

Federal Democratic Republic of Ethiopia

FY2020 Ex-Post Evaluation Report of
Japanese Grant Aid Project

“The Project for Construction of Secondary Schools in Amhara Region”

External Evaluator: Maki Hamaoka

Foundation for Advanced Studies on International Development

0. Summary

This project was implemented to improve access to and the educational environment for secondary education in Amhara region in Ethiopia by constructing new secondary schools and expanding existing secondary schools.

This project’s implementation is highly consistent with Ethiopia’s development policy, which emphasizes access to basic education and improvement of the educational environment as well as the target region’s developmental needs for basic education, and with Japan’s ODA policy for Ethiopia, which emphasized the education sector. Therefore, the project’s relevance is high. Although the project outputs and costs were as planned, the project period exceeded the plan. Therefore, the project’s efficiency is fair. Project implementation fully contributed to access to basic education and improvement of the educational environment by establishing new secondary schools and expanding classrooms in existing schools. The initial project effect target was achieved. In addition, it was confirmed that all 13 schools surveyed enjoyed impacts such as reductions in student dropout rates, improvement of students’ motivation to learn, improvement of teachers’ motivation to teach, and their class management by improving the educational environment. Therefore, effectiveness and impacts of the project are high. Some minor problems have been observed in terms of the technical aspect, financial aspect and current status of the operation and maintenance system. Therefore, sustainability of the project effects is fair.

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

1. Project Description



Secondary school constructed
by this project

1.1 Background

During the planning stage, in Ethiopia, the number of applicants for secondary education increased along with the primary education enrollment rate, causing problems such as a shortage of schools and classrooms and overcrowding of classrooms. In Amhara region, the gross enrollment ratio¹ (GER) in primary education (grades [G] 1-8) was 98.4% (2008/09), while the GER in general secondary education (G9-10) was only 38.4%. The shortage of schools and classrooms was pointed out as one of the causes for this. As of 2008/2009, there were 1,703 primary schools in the region, but only 82 secondary schools, a very limited number. In the eight cities targeted by this project, many problems occurred due to the lack of secondary schools: (1) overcrowded classes, (2) two-shift classes, (3) long-distance commuting to schools in the city center from remote areas, and (4) admission restrictions. There was an urgent need to construct secondary education facilities. Under these circumstances, grant aid was implemented in Amhara region to build new secondary schools and expand classrooms at existing schools.

1.2 Project Outline

The objective of this project was to improve access to and educational environments in secondary education in Amhara region by constructing new secondary schools and expanding existing secondary schools' facilities.

Grant Limit /Actual Grant Amount	1,208 million yen/1,208 million yen
Exchange of Notes Date /Grant Agreement Date	November 2011/November 2011
Executing Agency	Amhara Regional Education Bureau (AREB)
Project Completion	January 2018
Target Area	8 cities, 17 secondary schools
Main Contractors	<p><Construction works> Group 1: Eight secondary schools to be newly constructed Lot 1: Unity Engineering PLC Lot 2: Satcon Construction PLC Lot 3: Beha Construction PLC Lot 4: A.M.B Construction PLC Lot 4(R): Bayray Tadesse Building Contractor (Re-contracted after canceling the contract with the original contractor) Lot 5: Rediete Dagem Engineering & Construction PLC Lot 6: Yoakin Construction Lot 6(R): Mela Engineering & Construction PLC (Re-contracted after canceling the contract with the original contractor) Lot 7: Yotek Construction PLC</p>

¹ The number of students at a certain educational stage divided by the official school age population for that educational stage, regardless of age.

	<p>Lot 8: Nasew Construction PLC</p> <p>Group 2: Nine existing schools</p> <p>Lot 9: Quarit Construction PLC</p> <p>Lot 10: Yohanes Abreha General Contractor</p> <p>Lot 11: WT&T Construction PLC</p> <p>Group 3: Additional works utilizing the remaining balance</p> <p>Lot 12 : Livecone Construction</p> <p>Lot 13 : Abas Construction PLC</p> <p>Lot 14 : Bayray Tadesse Building Contractor</p> <p><Procurement of school furniture></p> <p>Lot 1 : Ketsela Bekele General Metal Work & Furniture</p> <p>Lot 2 : Maika Household and Office Furniture</p>
Main consultant	Mohri Architect & Associates, INC.
Procurement agency	Japan International Cooperation System
Outline design	July 2010 – July 2011
Related Projects	<p><JICA></p> <p>The Project for Mathematical Understanding for Science and Technology (MUST) (Technical cooperation project, March2019 – August 2023)</p> <p>To support the efforts of the Federal Ministry of Education of Ethiopia to revise mathematics curriculum and textbooks, JICA is implementing quality control support for these textbooks from G1 to G12. The project aims to strengthen the capacity of textbook writers and support textbook revision, especially for secondary education. When textbooks are revised and distributed nationwide with JICA support, the secondary schools under this project will benefit.</p> <p><Other donors></p> <p>World Bank, Finland, Sweden, Italy, Netherlands, United Kingdom, etc.: General Education Quality Improvement Program/GEQIP1:2009-13, GEQIP2: 2014-18, GEQIP-E: 2017-2022</p> <p>Comprehensive activities such as curriculum/textbook/evaluation development, teacher capacity building, and educational administration management are underway.</p>

2. Outline of the Evaluation Study

2.1 External Evaluator

Maki Hamaoka, Foundation for Advanced Studies on International Development

2.2 Duration of Evaluation Study

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

Duration of the Study: October 2020 – November 2021

Duration of the Field Study by local consultant: March 2021 – August 2021

2.3 Constraints during the Evaluation Study

(1) Due to the worldwide influence of coronavirus disease 2019 (COVID-19), this ex-post evaluation was carried out remotely with a local consultant's field survey, as an external Japanese evaluator could not travel. In the southeastern part of Amhara region, armed conflicts had occurred prior to the field survey. The armed conflicts in the area became severe immediately after the field survey began. In addition, protests against the persecution of Amharic peoples threatened the security of the entire region, and the local consultant returned to the capital after visiting 13 schools. The remaining four schools could not be visited.

(2) For one of the above four schools, the local consultant was able to partially obtain answers to the questionnaire via telephone or email. For the remaining three schools, the local consultant continued to request information over the phone and email several times over the course of several months, but the security of the Amhara region continued to deteriorate and school officials could not be contacted. Information could not be collected from those schools. As a result, 13 schools were visited and answers to the questionnaire were collected from 14 schools.

3. Results of the Evaluation (Overall Rating: B²)

3.1 Relevance (Rating: ③³)

3.1.1 Consistency with the Development Plan of Ethiopia

During the ex-ante evaluation, the Government of Ethiopia formulated a series of poverty-reduction plans for it to become a middle-income country by 2020–2023 and was implementing *the Growth and Transformation Plan (GTP) (2010/11-2014/15)*. One of the goals of the GTP was to achieve the Millennium Development Goals in the social sector by expanding education and health services. In addition, the Government of Ethiopia implemented its *Education Sector Development Program (ESDP) IV: 2010/2011-2014/2015* as an education sector strategy. ESDP-IV was aimed at i) improving the quality of education and ii) access to and equity of education, with the aims of realizing universal primary education by 2015 and universal general secondary education (G9–10) by 2020.

At the time of the ex-post evaluation, the Ethiopian government stated in its *Ten Years Development Plan (2021-2030)* that basic social services such as food, safe water, health, and education are to be accessible to all citizens regardless of economic conditions as measures of prosperity. The long-term vision is that Ethiopia will be a leader in Africa.⁴ Specifically, the Ethiopian government aims to provide fair, high quality, free education from preschool through

² A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

³ ③: High, ②: Fair, ①: Low

⁴ Source: Ten Years Development Plan (2021), p19

secondary education as human resources development plan.⁵ Regarding the education sector strategy, *ESDP-V (2015/16-2019/20)* focuses on improving the quality, access, equity, and internal efficiency of general education. The aim of ESDP-V is to increase the GER of general secondary education to 74% for both boys and girls by FY 2019/2020, as compared to 37% for girls and 40% for boys in FY 2013/2014.⁶

In light of the above, this project was implemented to improve access to and the educational environments in general education facilities. The project was highly relevant to the Government of Ethiopia's development policy during both the ex-ante evaluation and the ex-post evaluation.

