

Pakistan

FY2022 Ex-Post Evaluation Report of Japanese Grant Aid Project

"The Project for Upgrading Primary Girls Schools into Elementary Schools in Southern Rural Sindh"
and

"The Project for Upgrading Primary Girls Schools into Elementary Schools in Northern Rural Sindh"
External Evaluator: MIURA Masako (QUNIE CORPORATION)

0. Summary

The projects aimed to improve access to basic education for girls in rural areas of Sindh by constructing school facilities and providing classroom furniture and equipment to expand the existing girls' primary schools into elementary schools with the addition of middle schools, thereby contributing to reducing urban-rural and gender disparities in educational opportunities. The projects were in line with the development policy and development needs of Pakistan and Sindh at the time of planning and ex-post evaluation, and the project planning and approach were appropriate. It was also consistent with the Japan's ODA policy at the time of planning. No specific linkages or synergies were identified for either internal or external consistency, but there was no duplication of projects. From the above, the relevance and coherence of the project is high. In terms of the outputs of the projects, some of them were implemented as planned, and rest of them were cancelled or implemented with additional components. In addition, both the project period and the project cost were slightly higher than planned, but generally implemented as planned. Therefore, the efficiency is high. As a result of the implementation of the projects, school facilities have been upgraded and the schooling environment for girls in rural areas has improved. However, the number of students enrolled in the newly established girls' middle schools was significantly lower than the target envisaged at the time of planning. Even at the time of the ex-post evaluation, only about 61% of the target had been achieved. In addition, improvements in the quality of educational contents through the use of the multipurpose rooms as computer rooms were not identified. While the improvement of the schooling environment has helped parents to send girls to school with less concern, there have been still some students in the target areas who cannot attend school due to a lack of understanding of the importance of girls' education and economic factors. Only a certain degree of effectiveness and impact can be confirmed compared to the original plan. Therefore, effectiveness and impacts of the projects are moderately low. Regarding the sustainability of the project, there are no concerns on sustainability of policies, systems and technologies. However, there is a need to strengthen capacity, including through the use of SMC funds, and to improve the financial situation for the operation and maintenance of each school. Therefore, there are some issues regarding the sustainability of organizational, financial and social aspects including the current status of operation and maintenance.

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

1. Project Description



Project Location
(Source: External Evaluator)



A Classroom and Furniture
(Source: External Evaluator)

1.1. Background

The 18th Constitutional Amendment of the Islamic Republic of Pakistan (hereinafter referred to as "Pakistan") in 2010 significantly revised the role of the federal government, devolving administrative authority in the education sector to provincial governments, including policy-making, curriculum development and textbook production. Although access to basic education in the country has been improving, the net enrolment rate was 57% in primary education (grades 1-5, ages 5-9) and 22% in middle education (grades 6-8, ages 10-12), still lagging behind other neighbouring countries (Pakistan Social and Living Standard Measurement (PSLM), 2011/12).

Sindh Province, the target area of the project, has the second largest population in the country after Punjab Province, and has been a driver of Pakistan's economic growth, along with Punjab, in sectors such as industry and agriculture. However, the net enrolment rate in the province was below the national average at 50% for primary education and 13% for middle education, and the net enrolment rate for girls in rural Sindh was particularly serious at 36% for primary education and 7% for middle education (PSLM, 2011/12). In Pakistan, schools are usually set up separately for boys and girls, and there were many cases in rural areas where there were no middle schools within accessible reach of girls. There were various socio-economic factors behind the low enrolment of girls, and the lack of school facilities was one of the factors hindering girls' enrolment, so there was a high need for the establishment of new middle schools for girls, especially in rural areas. In addition, some primary schools had become unsafe due to dilapidation. Under these circumstances, the Government of Pakistan requested for the construction of girls' middle schools in rural areas of Sindh, and JICA has supported to expand existing primary schools into middle schools for girls.

1.2. Project Outline

The objective of this project is as following;

- The Project for Upgrading Primary Girls Schools into Elementary Schools in Southern Rural Sindh (hereafter referred to as "Southern Project")

To improve girls' access to basic education in rural areas of Sindh by expanding and upgrading existing primary schools into girls' middle schools and rebuilding aging primary school classrooms¹, thereby contributing to reducing urban-rural and gender disparities in educational opportunities.

- The Project for Upgrading Primary Girls Schools into Elementary Schools in Northern Rural Sindh (hereafter referred to as "Northern Project")

To improve girls' access to basic education in rural areas of Sindh by expanding and upgrading existing primary schools into girls' middle schools, rebuilding aging primary school classrooms and improvement of classroom furniture and equipment, thereby contributing to reducing urban-rural and gender disparities in educational opportunities.

<Grant Aid Project>

Grant Limit / Actual Grant Amount		[Southern Project] 808 million yen / 808 million yen [Northern Project] 973 million yen / 973 million yen
Exchange of Notes Date / Grant Agreement Date		[Southern Project] February 2014 / February 2014 [Northern Project] March 2016 / March 2016
Executing Agency		School Education and Literacy Department: SELD
Project Completion		[Southern Project] November 2016 [Northern Project] June,2019
Target Area		Sindh Province, the Islamic Republic of Pakistan
Main Contractors	Construction	[Southern Project] • SALMAN Enterprises (Lot 1, Lot 2) • AMCORP Engineering & Construction (Pvt) Limited (Lot 3) [Northern Project] • AMCORP Engineering & Construction (Pvt) Limited
	Equipment	[Northern Project] • Siddiq Sons (educational furniture) • Wasif Ghafoor Engineering & Contractor (computers) • Sigma Ventures (computers, photovoltaic systems)
Main Consultant		Matsuda Consultants International Co., Ltd.
Procurement Agency		Japan International Cooperation System

¹ The education system in Pakistan is broadly divided into pre-school, primary, secondary and higher education. Primary education is divided into primary schools (grades 1-5) and middle schools (grades 6-8). There are also elementary schools (grades 1-8), which is a combination of primary school and middle school. The main scope of the project was to expand primary schools into elementary schools by adding middle schools to the primary schools.

Preparatory Survey	[Southern Project] August to October 2012 [Northern Project] August to December 2015
Related Projects	<p><Technical Cooperation></p> <ul style="list-style-type: none"> • The Punjab Literacy Promotion Project (2004-2007) • The Punjab Literacy Promotion Project, Phase-II (2007-2010) • Non Formal Education Promotion Project (2011-2014) • Project for Promotion of Student-Centered and Inquiry-Based Science Education (2009-2012) • Advancing Quality Alternative Learning Project (2015-2020) • Advancing Quality Alternative Learning Project, Phase-II (2021-2025) • Project for Gender Responsive Actions to Ensure Retention through Community Engagement and School Practice (2022-2026) • Advisor for Education Policy (2022-2024) <p><ODA Loan></p> <ul style="list-style-type: none"> • Balochistan Middle Level Education Project (1997-2010) <p><Grant Aid Project></p> <ul style="list-style-type: none"> • Project for Establishment of Teacher's Training College for Female and Provision of Educational Equipment for North-West Frontier Province in Islamic Republic of Pakistan (1994) • The Project for the Improvement in the Primary Education for the North-West Frontier Province (1994) • The Project for the Improvement in the Primary Education for the North-West Frontier Province, Phase 2/3 (1995) • The Project for the Improvement in the Primary Education for the North-West Frontier Province, Phase 3/3 (1996) • Non-Project Grant Aid for Earthquake Reconstruction (2006-2010) • The Project for Upgrading Primary Girls' School into Elementary School in Rural Sindh Province (2023) <p>【International Organizations, Aid Organizations】</p> <ul style="list-style-type: none"> • World Bank: Sindh Education Sector Project (SEP) (2009-2012), Sindh Education Project Phase-II (SEP II)

