1-1  Background of the Project

Pakistan is one of the countries with the highest child mortality rate, such as under 5 mortality rate is 101 per 1,000 live births, infant mortality rate is 80 per 1,000 live births. Immunization coverage is not optimal with polio being 65%, measles 67% and BCG 80% and many donors such as GAVI, WHO and UNICEF have supported Expanded Programme on Immunization (EPI) with certain amount of inputs. Japanese Government had also provided polio vaccine through grant aid scheme since 1996. JICA also had dispatched long-term and short-term experts, provided equipment and offered the trainings in Japan. Based on above cooperation and the request from Pakistan government, the EPI/Polio Control Project in Pakistan (hereinafter referred to as ‘the Project’) has been launched in September 2006 to last for five years until September 2011, in order to increase the number of the children under the age of two who are vaccinated in the target districts within the province of Khyber Pakhtunkhwa (KPK), namely Swat, Buner, Shangla and Haripur. The counter-parts of the Project are Ministry of Health (Federal) and KPK Province’s health office. Outputs of this Project are as follows, 1."EPI services are properly provided in the target districts.” and 2."Parents ensure their children to be vaccinated in the target districts.” for districts of Swat, Buner, Shangla and Haripur, 3.” Quality control capacity of QCL (Quality Control Laboratory) of NIH is enhanced.” for Quality Control Laboratory of National Institute of Health, 4.” Federal and Provincial routine EPI system is strengthened.” for federal and provincial EPI cells. The chief adviser and project coordinator as long-term experts and short-term experts of vaccine logistics, QCL capacity strengthening and EPI support have been dispatched. EPI related equipment is also provided. The Advisory Study Mission was dispatched in October, 2008 and the Mid-term review was conducted in October, 2009. The Terminal Evaluation Team was dispatched in April 2011, to confirm the achievement of the Project, to draw the lessons for the Project’s
activities and related activities, and to collect essential information for the future plan of a project.

1-2 Project Overview
(1) Overall Goal
Morbidity due to EPI-targeted vaccine-preventable diseases is reduced in the target districts.

(2) Project Purpose
Children under the age of two are vaccinated in the target districts.

(3) Output
1) EPI services are properly provided in the target districts.
2) Parents ensure their children to be vaccinated in the target districts.
3) Quality control capacity of QCL/NIH is enhanced.
4) Federal and Provincial routine EPI system is strengthened.

(4) Input (at the point of Terminal Evaluation)

Japanese side:
Long-term Experts 4 persons Equipment Provision 46 items: Cold chain equipment (refrigerators, freezers, temperature monitor), QCL equipment etc. (40,340,908 Pak Rs, 40 million JPY)
Short-term Experts 9 persons Costs necessary for the implementation of the Project 62.8 million JPY (Local Consultant, Training Expense)
Trainings in Japan 15 persons
Pakistan’s side:
Counterparts 40 persons Local Cost (for whole Project period) 16.2 million Pak Rs 16.2 million JPY
Others: Project Office was provided and the cost of electricity and water supply was paid by Pakistan side.

2. Evaluation Team

<table>
<thead>
<tr>
<th>Members of Evaluation Team</th>
<th>Leader</th>
<th>Dr. Mitsuo ISONO</th>
<th>Senior Advisor, Human Development Department, JICA</th>
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<tbody>
<tr>
<td>EPI/Polio Control</td>
<td>Dr. Masahiko HACHIYA</td>
<td>Head, Infectious Disease Control Group Department of International Medical Cooperation, Japan National Center for Global Health and Medicine</td>
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3-1 Project Performance
- Inputs and Outputs

(1) Output 1: EPI services are properly provided in the target districts.

Output 1 is being partially achieved as the indicators for Output 1 shown below have been achieved in Haripur.

Indicator 1 “More than 80% of LHWs, EPI technicians and medical doctors are trained on EPI service provision” was achieved, as 100% of LHW (731 persons) finished the training course of LHW routine EPI involvement, 99% of EPI technicians (55 persons) and 100% of MO (Medical Officer) in charge of health facility (38 persons) have also completed their training courses in Haripur.

