

Country Name	<b>The Project for Water Supply, Sewerage and Drainage Master Plan of Faisalabad</b>
Islamic Republic of Pakistan	

**I. Project Outline**

Background	The population of the urban areas of Faisalabad, the 2nd largest city of Punjab Province and the 3rd largest city in Pakistan, was about 2.7 million as of 2015 and was expected to increase to over 4 million by 2038. Rapid population growth in Faisalabad made it difficult to secure adequate quantities of water for supply from both infrastructure development and water resource development perspectives. As of 2015, only 60% of the households in the city had access to municipal water supplied by the Water and Sanitation Agency, Faisalabad (WASA-F). The sewerage coverage ratio within the WASA-F service area was only about 73% in 2015. The areas without sewerage had to cope with chronically unsanitary conditions, while the areas with sewerage drains had to cope with pressing challenges to maintenance. (Figures at the time of ex-ante evaluation.)		
Objectives of the Project	This project aims to (i) develop an integrated Master Plan (M/P) related to operational improvements and facility investments for water supply (WS), sewerage and drainage (S&D) in Faisalabad with the target year of 2038, (ii) to recommend policies/measures for practical utilization of the M/P through pilot activities <sup>1</sup> , and (iii) to enhance the institutional capacity of WASA-F for implementation of the M/P in the boundary area of the Faisalabad Peri-Urban Structure Plan (FPUSP) <sup>2</sup> , thereby contributing to the improvement of the water supply, sewerage, and drainage environment in this area. 1. Expected Goals through the proposed plan <sup>3</sup> : The water supply, sewerage, and drainage environment are improved in the boundary area of the FPUSP.		
Activities of the Project	1. Project site: Boundary area of the FPUSP. 2. Main activities: Basic studies (e.g., collection and analysis of relevant data and information, water quality survey, socio-economic survey, identification of issues for WS, S&D, etc.); formulation of M/P for WS, S&D, and institution and finance; and pilot activities or studies for WS in 3 pilot areas (Safraz Colony, Madina Town, and Sitara Spana City). 3. Inputs (to carry out above activities) Japanese Side 1) Mission members: 15 persons 2) Trainees received: 13 persons (8 in Japan and 5 in Cambodia and Thailand) Pakistani Side 1) Staff allocated		
Project Period <sup>4</sup>	(ex-ante) July 2016-July 2019 (36 months) (actual) July 2016-June 2019 (36 months)	Project Cost (Japanese side only)	(ex-ante) 624 million yen, (actual) 597 million yen
Implementing Agency	Water and Sanitation Agency, Faisalabad (WASA-F)		
Cooperation Agency in Japan	Nihon Suido Consultants Co., Ltd.; Japan Techno Co., Ltd.; Yokohama Water Co., Ltd.		

**II. Result of the Evaluation**

## &lt; Special Perspectives Considered in the Ex-Post Evaluation &gt;

- As for Utilization Status of the Proposed Plan, the Target Year was set to be Pakistan Fiscal Year (PFY) 2021 (July 2021-June 2022) because the ex-post evaluation was planned in 3 years after the project completion as per the Ex-ante Evaluation Sheet. The status at the time of ex-post evaluation was also checked and considered in making the evaluation judgment. “The projects proposed in the M/P developed by this project are considered for realization” in Indicator 1 was interpreted to be “realization of the projects or some components of the projects proposed in the M/P developed by this project are officially discussed within WASA-F and rough cost estimates with possible funding sources were prepared” based on the interpretation of the WASA-F confirmed during the field survey.
- The utilization status of the considered Phase 1 projects other than the priority projects<sup>5</sup>, the utilization status of the M/P related to operational improvements (i.e., Operation and Management Improvement Plan), and the continuation status of the pilot activities in the pilot areas at the time of ex-post evaluation were checked as Supplementary Information (SI)-1, SI-2, and SI-3, respectively. The continuation status of the enhanced capacity was checked under Sustainability.
- For the indicators and SIs without clear targets in the Target Year/ex-post evaluation, the appropriateness of the confirmed results was checked by asking the Implementing Agency (WASA-F)’s judgment with grounds.
- The description of the Expected Goal of this evaluation was based on “5. Expected Goal to be achieved through the proposed plan after the project completion” in the Ex-ante Evaluation Sheet. It is noted that “2. Expected Goal which will be attained after implementing the Proposed Plan” stated in the R/D (i.e., (1) “The M/P is authorized as an official document of WASA-F” and (2) “Necessary activities are continuously implemented based

