

Islamic Republic of Pakistan

FY2023 Ex-Post Evaluation Report of
Japanese ODA Loan Project
“Polio Eradication Project (Phase 2)”

External Evaluator: Koichiro Ishimori, Value Frontier Co., Ltd

0. Summary

The objective of this project was to ensure the smooth vaccination of children under five years old in Pakistan by procuring polio vaccines for the entire country, thereby contributing to the early eradication of polio in the country. The project was relevant to the development policies and needs at the time of both ex-ante and ex-post evaluations, and the project plan and approach were also appropriate. The project’s coherence with Japan's development cooperation policies, as well as internal and external coherence, were confirmed; therefore, its relevance and coherence are high. The volume of vaccines procured exceeded the plan, and both the project cost and period were within the plan. Therefore, efficiency of the project is very high. However, among the seven operation and effect indicators, three related to vaccination coverage fell slightly short of the target, and two failed to achieve the target, though this was partially attributable to external factors. Moreover, polio cases are still reported at the time of ex-post evaluation, and the project has not yet achieved polio eradication. Nevertheless, the project is assumed to have contributed to a certain extent to the improvement of the health of vaccinated children, as well as to gender, well-being, and human rights, as represented by mothers. As the effects of the project can only be confirmed to a certain extent compared to the plan, effectiveness and impact of the project are moderately low. No issues have been observed in the policy/system, institutional/organisational, technical, financial, environmental, and social aspects, including the current status of operations and maintenance. Future risks have been well mitigated. Therefore, sustainability of the project effects is very high. In light of the above, this project is evaluated to be satisfactory.

1. Project Description



Project Locations¹
(Source: Made by the external evaluator based on the map made by U.N.)



The scene of oral polio vaccination
(Source: Taken by the external evaluator)

¹ The designations on this map are for illustrative purposes only and do not represent JICA's views on the legal status, borders, and demarcation, as well as geographical names of any country or region.

1.1 Background

Polio (poliomyelitis) is an orally transmitted infectious disease that causes paralysis of such body parts as hands and feet when the poliovirus² enters through the mouth and then the intestinal tract into part of the spinal cord. Currently, there is still no surefire cure.³ However, polio eradication was expected to follow that of smallpox that had been eradicated in 1980.⁴ This is because polio is preventable through vaccination. Therefore, the international community was strengthening vaccination activities in Afghanistan and Pakistan, the only two remaining polio-endemic countries in the world. The project was implemented in Pakistan as part of global efforts to eradicate polio.

In addition, the loan conversion mechanism (hereinafter referred to as loan conversion) was applied to the project, whereby Bill & Melinda Gates Foundation (hereinafter referred to as Gates Foundation) would repay the yen loan debt on behalf of the Government of Pakistan if the latter achieved through the project the pre-agreed indicators between Gates Foundation and JICA. This was expected to further encourage the Pakistani government to eradicate polio and contribute to reducing the financial burden on the government.

1.2 Project Outline

The objective of this project was to ensure the smooth vaccination of children under five years old in Pakistan by procuring polio vaccines for the entire country, thereby contributing to the early eradication of polio in the country.

Loan Approved Amount / Disbursed Amount	6,290 million yen / 6,268 million yen
Exchange of Notes Date / Loan Agreement Signing Date	May 2016 / May 2016
Terms and Conditions	Interest Rate Yen LIBOR – 100 bp ⁵ Repayment Period 40 years (Grace Period 10 years) Conditions for procurement General untied
Borrower / Executing Agency(ies)	President of the Islamic Republic of Pakistan/ Ministry of National Health Services, Regulation and Coordination (hereinafter referred to as MoNHSRC)
Project Completion	September 2018
Target Area	Pakistan Nationwide
Main Contractor(s)	United Nations Children’s Fund

² Polioviruses include wild poliovirus, vaccine-derived poliovirus, and vaccine strain poliovirus. Wild polioviruses are caused by naturally occurring polioviruses. Vaccine-derived polioviruses are caused by polioviruses that have genetically mutated (VP1 overall mutation rate is between 1% and 15%) from attenuated polioviruses in the parent strain of oral polio vaccine (OPV), and vaccine strain polioviruses are similarly caused by polioviruses that have been genetically mutated (VP1 overall mutation rate is less than 1%). (Source: <https://www.pref.okayama.jp/page/detail-92675.html>)

³ Ministry of Health, Labour and Welfare (Source: <https://www.forth.go.jp/moreinfo/topics/name09.html>)

⁴ As the international community is committed to eradicating polio caused by wild poliovirus, ‘polio eradication’ in this document refers to eradication of polio caused by wild poliovirus, and ‘polio cases’ refer to the number of cases of polio caused by wild poliovirus.