As for Indicator 2 “The number of immunizations administered by LHWs is increased.” the number of immunization administered by LHW has been increased from 2009 in Haripur. Cases of immunization for measles were increased from 9 to 722 in 2009 to 2010, 0 to 38 for BCG, 25 to 1698 for polio, 25 to 1698 for pentavalent, and 23 to 2349 for tetanus toxoid.

For Indicator 3 “The number of EPI centers having functional refrigerator is increased”, 27 refrigerators for vaccines are going to be provided to EPI centers in Haripur for storage of vaccines for LHW and EPI technicians. The number of EPI centers having functional refrigerator will increase from 32 to 59.

As for Indicator 4 “Out Reach Plan is formulated and implemented at First-level Care Facility (FLCF) level”, according to the situation survey of Haripur, 46% of the EPI technicians had not planned and implemented the outreach plan before the Project. Since the Project has supported the monthly meeting of EPI technician, Out Reach Plan is re-formulated and strengthened implementation.

It could not be judged in other three districts (Buner, Shangla and Swat) due to suspension of the Project activities.

(2) Output 2: Parents ensure their children to be vaccinated in the target districts.

It is difficult to evaluate Output 2 as the Project activities have not been conducted.

Indicators for Output 2, 1.:“The number of religious and community leaders, policy makers, parents, caretakers of children, maleks, etc. who have participated in social mobilization activities in this project is increased.” 2: “ The percentage of parents/caretakers of children under one year who recognize that routine immunization course protects children under one year from 8 dangerous diseases, availing the services to complete the course in a timely.” and 3: “The percentage of parents/caretakers of children under one year who accept that routine immunization is essential in addition to Polio drops during NIDs /SNIDs (Polio campaign)” have not been achieved as the Project activities have not been conducted due to security reasons.

KAP(Knowledge, Attitude and Practice) survey was conducted in Swat, Shangla and Buner in the first half of the project period. Thereafter, the Project has not conducted the activities at this moment. A seminar for cooperation planning evaluation analysis was conducted from 17/April/2011 - 1/May/2011.
88 members including teachers, community leaders and NGO staff, was held in Haripur in July 2009. Since then, no activity was conducted until now.

As seen above, it’s difficult to measure the achievement by the indicators as the Project Activities have been interrupted in an early stage.

(3) Output 3: Quality control capacity of QCL/NIH is enhanced.

**Output 3 is mostly achieved as Indicators shown below have been achieved.**

In order to enhance quality control by QCL, the training of ‘Quality Control Testing Method’ and ‘Trend Analysis’ by short-term experts and the training in Japan of ‘Vaccine Quality Control Technology’ were conducted.

The indicator 1 “The number of trained QCL staff is increased.” has been achieved, as 7 QCL staff and 2 QA (Quality Assurance) staff participated in the training conducted by short-term experts and among them, 3 staff members participated in the counterpart training in Japan.

Indicator 2 “The knowledge and skill level of QCL staff is increased according to the set criteria, including GMP.” has also been achieved. According to the Japanese expert, the capacity of trained staff in terms of knowledge and skill has been improved through the above mentioned trainings.

Indicator 3 “Procured equipment of the QCL is properly utilized and maintained.” has been achieved, as it was confirmed that almost of all the provided equipment are used and well maintained by the terminal evaluation team.

(4) Output 4: Federal and Provincial routine EPI system is strengthened.

**It is difficult to judge Output 4 at the time of terminal evaluation.**

Indicators for Output 4 are 1:” Stock-out days of vaccines and maximum interval of vaccine receipt at provincial and district vaccine storage is reduced.” 2:” The number of training monitoring and evaluation is increased.” 3:”The quality of routine EPI data is improved.” and 4:” The number of monitoring by provincial EPI Cell and Provincial National Program is increased.”

Since the training course was completed in February, 2011 in all districts of 4 provinces for indicator 1, and the training of EPI data management has just been completed in March, 2011 for indicator 2, 3 and 4.

To evaluate these training courses, it is necessary to standardize the data format for EPI. However, currently the Project activities are at the stage of integration of the monitoring/evaluation format in KPK only and have not started in other 3 provinces.

-Project Purpose

**The Project purpose was achieved in Haripur as three indicators shown below have been achieved, but not in Swat, Shangla, and Buner for interruption of the Project Activities.**

Indicator 1:” The number of immunized children with measles or pentavalent vaccine under one year-old is increased.” has been achieved, as the number of immunized children with measles and pentavalent vaccine under one year-old increased in the last five years in Haripur. The Project contributed to this progress mainly by introducing LHWs’ involvement in EPI service from 2009. The number of vaccination increasing started earlier than the Project (from 2008) in Haripur, it can be judged that this improvement was mainly contributed by the efforts of district government.