	<p>(2013-2017), Sindh Early Learning Enhancement through Classroom Transformation (SELECT) (2021-2026)</p> <ul style="list-style-type: none"> • European Union: Sindh Education Plan Support Programme (SEP-SP) (2006-2012), Sindh Education Plan Support Programme (SEPS) (2014-2017) • United States Agency for International Development (USAID): ED-LINK (2007-2012), Sindh Teacher Education Project (Pre-STEP) (2011-2014), Sindh Basic Education Program (2011-2016) • United Nations Children's Fund (UNICEF): Transitional School Structures (TSS) in Sindh province (2010-2012) • Asian Development Bank (ADB): Decentralized Elementary Education Project (DEEP) (2003-2008) • Canadian International Development Agency (CIDA): Sindh Elementary Teacher Training Project (SETTP) (2008-2015), Loans for education reform projects (2006-2013) • UK Department for International Development (now Foreign, Commonwealth and Development Office): Funding for education in Sindh (2012-2015)
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2. Outline of the Evaluation Study

2.1. External Evaluator

MIURA Masako (QUNIE CORPORATION)

2.2. Duration of Evaluation Study

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

Duration of the Study: November 2022 to December 2023

Duration of the Field Study: March 2023 to June 2023 (implemented remotely)

2.3. Constraints During the Evaluation Study

This ex-post evaluation did not envisage the implementation of a field study by an external evaluator, and information was collected during the evaluation through a field study by a local consultant based on a questionnaire and online interviews. As a result, some information and data were not sufficiently provided by the executing and related agencies, which limited the analysis of some parts of project contents and results.

3. Results of the Evaluation (Overall Rating: C²)

3.1. Relevance/Coherence (Rating: ③³)

3.1.1. Relevance (Rating: ③)

3.1.1.1. Consistency with the Development Plan of Pakistan

The National Education Policy 2009, which was the Government's national education policy at the time of planning, stated that it aims to ensure equal educational opportunities by "providing basic educational facilities and equal access to education for girls, boys, disadvantaged / marginalised groups, children and adults with special needs". Among the priorities identified in the Policy were "poverty reduction, increasing enrolment, improving infrastructure, especially girls' access to secondary education, building and renovating new schools and providing transport in remote areas". *The Second Phase of Sindh Education Sector Project (SERP II)*, which was the Sindh provincial education policy at the time of planning of the Southern Project, indicated a direction of expanding existing primary schools into elementary schools. In addition, *The School Education Sector Plan And Roadmap for Sindh (SESP) 2014-2018*, which was the Sindh provincial education policy at the time of planning of the Northern Project, identified "girls are vulnerable to poor conditions at community level, including lack of sanitation facilities in schools" and the "need to encourage girls' schooling in rural areas" as challenges.

The national policy on education has not been newly formulated since the above-mentioned *National Education Policy 2009*, and therefore the national policy at the time of the ex-post evaluation remained unchanged from the time of planning. *The School Education Sector Plan And Roadmap for Sindh (SESP) 2019-2024*, which is the provincial education plan at the time of the ex-post evaluation, sets SDG 4 target 4.1 "By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes" as one of the targets by 2024. It also states that girls' access to secondary education will be strengthened by expanding primary schools to elementary schools and increasing the number of secondary schools. Reducing regional disparities in secondary education is also listed as one of the challenges.

At both the time of planning and ex-post evaluation, education policies in Pakistan and Sindh province have emphasised the importance of girls' education, with strengthening girls' access to secondary education as one of the challenges. Therefore, it can be said that the projects were in line with the development policies of Pakistan and Sindh at both the time of planning and the ex-post evaluation.

3.1.1.2. Consistency with the Development Needs of Pakistan

During the planning of both the Southern and Northern Projects, it was noted that the net

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

³ ④: Very High, ③: High, ②: Moderately Low, ①: Low

enrolment rate of girls in secondary education in rural Sindh was low compared to urban Sindh and other provinces. *The Pakistan Social and Living Standards Measurement (PSLM)* in 2011/12 showed that a net enrolment rate for primary education was 50% and the net enrolment rate for middle education was 13%, then both were below the national average. Furthermore, the net enrolment rate of girls in rural Sindh for the middle education was 7%, which was lower than the figures for girls in urban Sindh (29%), boys in rural Sindh (17%) and girls in rural areas in other provinces (22% in Punjab, 13% in Khyber Pakhtunkhwa and 8% in Balochistan). It was also reported that some primary schools in Sindh were in a status of unsafe conditions due to ageing facilities.

Since the time of planning and at the time of the ex-post evaluation, enrolment of girls in the middle education in rural Sindh has remained at a low level (9% in 2012/13, 6% in 2013/14, 7% in 2014/15, 6% in 2018/19 and 7% in 2019/20 (no survey conducted in 2016 and 2017)), the need for enhanced access to middle education for girls has been very high. The lack of understanding among parents regarding the need for girls' education in rural areas and the inappropriate school buildings and facilities have resulted in many students enrolling in primary and middle education without completing the entire process. The executing agency reported that there has been a certain number of girls who were only able to access up to primary education due to the lack of middle schools in the accessible areas.

From the above, it can be said that the needs related to strengthening girls' middle education were high and the project is consistent with the development needs at the time of planning and at the time of the ex-post evaluation, as it provides support for the construction of appropriate school facilities and for improving the safety of the facilities.

3.1.1.3. Appropriateness of the Project Plan and Approach

Based on the lessons learnt from similar projects in the past, the Southern Project plan included the following two points to be noted: 1) To ensure an adequate construction quality supervision system, the project area should be focused, and feasible construction period batches should be set considering the site-specific conditions, and local contractors with sufficient capacity should be selected through pre-qualification screening; 2) A maintenance budget should be secured at the cost of the executing agency, as well as the allocation of teachers and staff required for the operation of the school. In the implementation of the project, both 1) and 2) were carried out, but not satisfactorily. In the Southern Project, sufficient information on the selection of local contractors could not be obtained in the pre-qualification process, resulting in delays in construction by the selected contractors and consequently extending the construction period (see Section 3.2 Efficiency). However, in the Northern Project, a tender plan was formulated based on lessons learnt from previous projects and the experience of the Southern Project, and the selection of a local contractor with sufficient construction and supervision capacity was carried out,

resulting in the completion of the project without any delays in the overall construction period.

There were also changes to the project plans for both the Southern and Northern Projects. In the Southern Project, due to a shortfall in project costs caused by higher-than-expected exchange rate fluctuations, the project plan was changed so that the distribution of educational furniture and equipment (computers) was cancelled, based on the needs of the executing agency. Educational furniture was delivered by the executing agency instead, but not all of target schools received educational equipment (computers). As a result, the use of the multipurpose room as a computer room, which was envisaged at the time of planning, was limited (see 3.3.1 Effectiveness). Foreign exchange fluctuations also occurred in the Northern Project, which led to an increase in project costs, but the project plan was reviewed based on the needs of the executing agency and changed with the procurement of new equipment.

Therefore, although there are some issues regarding the appropriateness of the project plan and approach, the southern and Northern Projects in general have been adequately addressed based on lessons learnt from past projects.

3.1.2. Coherence (Rating: ②)

3.1.2.1. Consistency with Japan's ODA Policy

The Japan's Country Assistance Policy for the Islamic Republic of Pakistan (April 2012) stated to implement basic education programmes under the priority area "Human Security and Improvement of Social Infrastructure". In addition, based on the results of previous project implementations and the Japanese government's policy of "A society in which women shine, *the JICA Country Assistance Policy for the Islamic Republic of Pakistan (March 2014)* has identified "education," with a focus on non-formal education and girls' education, as a significant issue.

Therefore, the projects are highly aligned with Japan's ODA policy at the time of planning.