3.1.2 Consistency with the Development Needs of Ethiopia

(1) Need for Construction of Secondary Education Facilities

1) Enrollment

Table 1 shows the number of students enrolled in secondary education in Ethiopia and in Amhara region from the time of ex-ante evaluation to the time of ex-post evaluation. The number of students enrolled increased year by year, and the annual average growth rate of Amhara region was higher than the national average. Another characteristic of secondary education in Amhara region is that the number of girls enrolled has exceeded that of boys since FY 2012/13.

Table 1: Secondary Education Enrollment Status in Ethiopia and the Amhara Region

Region	Item	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Annual average growth rate (%)
Amhara Region	Male	220,760	214,985	237,247	246,007	246,007	289,198	301,423	325,114	366,737	440,059	8.0%
	Female	204,063	208,375	240,271	253,031	253,031	307,402	317,222	343,505	377,016	454,296	9.3%
	Total	424,823	423,360	477,518	499,038	499,038	596,600	618,645	668,619	743,753	894,355	8.6%
National	Male	976,822	960,353	1,010,821	1,057,024	1,109,877	1,276,046	1,358,168	1,430,772	1,526,653	1,874,201	7.5%
	Female	773,312	805,658	888,910	941,331	998,238	1,145,117	1,201,009	1,235,969	1,293,482	1,592,771	8.4%
	Total	1,750,134	1,766,011	1,899,731	1,998,355	2,108,115	2,421,163	2,559,177	2,666,741	2,820,135	3,466,972	7.9%

Source: Education Statistics Annual Abstract, September 2019-March 2020 (2020), Education Statistics Annual Abstract 2009 E.C. 2016/17 (2017), 2008 E.C. 2015/16 (2016), 2007 E.C. 2014/15 (2015)

2) GER

During the ex-ante evaluation, GER in primary education was 98.4% (2008/09) in Amhara, while GER in general secondary education (G9-G10) was only 38.4% (2008/09).⁷ One reason for this was the lack of schools and classrooms (see 1.1 Background).

By the ex-post evaluation, GER in Amhara region had grown to 47.9% for secondary education as a whole, 64.2% for general secondary education, and 31.3% for preparatory secondary education. Although the figures improved year by year, they are far from the GER

⁵ Source: Ten Years Development Plan (2021), p59

⁶ Source: ESDP V (2015), p38

⁷ Source: Preparatory survey report in Japanese, p1-5

target of 74% enrollment by 2020. The reasons are that the number of students who have completed primary education is small and that the number of secondary schools is still limited.

In light of the above, the need for educational facilities in Amhara region was high for secondary education at both the ex-ante and ex-post evaluation stages.

3.1.3 Consistency with Japan's ODA Policy

The *Country Assistance Policy for Ethiopia (2012)* of the Ministry of Foreign Affairs established education as a priority area for cooperation with Ethiopia from the perspective of human resource development to support food security and industrialization. In addition, in the *Yokohama Action Plan (2008)*, formulated at the 4th Tokyo International Conference on African Development, this project was positioned as an important project that could contribute to the realization of Japan's commitment to the education sector and to achievement of the Millennium Development Goals in the education sector.⁸ The project was consistent with Japan's ODA policy during planning.

In light of the above, this project's implementation has been highly relevant to Ethiopia's development plan and development needs as well as Japan's ODA policy. Therefore, its relevance is high.

3.2 Efficiency (Rating: ②)

3.2.1 Project Outputs

(1) Japanese Outputs

Through this project, the establishment of eight secondary schools, expansion of general classrooms at nine existing secondary schools, and procurement of furniture at all target schools were carried out as planned (see Tables 2 and 3). The plans shown in Tables 2 and 3 are a result of the second detailed design: Remaining construction at one school had to be redesigned, as a contract was canceled due to the contractor's inability to perform the work. The main changes from the scope planned in the preparatory survey are as follows.

- Cancellation of Libraries in Two Existing Schools

As a result of the bidding process for construction work for the first group of schools, the funds for procuring furniture and equipment for the second group were insufficient. Thus, the construction of libraries at the six existing schools was removed from "Classroom Block + Library." At four of these schools, libraries were subsequently constructed utilizing the balance generated after bidding for the second group. As a result, libraries were ultimately not established at two of the existing schools.

⁸ Source: Ex-ante evaluation table (2012), p1

- Cancellation of Contract due to Nonfulfillment at One New School (WD-6)

Regarding WD-6, the contract was canceled in the middle of construction in July 2014 due to the contractor's inability to perform construction work. After calculating the cost of the remaining construction, design, and supervision; and the procurement agency; the balance after cancellation was not enough to construct all planned facilities, so the library block and laboratory block A, laboratory block B, Administration block A, Administration block B, one latrine block, and part of the exterior construction were carried out by the Ethiopian side instead of grant aid.

Table 2: Planned and Actual Facility Construction Outputs

Building	Planned	Actual	Remarks
【8 new schools】			
Regular classrooms (8 classrooms per story)	23	23	4 buildings in each of 5 school and 1 building in each of 3 school. 23 buildings x 8 classrooms = 184 classrooms
Regular classrooms (12 classrooms per story)	6	6	2 buildings were built in each of 3 school. 6 buildings x12 classrooms = 72 classrooms
<u>Total of regular classrooms</u>	256	256	
Library blocks	7	7	WD-6 contract canceled during construction due to contractor's inability to perform the work. Balance after cancellation was insufficient to construct all planned facilities, so library block was built by the Ethiopian side instead of using grant aid.
Laboratory blocks	22	22	Block A (1 science laboratory): 2 blocks in each of 7 school, 1 block in 1 school, 15 buildings total Block B (science laboratory, information communication technology (ICT) center, satellite receiver center): 7 schools excluding WD-6, 7 blocks total. WD-6: Balance after original contract cancellation was insufficient to construct all planned facilities. One of 2 laboratory Blocks A and laboratory Block B were constructed by the Ethiopian side instead of via grant aid.
Administration Block A (Director's room, vice directors' rooms, secretary's room, administration office room)	7	7	WD-6: Balance after original contract cancellation was insufficient to construct all planned facilities. Administration Blocks A and B were constructed by the Ethiopian side instead of via grant aid.
Administration Block B (Financial office rooms, record room, document storage, janitor room, mini-media room)	7	7	
Administration Block C (Staff room and resource center)	8	8	
Latrine Block (8 booths for students, teachers, and staff)	23	23	3 blocks each in each of 7 school except WD-6. Two blocks were built at WD-6. WD-6: Balance after original contract cancellation was insufficient to construct all planned facilities. One of 3 latrine blocks was constructed by the Ethiopian side instead of via grant aid.
【Existing 9 schools】			
Classroom block (4 rooms)	9	9	9 blocks x 4 rooms = 36 classrooms
Classroom block + library	4	4	4 blocks x 4 rooms = 16 classrooms
<u>Total of regular classrooms</u>	52	52	
Library blocks	7	7	Initially, library blocks were planned at all 9 target schools, but as a result of bidding for the first group of construction work, furniture and equipment funds for the second group were insufficient. Library blocks were canceled for 6 schools. Library blocks were later built in 4 of them using the balance after Group 2 bidding. Library blocks were ultimately not constructed at 2 existing schools.

Source: Documents provided by JICA

Note: Regular classrooms are classrooms in which students take regular lessons.