Indicator 2: “Reported routine EPI coverage (DPT/Pentavalent) increased” has been achieved for five years in Haripur. The degree of increase in Haripur appears greater than those of other districts in KPK, but
interpretation of this figure should be made very carefully as the coverage (immunized population/target population) in Haripur showed over 100%. The reason of this can be suspected that the population data for coverage calculation may be lower than actual number as is based on the census in 1998.

Indicator 3 “Drop-out rate of Pentavalent [(Penta 1-Penta 3)/ Penta 1] is reduced” has been achieved in Haripur as drop-out rate is tending to decrease from 2008, it dropped from 851 cases into 419 cases from 2009 to 2010.

- Prospect of Overall Goal

The achievement of the overall goal cannot be verified at the point of the Terminal Evaluation.

Indicator 1: “Polio free is maintained” was difficult to be judged. Polio cases were reported in Swat and Shangla, but not in Haripur and Buner in the last five years. The Project’s contribution to polio control seems to be limited, and repeated polio immunization campaigns play a major role in controlling polio.

Indicator 2: “The incidence of measles is reduced.” was also difficult to be judged. Measles incidence was not reduced. The surveillance data shows the incidence peaked in 2007 and incidence in other years were relatively low. Considering the epidemiology of disease, unstable values may result in reflect natural fluctuation rather than project effect.

Indicator 3: “The incidence of NT is reduced.” was also difficult to be judged. Neonatal tetanus did not decrease in incidence. The effect of the Project activities cannot be measured because of the short duration of observation period, difficult clinical diagnosis, and low incidence.

3-2 Summary of Evaluation Results

(1) Relevance

The relevance of the Project is high, considering the importance of EPI/Polio control in global trend and in Pakistan, consistency of the development plan of government of Pakistan and the assistance policy of government of Japan. Moreover, Japan has the advantage in EPI field.

Protect against infectious diseases is the priority subject in millennium development goal and Pakistan’s strategy of poverty reduction. In a budget document of Ministry of Health, PC-1(2009-10-2013-14), EPI-routine activities are included. The Project also follows other health policies and strategies, National Health Strategy, National EPI Policy and National Emergency Action Plan for Polio eradication (NEAP) 2011. LHW is obliged to do EPI service under the current EPI policy.

There is consistency with Japanese ODA policy in priority subjects of health and population. EPI service delivery itself is the basic health service and the Project’s plan of training for LHW and EPI technicians to contributes to universal access of EPI service to communities.

As JICA has experiences of technical support on EPI field, by dispatching short-term experts in Pakistan and by EPI projects in China and other countries, those experiences can be utilized in practical support for EPI service.

(2) Effectiveness

Effectiveness of the Project is can be judged as generally high. Effectiveness of each Output for the Project purpose “Children under the age of two are vaccinated in the target districts.” is as follows.

Regarding Output 1: “EPI services are properly provided in the target districts.”, effectiveness can be observed in Haripur. Output 1 is contributing to the Project Purposes, through involvement of LHW and strengthening of recording and reporting system of EPI, the Project activities turned out the significant
increase of vaccination especially by LHWs and coverage of immunization.

Output 2: “Parents ensure their children to be vaccinated in the target districts.”, effectiveness cannot be observed as the Activities were not conducted.

Output 3: “Quality control capacity of QCL/NII is enhanced.”, effectiveness can be observed indirectly. As results of comprehensive technical training was conducted to strengthen the skills of QCL staff, provision of equipment including instruction of its maintenance, and monitoring QCL, quality of the vaccines for EPI has been secured.

Output 4: “Federal and Provincial routine EPI system is strengthened.”, it’s difficult to judge the effectiveness as the activities for Output 4 have been in the middle of implementation. At this moment, there were no effects observed by these activities. However, considering response from trainees and relevant parties, calculating accurate number of immunization and stable supply of vaccines by EPI data management can be expected. Thus, effectiveness can be expected if all the activities are completed at the time of termination of the Project.