⁵ LIBOR stands for London Inter-Bank Offered Rate, meaning the interbank offered rate in London market, and LIBOR for the Japanese yen currency is called yen LIBOR. Bp stands for basis point, and 100 bp means 1%. The interest rate minus 1% is applied to the yen LIBOR at that time for each interest payment.

(Over 1 billion yen)	(hereinafter referred to as UNICEF) World Health Organization (hereinafter referred to as WHO)
Main Consultant(s) (Over 100 million yen)	—
Related Studies (Feasibility Studies, etc.)	—
Related Projects	<p>【Loan projects】 “Polio Eradication Project (2011-2013)”</p> <p>【Grant project】 “The Project for the Eradication of Poliomyelitis (1996-2010)” “The Project for the Control and Eradication of Poliomyelitis (2011-2023)”</p> <p>【Technical cooperation projects】 “EPI/Polio Control Project (2006-2011)” “Project for Strengthening Routine Immunization (2014-2018)” “Dispatch of the Expert on Vaccine Logistics (2016-2017)” “Dispatch of the Expert on Cold Chain Equipment Management (2017-2018)” “Dispatch of the Expert on Vaccination Awareness Activities (2017)” “Dispatch of the Advisor (Technical Assistance under Finance and Investment Account, Phase 2) (2017-2018)” “Project for Strengthening Routine Immunization System in Primary Health Care Settings (2018-2022)” “Project for Strengthening Continuum of Care for Mothers, Newborn and Child Health in Primary Health Care Settings (2023-2026)”</p> <p>【Projects by other organisations】 UNICEF (vaccine procurement, vaccination awareness activities, etc) WHO (vaccination activities) Islamic Development Bank (accommodation of funds) Bill & Melinda Gates Foundation (hereinafter referred to as Gates Foundation) (financial and technical assistance)</p>

2. Outline of the Evaluation Study

2.1 External Evaluator

Koichiro Ishimori, Value Frontier Co., Ltd

2.2 Duration of Evaluation Study

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

Duration of the Study: November, 2023 - January, 2025

Duration of the Field Study: February 24, 2024 - March 8, 2024

2.3 Constraints During the Evaluation Study

The objective of this project was to ensure the smooth vaccination of children under five years old throughout Pakistan. However, owing to security concerns, the external evaluator's site visits were limited to the Islamabad area.

3. Results of the Evaluation (Overall Rating: B⁶)

3.1 Relevance/Coherence (Rating: ③⁷)

3.1.1. Relevance (Rating: ③)

3.1.1.1 Consistency with the Development Plan of Pakistan

Pakistan's health sector plan at the time of ex-ante evaluation of the project, *the National Health Vision Pakistan (2016–2025)*, mentioned the strengthening of vaccination activities for polio eradication, as one of the only two remaining polio-endemic countries in the world. *The Emergency Plan for Polio Eradication (2016–2018)* formulated under the plan called for the implementation of appropriate vaccination activities and the strengthening of vaccination activities for unvaccinated children in polio-endemic areas. As the project was to procure vaccines to be used in vaccination activities conducted throughout the country from 2016 to 2018, it is judged that the project was consistent with the development policy at the time of ex-ante evaluation.

At the time of ex-post evaluation, *the National Health Vision Pakistan (2016–2025)* still remains valid. *The National Emergency Action Plan (2021–2023)*, newly developed under the plan, calls for the complete interruption of polio transmission not only in polio-endemic areas but also throughout the country by the end of 2023. As the project aims to procure polio vaccines for the entire country to achieve the early eradication of polio in Pakistan, it is judged that the project is consistent with the development policy at the time of ex-post evaluation.

3.1.1.2 Consistency with the Development Needs of Pakistan

At the time of ex-ante evaluation of the project, the Government of Pakistan had been working towards polio eradication since the launch of the Polio Eradication Initiative in 1994, and the number of polio cases had been on a decline. However, due to the stagnation of vaccination activities in some areas and the displacement of many internally displaced persons affected by military activities, the number of polio cases in 2014 increased significantly from 93 in the previous year to 306. In response, the Government of Pakistan established the National Task Force on Polio Eradication chaired by the prime minister and formulated the National Emergency Operations Centre (hereinafter referred to as N-EOC) under the MoNHSRC to centrally manage polio control; however, eradication required the continuous implementation of vaccination activities. As the project aimed to procure polio vaccines necessary for the implementation of such vaccination activities, it is judged that the project was consistent with the development needs at the time of ex-ante evaluation.

