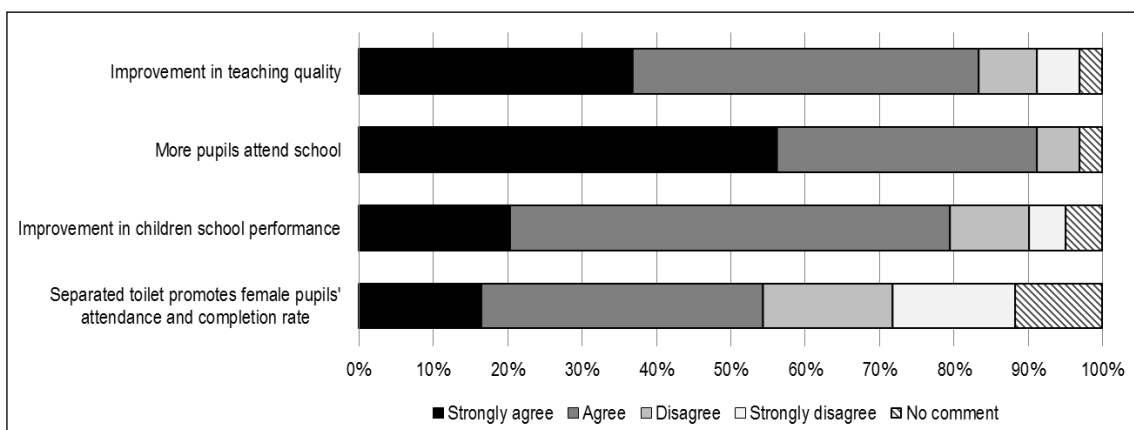
### 3.4 Impacts

#### 3.4.1 Intended Impacts

The following two impacts were expected from the project at the time of project planning.

- (1) Gender-segregated toilets for both pupils and teachers respectively, thus removing some of the impediments for girls' enrollments
- (2) Operation and maintenance activities having been started by local people in the community, centering on the parents of pupils, awareness of the local community is raised

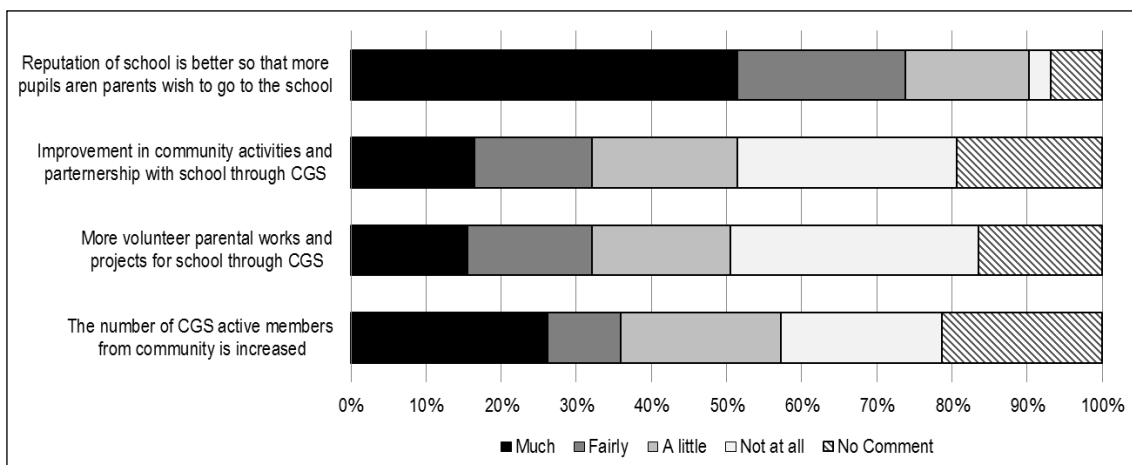
With regard to (1) according to the results of the beneficiary survey shown in Figure 8 there were relatively few opinions given on the idea of separate toilets contributing to an increase in girls' enrollment. There may be other strong inhibiting factors perceived by most of the people connected to a school. According to the response from the Implementing agency, it was suggested that there are other fundamental impediments causing girls to drop-out apart from separate toilets at school, such as the influence of their mothers and the situation of the community. It was also pointed out, however, that as the drop-out rate of girls at the age of first menstruation is high, the use of gender-segregated toilets may be indeed be correlated with the drop-out rate. It may thus be inferred that the installation of gender-segregated toilets may in fact positively affect girls' enrollment, especially for those who are in the upper grades of school.