3.1.2.2. Internal Coherence

During the project periods of both the Southern and Northern Projects, the "Advancing Quality Alternative Learning Project (2015-2020)", which targeted Sindh province, was implemented. However, there were not specific collaborative arrangements envisaged at the planning stage, and there was also no coordination or collaboration with other JICA projects during the project periods.

Therefore, internal coherence has not been confirmed.

3.1.2.3. External Coherence

At the time of the Southern Project planning, the Ex-ante Evaluation Report stated that "SERPs supported by the World Bank, EU and others are rehabilitating and expanding schools, mainly primary schools. The project is expected to have a synergistic effect by rehabilitating

primary and middle schools while avoiding duplication with support from other donors". However, through this ex-post evaluation, it was confirmed that there was no overlap with projects funded by other donors but also but also no specific synergies, during the project period. No collaboration with assistance from other donors was envisaged at the time of the Northern Project, and there was no overlap with projects of other donors during the project period.

Therefore, external coherence has not been confirmed.

The projects were consistent with the development policy and development needs of Pakistan and Sindh province at the time of planning and ex-post evaluation, and the project plans and approach were appropriate. It was also consistent with Japanese ODA policy at the time of planning. As for internal consistency, there were no specific collaboration with other JICA projects, and as for external consistency, the initially expected coordination with other donors and synergies were not confirmed, but there was no duplication with projects supported by JICA or other donors.

Therefore, its relevance and coherence are high.

3.2. Efficiency (Rating: ③)

3.2.1. Project Outputs

The planned and actual outputs of the projects are shown in Table 1 and Table 2.

Table 1: Planned and Actual Outputs of the Southern Project

Items	Plan	Actual
Construction works, procurement of equipment		
Facilities	Classroom buildings: 39 buildings in 31 schools (133 classrooms., 31 multi-purpose rooms, 24 rooms for school principal and storages) *including rebuilding Lavatory blocks: 138 booths Total floor space: 9,096.23 sqm	Classroom buildings: 37 buildings in 29 schools (127 classrooms, 29 multi-purpose rooms, 22 rooms for school principal and storages) * including rebuilding Lavatory blocks: 126 booths in 30 blocks Total floor space: 8,579.47 sqm
Educational furniture	Desks and chairs for teachers: 164 sets Two-person desks for students: 2,460 Chairs for students: 4,920 Desks and chairs for school principal: 24 sets Chairs for guests: 96 Cabinets in rooms for school principal: 48 Cabinets in storages: 48 1 Table and 4 chairs for meetings: 24 sets	<u>Cancelled</u>
Educational equipment	Desk-top computers: 310 sets Laser printers: 31	<u>Cancelled</u>
Consulting Services		
Technical services	Technical services on construction supervision by procurement agency	Technical services on construction supervision by procurement agency

Source: Documents provided by JICA, Results of the interview and questionnaire for the executing agency and implementing consultants

Table 2: Planned and Actual Outputs of the Northern Project

Items	Plan	Actual
Construction works, procurement of equipment		
Facilities	Classroom buildings: 26 buildings in 25 schools (94 classrooms, 25 multi-purpose rooms, 22 rooms for school principal and storages), rebuilding: 17 classrooms Lavatory blocks: 24 blocks Total floor space 6,953.20 sqm	Classroom buildings: 26 buildings in 25 schools (97 classrooms, 25 multi-purpose rooms, 22 rooms for school principal and storages) *Including rebuilding Lavatory blocks: 24 blocks Total floor space: 7,105.92 sqm
Educational furniture	Desks and chairs for teachers: 119 sets Two-person desks for students: 1,785 Chairs for students: 3,570 Desks and chairs for school principal: 22 sets Chairs for guests: 88 Cabinets in rooms for school principal: 44 Cabinets in storages: 44 1 Table and 4 chairs for meetings: 22 sets	Desks for teachers: 122 Chairs for teachers: 298 Desks and chairs for students (Large and medium): 1,455 Chairs for students: 750 Desks for school principal: 22 Chairs for school principal: 22 Cabinets: 88 Desks for meetings: 22 Desks for computers: 375
Educational equipment	Desk-top computers: 250 sets Laser printers: 25	Desk-top computers: 250 sets Laser printers: 25 Voltage regulators: 250 sets Extension codes: 250 sets
Others		<u>Additional items</u> Photovoltaic panels: 300 sets Installation stands: 25 sets Inverters: 25 sets Batteries: 100 sets Systematic cabinets: 25 sets
Consulting Services		
Technical services	Technical services on construction supervision by procurement agency	Technical services on construction supervision by procurement agency

Source: Documents provided by JICA, Results of the interview and questionnaire for the executing agency and implementing consultants

In the Southern Project, 39 buildings in 31 schools were planned to be constructed at the time of planning, but two schools were cancelled and 37 buildings in 29 schools were finally constructed. In Pakistan, land for school construction is generally transferred from the landowner to the LSED, and in this project as well, 31 school sites were scheduled to be transferred from the landowner. However, as about two years had passed between the preparatory survey and the start of construction, the executing agency built a school on its own in one of the two schools, while in the other school, the landowner withdrew its intention to transfer the land. On the land that was not transferred, construction was cancelled because an alternative site could not be found. As a result, the number of school buildings decreased from 39 to 37, and the total floor area also decreased.

The procurement of educational furniture and equipment was cancelled in the Southern Project. There were two main reasons for the shortfall in project costs that resulted to the cancellation (the first reason had a particularly significant impact).

- It took eight months from the signing of the procurement agency agreement to the actual

contribution of funds. In the meantime, the exchange rate fluctuations occurred and the yen depreciated, resulting in a decrease in the project cost in US dollars.

- The tender price exceeded the planned price, resulting in a budget excess. Quotations were obtained and planned prices were investigated during the preparatory study. However, at the start of procurement, the quoted prices increased and, as the construction was extensive, the bid prices of all contractors who responded to the tender exceeded the planned prices.

In response to the shortage of funds, the JICA Pakistan office, the executing agency, the procurement agency and the implementation consultant discussed the changes to the project plan. Based on the request from the executing agency to keep the number of school sites, it was decided to withdraw the procurement of educational furniture and equipment while maintaining the plan for the construction of schools. Out of the cancelled components, the executing agency procured and deployed the educational furniture on its own. As for educational equipment, desktop computers were distributed to some target schools.

In the Northern Project, there are differences between the planned and actual figures for the procurement of desks and chairs for students. For chairs, the original plan was to procure desks and chairs separately, but in some classrooms, integrated desks and chairs or three-seater desks were distributed instead of two-seater desks. This resulted in actual values for desks and chairs being different from those in the plan, but procurement was carried out in accordance with the number of students required. In the Northern Project, the appreciation of the yen due to exchange rate fluctuations resulted in a residual fund for project costs in US dollars at the start of procurement, and it was decided to use the residual fund to install photovoltaic systems in all 25 schools. As for how to utilize the residual funds, the installation of photovoltaic systems to cope with the constant electricity shortage, as well as the addition of extra school sites, were considered. However, as there were concerns that additional sites would require further time for negotiations on the transfer of land, it was finally decided to install photovoltaic systems after discussions between stakeholders. Installed photovoltaic systems can generate 2.4 kW of electricity per school, enough to cover lighting in classrooms and toilets during power outages, and power for the electric pumping system from wells for flushing the toilets.

As a result of the above, the construction of classrooms and school buildings was generally implemented as planned, but due to insufficient funds in the Southern Project and residual funds in the Northern Project, the plans for the procurement of educational furniture and equipment were changed, respectively.

3.2.2. Project Inputs

3.2.2.1. Project Cost

The planned and actual project costs are shown in Table 3.