Table 3: Planned and Actual Furniture Procurement Outputs

Room	Quantity		Furniture and Quantity (quantity per room)	
	Planned	Actual	Planned	Actual
Regular classrooms	256	256	Tablet chair (40), teacher's desk (1), teacher's chair (1), chalkboard (1), white board (1), notice board (1)	As planned
Library (Capacity: 150)	11	11	Library desk (25), library chair (151), catalogue box (1), file cabinet (1), kneehole desk (1), bookshelf (26), chalkboard (1), notice board (1)	As planned
Library (Capacity: 300)	3	3	Library desk (50), library chair (301), catalogue box (1), file cabinet (1), kneehole desk (1), bookshelf (26), chalkboard (1), notice board (1)	As planned
Science laboratory (physics)	22	22	Stool (42), teacher's desk (1), teacher's chair (1), demonstration table (1), work bench (20), cupboard A (4), cupboard B (1), chalkboard (1), notice board (2)	As planned
Science laboratory (chemistry)				As planned
Science laboratory (biology)				As planned
Resource center	8	8	Office desk (10), chair (16), cupboard A (10), Book desk (2), Shelf (10), chalkboard (2), notice board (2)	As planned
ICT center	7	7	Computer desk (20), chair (41), teacher's desk (1), shelf (1), whiteboard (1), notice board (1)	As planned
Director's office	7	7	Office desk (1), meeting table (1), armrest chair (2), office chair (8), cupboard A (2), file cabinet (2), notice board (2)	As planned
Vice director's offices (2 offices)	7	7	Office desk (2), meeting table (2), armrest chair (2), office chair (12), cupboard A (2), file cabinet (2), notice board (2)	As planned
Secretary's room	7	7	Office desk (2), office chair (14), cupboard A (2), file cabinet (2), shelf (2)	As planned
Financial office room	7	7	Office desk (4), armrest chair (4) office chair (8), cupboard A (4), file cabinet (4)	As planned
Administration office room	7	7	Office desk (3), armrest chair (3), office chair (6), cupboard A (3), file cabinet (3)	As planned
Record office and storage	8	8	Office desk (1), office chair (1), cupboard A (1), file cabinet (1), shelf (4)	As planned
Staff room	8	8	Office chair (30), meeting table (5), file cabinet (6), chalkboard (1), notice board (1), locker (15)	As planned

Source: Documents provided by JICA

(2) Ethiopian Side Outputs

The outputs to be undertaken by the Ethiopian side included securing the land; forming the land; construction of access roads and removing obstructions; providing electrical connection for all target schools and water connection; constructing gates, fences, and guard rooms; constructing drinking fountains; constructing sports grounds; providing apparatus for distance learning curriculum and computers; and science laboratory materials for new schools only.

Of the outputs that the eight new schools needed to complete prior to the commencement of construction, securing the land and forming the land were carried out as planned. However, construction was delayed at four schools by one to two months because it took time to arrange heavy equipment for the construction of access roads. Some heavy equipment could not enter the sites due to rainfall, either. In addition, at the time of final inspection, these outputs required to be

completed before the start of school operation were delayed: electrical connections, water connections, and construction of drinking fountains. As shown in Table 4, at the time of ex-post evaluation, the Ethiopian side had completed electrical connections at all target schools, but some schools have still not completed water connection or construction of sports grounds. In schools where the water connections are not completed, water cannot be used, so laboratory classrooms are only partially operated, which affects the operation of the facility.

Table 4: Progress on the Ethiopian Side’s Obligations in the Secondary Schools

Item		Number of target schools	Ex-post evaluation (2021)			
			Completed	Underway	Not undertaken	n/a
1	Electrical connection	17	17	0	0	0
2	Water connection to laboratories ^{Note}	8	4	1	0	3
3	Water connection to toilets ^{Note}	8	4	1	0	3
4	Construction of gates, fences	8	7	1	0	0
5	Construction of guard rooms	8	6	0	0	2
6	Construction of drinking fountains	8	5	0	1	2
7	Preparation of sports grounds	8	3	3	0	2
8	Installation of apparatus for distance learning curriculum	8	7	0	0	1
9	Provision of computers	8	6	0	0	2
10	Provision of science laboratory materials	8	5	1	0	2
11	Provision of educational equipment and books for libraries	8	5	1	0	2

Source: Prepared by the evaluator based on field study results

Note: Budget estimation during planning referred to “water connection” as connection of water to the school compound and did not include the costs of connecting water pipelines to the school facilities. However, because facilities such as laboratory and handwashing facilities installed beside latrine blocks can be operated properly with water, the evaluator judged the water connection to be completed if water pipelines were connected to the building.

Regarding the delay in Ethiopian-side outputs, the procurement agency confirmed output progress regularly and urged the AREB and the officers in charge of the woreda’s education offices to implement the obligations by telephone or letter during construction. In addition, the procurement agency directly urged the woreda’s education officer and school directors during the site visit, but the obligations were not easily implemented. There are multiple factors behind the delays. For example, in Ethiopia, where decentralization is prevalent, it is difficult for the AREB to pass instructions to the woreda’s education bureau, and related organizations are slow to respond to outputs that require the cooperation of other organizations, such as electrical connections. Also, if a budget request could not be approved in one year, it was necessary to wait

for nearly a year until the budget formulation time for the following year.⁹

3.2.2 Project Inputs

3.2.2.1 Project Cost

As for the project cost, because no information on the actual costs borne by the Ethiopian side was available, only the planned and actual costs borne by the Japanese side were evaluated. The total cost during planning was 1,262 million yen, with 1,208 million yen borne by the Japanese side and 54 million yen borne by the Ethiopian side. The actual cost borne by the Japanese side was 1,208 million yen, 100% of the planned budget.

3.2.2.2 Project Period

As shown in Table 5, the actual project period was 77 months, against a planned 72 months (109% of the planned period). The difference between the plan and the actual result is due to several reasons. First, the tender/contract period exceeded the planned period due to re-tender. The commencement of construction work on schools themselves was delayed by access road construction delays on the Ethiopia side. Construction was interrupted by the rainy season, as well.

Table 5: Planned and Actual Project Periods

	Planned ^{Note}		Actual	
	Period	Months	Period	Months
Overall period	August 2011– July 2017	72 months	September 2011– January 2018	77 months

Source: Documents provided by JICA

Note: This period started on the month when the procurement agency contract was concluded and ended when all works and procurements were completed. However, the period for the reimbursement procedure is not included. In addition, the contract for Lot 6 in Group 1 was canceled in July 2014 due to the contractor's inability to perform the work. A design change was made to carry out the remaining construction using a new contractor. In the case of grant aid by the procurement agency method, the planning period is regarded as the period based on the detailed design. After the Lot 6 design change, the completion date was set as July 2017, when the completion of construction works as well as furniture and equipment procurement were expected.

Although the project cost was within the plan, the project period exceeded the plan. Therefore, the project's efficiency is fair. The constructed schools have been used as schools after handing them over to the Ethiopian side, but there were delays in some outputs borne by the Ethiopian side.

⁹ Source: Procurement agency's answers to the questionnaire.

3.3 Effectiveness and Impacts¹⁰ (Rating: ③)

3.3.1 Effectiveness

3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

(1) Number of Students in Newly Established Schools

Through this project, a total of 256 classrooms were constructed in eight secondary schools, 32 classrooms in each school. For this indicator, the number of enrolled students by school is compared with the enrollment capacity of 1,280 students (See Table 6). Among the eight schools, the actual number was 6,558 students against a target value of 6,400 (102% of the capacity). This amount includes the five schools for which enrollment data was available at the time of ex-post evaluation.