(3) Efficiency

Efficiency can be judged as middle level.

As Training courses for LHW for Output 1: “EPI services are properly provided in the target districts” have not been implemented as planned in three target districts due to security reasons, the efficiency was rather low. All the equipment provided towards those districts is unable to monitor its use at the time of the Terminal Evaluation.

The Activities of Output 2: “Parents ensure their children to be vaccinated in the target districts”, such as promoting the understanding of immunization for religious leaders, have been interrupted due to security reasons in three target districts. And there were no such activities conducted in Haripur as it was judged low priority by Japanese experts. The efficiency of the Output 2 should be considered as low in this regard.

Regarding Output 3: “the strengthening of QCL”, the experts and equipment were inputted as scheduled and related activities were implemented along with the plan. As a result, indicators have been already achieved at the time of terminal evaluation. Thus, the efficiency of the output 3 is high.

Activities for Output 4: “Federal and Provincial routine EPI system is strengthened.” target four provinces. As Japanese experts and even project local staff are not able to access some area in those provinces due to security reasons, counterparts need to travel to Islamabad. Activities were conducted after getting consensus among the relevant parties and were conducted smoothly and appropriately. However, not all of planned activities have been completed at this moment therefore it is too early to judge its efficiency.

(4) Impact

It is difficult to determine the possibility of the achievement of the Overall Goal at this moment.

In terms of positive impact, a mechanism for EPI service delivery including reporting system which was developed in Haripur has been highly evaluated and the performance of LHW in Haripur is recognized as a good practice by stakeholders. It is expected that the National Programme will contain these systems to introduce them to other districts.

Judging from interview survey by the terminal evaluation team, it was found that LHW became confident and well-motivated after the EPI services training. Thus, it is expected that their routine activities will be well motivated and resulting in providing better health care services to communities.

No negative impact was observed.
Sustainability

It is judged that the sustainability of the Project is expected in certain level.

Political Sustainability of Project Effects: One of the Project Activities, LHW’s involvement in EPI service provision was cited in Mid-Term Development Framework 2005-2010 and National EPI Program. The LHW activities related EPI service delivery will be cited in a new National EPI Policy which is drafted now.

Institutional Sustainability of Project Effects: The Federal and Provincial EPI cells have already strengthened their capacity with adequate number of staff members for EPI service delivery. It is expected that these institutions will be able to sustain current capacity after the devolution. Through the various training courses implemented by the Project, counterparts acquired knowledge and skill. However, those trainings have been conducted only by the Japanese side and the Pakistan side has not been fully involved. This is due to the lack of adequate human resources in Pakistan side, especially at provincial levels. Considering this situation, the Project aimed to institutionalize the reporting to obtain technical sustainability. In future, to obtain the institutional sustainability, a planning and management for proper human resources allocation will be expected on EPI cells of the federal and provincial levels.

Technical Sustainability of Project Effects: Regarding the output 1: “EPI services are properly provided in the target districts.” in Haripur, the routine EPI service delivery system through EPI technician and LHW have been observed well developed. And the KPK Provincial EPI cell has acquired sustainability to maintain this mechanism technically. For the output 3: “strengthening of QCL”, technical sustainability of the QCL is high as through the Project, all the staff members have obtained knowledge and skill to deal with the equipment related to QCL. Regarding the output 4: “strengthening of routine EPI system in Federal and Provincial EPI cells”, to obtain the technical sustainability, the Project team will still have to be worked on as remaining tasks.

Financial Sustainability of Project Effects: The main implementation body of EPI service provision will be Provincial Government after the devolution (from federal to province), each Province EPI cell is currently reviewing its PC-1 for the next fiscal year (starts from June, 2011). It is expected that proper service provision would be made as planned though, the Federal and Provincial EPI cells still rely on donors for operational costs. There were interruptions of trainings or delay of salary payments due to problems regarding contracts with donors. Thus, the Federal and Provincial EPI cells will have to continue their efforts to secure the budget.

As for QCL, the financial sustainability is high, as the budget is allocated according to the national component of PC1.

3-3 Factors promoting better sustainability and impact

(1) Factors concerning to Planning
None could be observed.