Table 3: The Planned and Actual Project Costs

Unit: mil Yen

	Plan			Actual		
	Total cost	Japan	Pakistan	Total Cost	Japan	Pakistan
Southern Project	815	808	7	935	808	127
Northern Project	977	973	4	973	973	0

Source: Documents provided by JICA, Results of the interview and questionnaire for the executing agency and implementing consultants

In the Southern Project, some of the project plans were changed due to a reduction in the project costs in US dollars caused by foreign exchange losses, and the project cost based on the changed plans was a total of JPY 808 million. The cost of the originally planned educational furniture and some educational equipment was borne by the executing agency and it was approximately JPY 120 million (calculated at 108.736 million Pakistani rupees (PKR) at the average rate of JPY 1.107 during the project period). Adding the planned Pakistani contributions of 7 million at the time of planning, the total project cost was JPY 935 million, slightly higher than the planned amount of JPY 815 million (115% of the plan).

In the Northern Project, due to foreign exchange gains that generated a residual in the project cost in US dollars, it was decided to install photovoltaic systems in each school and additional equipment was procured for this. In addition, following the design changes for the installation of photovoltaic systems, the electricity supply from the existing power grid, which was planned to be carried out at the Pakistani side's expense, was to be provided on a voluntary basis. As a result, the planned project cost of JPY 4 million to be borne by the Pakistani side was JPY 0. The total project cost for school construction and procurement of educational furniture and equipment, which was originally planned, was JPY 961 million (JPY 973 million minus JPY 12 million which was spent on procurement of additional equipment (photovoltaic systems)), which was within the plan (99% of the plan).

Therefore, the costs for southern and Northern Projects were 115% and 99% of the plan, respectively, and the cost in total was slightly exceeded the plan (107% of the plan).

3.2.2.2. Project Period

In the Southern Project, delays in the start of tendering and construction work led to an excess of nine months compared to the planned 23 months (139% of the plan). In the Northern Project, the main construction period was 24 months as planned and the project period was 29 months, which was within the planned amount of 30 months (96% of the plan). Therefore, the total project period slightly exceeded the plan (118% of the plan).

Some of the outputs of the project were implemented as planned, and others were cancelled

and some were added. In addition, the project period and project costs were slightly higher than the plan, but were generally implemented as planned. Therefore, efficiency of the project is high.

3.3. Effectiveness and Impacts⁴ (Rating: ②)

3.3.1. Effectiveness

3.3.1.1. Quantitative Effects (Operation and Effect Indicators)

Two operational effectiveness indicators were set for the Southern and Northern Projects respectively, with targets set for 2019 for the Southern Project and 2021 for the Northern Project. Targets and results for the quantitative effectiveness indicators are shown in Tables 4~7.

Table 4: Planned and Actual Quantitative Indicators for the Southern Project
(Number of Classrooms)

	Baseline	Target	Actual	
	2012/13	2019	2016	2019
		3 years after completion	Project completion	3 years after completion
Number of Classrooms	0 in 31 schools	133 in 31 schools	127 in 29 schools	—

Source: Documents provided by JICA, Results of the interview and questionnaire for the executing agency and implementing consultants

Table 5: Planned and Actual Quantitative Indicators for the Southern Project
(Number of Enrolment)

	Baseline	Target	Actual				
	2012/13	2019	2018/19	2019/20	2020/21	2021/22	2022/23
		3 years after completion					
Number of Students in Newly Established Girls' Middle Schools	182	2,406	418	418	1,162	1,536	1,985
Comparison with the Target	—	—	17%	17%	48%	64%	82%

Source: Documents provided by JICA and the executing agency

Table 6: Planned and Actual Quantitative Indicators for the Northern Project
(Number of Classrooms)

	Baseline	Target	Actual	
	2015/16	2021	2018	2021
		3 years after completion	Project completion	3 years after completion
Number of Classrooms	0 in 25 schools	94 in 25 schools	97 in 25 schools	—

Source: Documents provided by JICA, Results of the interview and questionnaire for the executing agency and implementing consultants

⁴ When providing the sub-rating, Effectiveness and Impacts are to be considered together.

Table 7: Planned and actual quantitative indicators for the Northern Project
(Number of Enrolment)

	Baseline	Target	Actual				
	2015/16	2021 3 years after completion	2018/19	2019/20	2020/21	2021/22	2022/23
Number of Students in Newly Established Girls' Middle Schools	100	2,028	—	48	711	959	807
Comparison with the Target	—	—	—	2%	35%	47%	40%

Source: Documents provided by JICA and the executing agency

Indicator 1

The planned number of classroom buildings has been constructed and approximately the expected number of classrooms has been installed.

Indicator 2

In the Southern Project, a target of 2,602 students was set for the 2019/20, but the actual target was 2,406 students, after deducting a total of 196 enrolments envisaged for the two schools for which construction was cancelled. In the Northern Project, the target of 2,028 students was set for the 2021/22. In the Southern Project, the number of students in the 2019/20 was 418, with only 17% achievement against the target. In the subsequent year 2020/21, the number of students increased significantly to 1,162, but the achievement against the target was 48%, and in 2022/23, the latest data provided by the executing agencies, the number of students was still 1,985 and the achievement against the target was only 82%. In the Northern Project, the number of students in 2021/22, the year in which the target was set, was 959, with an achievement rate of 47% against the target. From the above, it is revealed through this ex-post evaluation that the actual enrolment rates for both projects were significantly lower than the target. The following three reasons for the low enrolment rate were identified through the interviews with the executing agency;

- The recruitment of teachers did not proceed as planned, which caused delays in the opening of the middle education classes in some schools⁵.
- The opening of middle education classes was delayed because schools were closed for a certain period of time and procedures were delayed due to the spread of the COVID-19.
- Enrolments in every school were lower than planned to avoid COVID-19.

The shortage of teachers had been a challenge from the time the preparatory survey for the Southern Project was conducted, and the number of teachers required for the establishment of new middle schools was assumed, while "ensuring the necessary staffing for school management"

⁵ In addition to a shortage of prospective teachers in rural areas, Sindh has faced years of turmoil over the recruitment of teachers and has been unable to secure sufficient numbers of teachers. See the following reference (available only in Japanese); JICA et.al (2022), Preparatory survey report on the project for upgrading primary girls schools into elementary schools in rural Sindh in the Islamic Republic of Pakistan. In recent years, the recruitment process has been strengthened and teachers are gradually being deployed.

was also noted as a concern (see 3.1.1.3 Appropriateness of the Project Plan and Approach). However, the recruitment of teachers was not going according to plan (see footnote 5), and consequently many schools were unable to open middle education classes for several years after the project completion⁶.

As the target for the Southern Project is set for 2019, there is no impact of COVID-19 in the above background, which has spread since the beginning of 2020. Analysis based on data collected in qualitative research⁷ conducted in 10 of the 29 schools for the Southern Project, as well as data provided by the executing agency, also did not confirm a COVID-19-induced decrease in enrolments in 2020/21 and 2021/22 compared to 2019/20, but rather a significant increase in the number of students in 2020/21 compared to the previous year (see Table 5). For the Northern Project, which has a target year of 2021 (three years after the project completion), there may have been a negative impact due to the lack of school enrolment campaigns caused by the spread of COVID-19. However, according to data provided by the executing agency, the number of students in 2020/21, like in the Southern Project, increased significantly compared to the previous year, 2019/20 (see

Table 7), and no explicit impact of the spread of COVID-19 infection was identified. Under these circumstances, it can be said that the achievement of 17% of the target in 2019/20 for the Southern Project, 47% in 2020/21 for the Northern Project, and 61% of the target through all 54 schools at the time of the ex-post evaluation, is not sufficient to meet the results.

From the above, some indicators have not been achieved and the expected quantitative effects have not been demonstrated⁸.

⁶ According to the executing agency, at the time of the ex-post evaluation, middle education classes had been opened in all 54 schools.