Table 6: Number of Students in Newly Established Schools

ID	Zone	Woreda	School	Base line	Target		Actual										Satisfaction rate for enrollment capacity (%)	
					Classrooms	Enrollment capacity	At the time of final inspection (2018/19)					At the time of ex-post evaluation (2020/21)						Enrollment capacity
							G9	G10	G11	G12	Total	G9	G10	G11	G12	Total		
GD-1	North Gondar	Gondar	Kebele 18	0	32	1,280	568	288	245	187	1,288	n/a					1,280	n/a
BH-2	Bahir Dar	Bahir Dar	Kebele 14	0	32	1,280	344	208	93	215	860	373	460	213	235	1,281	1,280	100.1%
DS-3	South Wollo	Dessie	Boru Selasie K.14	0	32	1,280	218	174	0	0	392	251	151	86	0	488	1,280	38.1%
DM-4	East Gojjam	Debre Markos	Kebele 3	0	32	1,280	717	411	404	384	1,916	514	615	465	419	2,013	1,280	157.3%
DB-5	North Shoa	Debre Birhan	Kebele 6	0	32	1,280	841	593	0	0	1,434	n/a					1,280	n/a
WD-6	North Wollo	Woldia	Defrega Kibi Kebele	0	32	1,280	303	160	0	0	463	435	300	300	157	1,192	1,280	93.1%
DT-7	South Gondar	Debre Tabor	Debre Tabor Evesus	0	32	1,280	503	279	405	562	1,749	490	433	282	379	1,584	1,280	123.8%
GK-8	West Gojjam	Gonji Kolela	Gonji Kolela	0	32	1,280	805	724	446	348	2,323	n/a					1,280	n.a.
Total					256	10,240	4,299	2,837	1,593	1,696	10,425	2,063	1,959	1,346	1,190	6,558	6,400	102.5%

Source: Preparatory survey report, and developed by the evaluator based on target schools' answers to the questionnaire
 Note: Enrollment capacity (40 persons) x 32 classrooms = 1,280 students (Source: preparatory survey report)

By school, the number of students enrolled in four schools met their capacity, and the number of students enrolled in one school was small. The reason for the low enrollment in one school (DS-3) is that some students drop out of school to help with household chores as they advance through the grades due to their family's financial situation.¹¹ As a result, fewer students go on to the preparatory secondary education, and fewer students transfer from existing schools to DS-3 than expected.¹² At the time of final inspection in 2019, the number of students advancing from

¹⁰ Sub-rating for Effectiveness is to be put with consideration of Impacts.

¹¹ Source: Interview with DS-3 school director and vice director.

¹² During planning, we assumed that some percentage of existing secondary school students in the same school districts as the new schools would be transferred to the new schools. The total number of classrooms needed in the three existing schools (DS-15, DS-17, one existing school not covered by this project) in the school district of Dessie City, South Wollo Prefecture, where DS-3 is located, was 62 (Source: Preparatory Survey Report p3-8, 3-9). In that respect, the construction of 32 classrooms in DS-3 by this project met secondary education development needs for facilities in Dessie City. However, in Ethiopia, parents tend to prefer existing schools that are already functioning to new schools (source: JICA Ethiopia office interview). In Dessie City, it seems that few students transferred from existing schools to new schools as expected. In fact, DS-15 and DS-17 are still overcrowded, although classroom overcrowding has been

G10 to G11 was too small to offer preparatory secondary education in DS-3, so students advancing to G11 were forced to commute to other schools in Dessie City. Since DS-3 has recently started offering preparatory secondary education, the number of students enrolled in it is small; however, the situation is improving compared to the time of final inspection, when there were no students in preparatory secondary education.

In light of the above, four out of the five schools for which enrollment data was obtained at the time of ex-post evaluation had sufficient numbers of enrolled students. One school with a small student population that did not offer preparatory education at the time of final inspection has begun offering preparatory secondary education as of ex-post evaluation. Considering the improvement of the situation, achievement of this indicator is judged to be high.

(2) Average Number of Students per Classroom for the Existing Schools

A total of 52 classrooms were constructed by this project for the nine existing schools, and the number of regular classrooms totaled 353 after the project. As shown in Table 7, the number of students of the nine schools per general classroom was 76 against a target of 71.5 (achievement level 94%).

Table 7: Average Number of Students per Classroom for the Existing 9 schools

ID.	Zone	Woreda	Schools	Baseline			Target			Actual (Ex-post Evaluation)					
				(a) Existing classrooms (CRs)	Enrollment (2010/11)	(c) Students per CR (b/a)	(d) Number of CRs to be constructe d by this project	(e) Number of CRs after the project (a+d)	(f) Students per CR (b/e)	(g)Number of CRs constructe d by the project	(h) CRs used as regular CRs	(i) Total number of CRs used as regular CRs (a+g)	Enrollment (2020/21)	(j) Total	(k) Students per CR (j/i)
BD-9	Bahir Dar	Bahir Dar	Tana	43	2,904	68	4	47	62	4	0	43	3,791	88	70%
BD-10	Bahir Dar	Bahir Dar	Ghion	34	2,839	84	4	38	75	8	4	42	4,253	101	74%
BD-11	Bahir Dar	Bahir Dar	Fasilo	33	2,117	64	4	37	57	8	8	41	2,002	49	117%
GD-12	North Gondar	Gondar	Fasiladas	28	3,357	120	4	32	105	4	4	32	2,015	63	167%
GD-13	North Gondar	Gondar	Edgit Feleg	17	2,019	119	4	21	96	4	4	21	3,421	163	59%
GD-14	North Gondar	Gondar	Azezo	27	3,140	116	4	31	101	8	8	35	3,478	99	102%
DS-15	South Wollo	Dessie	Hottie	60	3,467	58	4	64	54	4	0	64	3,421	53	101%
DS-16	South Wollo	Dessie	Niguse Michael	28	2,157	77	4	32	67	4	4	32	1,933	60	112%
DS-17	South Wollo	Dessie	Kidame Gebya	31	2,092	67	4	35	60	8	8	39	2,210	57	105%
			Total	301	24,092	80	36	337	71.5	52	40	349	26,524	76	94%

Source: Preparatory survey report, and developed by the evaluator based on target schools' answers to the questionnaire

The number of students per classroom decreased almost as targeted at six out of nine schools. Compared to the national and regional target of 40 students per classroom, the national and regional averages of students per classroom at the time of ex-post evaluation were 64.3 and 61.0,

alleviated as planned. At the time of planning, it is difficult to predict the number of dropouts from new schools and whether students will actually transfer from existing schools to new schools. For these reasons, it cannot be said that there was no need for the establishment of a new secondary school in Dessie City just because the number of students enrolled in DS-3 was small.

respectively.¹³ The declining number of students per classroom in five of the six schools is close to the regional average, although there is a gap from the regional target.

The current status of the three schools where the number of students per classroom has not decreased is as follows:

- In BD-9, the number of students enrolled in preparatory secondary education (G11, G12) is increasing compared to the time of planning.
- In BD-10, since four out of eight regular classrooms constructed by this project are used as ICT rooms instead of regular classrooms, the number of classrooms operated as regular classrooms is fewer than planned. Regular classrooms were converted to ICT rooms because the existing classrooms are unlocked, built with earthen walls and tin roofs, are of poor quality, and are not suitable for storing precision equipment such as computers and printers.¹⁴
- In BD-12, the number of G12 students was greater than expected during the planning phase.

Six of the nine target schools achieved their target values, and the degree of indicator achievement is as high as 94%. The degree of achievement of this indicator is judged to be high because classroom overcrowding was alleviated compared to the time of planning. Improvement of the learning environment was confirmed.

(3) Number of Students per Library Seat for the Existing Schools

The average number of students per library seat for the seven schools where libraries were constructed in the project was 11, against the target of 10 (see Table 8). In six of the seven schools, the number of students per library seat was almost in line with the target. The last school, which had a slightly larger gap between the target value and the actual value, was affected by the fact that many students go on to preparatory secondary education.