(2) Factors concerning to the Implementation Process
The Japanese Experts have been attending those regular meetings with counterparts or other organizations to exude their presence and to share the information about the Project, and to collect the necessary information on EPI. Some of the meetings were essential for smooth implementation of the Project. Especially, at the EPI review meeting in September, 2009, the chief adviser share the information on the concept of vaccine logistics Management and EPI data management, as a result, the concept was recognized as a practical mechanism by relevant parties. Soon after that, the component of Vaccine Logistics
Management was included in PC-1 (Federal) at the time of its revision.

3-4 Factors inhibiting better sustainability and impact

(1) Factors concerning to Planning

The Activities of Output 2” Parents ensure their children to be vaccinated in the target districts.”, such as for religious leaders to promote understandings of EPI towards parents in target districts have not been done. Which was judged by the Japanese Experts as the priority of these activities was not high in the targeted district. This might indicate that there was mismatch between the project design and actual situation in Pakistan. Thus, those activities should have been modified through revision of PDM at the certain point of time after the midterm review.

(2) Factors concerning to the Implementation Process

While Japanese experts have been communicating with counterparts and other related institutions by attending those conferences above, some concerning factors can be observed as follows.

1) Non-existence of oversight on the Project: a function to oversee whole activities was not formulated by the Project even though the counterparts are varied according to the activity of the Project.
2) Less communication among counterparts: Especially with EPI and National Program of federal and province levels, a communication channel was not well organized.
3) Since the bombing of the madrassa in KPK in October 2006, security problems such as suicide bombing have become widespread and serious. Also, the activities related to health and education has been restricted due to deterioration of security conditions, and Japanese experts were not able to work in the project sites since May 2007. Furthermore, Japanese experts could not visit even Peshawar and started to send national staff of the Project to the project sites for implementing the project activities and invited the counterparts to Islamabad for meetings. The Project had newly employed medical doctors as national staff to re-start and promote the activities in three target districts. However, the grave security condition did not allow them to do so fully. Responding the above situation, in October 2008, Advisory Study Mission was dispatched to Pakistan to review the activities and progress of the Project. The Advisory Study Mission selected Haripur as new target area among the candidate districts. The addition of new target district to the Project was approved in second JCC in April 2009. Since dispatching the Advisory Study Mission, security condition has not improved and the activities in three target districts have remained suspended. The project activities in Haripur, however, have been implemented until now. And the training on EPI Data Management has been newly conducted targeting KPK after the Mid-term review. Furthermore, on July and August 2010, Pakistan suffered extensive damages from floods. And some of the Training courses of the Project had to be suspended for three months, as there was no other choice.

3-5 Conclusion

The Project Purpose has been achieved in Haripur From the view of evaluation of five criteria, relevance is high, effectiveness is also almost high, and efficiency is moderately high. As for impact, “Prospect for the achievement of the Overall Goal” cannot be confirmed at the moment. Although EPI service provision mechanism including reporting system and LHW’s performance in Haripur were not implemented in other pilot areas including Swat because of security issues, output 1 “EPI services are properly provided in the target districts” and output 3 “Quality control capacity of QCL/NIH is enhanced” were partially achieved
with clear results in Haripur. As for sustainability of the Project, political aspect of sustainability is assured though, from institutional aspect, it is needed to proper allocation, plan and management of human resources from federal to provincial level. Technical aspect of sustainability is almost assured though, continuous activities until the termination of the Project is required to ensure the Output 4 “Federal and Provincial routine EPI system is strengthened”. Financial sustainability will be tough issue for Pakistan as it has chronic shortage of budget and depending on donors’ support for EPI operational cost, continuous efforts to obtain the resources is needed.

There were several hindering factors such as change of target areas due to deterioration of security condition and flood etc…during the implementation process of the Project. The Project team made efforts to continue the activities they could do in those limited areas. At the moment, the sustainability in terms of technical aspect is not enough, and one of the reasons behind is the length of the project was not enough. It is necessary that Japanese experts will do their best to assure technical sustainability until the end of the project. However, certain results are evaluated from this project, and it is expected to wrap up the cooperation with the enhancement of technical sustainability within the remaining 6 months. Therefore, the suspension of the project is not necessary. Meanwhile, Japanese yen loan project “Polio Eradication Project” has been initiated since August 15, 2011. It should be discussed the possibility of the new technical cooperation project for the enhancement of EPI to strengthen the emerging yen loan project.