⁷ The following qualitative research was conducted in this ex-post evaluation to verify the qualitative effects and impacts;

Items	Details
Objectives	To identify how the school construction has improved the schooling environment for girls in the area, and to confirm the operation and maintenance status of the constructed facilities and installed materials and equipment.
Target	Headmistress and/or a teacher in 10 schools in South and North, in total 20 schools
Methodology	Individual interviews based on questionnaires
Research Items (summary)	<ol style="list-style-type: none"> 1) Inspection of the constructed facilities and verification of the operational status of the installed educational furniture and equipment 2) The extent of improvement in girls' enrolment in the area 3) Presence or absence of new curricula or programs initiated by making use of installed equipment 4) Status of various factors related to school attendance and commuting of children 5) Response by the school

⁸ In this ex-post evaluation, following three alternative indicators were considered to complement the output indicators of number of classrooms and students; 1) net enrolment rate, 2) drop-out rate and 3) promotion rate. With regard to 1), the net enrolment rate of girls in middle education in rural Sindh remained low compared to the time of planning and the ex-post evaluation, and data on detailed net enrolment rates at Taluka (Sub-district) level was not available. There are approximately 2,000 public schools (elementary schools and middle schools) providing middle education to girls in rural Sindh, and even if the number of out-of-school children decreased through the 54 schools covered by

3.3.1.2. Qualitative Effects (Other Effects)

The qualitative impact indicator was set at "Improved schooling environment for girls in primary education as a result of the reconstruction of existing classrooms which had safety issues". In all 54 schools covered by the projects, no safety-related problems were reported in relation to reconstructed classrooms, newly constructed classrooms and lavatory blocks, or installed educational furniture and equipment. Through the qualitative research, it was also confirmed that the classrooms and toilets have been improved and well-used, and that the schooling environment for girls in the target area has improved.

Therefore, it can be said that the qualitative effects have been achieved as expected.

3.3.2. Impacts

3.3.2.1. Intended Impacts

The findings on impact through qualitative research are shown in Table 8.

Table 8: The Findings of Qualitative Research on Impact

Intended impact	Details
Impact 1: The construction of perimeter walls, toilets and water supply facilities provides the necessary facility environment for girls to attend school and is expected to reduce the number of out-of-school girls in the target area.	
Perimeter Walls, Toilets, Water Supply Facilities	Perimeter walls, toilets and water supply facilities were provided in all 54 schools.
Decrease in the Number of Girls Out-of-School	There were no relevant data available before and after the project started or completed, and it was not confirmed whether the number of girls out-of-school had decreased.
Impact 2: The construction of classrooms with computer equipment as multi-purpose rooms is expected to improve the quality of educational contents by enabling classes to align with the curriculum of middle education.	
Use of Multi-Purpose Room	[South]Out of 10 schools, the multipurpose room was used in only 2 schools. In six of the remaining 8 schools, the rooms were converted into classrooms (distribution of computers was cancelled under the project, and some schools received around 5 computers by the executing agency). In 2 schools, the multipurpose rooms were not used. [North]6 out of 10 schools used it as a computer room, while 5schools did not use the rooms.
Use of Computers	[South]In schools equipped with computers, classes on basic computer use are supposed to be given, but actual usage was not identified. [North]In 5 of the 10 schools, informal classes were held by teachers to teach basic computer use on voluntary basis. In 3 of the remaining 5 schools, all ten computers were used for administrative work, and in 2 schools no computers were used except for one for office use in 2 schools (in one of these schools, it was reported that a power supply for the computers was not available).
Improvement of the Quality of	None of the 20 schools in South and North has a formal computer teacher and only informal computer classes have been conducted in some schools. No formal curriculum utilizing the

the projects, the impact on the net enrolment rate of middle education for girls in rural Sindh itself would be small, so it was not deemed to be an appropriate alternative indicator. As for 2) and 3), data on drop-out and promotion rates in middle education in rural Sindh before and after the start of the project, which were to be compared, were not available, and were therefore not deemed to be appropriate as alternative indicators as well.

Intended impact	Details
Educational Contents	<p>multi-purpose rooms was initiated and no corresponding improvement in the quality of the educational contents was identified as well.</p> <p>The STEAM (Science, Technology, Engineering, Arts, Mathematics) project, which is a practical learning program that integrates science, technology, engineering, arts and mathematics across the disciplines, was launched across Pakistan from 2022, and 22 out of 25 schools in the Northern Project were targeted for implementation of the program. Although computers equipped under the Northern Project are expected to be used in STEAM project classes, qualitative research of 10 schools confirmed that no teachers related to computers have been assigned and no schools have started a formal computer curriculum based on the STEAM project.</p>
<p>Impact 3: The construction of a school principal's office and a storage room that serves both as a storage for teaching materials and a staff waiting room will enable appropriate and effective school administration and management, and is expected to improve school management capacity through the effective use of teaching materials through the appropriate storage of administrative documents and information exchange among teachers.</p>	
Offices for school principal, Storage Rooms	<p>[South]In 9 out of 10 schools, a school principal's office and a storage room were provided, and school principal's offices were either not used or used infrequently in 3 of these schools (it was due to electrical system problems in 1 out of 3 schools). In 2 of the 9 schools, storage rooms were used as staff rooms for teachers.</p> <p>[North]In 8 out of 10 schools, school principal's offices and storage rooms were set up, and these were used as appropriate in 7 schools and it was converted into a classroom in 1 school. In 2 of 8 schools, storage rooms were used as staff rooms for teachers.</p>

For Impact 1, the outcome was not confirmed since no relevant data was provided by the executing agency. For impact 2, no schools in the south used the multi-purpose room as a computer room, possibly due to the impact of the withdrawal of computer distribution in the Southern Project. Also in the north, no formal computer classes were initiated and no improvement in the quality of educational contents through the use of classrooms equipped with computer equipment was identified. 25 out of 29 schools in the Northern Project are targeted by the newly launched Pakistan-wide STEAM project and are expected to utilise the computers distributed under the project, but at the time of the ex-post evaluation, none of the schools where the qualitative research was conducted had a computer teacher assigned to the project and the curriculum related to the project had not started. For impact 3, many of the schools where the qualitative research was conducted utilised the school principal's office, and storage rooms were also utilised for storage, staff meetings and other purposes. Appropriate and effective school administration and management wasn't confirmed.

Therefore, the expected impact was of limited occurrence.

3.3.2.2. Other Positive and Negative Impacts

1) Impacts on the Environment

The project was identified as category C in *the Guidelines for Confirmation of Environmental and Social Consideration* (April 2010). Interviews with the executing agency and the

implementing consultants revealed that no negative impacts on the environment occurred as a result of the construction of the school. According to the executing agency, no negative impacts on the environment were identified by the time of the ex-post evaluation.

2) Resettlement and Land Acquisition

No resettlement occurred as a result of the project implementation and land acquisition was based on a transfer from the landowner. Therefore, no negative impacts related to resettlement and land acquisition did not occur.

3) Gender Equality

The project targets support for girls' education and falls under the gender classification "projects mainly benefiting women". It was expected to improve school enrolment rates and contribute to the elimination of gender disparities by creating a more accessible environment for girls to attend school.

Through the focus group interviews (FGI) with parents in the qualitative research for the in-depth analysis for the LNOB (see box on the following page), many parents said that it has been more comfortable to let their girls to go to school due to the following improvements; the construction of new schools, which have reduced congestion in classrooms and created an appropriate schooling environment; improved sanitation with the installation of flush toilets; and safety with perimeter walls. On the other hand, it was also confirmed through the FGI that, in addition to the low awareness of the importance of girls' education in the community, education, especially for girls, still tends to be less prioritised, as many households live in economically disadvantaged situations and many of them have their children to do housework and labour. In some communities, understanding of the importance of girls' education is improving, and in such communities, parents sometimes consult school about support for attending school after a long absence due to seasonal or domestic work, and in some cases, teachers provide individual support for learning.