Source: Beneficiary survey

Figure 8: Local Perceptions of the Impacts of the Project

With regard to (2), as an impact of the project shown in Figure 9, “the reputation of school has improved so that more pupils wish to attend and more parents wish to send their children to the school”, it was agreed by 90% of respondents. This considerably high number suggests that rather than the awareness of the community being raised by activities of the legally established CGS, it is more likely that an increase in pupils and parents caused the “increase in active CGS members from the community” (which was noted by a little fewer than 60% of respondents). This in turn may have led to the revitalization of local communities. Therefore, it can be said that the increase in pupils and parents thanks to the project may have enlightened the local community to the significance of primary education through CGS activities.



Source: Beneficiary survey

Figure 9: Impacts of the Project on Local Communities

### 3.4.2 Other Impacts

#### 3.4.2.1 Impacts on the Natural Environment

As the target school facilities of the project were constructed within existing school sites, there was no large-scale land reclamation or modification of the environment. Also, the facilities were designed as flat buildings and therefore no insulation problems or wind hazards were expected. It was confirmed that there was no reports of negative environmental impacts during or after project implementation according to the results of the questionnaire survey with the Implementing agency at the time of the ex-post evaluation.

#### 3.4.2.2 Land Acquisition and Resettlement

The project constructed classrooms and toilets at the location of existing primary schools, and thus no land acquisition or resettlement was expected. According to the questionnaire survey with the Implementing agency, no such events were occurred as a result of implementation of the project.

#### 3.4.2.3 Unintended Positive/Negative Impacts

One of the unintended positive impacts was an increase in the number of teachers. By using CAP data on the average numbers of pupils per teacher, the total estimated number of teachers for the 65 target schools was calculated. Due to the governmental budgetary constraints, in general, it is difficult to increase the number of teachers at public schools and teachers themselves are reluctant to be transferred to rural areas. However as shown in Table 5, there was a swift increase around 150 persons in the year of project completion from a year earlier. At the time of project planning, there had been no target

for the number of teachers and it was confirmed that the number of teachers increased along with the aforementioned increase in pupils. Thus, the number of pupils per teacher was reduced.

Table 5: The Estimated Number of Teachers at 65 Target Schools

	Before the project			After project completion		
	2005	2006	2007	2008	2009	2010
	Year of project planning			Project Completion year	1 year after Completion	2 years after Completion
Average number of pupils per teacher at 65 target schools	64.5	64.1	64.0	61.8	61.2	61.1
Total estimated number of teachers at 65 target schools	371	375	415	563	555	546

Source: Estimated from CAP data obtained from the Implementing agency

Additionally, as mentioned in Figure 4 above regarding “Improvement of the educational/learning environment after the project,” 60% of respondents strongly agreed that “cleaning toilets and classrooms had become a habitual activity among pupils” and taken together with the percentage of responded “agree,” a total of more than 90% responded positively on improvements. This is considered to be an especially notable improvement compared to other items. Those pupils who are using school facilities maintain a hygienic environment by themselves not only helps efficient O&M, but also means the fostering of a sense of public duty as an unintended positive impact of the project.

With regard to the quantitative effect, as the actual number of pupils at the target schools exceeded the target pupil intake of the operation indicator, it can be said that the project contributed in terms of improvement of the enrollment rate. Also, the project contributed to mitigating overcrowding of the effect indicator. With regard to the qualitative effect, as indicated by the beneficiary survey, the expected effects were achieved. Furthermore, it is indicated that impediments on the enrollment of girls may have been reduced. Also, through the increase of pupils, increased participation of parents has led to expanded community involvement. And through CGS activities, awareness among communities that primary education should be highly regarded has been raised. As unintended impacts, an increase of teachers that comes with higher quality of education has been confirmed together with the fostering of a sense of public duty through habitual cleaning activities by pupils.

In light of the above, this project has largely achieved its objectives. Therefore, the effectiveness and impact of the project are high.