<sup>1</sup> This Output is not included in “Outputs” in the Record of Discussions (R/D) of the project, but the relevant activity is included in “Activities for Pilot Activity for Water Supply” in the R/D.

<sup>2</sup> The period of the FPUSP is 2015-2035. (Source: <https://fda.gov.pk/fpusp>)

<sup>3</sup> The degree of achievement of expected goals is not to be assessed in principle at the time of ex-post evaluation, since it is defined as the medium-to-long-term goals which will be attained as a result of crystallizing the proposed plan (“output” of the project).

<sup>4</sup> The number of months was counted based on dates.

<sup>5</sup> The M/P consists of 4 phases: Phase 1 (2018-2023), Phase 2 (2024-2028), Phase 3 (2029-2033), and Phase 4 (2034-2038) for WS M/P and Phase 1 (2018-2024), Phase 2 (2025-2029), Phase 3 (2030-2034) and Phase 4 (2035-2038) for S&D MP.

on the M/P.”) was considered as the 1st step for the utilization/implementation of the M/P and the utilization/implementation of the M/P, respectively. Given the above, the authorization status of the M/P was checked as the 1st step for Indicator 1. The utilization/implementation status of the M/P is covered by Indicator 1, Indicator 3, SI-1, and SI-2.

<p>1 Relevance/Coherence</p> <p>[Relevance]</p> <p>&lt;Consistency with the Development Policy of Pakistan at the Time of Ex-Ante Evaluation &gt;</p> <p>The project was consistent with the development policy of Pakistan at the time of ex-ante evaluation because the Pakistan Vision 2025 set forth “safe drinking water, sanitation, and hygiene services”.</p> <p>&lt;Consistency with the Development Needs of Pakistan at the Time of Ex-Ante Evaluation &gt;</p> <p>The project was consistent with the development needs of Pakistan for the improvement of the water supply, sewerage, and drainage environment in Faisalabad at the time of ex-ante evaluation as described in “Background”.</p> <p>&lt;Appropriateness of Project Design/Approach&gt;</p> <p>The project design/approach was appropriate. No problem attributed to the project design/approach was confirmed.</p> <p>&lt;Evaluation Result&gt;</p> <p>In light of the above, the relevance of the project is ③<sup>6</sup>.</p>
<p>[Coherence]</p> <p>&lt;Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation&gt;</p> <p>The project was consistent with Japan’s ODA policy to Pakistan at the time of ex-ante evaluation because the Country Assistance Policy for the Islamic Republic of Pakistan (2012) included assistance to improve the poor conditions of water and sanitation, especially in the urban areas, under one of the 3 priority areas of “Ensuring human security and improvement of social infrastructure”.</p> <p>&lt;Collaboration/Coordination with JICA’s other interventions&gt;</p> <p>Any collaboration/coordination between the project and JICA’s other intervention was not clearly planned at the time of ex-ante evaluation or during the project period.</p> <p>&lt;Cooperation with other institutions/ Coordination with international framework&gt;</p> <p>The cooperation/coordination with French Development Agency (AFD)’s “Extension of Water Resources for Faisalabad City Phase-II” (Credit Facility Agreement: May 2019) was planned, and was implemented as planned, and the positive effects were confirmed at the time of ex-post evaluation as shown in “Effectiveness/Impact”.</p> <p>&lt;Evaluation Result&gt;</p> <p>In light of the above, the coherence of the project is ③.</p>
<p>[Evaluation Result of Relevance/Coherence]</p> <p>In the light above, the relevance/coherence of the project is ③.</p>