No incidents or reports of gender-based violence (GBV) inside or outside school were identified in either the qualitative research or in-depth analysis related to LNOB. Supervision of the school environment was conducted by members of the school staff and male parents outside the school and students were often accompanied by their parents on their way to and from school, to ensure their safety.

Therefore, it can be said that although there are continuing challenges regarding the understanding of girls' education and economic aspects, the safe schooling environment has enabled parents to send their girls to school with peace of mind and has had a certain degree of positive impact with regard to gender.

Qualitative Research for In-depth Analysis of "Leave No One Behind (LNOB)"

In this ex-post evaluation, qualitative research for in-depth analysis of Leave No One Behind (LNOB) was conducted in addition to the qualitative research for 20 out of a total of 54 schools. The results were mainly taken into account in the evaluation of effectiveness and impact.

Items	Details
Objectives	To verify that the project has avoided cases of people not being able to fully benefit from the project or being negatively affected (left behind) by the project, despite being envisaged as beneficiaries of the project
Target area	2 schools in the South and 2 schools in the North out of the 54 schools with a School Management Committee (SMC)
Interviewee	5-6 parents and 1 or more school principal and teachers from each school
Selection method	Selection through coordination with SMCs
Methodology	<ul style="list-style-type: none"> • Focus group interviews (FGI) with 5-6 parents in each target school in 4 schools • Individual interviews with one or two teachers including a school principal in each target school in 4 schools
Research items	<ol style="list-style-type: none"> 1) School enrolment, school attendance and learning status of school-aged girls in the target area 2) If there are children/students who were unable to attend / continue to attend school or who are currently facing difficulties related to attending school <ol style="list-style-type: none"> ① Factors (economic situation, health (including mental and physical disabilities), social factors, difficulties in securing means of transport to school, etc.) ② Intentions of the parents/guardians of the child concerned ③ Existence or non-existence of consultation with the school or administrative authorities ④ Response of schools (whether or not information is provided or home visits are made) 3) Status of other factors related to schooling and school attendance of children <ol style="list-style-type: none"> ① Availability of means of transport to school ② Changes in commuting times (before and after school construction) ③ Availability of learning materials, stationery, etc. ④ Quality of teachers ⑤ Quality and difficulty of the curriculum ⑥ Quality of educational facilities ⑦ Existence of problems in the school other than in class, such as bullying and GBV (including during commuting to and from school) ⑧ Consultation reception mechanisms at the school or administrative authorities concerning education, school attendance or school commuting ⑨ Response and response mechanisms of the school to problems ⑩ Other advantages/disadvantages of going to school

4) Marginalized People, Social Systems and Norms, Human Well-being and Human Rights

Through qualitative research for in-depth analysis pertaining to LNOB, it was identified that some children are unable to attend school due to poverty, economic challenges and the consequent effects of child marriage⁹ and other factors. Households that have difficulty attending school or commuting to school consult with teachers and the school management committee (SMC, see section 3.4 Sustainability) and some of them receive individual assistance depending on their circumstances. Some schools provide financial support to households that cannot afford stationery or uniforms due to financial difficulties through donations from the school principal and teachers or through the SMC Funds. Some teachers provide individual support to students with low

⁹ The legal age of marriage in Pakistan is 18 for men and 16 for women. Also, The legal minimum age of marriage for boys and girls is 18 years in Sindh as per the Sindh Child Marriage Restraint Act.

absence rates due to household circumstances.

Therefore, it is concluded that schools take appropriate actions for children who have difficulties in attending school when they receive consultation from children or parents (no active intervention was identified for households that were not consulted).

5) Unintended Positive / Negative Impacts

28 out of a total of 54 schools were temporarily used as evacuation centres for people affected during the floods in 2022, and were used as social infrastructure in the region.

As a result of the implementation of the project, the schooling environment for girls has improved through the construction of middle schools for girls in a rural area of Sindh and the provision of perimeter walls, flush toilets and other facilities. On the other hand, the number of students enrolled in the newly constructed middle school was much lower than envisaged at the time of planning with the percentage remaining at around 61% of the target even at the time of the ex-post evaluation. As for the multi-purpose rooms in the constructed school buildings, none of the schools in the Southern Project were used as computer rooms as planned, and only half of the schools in the Northern Project were used as computer rooms. Therefore, the improvement in the quality of educational content through the use of the computer room was not confirmed which was expected at the time of planning. Most of school principal's offices and storage rooms have been used for meetings between teachers and for storing materials on a daily basis, although no improvement in the school's administrative management capacity was identified.

No negative impacts in environmental, social or other aspects were identified. While the construction of perimeter walls and flush toilets under the projects has enabled parents to feel secure in allowing girls to attend school, there are still some students in the target areas who cannot attend school due to lack of understanding of the importance of girls' education and economic factors. Some schools provide individual support for children who have been facing difficulties. During the large-scale flood in 2022, many of the schools constructed under the projects were used as evacuation centres for the affected local population and functioned as social infrastructure.

This project has achieved its objectives only to a certain extent. Therefore, effectiveness and impacts of the project are moderately low.

3.4. Sustainability (Rating: ②)

3.4.1. Policy and System

The School Education Sector Plan and Roadmap for Sindh (SESP) 2019-2024, which is the provincial education policy in Sindh at the time of the ex-post evaluation, states that access to education for girls will be enhanced through the extension of primary schools to elementary

schools and expansion of secondary schools in later stages, as one of the policies towards 2024.

The project is consistent with the education policy and development plan in Sindh up to 2024, and the policy and institutional sustainability delivered by the projects is high.

3.4.2. Institutional/Organizational Aspect

The following four parties are jointly responsible for the operation of schools, maintenance and management of school equipment, management of teachers and dealing with various problems in schools.

- School Education and Literacy Department (SELD)
- District Education Officer (DEO)
- Taluka Education Officer (Primary/ESHS) (TEO)
- School Management Committees (SMCs)

SELD is responsible for education administration in Sindh province as a whole, under which the provincial education offices and Taluka education offices are responsible for education administration in their respective administrative units. There are approximately 140 sub-districts in Sindh, with four TEOs assigned to each sub-district to manage the schools in the sub-district¹⁰. SMCs are organisations responsible for promoting community understanding of education, supporting school teachers, assisting in improving the quality of education, and supporting children and parents in attending school and learning, and consist of five to seven members (including the community chairperson, parents and the school principal). Each SMC is allocated a fixed budget for the operation and maintenance of the school, called as "SMC fund". SMCs, together with local communities and caregivers, prepare School Improvement Plans for the activities necessary for the maintenance of the school, and implement the activities and spend SMC funds according to these plans. According to the executing agency, at the time of the ex-post evaluation, SMCs were in place in all schools in Sindh. In case of any problems regarding the operation and management of schools, the school or SMC is to consult the TEO and DEO as appropriate¹¹.

SMCs play important roles in the operation and management of schools, but some SMCs are not yet fully functional and their activities are limited. Continuous capacity strengthening to support the functioning of SMCs is needed, but training for new SMC members provided by SELD is not implemented on a regular basis. Workshops for strengthening SMCs are being conducted by the Education Policy Advisor (2022-2024) currently being deployed by JICA to

¹⁰ The administrative units in Pakistan are Province-District-Taluka (Sub-district)-Union Council. The elementary schools are managed under the supervision of DEOs at the district level and under the guidance and supervision of TEOs (male and female) stationed at the Taluka Education Offices in each Taluka.

¹¹ Sindh is currently developing a public-private partnership (PPP) system for the management of public schools, and has started a project to outsource the management of some schools to private organizations like NGOs (collectively known as "Education Management Organizations (EMOs)") selected by the administration. 19 out of 54 schools targeted in this project are also planned to be outsourced to EMOs by the end of 2023.