At the time of ex-post evaluation, the number of polio cases in 2023 and 2024 (as of the end of May 2024) are 6 and 5, respectively, representing significant decreases from the time of ex-ante

⁶ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁷ ④: Very High, ③: High, ②: Moderately Low, ①: Low

evaluation; however, polio has not yet been eradicated. As eradication still requires continuous vaccination activities, it is judged that the project is consistent with the development needs at the time of ex-post evaluation.

3.1.1.3 Appropriateness of the Project Plan and Approach (Describe, if applicable.)

It was pointed out in a previous project, the Polio Eradication Project (2011–2013) in Pakistan, that the opportunity to make a decision on loan conversion was only once after the implementation of the project and that it did not provide the Government of Pakistan with an incentive to improve the project. The Polio Eradication Project (Phase 2), therefore, aimed to conduct monitoring jointly with the Government of Pakistan and the Islamic Development Bank, which co-financed the project, and check the indicators set by both the project and *the Emergency Plan for Polio Eradication (2016–2018)* on a regular basis (once every six months is assumed). It also aimed to establish a forum for discussing subsequent countermeasures. By doing so, it was intended to be the plan based on the spontaneous efforts of the Government of Pakistan. In fact, it had several opportunities to make a decision on loan conversion during the implementation stage and provided the Government of Pakistan with incentives to improve the project. Besides, the meetings for JICA, UNICEF, WHO, the Islamic Development Bank, and others were held once every three months to share the progress and challenges vis-à-vis polio eradication. Therefore, it is judged that the project plan and approach were appropriate.

3.1.2 Coherence (Rating: ③)

3.1.2.1 Consistency with Japan's ODA Policy

Japan's Country Assistance Policy for the Islamic Republic of Pakistan (2012) by the Ministry of Foreign Affairs at the time of ex-ante evaluation of the project included improving health services in the communities, including programmes for polio eradication as one of the three priority areas, ensuring human security, and improving social infrastructure. In addition, *JICA's Country Analysis Paper for the Islamic Republic of Pakistan (2014)* included health programmes to ensure human security and improvement of social infrastructure as one of the four intermediate objectives. As the project aimed to procure polio vaccines for the entire country of Pakistan for smooth vaccination activities, it is judged that the project was coherent with JICA's development cooperation policy at the time of ex-ante evaluation.

3.1.2.2 Internal Coherence

This project was intended to procure polio vaccines for use in *the Emergency Plan for Polio Eradication (2016–2018)* in Pakistan, with a total project cost of 19,265 million yen, of which 360 million yen was planned to be provided in collaboration with a grant aid project, the Project for the Control and Eradication of Poliomyelitis (2015). However, their collaboration did not

bring about any particular synergy other than cost sharing. Meanwhile, although the project targeted the entire country, the Khyber Pakhtunkhwa province (hereinafter referred to as the KP province), where the security situation was unstable, political discontent existed, and a proper understanding of polio vaccines was lacking, was positioned as a priority area. Notably, JICA's technical cooperation project, the Project for Strengthening Routine Immunization (2014–2018), which was being implemented at the time of ex-ante evaluation of the project, enhanced people's understanding by assisting the health authorities in the province in carrying out vaccination awareness activities. The technical cooperation project also entailed activities to not only strengthen vaccine logistics, including capacity building in vaccine management and cold chain equipment management, but also train and build the capacities of health workers in charge of vaccination activities. The technical cooperation project played a role in laying the groundwork for implementing the project; thus, it is judged that there was internal coherence at the time of ex-ante evaluation.