### 3.5 Sustainability (Rating: ③)

#### 3.5.1 Institutional Aspects of Operation and Maintenance

Both at the time of project planning and ex-post evaluation, the Implementing agency of the project was the Ministry of National Education, Department of Planning and Statistics (Ministère de l'Éducation Nationale, cellule de planification et de Statistique) which was responsible for the construction of educational facilities. The Department of National Basic Education of the Ministry (Direction Nationale de l'Éducation de Base) has taken responsibility for management issues, and the Department of Administration and Finance of the Ministry (Direction Administrative et Financière) has taken responsibility for budgetary issues. The Implementing agency has been in charge of a regional educational agency called the Academy of Education (Académie d'Enseignement: AE). The AE has supervised a number of CAPs at the district level. With regard to the target schools of the project, each CAP is responsible for surveillance of the status of O&M and providing technical assistance if necessary. Furthermore, as communes have been stipulated as proprietors of schools in the public finance structure, disbursement for O&M is in principle to be made through each commune. With regard to daily O&M activities, the actual implementing entities are the CGS established at schools.

#### 3.5.2 Technical Aspects of Operation and Maintenance

At the time of project planning, it was not required that new skills sets be acquired. Ordinary skills for O&M were to be exercised and there was to be a reinforcement of the O&M system. At the 16 target schools in Koulikoro, although the degree of use of the manuals seemed to vary depending upon the principal and CGS of the school, most essential O&M works such as wall painting, minor repairs, sludge disposal, and termite control, was carried out at most schools by the community. Thus no specific problems were identified.

#### 3.5.3 Financial Aspects of Operation and Maintenance

At the time of project planning, although it was assumed that fees collected from parents by parents associations and/or admission fees from pupils would essentially cover the costs of O&M, the rates of fees as well as how they were collected varied depending upon the situation of the school and its management, and it was not carried out in a planned manner. After project completion, it was expected that CGSs would assist in getting financial support and in improving management of accounting, based on the "School Management Plans" formulated in light of the corresponding financial circumstances of each school.

According to the response to the questionnaire from the Implementing agency, although there was no change with respect to the institutional aspect of O&M from the time of the project planning, there was an inevitable reduction in the financial allocation of central government due to fiscal austerity. The urgent issue is therefore how to best strengthen the financial capacity of each commune and CGS. It is also necessary to ensure the cost burden of CGS. In the beneficiary survey of the communities, including parents of pupils at 16 target schools in the Koulikoro region, questions were asked about items of public investment and priorities from the viewpoint of the community in order to ensure improvement of the teaching and learning environment. Answers included “construction of classroom(s),” “construction of teachers room(s),” “construction of toilet(s)/ bathroom(s),” “teaching materials and textbooks,” “improvement in the number and quality of teachers,” “girls’ education,” “reinforcement of CGS,” and “others”. The least prioritized item was the “reinforcement of CGS” while the “construction of classroom(s)” was perceived to be a great necessity requiring investment (the second priority was “improvement in the number and quality of teachers”). This indicates that communities generally assume that while the government and/or donors are in a position to construct classrooms and make improvements in the number and quality of teachers, they are also responsible for the funding of CGS activities. It was planned that O&M would be carried out at the target schools based on the premise that the total admission fees of enrolled pupils would be the main source of funds. However, according to the beneficiary survey 37 respondents said that they had paid additional O&M costs (for example for the purchase of repair parts) and that these costs were not taken from admission fees or parents’ fees. These 37 respondents were from 14 target schools out of 16 and 26 of the respondents were also CGS members. On the other hand, 65 respondents said that they had never paid additional costs<sup>21</sup> (they only paid the admission fees of 500CFA<sup>22</sup>-1,500CFA). Furthermore, to our question of “how schools should be funded for O&M,” the largest number of respondents (37 persons) chose “retainage of admission fees” and the second largest number (33 persons) chose “CGS fundraising activities.” In light of these results, it can be seen that CGS are essentially responsible for financing the additional O&M costs in communities.

We also asked whether respondents would agree to make a personal contribution if a school needed major repairs, e.g. rethatching. 27 completely agreed, 72 agreed, 3 disagreed, and 1 completely disagreed<sup>23</sup>. As the voluntary taking on of cost burdens is more or less part

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<sup>21</sup> The 65 respondents include teaching staff as well as community people who are not parents of pupils. Therefore, some of them do not have an obligation to pay admission fee.

<sup>22</sup> CFA francs (CFA) have a fixed exchange rate to the EURO. At the time of ex-post evaluation, 1 CFA was equivalent to 0.17 JPY.