Sindh, and the executing agency is expected to further enhance its response with these supports going forward.

As mentioned above, there are some challenges to sustainability in terms of Institutional / Organizational Aspect.

3.4.3. Technical Aspect

It was confirmed through the qualitative research that a school principal and SMC are responsible for the maintenance of facilities and equipment in each school. For the maintenance of facilities, maintenance training was organised within the projects and attended by two to three teachers and SMC members from each school. The maintenance manuals prepared and distributed within the projects are also kept and used in each school.

For minor repairs, schools or SMCs commission local contractors or electricians. In some schools, repairs are carried out by school staff. Where major repairs are required, the SMC or school is supposed to consult TEOs¹².

Based on the above, the sustainability of the technical aspect is high.

3.4.4. Financial Aspect

School operating funds for elementary education are consolidated, invoiced and executed by schools or by District and Sub-District Education Offices. The breakdown of operating costs in the school education sector for elementary education (primary and middle education) in Sindh under the jurisdiction of the SELD is shown in Table 9.

Table 9: Breakdown of Operating Budget for the School Education Sector in Sindh (ordinary expenses)

Unit: mil PKR

Items	2019/20		2020/21		2021/22	
	Plan	Actual	Plan	Actual	Plan	(Of which budget for middle education (%))
Personnel-related expenses	149,318.5	122,572.4	158,271.1	127,896.6	176,844.4	79.6%
Non-personnel expenses	29,290.4	8,927.1	39,094.0	18,733.1	45,258.1	20.4%
Project preparation studies	9.1	0	0	0	0	0%
Operating expenses*	6,727.0	1613.2	13,863.0	4,340.0	13,956.7	6.3%
Subsidies and debt forgiveness	2,981.1	1,313.4	3,673.2	2999.5	7,463.6	3.4%
Grants	9,655.1	5,868.0	9,534.6	8,118.5	10,758.1	4.8%
Physical property	6,662.5	0	6,756.4	310.0	7,796.9	3.5%
Repair and maintenance	3,264.7	132.6	5,266.7	2,965.1	5,282.8	2.4%
Total	178,608.9	131,499.5	197,369.1	146,629.7	222,102.5	1000%

Source: JICA et.al (2022), Preparatory survey report on the project for upgrading primary girls' schools into elementary schools in rural Sindh in the Islamic Republic of Pakistan (available only in Japanese), P.37

*: including SMC funds

¹² At the time of conducting the qualitative research, none of the 20 schools required major repairs to TEOs.

SMC funds used for routine school maintenance and management are included under "Operating expenses" in Table 9. The operating expenses have been very low in relation to the budget in both 2019/20 and 2020/21, and it is unclear whether sufficient funds will continue to be allocated for school maintenance and management.

Each SMC in the middle schools is to be allocated an annual operating expense of PKR 40,000 by the provincial government as the SMC fund. The use of the operating expenses is stipulated as follows;

- Maintenance of facilities and equipment: 50%
- Learning materials and textbooks: 50% (it can also be used for essentials such as hygiene products)

In a qualitative study of 20 schools in the south and north, although repairs for equipment and furniture and the purchase of teaching materials or stationeries are supposed to be covered by SMC Funds, most of the schools responded that when there was a shortfall in funds, it was supplemented by donations by teachers based on their salaries. In addition, 10 out of 20 schools had not been able to use SMC funds for several years¹³. The SMC or the school is supposed to consult TEOs about funding if major repairs to equipment or facilities are required.

The distribution of educational furniture, which was cancelled in the Southern Project due to lack of funds, was budgeted for and procured by the Sindh provincial government on its own and distributed to each school (some schools also received around five computers). In addition, in line with the installation of photovoltaic systems in the target schools in the north, the same systems were deployed in the target schools in the south. The total cost of these procurements in the south was PKR 141.277 million.

The executing agency was able to secure funds for its own procurement of educational furniture, equipment, and photovoltaic systems. However, the SMC funds for daily school maintenance was not sufficient, and it was revealed that the shortfall was covered by donations from teachers, including school principals. Therefore, it can be said that the sustainability of financial aspect is moderately low.

3.4.5. Environmental and Social Aspect

No negative environmental effects were identified. Therefore, it is assumed that there are no negative environmental impacts, and no issues of sustainability of environmental and social aspect.

¹³ In one of the 10 schools, the SMC Fund account had been frozen and the bank was in the process of reopening the account. In the remaining 9 schools, the status of the school had to be updated as it had changed from primary to elementary school, but the individual school identification code in Sindh Educational Management Information Systems (SEMIS) had not been updated by the SELD side so that the school could not receive the SMC funds for a certain period. According to the executing agency, a number of documentation procedures are required when updating the SEMIS code, and these have been taking time to complete.

3.4.6. Preventative Measures to Risks

There were no particular risks mentioned at the time of planning, and according to the executing agency, no major risks were envisaged at the time of the ex-post evaluation as well. Therefore, there is no concern for sustainability of the prevention to risks.

3.4.7. Status of Operation and Maintenance

The results of the qualitative research conducted in 20 out of a total of 54 schools revealed the following findings on the operation and maintenance of schools;

- The responsibility for the operation and maintenance of school facilities belongs to the school principals and the resources are to be paid from the SMC funds, but as per 3.4.4, most schools do not have enough financial resources and the shortfall is covered by donations from the salaries of the school principals and teachers. As a result, some schools have not been adequately repaired with furniture and facilities. In 4 out of 10 schools in the South, more than half of the educational furniture (supplied by SELD) was damaged, but had not been repaired or replaced yet. In the north, it was only about four years after the project completion and generally all furniture were in good condition while some of them are damaged.
- In many schools, cleaning staff are employed with contributions from teachers to clean classrooms and toilets.
- In 1 out of 10 schools in the Southern Project, the toilet pumps were damaged and not repaired, and the flush toilets that had been constructed were not in use. In addition, in 1 out of 10 schools in the Northern Project, the toilets were not adequately cleaned or maintained.
- In 1 of the 10 southern schools, the school principal's office was not in use because an electrical failure had occurred and had not been repaired yet.
- In 10 schools in the North, many of the computers distributed were in usable condition (as mentioned in 3.2.1, the distribution of computers was withdrawn in the Southern Project).
- The photovoltaic systems installed only in the Northern Project are functioning in 9 out of 10 schools. In 1 school, the photovoltaic system has not been generating electricity since the batteries have been stolen. In another school, a part of equipment was malfunctioning and did not generate power until 2022, and in 4 out of 10 schools, the batteries had expired, thus making power generation less efficient (according to the executing agency, the batteries in all target schools will be replaced in 2024).

Although schools and SMCs are responsible for the operation and maintenance of facilities and equipment, qualitative research revealed that many schools are not carrying out adequate repairs and replacements. Costs for maintenance are supposed to be covered by the SMC funds, but it is not sufficient, and in most schools the shortfall is being made up by teachers' donations, and maintenance is not being adequately implemented due to the lack of funds. A JICA assessment

conducted in March 2023 found that 9 out of 54 schools were severely damaged by the floods in 2022, and support for restoration is planned to be provided.

Therefore, sustainability in terms of maintenance and operation is moderately low.