During the implementation of the project, the grant aid project, the Project for the Control and Eradication of Poliomyelitis (2016–2018), which was to continue to support *the Emergency Plan for Polio Eradication (2016–2018)* of Pakistan, provided 404 million yen in 2016, 520 million yen in 2017, and 510 million yen in 2018, and has been providing approximately 500 million yen annually up to the time of ex-post evaluation. Furthermore, JICA dispatched the advisor (Technical Assistance under Finance and Investment Account, Phase2) (2017–2018) to support the promotion of the project and provide advice to the N-EOC. In addition to the Project for Strengthening Routine Immunization (2014–2018), which had already been implemented in the KP province at the time of ex-ante evaluation, various experts in areas such as vaccination awareness activities were dispatched to the province (2016–2018). Even after the implementation of the project, JICA has been assisting the health authorities in the KP province in enlightening vaccination activities and strengthening vaccine logistics through the Project for Strengthening Routine Immunization System in Primary Health Care Settings (2018–2022) and the Project for Strengthening Continuum of Care for Mothers, Newborn, and Child Health in Primary Health Care Settings (2023–2026) that have been implemented in the KP province to support *the National Emergency Action Plan (2018–2019)* and *the National Emergency Action Plan (2021–2023)*. These technical cooperation projects have been playing an important role in maintaining the effects and impacts of the project. Thus, it is judged that there is internal coherence at the time of ex-post evaluation.

3.1.2.3 External Coherence

At the time of ex-ante evaluation of the project, UNICEF was to procure polio vaccines and WHO was to conduct vaccination activities. The total project cost was 19,265 million yen, of which 12,010 million yen was planned to be provided by the Islamic Development Bank.

Furthermore, as previously mentioned, Gates Foundation and JICA planned to collaborate on loan conversion. However, all these collaborations were within the scope of what was envisioned at the time of ex-ante evaluation and did not bring about any particular synergistic effects. Consequently, the project collaborated with various organisations, and thus it is judged that there was external coherence at the time of ex-ante evaluation.

Pakistan has not yet achieved polio eradication, and UNICEF, WHO, the Islamic Development Bank, Gates Foundation, and others that have collaborated with this project continue to support the N-EOC. In addition, the French Development Agency is considering a new financial support initiative from 2024. Similarly, JICA has also been continuously supporting polio eradication in collaboration with UNICEF, even after the completion of the project; thus, it is judged that there is external coherence at the time of ex-post evaluation.

In conclusion, the project is consistent with the development policies and needs at the time of ex-ante and ex-post evaluations, and the project plan and approach were also appropriate. Consistency with Japan's development cooperation policy and the internal and external coherence of the project were also confirmed, indicating a high degree of consistency. Therefore, its relevance and coherence are high.

3.2 Efficiency (Rating: ④)

3.2.1 Project Outputs

This project was intended to procure approximately 273 million doses of polio vaccines for use in the vaccination campaign planned in *the Emergency Plan for Polio Eradication (2016–2018)*. However, owing to price competition for vaccine procurement, combined with the impact of the strong yen against the US dollar, approximately 383 million doses of polio vaccines were procured, approximately 140% of the planned volume.

3.2.2 Project Inputs

(For details, refer to "Comparison of the Original and Actual Scope of the Project" on the last page of the report.)

3.2.2.1 Project Cost

The total project cost was within the plan, at 18,018 million yen, compared with the planned 19,265 million yen. The significant decrease in the actual amount of the Islamic Development Bank portion, compared to the plan, was due to the calculation based on the average exchange rates designated in ex-post evaluation, whereas the decrease in the Pakistani government's portion was also due to the aforementioned, and the project period shortened.

Table 1: Planned and actual project cost

(Unit: Million yen)

	Planned cost ⁸	Actual cost ⁹
Polio Eradication Project (Phase 2)	6,290	6,268
Project for the Control and Eradication of Poliomyelitis	360	360
Islamic Development Bank	12,010 ¹⁰	11,046
Government of Pakistan	605	344
Total project cost	19,265 ¹¹	18,018

Source: Materials provided by JICA, the Islamic Development Bank, the N-EOC

3.2.2.2 Project Period

The planned project period was 32 months, from May 2016 (signing of the L/A agreement) to December 2018, when the vaccination campaign in *the Emergency Plan for Polio Eradication (2016–2018)* was anticipated to be completed. In reality, the campaign was completed in 29 months in September 2018¹², and thus, it was within the plan.

3.2.3 Results of Calculations for Internal Rates of Return (Reference only)

As the project is nonprofit and it is difficult to reasonably calculate the economically attributable benefits, the internal rate of return was not calculated at the time of both ex-ante and ex-post evaluations.

In conclusion, vaccine procurement accounted for approximately 140% of the planned volume, and the project cost and period were within the plan. Therefore, efficiency of the project is very high.

3.2 Effectiveness and Impacts¹³ (Rating:②)

3.2.1 Effectiveness

⁸ The average exchange rates for the base period of cost calculation (October 2015) applied at the time of ex-ante evaluation were 120.1 yen to the US dollar and 1.15 yen to the Pakistani rupee.