¹³ Education Statistics Annual Abstract, September 2019-March 2020 (2020)

¹⁴ Source: Interview with BD-10 director

Table 8: Number of Students per Library Seat for the Existing Schools

No.	Zone	Schools	Baseline			Target						Actual		
			(a) Seats of Existing Library	Enrollment (2010/11) (b) Total	(c) Number of Students per Seat	(d) Planned Capacity of Library	(e) Number of Seats after the Project (a+d)	(f) Number of Students per Seat (b/e)	(g) Number of Seats of Library constructed by the Project	(h) Number of seats after the project (a+d)	(i) Number of students per seat after the scope change (b/e) (* Only for schools where this project constructed a library)	Enrollment (2020/21) (j) Total	(k) Number of students per seat (j/k)	Target/Actual
BD-9	Bahir Dar	Tana	100	2,904	29	300	400	7	300	400	7	3,791	9	77%
BD-10	Bahir Dar	Ghion	70	2,839	41	150	220	13	150	220	13	4,253	19	67%
BD-11	Bahir Dar	Fasilo	90	2,117	24	150	240	9	150	240	9	2,002	8	106%
GD-12	North Gondar	Fasiladas	90	3,357	37	300	390	9	300	390	9	2,015	5	167%
GD-13	North Gondar	Edgit Feleg	50	2,019	40	150	200	10	0	0	0			
GD-14	North Gondar	Azezo	50	3,140	63	150	200	16	150	200	16	3,478	17	90%
DS-15	South Wollo	Hottie	0	3,467		300	300	12	300	300	12	3,421	11	101%
DS-16	South Wollo	Niguse	0	2,157		150	150	14	0	0	0			
DS-17	South Wollo	Kidame Gebya	108	2,092	19	150	258	8	150	258	8	2,210	9	95%
		Total	558	24,092	43	1,800	2,358	10	1,500	2,008	10	21,170	11	94%

Source: Preparatory survey report and developed by the evaluator based on target schools' answers to the questionnaire

Six of the seven schools achieved the target number of students per library seat, and the library usage environment had improved since project planning began. The degree of achievement for this indicator was judged to be high.

3.3.1.2 Quantitative Effects (Operation Indicators)

In ex-post evaluations of similar projects for primary and secondary school construction, one commonly evaluated operation indicator is whether the facilities constructed in the project are operated according to their originally designated purposes. Therefore, operation indicators were considered a necessary part of the ex-post evaluation, and they were added with the consent of the concerned parties.

Table 9 shows the operational status of the school facilities constructed in this project. As a whole, 243 classrooms, 88% of the 276 classrooms confirmed at the time of the field survey, were being used as regular classrooms as intended. At the new schools, 32 regular classrooms were built at each school. At one school (DS-3), 13 classrooms were unused due to the small number of students. The main reason this school had a higher percentage of unused classrooms than did other schools is as described in 3.3.1.1 Quantitative Effects (Operation and Effect Indicators) (1) Number of Students in Newly Established Schools.

For existing schools, 12 of the 44 regular classrooms were being used as ICT rooms. The existing classrooms do not have locks, and because they were very old, they were built with earthen walls and tin roofs, so they were not suitable for storing precision equipment such as computers and printers. Therefore, the three schools were using new regular classrooms as ICT rooms because they are suitable for storing computers and printers. In addition, one school was

using one regular classroom as a vice-director's room.¹⁵

As for special classrooms, a total of 22 laboratories were constructed at eight new schools, three in seven schools, and one in one school. The operational status of 13 of these laboratories at five schools (three in four schools, one in one school) was confirmed in the field survey. Of these, six laboratories at two schools (BH-2, DS-3) were partially used, mainly because of incomplete water connections and lack of lab technicians. The library was partially used in two schools and unused in one school in the 10 schools assessed.

As a whole, although the evaluation confirmed that some regular classrooms and special classrooms and one library were partially utilized or unused in a small number of schools, the operation status of the facilities constructed in this project was good.

Table 9: Operational Status of Facilities

Facility	Quantity	Operational status					Remarks	
		A: Used as originally intended	B: Partially used	C: Unused	D: Used for other purposes	Unconfir- med		
New Schools								
1	Regular classrooms	256	211	0	13	0	32	There are unused regular classrooms where the number of students is small.
2	Science laboratory (chemistry)	8	3	2	0	0	3	
3	Science laboratory (biology)	7	2	2	0	0	3	
4	Science laboratory (physics)	7	2	2	0	0	3	
5	Library	7	2	1	1	0	3	The reason for non-use is that students are not very aware of the need to use the library.
6	ICT center	7	3	1	0	0	3	
7	Administration building	10	10	0	0	0		The administration building includes the office of director and secretary, vice director's offices, administration and finance office, record room, storage, staff room.
8	Latrines for teachers and students	10	10	0	0	0		
Existing schools								
1	Regular classrooms	52	32	0	0	12	8	At the three schools where eight regular classrooms were constructed by this project, regular classrooms are used as ICT rooms. In addition, one room is used as vice-director's room in one school. The reason was that the regular classrooms constructed by this project are more suitable than existing classrooms for storing computers and printers because they are locked.
2	Library	6	5	1	0	0	0	

Source: Prepared by the evaluator based on the field study results

As described above, the number of students enrolled in the new schools constructed in this project met the projections, and the overcrowding of classrooms in the existing schools was alleviated. Special classrooms were partially utilized or unused in some schools. However, given the emphasis on the operation of regular classrooms in light of the project objectives of improving

¹⁵ Source: Field survey and answers to the questionnaire from the school

access to basic education by solving problems identified during planning, such as long-distance commutes and admission restrictions due to lack of facilities, the effectiveness was judged as high in the ex-post evaluation.

3.3.2 Impacts

3.3.2.1 Intended Impacts

In this project, access to basic education and improvement of the educational environment were expected as impacts. In the ex-post evaluation, these impacts were examined focusing on (1) improvement of school attendance, (2) improvement of quality of secondary education through improvements in the learning environment, and (3) increased student motivation to attend school.

(1) Improvement of School Attendance

Quantitative data on attendance rates and dropout rates could not be confirmed. Six of the 12 schools that answered the questionnaire reported increased attendance and decreased dropout rates due to the elimination of long-distance commuting, which was one of the problems before the project was implemented.¹⁶

(2) Improvement of Quality of Secondary Education through Improvements in the Learning Environment

This project alleviated the overcrowding of classrooms in existing schools and reduced the number of students per teacher. As a result, teachers reported reduced burden in managing their classes and improved teaching conditions compared to before project implementation.¹⁷

(3) Increased Student Motivation to Attend School

Before project implementation, the existing nine schools were aging and the windows, walls, ceilings, etc., were noticeably damaged. Some schools had no choice but to use dangerous, semi-collapsed classrooms, while others used community-built clay walls and temporary classrooms with tin roofs. Because of these conditions, students were taking classes while feeling the heat in the classrooms when it was hot outside and cold when it was cold outside. In addition, some schools were so overcrowded that a calm environment for classes could not be maintained.

After project completion, students attended classes in the concrete classrooms constructed in this project and were no longer affected by the cold or heat of the outside air, and most classrooms

¹⁶ Source: Interviews with a total of 20 school teachers and staff; two at each of eight school: director and vice-director at six schools, director and curriculum team leader at one school, director and planning team leader at one school, director at four schools)

¹⁷ Source: Interviews with a total of 12 school teachers and staff from eight existing schools; director, vice-director at four schools, director at four schools.

were no longer overcrowded. Teachers and administrators reported that students' motivation to learn was improved because they were able to concentrate on learning.¹⁸

In addition, it was confirmed at multiple schools during the field survey that students use the library for learning even on weekends due to the establishment or expansion of the library.¹⁹



Students concentrating in class



Students studying in the library on a weekend

As mentioned above, improvement of the educational environment improved teachers' motivation to teach, improving class management and students' motivation to learn.

3.3.2.2 Other Positive and Negative Impacts

(1) Impacts on the Natural Environment

This project had no negative impacts on the natural environment.

(2) Resettlement and Land Acquisition

During the planning stage, implementation of the project was not expected to require resettlement or land acquisition. At the time of the ex-post evaluation, the JICA Ethiopia Office and the AREB confirmed that unexpected illegal occupation of the site for BH-2 caused a delay in the start of construction, which had taken the time to resolve.