<p>2 Effectiveness/Impact</p> <p>&lt;Status of Achievement for the Objectives at the Time of Project Completion&gt;</p> <p>The Objectives were mostly achieved as planned by the time of project completion. An integrated M/P (PFY2018-2038), including WS M/P, S&amp;D M/P, and WASA-F’s Operation and Management Improvement Plan (OMIP) was developed (Output 1). Based on the results of the pilot activities for WS, 3 policies and specific measures were recommended for the implementation of WS development projects and WASA-F’s operation in the WS services (Output 2). The institutional capacity of WASA-F for the implementation of the M/P was enhanced by project activities for formulating the M/P, training in Japan and third countries, and sharing of the knowledge gained from the training with other staff through presentations and routine work (Output 3). WASA-F officially received/accepted the Final Report, including the proposed plan, before the project completion.</p> <p>&lt; Utilization Status of the Proposed Plan at the Time of Ex-post Evaluation&gt;</p> <p>The proposed plan has been mostly utilized as expected by the time of ex-post evaluation.</p> <p>In 2019, the M/P was approved by the Faisalabad Development Authority (FDA) as an official development plan of WASA-F. The WS MP and S&amp;D MP were scheduled to be implemented in 4 phases, and a total of 22 projects (14 for WS and 8 for S&amp;D) were proposed, including 2 priority projects (1 each for WS and S&amp;D). By PFY 2021 (Target Year), 11 projects (3 for WS and 8 for S&amp;D) were considered for realization, including 7 S&amp;D projects where only some components were considered as small projects. According to WASA-F, the number of considered projects was appropriate as the one in 3 years after the completion because, despite the economic crisis and default risk in Pakistan that made it difficult for WASA-F to secure funds from the Government of Punjab (GoPB) and donors, not only 4 projects (including the 2 priority projects) and a small project extracted from 1 project out of 7 projects in Phase 1 but also small projects extracted from 6 out of 15 projects in Phases 2 to 4 were selected for consideration based on the priorities of the relevant sectors. After PFY 2021, 3 WS projects (one each from Phases 2 to 4) and main components of 4 S&amp;D projects excluding the above-mentioned small projects (one each from Phases 1 to 4) were newly considered for realization (as of July 2023). WASA-F considers the number of considered projects so far (i.e., 14 projects, including 3 small projects) is appropriate because not only 5 out of 7 projects in Phase 1 but also 9 out of 15 projects in Phases 2 to 4 were considered based on the priorities despite the above-stated challenging situation (Indicator 1).</p> <p>By PFY2021, the contents of the M/P developed under the project were reflected in the draft Master Plan of Faisalabad (MPF) (PFY2021-2044) that was going to supersede the FPUSP. The MPF was approved by the FDA in December 2022 and superseded the FRUSP; however, it was suspended by the court in March 2023. According to WASA-F, it is noted that the FDA is considering the development of city as proposed in the MPF, including the contents of the M/P developed under the project ( Indicator 2).</p> <p>By PFY 2021, both of the priority projects were planned by the GoPB, and budgetary measures were taken<sup>7</sup> as planned in the indicator. At the time of ex-post evaluation (July 2023), one of them is in the tendering stage and the tendering is almost complete. The other one is</p>

<sup>6</sup> ④ : very high, ③ : high, ② : moderately low, ① : low

<sup>7</sup> The WS priority project is funded by JICA’s grant aid “The Project for the Improvement of Water Treatment Plant and Water Distribution System in Faisalabad” (Grant Agreement (G/A)): March 2021) and the S&D priority project is funded by Danish International Development Assistance (DANIDA)’s loan project “Construction of Eastern Wastewater Treatment Plant (44 million gallons per day (MGD)) of Faisalabad City (Phase 1)” (Approval by the Government of Denmark: March 2019).

in construction stage. As compared to the respective schedules proposed in the M/P, they are delayed mainly due to the delay of approval of the Planning Commission Form 1 known as “PC-1” (the project document) developed by WASA-F by the Government of Pakistan, which is mandatory before starting government projects, and the effects of the COVID-19 pandemic, and very lengthy process of land acquisition (in the case of the S&D project). However, the Project Management Unit teams are making all efforts to pace up the work. (Indicator 3).