⁹ The average exchange rates by international financial statistics applied at the time of ex-post valuation are 110.46 yen to the US dollar and 1.00 yen to the Pakistani rupee.

¹⁰ The materials provided by JICA indicated that the Islamic Development Bank's planned project cost was 8,525 million yen (equivalent to 100 million dollars), meaning that it was calculated at the exchange rate of 85.25 yen to the US dollar. However, as mentioned in footnote 8, the average exchange rate at the time of ex-ante evaluation was 120.1 yen to the US dollar, and thus, it should be recalculated at 12,010 million yen. Therefore, 12,010 million yen was applied to this ex-post evaluation as the bank's planned project cost.

¹¹ The total project cost was 15,780 million yen because the materials provided by JICA indicated that the planned cost of the Islamic Development Bank portion was 8,525 million yen. However, as explained in footnote 10, its planned cost was redefined as 12,010 million yen, and thus 19,265 million yen was redefined as the total project cost.

¹² Meanwhile, the month of the loan completion was July 2021. This was due to the fact that realisations of the project effects were lagging behind because of the difficulties in conducting vaccination activities in areas where the security situation was unstable, political discontent existed, and proper understandings of polio vaccine were not established, and that the opportunities to make a decision on loan conversion setting realisations of the project effects forth as a premise were postponed twice and subsequently the loan agreement was also postponed twice.

¹³ When providing the sub-rating, Effectiveness and Impacts are to be considered together.

3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

As this project was intended to procure vaccines to be used in the polio vaccination campaign planned in *the Emergency Plan for Polio Eradication (2016–2018)*, this ex-post evaluation measured actual values during the same period.

Table 2: Operational and Effectiveness Indicators

	Baseline Value	Target Value	Actual Value		
	2015	2018	2016	2017	2018
		Completion Year			Completion Year
① Total Number of Polio cases (cases)	54	0	20	8	12
② Environmental sample positive cases (%)	20	0	12	16	20
③ Coverage of polio vaccination campaign by lot quality assurance sampling survey (LQAS) (%)	66	90	83	87	88
④ Coverage in polio vaccination campaign by third-party independent monitoring (%)	90.5	95	90	90	92
⑤ Vaccination coverage of confirmed unvaccinated children under five years of age (%)	89	100	96	95	92
⑥ Annual vaccine disposal rate (%)	12	10	7	8	8
⑦ Percentage of campaigns in which vaccines were delivered to provincial offices nationwide 3 days prior to the start of each campaign (%)	98.7	100	100	100	100

Source: Materials provided by JICA and the N-EOC

Indicator 1: The actual value in 2018 improved, compared with the 2015 baseline value. However, the target value could not be achieved due to difficulties in implementing vaccination activities in such areas as the KP and Balochistan provinces¹⁴ where the security situation was unstable, political discontent existed, and a proper understanding of polio vaccines was lacking.

Indicator 2: For the reasons stated in Indicator 1, the actual value in 2018 was the same as the 2015 baseline value, and the target value could not be achieved.

Indicator 3: The actual value in 2018 improved, compared with the 2015 baseline value. However, the target value could not be slightly achieved partly due to the reasons stated in Indicator 1 and the increase in the population of unvaccinated children under 5 years of age by nearly 1 million each year nationwide.

Indicator 4: The actual value in 2018 improved compared with the 2015 baseline value. However, the target could not be achieved for the reasons described in Indicator 3.

Indicator 5: The actual value in 2018 improved compared with the 2015 baseline value. However, the target could not be achieved for the reasons described in Indicator 3.

Indicator 6: The N-EOC has been improving its vaccine management capacity, partly as a result

¹⁴ Twelve of the twenty cases (60%) in 2016, four of the eight cases (50%) in 2017, and eleven of the twelve cases (92%) in 2018 were reported in the KP or Balochistan provinces.

of the technical cooperation project implemented in the KP province to strengthen vaccine logistics, and the actual value in 2018 improved compared with the 2015 baseline value. The target value could be also achieved.

Indicator 7: For the reasons described in Indicator 6, the actual value in 2018 improved compared with the 2015 baseline value, and the target value could be achieved.

3.3.1.2 Qualitative Effects (Other Effects)

Nothing in particular¹⁵.

3.3.2 Impacts

3.3.2.1 Intended Impacts

1) Quantitative Effects

As the project aimed to contribute to polio eradication in Pakistan, its impact was measured by the number of polio cases in the year following its completion.