(3) Unintended Positive/Negative Impacts

a) Reducing the financial burden on parents

Before project implementation, some students stayed in the city, away from home, to attend secondary school. After project completion, these students were able to attend school while living at home. This had a positive family-level economic impact through reduced expenses for accommodation in the city. In addition, administrators reported that students were happy that they could live at home with their families and still attend school.²⁰

¹⁸ Source: Interviews with a total of 12 school teachers and staff from eight existing schools; director, vice-director at four schools, director at four schools.

¹⁹ Source: Interviews with a total of 12 school teachers and staff from eight existing schools; director, vice-director at four schools, director at four schools. And observation of the operational status of libraries during the field survey.

²⁰ Source: Director, vice-director of DS-3, director of DM-4, director of DS-16.

b) Impact on gender aspects (improving access to latrines for female students)

According to the Ethiopian Federal Education Standards of Secondary Education and the Amhara National Regional State School Construction Standards, schools should have separate latrines blocks for female students and male students. In this project, separate latrine blocks for female and male students, with sufficient physical separation to prevent interaction were constructed in eight new schools. As a result, teachers and administrators reported that female students were using the toilets without embarrassment and without fear of the sexual harassment that had occurred when female and male students did not have separate toilets.²¹

c) Consideration for students with disabilities

In this project, wheelchair ramps were built on the first floor of all new school facilities, passages between the blocks of school buildings were paved. The evaluation confirmed that 10 students with disabilities enrolled in three of the eight newly established schools.

In light of the above, the project's three effect indicators were achieved, and the operational status of the facilities constructed in the project was good, as a whole. This project fully contributed to access to basic education and improvement of the educational environment by establishing new secondary schools and expanding classrooms in existing schools, achieving the initial project effect target. In addition, all 13 schools surveyed reported impacts, such as increased student motivation to learn and improvement of teachers' motivation to teach, and six schools reported improvements in lesson management and reductions in student dropout rates. Therefore, effectiveness and impacts of the project are high.

3.4 Sustainability (Rating: ②)

3.4.1 Institutional/Organizational Aspect of Operation and Maintenance

The roles of stakeholders in education from the planning stage to the ex-post evaluation are shown in Table 10.

²¹ Source: Interviews with a total of 7 teachers and staff from 4 schools; the director of BH-2, the director and vice-director of DS-3, the director and planning team leader of WD-6, and the director and curriculum team leader of DT-7)

Table 10: Administrative Organization in the Education Sector

Organization	Role
Federal Ministry of Education	To formulate national education policy; formulate, implement, and monitor education sector development plans; provide technical support to regional education bureaus; develop and formulate the secondary education curriculum; prepare secondary education teaching materials; select secondary school teachers; and implement a unified national examination system
Regional education bureau	To formulate and implement regional education development plans, provide professional and technical support to zonal and woreda education bureaus, assign teachers, develop and formulate primary education curricula, standardize education levels in the region, and supervise construction projects by donors
Zonal education bureau	To implement various tasks and activities that cannot be carried out at the woreda level, coordinate the distribution of textbooks, and distribute teaching materials
Woreda education bureau	To establish and manage primary, secondary, and vocational training schools; provide support services to each school; form concrete plans based on regional education development plans and their implementation; comply with federal and regional education standards; form measures for disseminating education in the woreda (especially primary education) and their implementation; and form necessary community mobilization plans for constructing schools and procuring educational equipment
Community	To provide labor, materials, and funds for the school's operation and maintenance through a PTA; share maintenance costs; and form and monitor the school-improvement plan (including the budget)

Source: Developed by the evaluator based on the field survey results

After implementation of the project, teacher at 10 of the 12 schools for which data was obtained were assigned 40 students or fewer, which meets the national and regional standard of 40 students per teacher.

Of the 13 schools that answered the questionnaire, eight reported staff shortages. In some cases, schools do not actually hire laboratory technicians or librarians due to the lack of budget of the woreda administration and in some cases, PTA hires staff such as secretaries, guards, and cleaners to keep the school functioning. In schools where no lab technicians or library librarians are assigned, the laboratories and libraries are only partially operated due to the lack of staff, which affects the effective operation of the facility.

PTAs were established in all 13 schools that responded to the questionnaire and are all active. The main roles of PTA are (1) formulation and monitoring of the school improvement plan, (2) awareness-raising activities to promote school attendance, (3) sharing of school operation and maintenance costs, and (4) provision of labor for school maintenance and so on.

As a school, there is no problem with the daily organizational aspect of operation and maintenance. Although the operation and maintenance system is generally functioning because PTA actively supports the operation and maintenance of schools, some of schools lack lab technicians and library librarians. Since the non-assignment of staff affects the effective operation

of the facility and it is necessary to improve the staffing, it was judged that the sustainability of the operation and maintenance aspects is fair.

3.4.2 Technical Aspect of Operation and Maintenance

At all 13 schools surveyed, school maintenance committees conduct annual inspections of facilities and equipment during the summer holidays and record the inspection results. Schools reported that each defect found was repaired, but as described in 3.4.4. Status of Operation and Maintenance, 40% of the tablet chairs reported as damaged in the field survey was still unrepaired.



Damaged tablet chair. The chair in the back is used with the tablet removed.

Regarding future maintenance plans, the 14 schools that responded to the questionnaire answered that they would implement repairs of defects during the summer holidays. Given this situation, annual inspections are not sufficiently frequent, and schools are required to repair defects quickly, without leaving them until regular inspections.

Although schools carry out inspections regularly, technical sustainability was judged to be fair because defects in school facilities and equipment were not repaired in a timely fashion and there is room for improvement.

3.4.3 Financial Aspect of Operation and Maintenance

The budget for school operation and maintenance is funded by public subsidies and community support. The former includes (1) a Block Grant²² and (2) a GEQIP School Grant,²³ and the latter is (1) PTA annual fees, (2) donations, (3) fundraising activity profits, and (4) tuition fees (170 Birrs/year for G11–12 students). Tables 11 and 12 show the evaluation of the operation and maintenance budget and financial sustainability of the target schools.

²² Subsidies distributed by the Federal Ministry of Education to the regional education bureaus and then to the woreda education bureaus. The amount per student is 20 Birrs per year for G9-10 student. Although the amount is fixed, the actual amount varies depending on the financial situation of the region and woreda (Source: Interviews with the Regional Education Bureau at the time of ex-post evaluation).

²³ As part of the school improvement plan of GEQIP, a fixed amount per student is allocated directly to the school. The amount was 40 Birr per student per year at the time of planning (2011) and 50 Birr per year at the time of ex-post evaluation (2020) (Source: Interviews with the Regional Education Bureau at the time of ex-post evaluation).