3-6 Recommendations

(1) Communication between federal and provincial level has not been enough as the Project activities have become diverse after the mid-term review. Thus, it is recommended to enhance communication among all stakeholders including the Federal and Provincial EPI cells, NIH and other partners to solve the problems of comprehension of the Project activities by federal EPI cell.

1) Also, it is recommended to organize a meeting with all stakeholders to share the achievement of the Project and develop a plan for each output on how to bring the maximum effect of the Project in the remaining period.

2) Enhancing capacity by conducting training is the major approach of the Project implementation. It is recommended that the Pakistan side obtain sustainability to conduct these trainings after the end of the Project. However, as described above, as there are not enough caretakers at provincial levels in this regard, the Project is recommended to develop training mechanisms with the documented concepts, so that the Pakistan side can, at least, conduct those trainings by assistant of third parties. Also, it is recommended to draw lessons learnt from evaluation of the trainings. Also, the federal and provincial EPI are recommended to enhance intuitional capacity to conduct those trainings.

3) As for output 1 “EPI services are properly provided in the target districts.” It was recognized the positive effect of involvement of LHW into EPI program. However, as recommended at the mid-term review, effects of involvement of LHW have not been analyzed well. Thus, for further progress, the Federal EPI, along with the National Program, is recommended to analyze effects of involvement of LHW on EPI program, including effects of BCC activities by LHW and impacts, either positive or negative, by LHW activities for immunization.

4) As for the activity for output 1 “EPI services are properly provided in the target districts.” which is making and implementing of outreach plan by EPI technicians, EPI technicians have been able to develop outreach plans in Haripur. But, not enough monitoring on implementation of those plans has been done. It is recommended to develop monitoring and feedback mechanisms of implementation of
5) As for output 4 “Federal and Provincial routine EPI system is strengthened”, for EPI logistics and data management, the Japanese side is recommended to continue technical assistance so that the Pakistan side can obtain technical sustainability in these fields within the Project period.

6) At this moment, it is impossible to obtain certain numbers of indicators, especially for output 4 “Federal and Provincial routine EPI system is strengthened” of EPI data, vaccine stock and etc... Since these indicators are very important to judge significance of the Project, the Project is required to collect data regarding these indicators by the end of the Project period.

7) As for one of the activities for output 4 “Federal and Provincial routine EPI system is strengthened”, the Project has finished trainings on EPI data management in only twelve districts in one province at this moment. Since this training is very meaningful for EPI program and planned to conduct in four provinces to bring maximum effect of the Project. Thus, the Project is recommended to conduct these trainings in remaining provinces as much as possible.

8) For the activity 4-4 (Conduct analysis and assessment of EPI disease surveillance data at Federal and Provincial EPI Cell) of output 4, the Project is recommended to develop the criteria for validation of data quality to assess surveillance data.

3-7 Lessons Learned

(1) In the process of on devolution (from federal to province), more decision making authority will be delegated to provincial level. Under such a circumstance, it is more important to share the contents of the Project activities among federal level and other donors to ensure maximum effects and development of Project activities.

(2) It is the same in other projects in Pakistan, the Project tended to be “rendering of service” rather than enhancing capacity development. It is essential for capacity development that a Project has precise project design and active approach to Pakistan side before and during Project period.

(3) Regarding the project design, it should be carefully considered that an approach “build implementing system as a model in a target area and try to expand to country wide“ is very difficult not only to implement, but to obtain consensus from relevant parties in Pakistan.

(4) As seen in the training course of the Project, there was lack of recipient institutions and human resources for implementation of training for capacity development. It is important to do deep discussion about it with counter parts beforehand for better understandings about sustainability of the project and confirmation of the recipient institution.

(5) Since the project activities tend to be “service rendering” technically and financially, it is recommended to discus with counter parts beforehand so that counter parts have more ownership and responsibility.

(6) Since the counterparts were assigned according to each activity of the Project, there was no one to oversee and manage those counterparts as a whole. Regarding this matter, a person who is in charge of the entire project activities must be chosen at the beginning of the project design, or meetings such as JCC should be set to make the counterparts well coordinated.
(7) When having projects with the possibility of having various restrictions on project activities because of the bad security situation, one’s safety must be the first priority for experts. If possible, local resources should be utilized, and a structure for the smooth implementation must be prepared.