In terms of policy and system, the existing provincial education policy describes strengthening girls' access to education as a priority, which is highly sustainable. In terms of institutional/organizational aspect, each administrative unit has a person in charge and role in relation to middle education in its function. The SMCs established in each school play various roles in school management, such as supporting parents and teachers and maintaining the school, but some of the SMCs are not functioning fully and require continuous capacity building of the SMCs, so there are some sustainability issues. In terms of the technical aspect, the maintenance manuals prepared by the projects are used on a daily basis in each school, and when repairs are required, local contractors and other professional engineers are commissioned as appropriate, so the technical sustainability of the project can be said to be high. On the financial aspect, the actual allocations for operational expenses, including SMC funds dedicated to the operation and maintenance of schools, have been low compared to the plan. In many schools, SMC funds are insufficient and the shortfall is covered by donations from teachers. Therefore, there are some sustainability issues in the financial aspect. There are no specific issues of sustainability related to environmental and social aspects and prevention of risks. In terms of operation and maintenance, school principals and SMCs are responsible for that, but many schools in the south do not repair or replace furniture and equipment, and SMC funds are not sufficient to cover the costs. Therefore, there are some challenges in terms of sustainability for operation and maintenance.

Some minor issues have been observed in the institutional/organizational and financial aspects including the current status of operation and maintenance. They are not expected to be improved. Therefore, sustainability of the project effects is moderately low.

4. Conclusion, Lessons Learned and Recommendations

4.1. Conclusion

The projects aimed to improve access to basic education for girls in rural areas of Sindh by constructing school facilities and providing classroom furniture and equipment to expand the existing girls' primary schools into elementary schools with the addition of middle schools, thereby contributing to reducing urban-rural and gender disparities in educational opportunities. The projects were in line with the development policy and development needs of Pakistan and Sindh at the time of planning and ex-post evaluation, and the project planning and approach were appropriate. It was also consistent with the Japan's ODA policy at the time of planning. No specific linkages or synergies were identified for either internal or external consistency, but there

was no duplication of projects. From the above, the relevance and coherence of the project is high. In terms of the outputs of the projects, some of them were implemented as planned, and rest of them were cancelled or implemented with additional components. In addition, both the project period and the project cost were slightly higher than planned, but generally implemented as planned. Therefore, the efficiency is high. As a result of the implementation of the projects, school facilities have been upgraded and the schooling environment for girls in rural areas has improved. However, the number of students enrolled in the newly established girls' middle schools was significantly lower than the target envisaged at the time of planning. Even at the time of the ex-post evaluation, only about 61% of the target had been achieved. In addition, improvements in the quality of educational contents through the use of the multipurpose rooms as computer rooms were not identified. While the improvement of the schooling environment has helped parents to send girls to school with less concern, there have been still some students in the target areas who cannot attend school due to a lack of understanding of the importance of girls' education and economic factors. Only a certain degree of effectiveness and impact can be confirmed compared to the original plan. Therefore, effectiveness and impacts of the projects are moderately low. Regarding the sustainability of the project, there are no concerns on sustainability of policies, systems and technologies. However, there is a need to strengthen capacity, including through the use of SMC funds, and to improve the financial situation for the operation and maintenance of each school. Therefore, there are some issues regarding the sustainability of organizational, financial and social aspects including the current status of operation and maintenance.

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

4.2. Recommendations

4.2.1. Recommendations to the Executing Agency

Identification of activities related to increasing enrolment and integration into education policy

Although middle schools were attached to primary schools and expanded to elementary schools with the aim of improving girls' access to secondary education, enrolment in all 54 schools remained low at around 61% of the target at the time of the ex-post evaluation. The low enrolment of girls in rural areas is due to various factors, such as lack of understanding of the importance of girls' education by parents, domestic work and child marriage, in addition to poor access to schools due to distance. Therefore, establishing schools alone does not immediately lead to an increase in enrolment. Although the executing agency and schools are conducting awareness-raising activities at the community level, they are also required to identify the activities and necessary support to further increase enrolment and specifically include them in the next education policy, which will replace the current provincial education policy, *the School Education Sector Plan And Roadmap for Sindh (SESP) 2019-2024*.

Implementation of capacity building of SMCs

SMCs established in each school are school committees organised with community representatives and parents as members, and are expected to have the impact of increasing community and parental ownership of education. However, while SMCs have been assigned various responsibilities for the operation and maintenance of schools, some SMCs have only been established and are not carrying out the necessary activities. The executing agency is required to conduct assessments of SMC activities and provide regular guidance and training to members in SMCs that are not functioning adequately to enhance their capacity. Workshops to strengthen SMCs have been conducted by the Education Policy Advisor assigned by JICA to Sindh. With support from these donors, the executing agency needs to further develop its response.

4.2.2. Recommendations to JICA

Support for increasing enrolment and improving the learning environment in the next phase of the project

While the project aimed to improve access to secondary education for girls by expanding existing primary schools in rural areas into elementary schools, the enrolment rate is currently 61% of the target, which indicates that the project has not achieved the expected results. JICA plans to implement "The Project for Upgrading Primary Girls' School into Elementary School in Rural Sindh Province" (Grant Agreement Date: 10 February 2023) which provides for the expansion of primary schools to elementary schools in rural areas of Sindh as same as the Southern and Northern Project. However, as it is hardly possible to increase enrolment only through school construction, it is necessary to discuss measures together with the executing agency to avoid a situation where the number of enrolments is significantly lower than the target, as happened in this project. Based on the achievement of the results of the projects, it is expected that appropriate targets should be set after analysing the factors behind the lower-than-expected enrolment through consultations with the executing agency, as well as encouraging the executing agency to formulate specific activity plans and identify necessary support to improve the enrolment rate. In addition, with regard to SMCs, which play an important role with regard to the operation and maintenance of schools, the actual status of their activities and use of funds has not been fully captured. Following components should be part of the planning of newly launched grant projects, which will contribute to increasing school enrolment and improving the learning environment in the target areas; activities related to increasing school enrolment, continuous awareness-raising activities in rural areas, assessment, capacity-building training and following-up on SMC operation and utilisation of funds. Support for capacity enhancement of SMCs by the Education Policy Advisor currently deployed in Sindh and assistance for SMCs which is incorporated in the next phase of the grant project, are also expected to be ensured.

Strengthening collaboration with the ongoing technical cooperation project

In the technical cooperation "Project for Gender Responsive Actions to Ensure Retention through Community Engagement and School Practice" (2022-2026), currently being implemented in Sindh, activities related to school drop-out deterrence are being carried out with the aim of contributing to the reduction of out-of-school children. Out of the 54 schools supported by the project, only one school is being used as a base for this technical cooperation. It is expected that activities related to the learning continuum from primary to middle education will be undertaken in this specified school. It is also anticipated that knowledge and experience gained through the technical cooperation project on school drop-out deterrence will be utilised in the implementation of the above-mentioned grant assistance "The Project for Upgrading Primary Girls' School into Elementary School in Rural Sindh Province" as well.

Enhancement of collaboration and coordination in the education sector in Sindh province

The education sector in Sindh is supported by not only JICA but also other donors such as the World Bank. Despite the expectation of synergies with support by other donors at the time of planning this project, no specific collaboration was identified in the projects. It would be recommended that there is greater collaboration and coordination across the education sector, in order to implement initiatives to increase girls' enrolment in school.

4.3. Lessons Learned

Setting the bidding period in consideration of the difficulties in selecting local contractors

As the projects were Grant Aid for Community Empowerment, it was mandatory to use local contractors for the construction of the schools. At the start of the Southern Project, the procurement agency and the implementing consultant did not have sufficient information on the local contractor and it was difficult to assess the capacity of the contractor to construct and supervise the project only from the tender documents, which caused delays in the work of the selected contractor and greatly extended the construction period. Quoted prices were also higher than at the time of the survey, and all tender prices were higher than the planned prices (see 3.2.1). In the Northern Project, it was made possible to use these experiences and the information on local contractors collected in the Southern Project to carry out appropriate procurement. For future implementation of similar projects, it is recommended that the project design takes into account the difficulty of selecting local contractors, for example, by setting a timeframe for bid preparation and bidding at the preparatory survey phase to allow more time to collect information on local contractors, and by making the quotations obtained at the preparatory survey phase more detailed and increasing the number of quotations obtained.

(End)