Table 3: Polio Cases

	Baseline Value	Actual Value					
	2015	2019	2020	2021	2022	2023	2024 ¹⁶
Polio cases (cases)	54	147	84	1	20	6	5

Source: Materials provided by the N-EOC

In 2019, political turmoil and religious agitation in the KP province made it difficult to conduct vaccination activities, and the number of polio cases reached its highest in the past decade. In 2020, although the aforementioned problems were addressed, the declaration of the coronavirus disease 2019 (COVID-19) pandemic made it difficult to conduct activities for four months, and consequently, the number of cases remained high. In 2021, the number of cases decreased to one owing to continued vaccination activities despite the pandemic. In 2022, the number of cases increased again because of political turmoil, but it began to decrease again in 2023. However, five cases were confirmed as of the end of May 2024, and eradication has not yet been achieved.¹⁷

2) Qualitative Effects

This project aimed to improve the health of Pakistani children through polio eradication, but as mentioned above, as of yet, neither has polio eradication been achieved nor has the effect of

¹⁵ The ex-ante evaluation set as the effect indicator improvement of child health through polio eradication. However, it was analysed as the impact indicator since this corresponded to impacts.

¹⁶ As of the end of May 2024.

¹⁷ Notably, 105 of 147 cases in 2019 (71%), 48 of 84 cases in 2020 (57%), 1 of 1 case in 2021 (100%), 20 of 20 cases in 2022 (100%), 4 of 6 cases in 2023 (67%), and 4 of 5 cases in 2024 (80%) were reported in the KP or Balochistan provinces.

improving the health of Pakistani children through eradication been realised. However, it can be still considered that the project may have contributed to the improvement of children's health, even though eradication has not yet been achieved. In this ex-post evaluation, therefore, children who were vaccinated against polio through the project were identified,¹⁸ and their 12 parents (six fathers and six mothers) were interviewed. As a result, 11 parents (six fathers and five mothers) responded that their children had not suffered from polio and had maintained good health thanks to the project (the remaining mother responded that although her child had been vaccinated and had not suffered from polio, there was no correlation between the vaccination and her child's health). Therefore, it can be assumed that the project has contributed to a certain degree to the improvement of children's health, though this cannot be confirmed due to the small sample size.

3.3.2.2 Other Positive and Negative Impacts

1) Impacts on the Environment

This project does not correspond to any of the sensitive sectors, characteristics, and/or areas listed in JICA's Guidelines for Environmental and Social Considerations (April 2010), and it is judged to have minimal undesirable effects on the environment; therefore, the project was placed in category C. No undesirable effects on the environment were found at the time of ex-post evaluation.

2) Resettlement and Land Acquisition

As the project was intended to provide funds necessary to procure vaccines, resettlement and land acquisition were not considered to have occurred, and they are not recognised at the time of ex-post evaluation.

3) Gender Equality

As a result of interviewing 11 parents (six fathers and five mothers), excluding one mother who denied the effects of the vaccination, 9 parents (six fathers and three mothers) answered that their children had remained healthy and had not suffered from polio, which allowed their mothers to go out and work freely (the remaining two mothers answered that they were not able to go out and work because their children had diseases other than polio). Therefore, it can be assumed that the project has contributed to a certain degree to women's freedom in social activities, though this cannot be confirmed because of the small sample size.

4) Marginalized People

¹⁸ As the unvaccinated children under five years of age who received the polio vaccines procured under the project were generally between 6 and 13 years of age at the time of ex-post evaluation, children under such ages were identified with the help from the N-EOC in a district (G-11) in Islamabad where the lower-middle income group lives and where field surveys were permitted due to security reasons.

All children under five years of age nationwide can be vaccinated against polio free of charge, and vaccines are widely available in a way that community health workers visit children's homes and schools, considering children's accessibility to medical facilities. Therefore, it is considered that almost no children were prevented from participating in social activities.

5) Social Systems and Norms, People's Well-being and Human Rights

As a result of interviewing 11 parents (six fathers and five mothers), excluding 1 mother who denied the effects of the vaccination, all answered that the entire family enjoyed happiness because their children were kept healthy and did not suffer from polio. According to the CHAL Foundation, an NGO in Islamabad that provides support for people with disabilities, including those infected with polio, when a child in a poor area is infected with polio, his or her family is sometimes treated with contempt and refrains from going out, resulting in the negligence of human rights. Therefore, it can be assumed that the project has contributed to a certain degree to the well-being of families and human rights, though this cannot be determined owing to the small sample size.