Table 11: Operation and Maintenance Budget by School

Unit: Ethiopian Birr

School ID	GD-1	BH-2	DS-3	DM-4	DB-5	WD-6	DT-7	GK-8	BD-9	BD-10	BD-11	GD-12	GD-13	GD-14	DS-15	DS-16	DS-17
Number of classrooms																	
Enrollment ^{Note 1}	G9-10	n.a.	833	402	1,129	n.a.	735	923	n.a.	1,927	2,341	1,129	1,654	2,465	1,654	1,466	1,349
	G11-12	n.a.	448	86	884	n.a.	457	661	n.a.	1,864	1,912	840	886	1,757	1,013	1,767	861
Total		1,281	488	2,013		1,192	1,584		3,791	4,253	2,002	2,015	3,411	3,478	3,421	1,933	2,210
1 Estimate of public subsidies (calculated based on the prescribed amount of public subsidies and the number of students enrolled at the time of ex-post evaluation)																	
(1) Block Grant ^{Note 2}	n.a.	49,980	24,120	67,740	n.a.	44,100	55,380	n.a.	115,620	140,460	69,720	67,740	99,240	147,900	99,240	87,960	80,940
(2)-1 School Grant ^{Note 3}	n.a.	49,980	24,120	67,740	n.a.	44,100	55,380	n.a.	115,620	140,460	69,720	67,740	99,240	147,900	99,240	87,960	80,940
(2)-2 School Grant	n.a.	31,360	6,020	61,880	n.a.	31,990	46,270	n.a.	130,480	133,840	58,800	62,020	122,990	70,910	123,690	32,690	60,270
(3) Total of public subsidies	n.a.	131,320	54,260	197,360	n.a.	120,190	157,030	n.a.	361,720	414,760	198,240	197,500	321,470	366,710	322,170	208,610	222,150
Source of budget																	
1. Public subsidies																	
(1) Block Grant ^{Note 2}	n.a.	n.a.	8,000	n.a.	n.a.	n.a.	14,015	n.a.	129,000	n.a.	73,410	151,200	12,000	3,700	207,180	85,000	n.a.
(2) School Grant ^{Note 3}	n.a.	n.a.	15,000	n.a.	n.a.	n.a.	101,690	n.a.	233,220	n.a.	140,570	23,000	5,000	172,550	121,430	52,000	n.a.
(3) Total of public subsidies	n.a.	n.a.	23,000	n.a.	n.a.	n.a.	115,705	n.a.	129,000	245,000	213,980	174,200	17,000	328,610	328,610	137,000	n.a.
Comparison with the estimate of public subsidies (%)	n.a.	n.a.	42%	n.a.	n.a.	n.a.	74%	n.a.	36%	59%	108%	88%	5%	90%	102%	66%	n.a.
2. Community contribution																	
(1) Tuition fee for G11-12, PTA annual fees and donations	n.a.	n.a.	50,000	n.a.	n.a.	n.a.	300,000	n.a.	114,000	1,200,000	462,490	307,000	109,860	172,210	1,171,040	580,000	n.a.
(2) Fundraising activity	n.a.	n.a.	75,000	n.a.	n.a.	n.a.	16,000	n.a.	3,700	70,000	6,000	12,000	241,500	0	135,326	0	n.a.
(3) Total of community contribution ((1)+(2))	n.a.	n.a.	125,000	n.a.	n.a.	n.a.	316,000	n.a.	117,700	1,270,000	468,490	319,000	351,360	172,210	1,306,366	580,000	n.a.
Total budget (1+2)	n.a.	500,000	148,000	810,086	n.a.	400,000	431,705	n.a.	246,700	1,515,000	682,470	493,200	368,360	500,820	1,634,976	717,000	n.a.
Budget per student	n.a.	390	303	402	n.a.	336	273	n.a.	65	356	341	245	108	144	478	371	n.a.

Source: Preparatory survey report and developed by the evaluator based on the interviews at the time of ex-post evaluation.

Note 1: In planning, the number of students was calculated as the number of planned classrooms × the number of students per classroom (40 students × 2 (double shift)).

Note 2: In planning, the Block Grant was 20 Birr per student for G9–10. The estimation was calculated by multiplying the above enrollment capacity by 20 Birr.

Note 3: In planning, the school grant was 50 Birr per year for G9–10 and 60 Birr for G11–12. At the time of the ex-post evaluation, it was 60 Birr for G9–10 and 70 Birr for G11–12.

Table 12: Evaluation of Financial Sustainability by School

School ID	GD-1	BH-2	DS-3	DM-4	DB-5	WD-6	DT-7	GK-8	BD-9	BD-10	BD-11	GD-12	GD-13	GD-14	DS-15	DS-16	DS-17
(1) Public subsidies	n.a.	n.a.	1	n.a.	n.a.	n.a.	2	n.a.	1	2	3	3	1	3	3	2	n.a.
(2) Community contribution	n.a.	n.a.	1	n.a.	n.a.	n.a.	2	n.a.	1	2	2	1	1	1	3	3	n.a.
Overall evaluation	n.a.	2	1	2	n.a.	2	2	n.a.	1	2	2	2	1	2	3	2	n.a.
Remarks			The amount of public subsidy is small. The PTA annual fee is set at 200 Birr, but the actual collection is about 100 Birr/student, and the financial support of the community is vulnerable.	The budget is secured to a certain extent.		The budget is secured to a certain extent.			The amount of PTA annual fee collected is small compared to the number of students. In fact, two-thirds of the students have a certification from the kebele revealing their inability to pay for the school.		The annual PTA membership fee per student is less than that of other schools, and the income from income-generating activity is also small.	The school receives a certain amount of public subsidies, but the community financial support is small.	Both public subsidies and community financial support are small.	Community financial support is small.	Both public subsidies and financial support for the community are secured.	Although the amount of public subsidy is small, the PTA annual membership fee which amount per student is large and has a high collection rate, compensates for the late	

Source: Developed by the evaluator based on interviews during the field study.

Note: The degree of sufficiency of each item is classified as being in one of three stages: 3: high, 2: fair, and 1: low. Public subsidy is judged to be 1 if a Block Grant was not allocated as of March 2021 or if the grant was less than the specified amount.

As Table 11 shows, all 14 schools that responded to the questionnaire reported delays in or reduced amounts of public subsidies. Delays and reductions in public subsidies were due to federal budget deficits and prioritization of spending in areas deemed more urgent than education (e.g., health). Under these circumstances, the PTA allocates annual membership fees, profits from fundraising activities, and donations to school operating expenses to operate the school.

For some schools, financial support from the community can cover the school's operating expenses, while for others, many households in the communities do not earn cash income, and

the PTA cannot collect sufficient annual membership fees. Fund mobilization levels vary depending on local economic conditions and community capacity.

As shown in Table 12, which presents the financial status and sufficiency of public subsidies and community support for the 13 schools that answered the questionnaire, the status of one school was judged to be high, nine schools were fair, and three schools were low.

Regarding the outlook for the future budget, although the government attaches importance to the education sector, it places a higher priority on urgent matters such as the health sector's ability to manage COVID-19. In the education sector, funds needed to operate schools under COVID-19 conditions, such as for increasing the number of teachers to allow double shift and for purchasing masks and alcohol are prioritized. Under these circumstances, delays and reductions in public subsidies for daily school operating expenses are expected to continue.

Given the above, although the schools are highly regarded for their ability to keep the schools running through the self-help efforts of the community using various resources such as PTA membership fees and profits from fundraising activities. Because of the delays and reductions in public subsidies and the amount of financial support from the community, the financial status of 12 of the 13 schools surveyed was classified as medium to low. Therefore, the overall financial sustainability was judged to be fair.

3.4.4 Status of Operation and Maintenance

The final inspection in 2019 confirmed cracks and peeling in the mortar finish on walls, columns, and ceilings, peeling paint, and roof leaks as common defects for each facility, and these were repaired. Common furniture defects confirmed for each facility included bolts and rivets missing from desks and chairs, damage to the welded part of the chair frame, and peeling of the surface material of the desks and chairs. Repairs such as reattaching bolts and rewelding frames were carried out. The final inspection also found graffiti and holes made with ballpoint pens on the tablets of students' tablet chairs, and many tablet chairs had been left outdoors without being returned to the classroom. In some schools, tablet chairs that needed loose bolts fixed were piled up in the warehouse. In addition, the door handle levers and the door locks were sometimes destroyed. In response, the consultant in charge of supervision wrote to the AREB and the target schools to request (1) regular cleaning, (2) proper handling and maintenance of furniture, and (3) proper management of keys including the provision of key boxes assigned to administrators. Table 13 shows each facility's status based on direct observation of the general classroom by the field survey assistant at the time of the ex-post evaluation review of photos by the evaluator.

Table13 : Status of Regular Classrooms

Classification	Number
A: Very good (clean, with no garbage or food waste on the floor)	3
B: Good (almost clean, with no garbage and food waste on the floor)	9
C: Some problems (not clean, with some garbage or food waste on the floor)	1
D: Many problems (not clean, with a lot of garbage or food waste on the floor)	0
Total	13

Source: Prepared by the evaluator based on the field survey

Table 14 shows the results of the field survey of the furniture and equipment in regular classrooms.