<sup>23</sup> In case of disagreement of the cost burden by individual, to the question of how should they get funding; each one of the respondents chose local commune, admission fees or CGS fundraising. Also, there was one “no comment”.



of the prevailing attitude in communities, the assumption of joint ownership of “our school” is substantially high.

As no financial record of the 16 target schools could be obtained, the question was asked as to whether there had been an increase or decrease in O&M costs after the project. Except for 16 who answered “I do not know,” 40 out of 86 respondents responded that the O&M cost was much higher, while only 6 responded that it was much lower. This indicates that in general the O&M cost is perceived to be higher. Even though there is an increase in the cost burden on the community, the positive attitude of mainly CGS members to the cost burden as stated above is noteworthy. Also, as mentioned above, in the qualitative effect with regard in to the improvement of school management after the completion of the project, the result is dovetailed with the observation that the improvement in accounting improved transparency and thus contributed to greater credibility among the local community including parents of pupils.

It is deemed that through the CGS activities, the principle of self-pay burden for the community has gradually become established when it comes to the financial aspects of O&M.

#### 3.5.4 Current Status of Operation and Maintenance

According to the response from the Implementing agency, including those constructed through this project, school facilities constructed with Japan’s assistance are reported to be durable, safe and comfortable, with good ventilation during the hot season. In addition, as for those target schools of the project, it was said that the CGSs contribute notably to O&M, and that parents’ participation is also high. Major items in the annual expenses of O&M carried out by the community are regular painting of walls and repairs to fittings. The other O&M item is assumed to be the disposal of sludge when toilet tanks are cleaned, which is essentially dealt with by volunteers from the community. With regard to the current status of the facilities at the 16 target schools in Koulikoro, a degradation of the window and door fittings caused by much opening/closing is most commonly observed. However, it is also noted that the degree of degradation depends upon the frequency of repairs, which take place at the discretion of each school. Also, some schools have needed termite control, but schools and the community see this as a task which is within their capacity. Thus, O&M activities on a daily basis seem to be in their control.

Furthermore, no serious defects, such as cracked concrete, have been reported, and the repainting of toilet walls and others was carried out voluntarily by the community in their own original way. Also, as mentioned in unintended impact, the cleaning of classrooms and toilets is carried out by pupils on a daily basis. Thus no specific problems with the current status of O&M have been identified.

No major problems have been observed in the institutional, technical and financial aspects of the operation and maintenance system. Therefore, the sustainability of the project effects is high.

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

### 4.1 Conclusion

The objective of this project was to mitigate overcrowding in classrooms, to assure better access to, and to improve the quality of, the sanitary learning environment in primary education in 4 targeted regions (Koulikoro, Ségou, Sikasso, Mopti) in Mali, by the construction of facilities, the procurement of classroom furniture and the strengthening of school management organizations for targeted primary schools, thereby contributing to improvement of access to, and educational environment in primary education in Mali. The relevance of this project is high as it is relevant to the Mali's policies of emphasizing better access to primary education and development needs of improving the enrollment rates by construction of elementary schools in targeted 4 regions Mali both at the time of planning and the ex-post evaluation. Also, it is relevant to the ODA policy of Japan at the time of planning. On the other hand, although the project period was within the plan, changes in the specifications of construction materials meant that the project cost was more than the plan. Therefore, the efficiency of the project is fair. With regard to effectiveness, we have confirmed that the total number of pupils has increased, and at the same time, overcrowding has been mitigated to some extent. With regard to improvement of the teaching and learning environment, among other things, the upgrading of school facilities is highly appreciated by pupils' parents as well as other people in the community of the target region of Koulikoro. Furthermore, as for school management, it is deemed that transparency in accounting and cleaning duties has notably improved. Motivated by the good reputation, the number of parents who hope to send their children and the number of children who hope to go to these schools has increased. This may have synergized with reducing the disincentives of girls' education and also in enlightening the community about the importance of primary education. Furthermore, with regard to impact, a promotion of public morality among pupils has been manifested in their voluntary cleaning activities. Thus, the effectiveness and impact of this project are high. Regarding sustainability, the communities have organized themselves to carry out the operation and management activities. There is no problem in the technical aspects and the community have carried out simple repairs and cleaning on a daily basis. With regard to the financial aspect, although the cost of operation and maintenance has risen as a result of the project, it was confirmed that, as the community are willing to accept the cost burden, along with principle of benefit has been gradually shared among them. Therefore, the sustainability of the project is high.