In conclusion, the actual values of three of the seven operational and effectiveness indicators related to vaccination coverage were slightly below the target value. Those of two other indicators did not meet the target value, though this was partially attributable to external factors. Besides, polio cases are still reported at the time of ex-post evaluation, and polio eradication has not yet been achieved. However, the project is assumed to have contributed to a certain degree to the improvement of the health of the vaccinated children and to the gender, well-being, and human rights of their mothers. 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: ④)

3.4.1 Policy and System

Pakistan's health sector plan, National Health Vision Pakistan (2016–2025), remains in effect at the time of ex-post evaluation. *The National Emergency Action Plan (2021–2023)*, developed under the plan, aims to completely interrupt¹⁹ polio transmission not only in polio-endemic areas but also throughout the country by the end of 2023. Furthermore, the Pakistan Muslim League-Nawaz (PML-N), headed by Mr Sharif, the prime minister of the coalition government formed in February 2024, has pledged, as its manifesto, to interrupt polio transmission by 2026. Accordingly, it is highly probable that the Government of Pakistan will maintain its policy to eradicate polio. Therefore, no policy or institutional problems were observed.

¹⁹ Zero polio case for one year results in 'interruption', followed by "eradication" after another two years of zero polio case.

3.4.2 Institutional/Organizational Aspect

The N-EOC under the MoNHSRC, designated as the management body by the National Task Force on Polio Eradication that is chaired by Prime Minister Sharif, centrally manages polio-related activities. The MoNHSRC appoints the N-EOC coordinator as the head of the N-EOC, and the coordinator manages 137 N-EOC staff members divided into 5 teams (Epidemiological Information Analysis Team, Surveillance Team, Vaccination Action Team, Emergency Response Team all consisting of WHO staff, and Awareness Activities and Vaccine Procurement Team consisting of UNICEF staff) and 370,000 health workers nationwide who are involved in vaccination activities. Meetings of core N-EOC staff are usually held twice a week to share progresses and challenges, and therefore, no institutional or organisational problem is observed.



Scene of the meeting
(Source: Photo taken by external evaluator)

3.4.3 Technical Aspect

The N-EOC's 137 staff members are all highly specialised international and national staff members, seconded by WHO and UNICEF. Health workers in some field areas are equipped with GPS devices to ensure that there is no unvaccinated child left, while the N-EOC HQs use state-of-the-art data science technology to utilise data from the field for the surveillance and analysis of poliovirus. Therefore, no technical problem is observed.

3.4.4 Financial Aspect

Table 4: Budget Status for 2024-2026

(Unit: Million dollars)

	2024	2025	2026
Budget	156.12	140.27	134.26
Secured	100.00	0	0
Expected to be secured	56.12	0	0

Source: the N-EOC

The Islamic Development Bank signed an agreement to provide 100 million US dollars for 2024. Notably, 55 million out of the remaining 56.12 million US dollars will be provided by the French Development Agency and Gates Foundation in a coordinated support package (the French Development Agency will provide a 35 million US dollar loan, while Gates Foundation will provide a 20 million US dollar grant), and the agreement was expected to be signed by the end of May 2024. The remaining balance is expected to be provided by the other major donors. The budget for 2025 will be determined at the end of 2024, but the major donors remain committed to polio eradication. Therefore, no financial problem is observed.

3.4.5 Environmental and Social Aspect

As assumed during ex-ante evaluation, no negative environmental and social impacts are observed.

3.4.6 Preventative Measures to Risks

As assumed during ex-ante evaluation, no risk is observed during the implementation of the project.

3.4.7 Status of Operation and Maintenance

Polio vaccines are procured from international pharmaceutical companies approved by WHO, and all vaccines are transported to and stored in the national cold chain warehouse adjacent to the N-EOC HQs in Islamabad. After that, refrigerated vaccines are transported to secondary and tertiary health facilities in each province in accordance with vaccination activities. From the tertiary health facilities, health workers carry the refrigerated vaccines in cooler boxes for vaccination activities. All vaccines are temperature-controlled between 2 °C and 8 °C, according to the WHO cold chain guidelines.