Table 14: Defects of Furniture and Equipment of Regular Classrooms

Item	Number of confirmed items	Number of damaged items	Percentage of confirmed items damaged
Tablet chair	1,230	499	41%
Notice board	42	24	42%
Chalk board	35	2	6%
Door	33	4	12%

Source: Prepared by the evaluator based on the field survey and from photo judgments

At the time of the ex-post evaluation, all the tablet chairs that had been procured in this project were damaged and were no longer in use at the two schools surveyed. These chairs are not included in the table above. School teachers and staff recognized that the damage to the tablet chairs was the result of poor quality. However, based on the final inspection mentioned above and the results of an ex-post evaluation conducted in FY2019 “The Project for Construction of Primary and Secondary Schools in the Southern Nations, Nationalities and Peoples’ Regional State,” which reported a similar situation as in this case with damaged tablet chairs were being used with damage and piled up in many of the target secondary schools, the main causes of damage to the tablet chairs are thought to be that (1) the users (mainly students) are not careful with the furniture and equipment and (2) the schools do not repair defects quickly.

As mentioned above, schools reported conducting annual inspections and repairing defects. However, many of the defects, such as loose door handles and loose bolts on desks and tablet chairs would not cause damage if regular preventive measures were implemented, such as tightening each time looseness is noticed, instead of checking once a year.

Overall, the facilities of the secondary schools in this project were generally better maintained than those of the secondary schools surveyed in a similar ex-post evaluation, FY2019 Ex-Post Evaluation of Japanese Grant Aid Project “The Project for Construction of Primary and Secondary Schools in the Southern Nations, Nationalities and Peoples’ Regional State.” Given

the remaining damage to furniture and equipment and the current lack of timely maintenance, the status of the operation and maintenance system was judged to be fair.

Some minor problems were observed in terms of technical aspects, financial aspects, and the current status of the operation and maintenance system. Therefore, the sustainability of the project effects is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was implemented to improve access to and the educational environment for secondary education by constructing new secondary schools and expanding existing secondary schools in Amhara region in Ethiopia.

This project's implementation is highly consistent with Ethiopia's development policy, which emphasizes access to basic education and improvement of the educational environment as well as the target region's developmental needs for basic education, and with Japan's ODA policy for Ethiopia, which emphasized the education sector. Therefore, the project's relevance is high. Although the project outputs and the project costs were as planned, the project period exceeded the plan. Therefore, the project's efficiency is fair. The implementation of this project fully contributed to access to basic education and improvement of the educational environment by establishing new secondary schools and expanding classrooms in existing schools, and achieved the initial project effect target. In addition, it was confirmed that all 13 schools surveyed had impacts such as reductions in student dropout rates, improvement of students' motivation to learn, improvement of teachers' motivation to teach and their class management and teachers' motivation to teach by improving the educational environment. Therefore, effectiveness and impacts of the project are high. Some minor problems have been observed in terms of the technical aspect, financial aspect and current status of the operation and maintenance system. Therefore, sustainability of the project effects is fair.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

(1) Immediate Completion of Ethiopia's Obligations in Schools where they have not been completed

The obligations of the Ethiopian side were planned to be completed prior to the start of school operation, but due to budget shortages and delays in coordination with other organizations, water connections and construction of sports grounds had not yet been completed at some schools at the time of ex-post evaluation. In schools where water connections were not completed, laboratories constructed by this project are only partially used. To utilize facilities constructed through this

project in accordance with their initial purpose, it is necessary for the Ethiopian side to complete its obligations as soon as possible.

If it seems difficult to secure the budget from the woreda, it is recommended for PTA to make efforts to ensure financial resources by discussing means for securing them and by asking for donations, implementing or strengthening fund-raising activities for creating revenue. In addition, it is recommended that AREB makes a regular progress report on these obligations, perhaps monthly or quarterly, to the JICA Ethiopia office until the obligations are completed.

(2) Immediate Repair to Damaged Equipment and Strengthening Daily Maintenance (Recommendation to the executing agency and the target schools)

First of all, schools with damaged equipment and furniture should immediately repair the damaged equipment. Although we appreciate that the schools are carrying out repairs to damaged equipment through teachers, PTAs, and local contractors with limited financial resources, we found that the main cause of the damage was users, based on physical observation conducted at the time of ex-post evaluation and interviews with related parties.

In addition, periodic inspections have been carried out at all surveyed schools, but most schools do not perform repairs immediately, even when they recognize that the equipment is damaged. They repair all damaged equipment during school holidays. Such curative maintenance is important, but from now on, preventive maintenance should be strengthened. This means repairing damage while equipment is still usable, and tightening loose bolts based on inspection results.

— In order to raise the target woredas' and schools' awareness of these issues, it is desirable that AREB informs the woreda education bureaus and target schools of the above points in writing to encourage careful handling of furniture and equipment and implementation of preventive maintenance.

4.2.2 Recommendations to JICA

(1) Continuous Monitoring on the Obligations of Ethiopian Side and Maintenance Status of the Target Schools

Regarding the obligations of the Ethiopian side, it is desirable that the JICA Ethiopia office regularly checks on progress with AREB via e-mail or telephone, as it has practiced so far, and encourage implementation of the obligations frequently. It is also recommended that the JICA Ethiopia office visits target schools to directly monitor obligations on the Ethiopian side as well as the maintenance condition of the target schools. When visiting the target schools, aiming for synergy between grant aid and technical cooperation, it is recommended to take the opportunity to visit the Amhara region for the Project for Mathematical Understanding for Science and Technology, which is concurrently being implemented to introduce educational activities on new

mathematics curriculum for G9-12.

4.3 Lessons Learned

Early Involvement of Major Stakeholders in the Obligations of the Recipient Country

The outputs to be undertaken by the Ethiopian side included securing the land; forming the land; construction of access roads and removing obstructions; providing electrical connection for all target schools and water connection; constructing gates, fences, and guard rooms; constructing drinking fountains; constructing sports grounds; providing apparatus for distance learning curriculum and computers; and science laboratory materials for new schools only.

Despite repeated written and verbal encouragement from the concerned parties on the Japanese side to the Ethiopian side to implement these obligations, due to delays in budgetary procedures and coordination with other organizations, electrical connections, water connections, construction of water fountains, constructing of sports grounds were not completed in some schools at the time of the final inspection that was implemented one year after completion. At the time of the ex-post evaluation, electrical connections had been completed in all 17 schools, but water connections and constructing sports grounds had not been completed in some schools. In the schools where the water connection was not completed, it affected the effective operation of some facilities, such as the inability to conduct experiments using water in the laboratory.

— In this way, if the recipient country's obligations which required a certain budget is included in the project scope, and it is assumed that it would be difficult for the recipient country to implement its obligations with only public funds, concerned parties on the Japanese side should have urged government officials of the recipient country to implement their obligations on schedule in writing and verbally from the early stages of implementation. Additionally, the parties should have discussed specific ways to secure financial resources from collaborative stakeholders, such as target communities and influential people in the community. Then, they might have proceeded with implementing the recipient country's obligations in realistic ways.

In fact, in the "The Project for Construction of Primary and Secondary Schools in the Southern Nations, Nationalities and Peoples' Regional State Ethiopian Southern Nations, Nationalities" that was evaluated in FY2019, the woreda administration and parents who had long been anxious for the establishment of a secondary school in their community cooperated to save for the costs of electricity and water connection, and they coordinated with the Ethiopian Electric Power Authority from an early stage to complete obligations including electrical connections before starting school operations. Similarly, in the Amhara region, which is the target region of this project, the community is actively providing funds and labor for the operation of the school.

Involving local stakeholders from the early stages of implementation and fostering stakeholders' ownership will help promote financing and reduce risk of delays in implementing obligations of the recipient country.