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

## 4.2 Recommendations

### 4.2.1 Recommendations to the Implementing Agency

#### Reinforcement of the monitoring mechanism

Individual data for the target schools was not provided by the Ministry of National Education for this ex-post evaluation study. In the recovery period after the crisis of 2012, the Implementing agency faced the need to place reliance on local administrative capacity in order to ensure the viability of national education policy. However, even with the transition of executing power to local autonomies, regarding the results of policy execution, central government is entitled to retain power and the role of monitoring and should be provided with accurate information, always provided that they are in the right position for policy making for, and evaluation of, nationwide improvements in primary education. If “decentralization” through the transition of power is in fact mired in the irresponsible disintegration of power, it would be preposterous as essential information signals may not be incorporated into the policy making process. Also on the negative side of decentralization, there is the danger that, through the disintegration of power, the organizational structure may become complex and fall into excessive stratification thus causing a lack of communication, a lack of due fund-management and a confusion of function and responsibility among constituents. This creates not only extra administrative costs but is also harmful to efficient policy implementation which may result in a plunge into widening regional disparity. Therefore, we would urge the earliest possible establishment of a nationwide information collection and monitoring mechanism by the central government. As AE and CAP under the Ministry of Education are the key decentralized arms of the education administration system, through the reinforcement of their technical capacity to provide assistance, they in particular should become active players in the monitoring mechanism. They should swiftly share and analyze data and information on local issues with regard to education. They should then be able to build on effective endeavors of the improvement of education with a realistic target across the country.

### 4.2.2 Recommendations to JICA

None.

## 4.3 Lessons Learned

#### Positive effects of high-quality specifications and construction on the ownership of the community

Although a high level of use by an increased number of pupils and progressive aging of the facilities may well be anticipated, the target schools were being maintained in a fairly good condition at the time of ex-post evaluation thanks to proactive participation in O&M by the

community. As for the institutional background, Mali is in the middle of a decentralization process. Although local autonomies face inflated administrative power, difficulties in public finance mean that performance cannot be ensured in practice. Therefore it is indispensable that as users of the schools, communities, centering on the parents of pupils, voluntarily take the burden of a large portion of costs in order to carry out O&M.

In Mali, it is common that school buildings collapse and become non-usable due to the strong desert wind and rainstorm. Taking this harsh environmental issue into consideration, in the construction of the schools of this project, deep piling took place and durable concrete blocks were used. The high standard specification of construction of principals' offices, gender-segregated toilets and storage is well-regarded and appreciated in local communities from the point of view of durability and safety, and although the burden of O&M costs on the community is higher than before, the sense of ownership has been raised to the extent that communities will voluntarily take on the cost burden. An additional advantage might be that these aspects may have facilitated the necessary personnel transfer of teachers in a timely manner.

At the time of project formulation and planning, it is important that specifics should be determined in hope of raising the sense of community ownership in terms of O&M, through a thorough examination of willingness toward the cost burden to be taken by an implementing entity or group that is an operational manager of school facilities in a real sense and specific requirements (including cultural and social factors). This may have a positive effect on the sustainability of a project.

#### Points to consider regarding the problem of the trade-off of effectiveness indicators

At the time of project planning, while the indicator of an increase in enrollment of children was set, the indicator of a decrease in the number of pupils studying in overcrowded classrooms was also set. As each indicator is mutually exclusive, there is a difficult trade-off. In a country like Mali, where the number of children in primary education who are not in school is in the absolute majority, it is inevitable that the overcrowding issue will be aggravated as numerous children in the community must be admitted to schools with newly constructed classrooms. Thus, the combination of the indicators is not appropriate. Considering the schools' admissions policies, it is unthinkable to assume that they would flatly refuse children on the grounds of the target value of the indicator or the government standard limits per classroom. Therefore, although there may be a plausible rationale behind the setting of an independent indicator, it is important that there should be a careful examination, in light of the critical local factors in a country, of whether indicators are compatible, whether there should be any order of priority among them, and whether there are any specific conditions for them to be compatible, in order to set adequate indicators to measure effectiveness.