National Cold Chain Warehouse



Tertiary health facility in Islamabad



Refrigerated vaccines in a cooler box



Vaccination activity by a health worker

(Source: All photos taken by external evaluator)

In conclusion, no issues have been observed in the policy/system, institutional/organisational, technical, financial, environmental, and social aspects, including the current status of operations and maintenance. Future risks have been well mitigated. Therefore, sustainability of the project effects is very high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of this project was to ensure the smooth vaccination of children under five years old in Pakistan by procuring polio vaccines for the entire country, thereby contributing to the early eradication of polio in the country. The project was relevant to the development policies and needs at the time of both ex-ante and ex-post evaluations, and the project plan and approach were also appropriate. The project's coherence with Japan's development cooperation policies, as well as internal and external coherence, were confirmed; therefore, its relevance and coherence are high.

The volume of vaccines procured exceeded the plan, and both the project cost and period were within the plan. Therefore, efficiency of the project is very high. However, among the seven operation and effect indicators, three related to vaccination coverage fell slightly short of the target, and two failed to achieve the target, though this was partially attributable to external factors. Moreover, polio cases are still reported at the time of ex-post evaluation, and the project has not yet achieved polio eradication. Nevertheless, the project is assumed to have contributed to a certain extent to the improvement of the health of vaccinated children, as well as to gender, well-being, and human rights, as represented by mothers. As the effects of the project can only be confirmed to a certain extent compared to the plan, effectiveness and impact of the project are moderately low. No issues have been observed in the policy/system, institutional/organisational, technical, financial, environmental, and social aspects, including the current status of operations and maintenance. Future risks have been well mitigated. Therefore, sustainability of the project effects is very high. In light of the above, this project is evaluated to be satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

Polio cases are still being reported, even at the time of ex-post evaluation. The N-EOC should strengthen communication to promote the correct understanding of polio vaccines and increase coverage of polio vaccinations to achieve the early interruption and eradication of polio.

4.2.2 Recommendations to JICA

Notably, JICA is not only implementing a technical cooperation project, the Project for Strengthening Continuum of Care for Mothers, Newborn, and Child Health in Primary Health Care Settings (2023–2026) in the KP province at the time of ex-post evaluation but also assisting the health authorities in the province in carrying out vaccination awareness activities. To increase the coverage of polio vaccinations in the province, JICA should not only strengthen vaccination awareness activities, but also promote routine vaccinations including polio vaccines and collaborate with other maternal and child health care programmes.

4.3 Lessons Learned

Identification and elimination of impediments to vaccination activities

One of the reasons why polio eradication has not yet been achieved to date at the time of ex-post evaluation is that it is difficult to conduct vaccination activities in some areas where security is unstable, political discontent exists, and a proper understanding of polio vaccines is lacking. When formulating a project to eradicate polio in the future, JICA should do so after identifying the political and social factors that impede vaccination activities and eliminating or mitigating such factors as much as possible.

5. Non-Score Criteria

5.1 Performance

5.1.1 Objective Perspective

During the implementation period of the project, JICA participated in the daily morning meetings and quarterly joint monitoring meetings held at the N-EOC to monitor the progress towards polio eradication and build sound communication and relationships with the N-EOC. Besides, JICA dispatched the advisor (Technical Assistance under Finance and Investment Account, Phase2) (2017–2018) to the N-EOC to promote the implementation of the project and provide advice, thus fulfilling its role and providing the necessary support. In addition, even after the implementation of the project, the project continues to support the awareness activities of the health authorities in the KP province where further efforts are needed by implementing technical cooperation projects, including the Project for Strengthening Routine Immunization System in Primary Health Care Settings (2018–2022) and the Project for Strengthening Continuum of Care for Mothers, Newborn, and Child Health in Primary Health Care Settings (2023–2026).

(End)

Comparison of the Original and Actual Scope of the Project

Item	Plan	Actual
1. Project Outputs	Polio Vaccines Approx. 273 million doses	Polio Vaccines Approx. 383 million doses
2. Project Period	May 2016-December 2018 (32 months)	May 2016-September 2018 (29 months)
3. Project Cost		
Amount Paid in Foreign Currency	18,660 million yen	17,674 million yen
Amount Paid in Local Currency	605 million yen (526 million PKR)	344 million yen (344 million PKR)
Total	19,265 million yen	18,018 million yen
ODA Loan Portion	6,290 million yen	6,268 million yen
Exchange Rate	1USD = 120.1 yen 1 PKR = 1.15 yen (As of October 2015)	1USD = 110.46 yen 1 PKR = 1.00 yen (Average between May 2016 and September 2018)
4. Final Disbursement	July 2021	