By PFY2021, 2 of the 3 policies and their measures for WS services/operations recommended in the M/P were not utilized and their status remains unchanged at the time of ex-post evaluation (July 2023). While 5 out of 6 measures for the policy on “Increase customer satisfaction and bill payment rates” have been implemented in the whole city as planned, none of the measures for the other 2 policies on “Create District Metered Areas (DMAs) and improve WS services” and “Block-by-block expansion to cover the whole city” have not been started yet mainly due to delay of approval of a relevant subproject of one of the Phase 1 WS projects by the GoPB, in which the creation of DMAs is included. This subproject has been approved and included in the Annual Development Program (ADP) of the GoPB<sup>8</sup> for PFY 2023. In addition, under a JICA’s technical cooperation project “The Project for Improvement of Management Capacity of Water Supply Sector in Faisalabad” (2022-2026), the creation of DMAs in some towns is planned for 2024. Therefore, WASA-F is expected to be able to take up the measures for the other 2 policies in the near future (Indicator 4).

In addition, as for 5 projects in Phase 1 other than the 2 priority projects, budgetary measures have been taken for 2 out of 4 WS projects and a small project extracted from the remaining 1 S&D project. Moreover, budgetary measures have been taken for small projects extracted from 3 out of 6 S&D projects in Phases 2 to 3. The 2 WS projects in Phase 1 are funded by the AFD’s project mentioned in “Relevance/Coherence”<sup>9</sup> but a subproject (including DMA creation) of one of them is funded by the GoPB. Both of the WS projects (AFD-funded parts) are in the tendering stage and the tendering is almost complete. The subproject (GoPB funded part) has been included in the ADP for PFY 2023 as stated in the results of Indicator 4. The small S&D projects have been included in the ADP for PFY 2020 to 2023, considering the priorities, and implemented according to the ADP. It is also noted that feasibility studies for 3 out of 9 WS projects in Phases 2 to 4 are in process. As compared with the schedules proposed in the M/P, the 2 WS projects in Phase 1 are delayed mainly due to the delay of approval of the PC-1 for these projects by the Government of Pakistan and the effects of the COVID-19 pandemic. Meanwhile, all the small S&D projects and feasibility studies for WS projects are as per or ahead of the schedules proposed in the M/P (SI-1).

Further, the WASA-F’s OMIP developed under the project has been mostly utilized. The OMIP consists of proposals for a new Business Plan (NBP), organizational reform, and human resource development (HRD). Activities proposed for the organizational reform, and the HRD have been implemented based on the priorities, resulting in the establishment of an asset management system, establishment of an automation cell in the Finance Directorate, outsourcing of bill distribution, establishment of an in-house training academy, provision of training to employees, hiring of additional staff, etc. A proposed concept for the NBP has been utilized to formulate the 2nd Business Plan, which was approved by the governing body of WASA-F in 2022. It has not been implemented yet because the final approval by the GoPB is delayed due to slow governmental procedures etc.(SI-2).

The pilot activities for WS were introduced in 2 of 3 pilot areas. Most of the pilot activities have been continued in these 2 areas. Some activities could not be continued because of a shortage of funds within the GoPB due to the large budget used in disaster resilience activities after a devastating flood in August 2022. The knowledge and experience acquired through the pilot activities as well as the satisfaction of customers on the improved WS confirmed by no report of complaints have promoted the continuation of the activities. Unlike these areas, no pilot activities for WS were conducted in the other pilot area. Some studies were conducted, but the study results have not been used in this area. WASA-F confirmed that there was no plan to use them in this area at the time of project completion. Therefore, the continuation status of the study results is not considered in making a judgment (SI-3).

<Other Impacts at the Time of Ex-post Evaluation>

The priority projects proposed in the M/P have been proceeded by a JICA’s grant aid and a DANIDA’s loan project as shown in footnote 7. In JICA project, 30 WASA-F employees living in the staff residences demolished for the construction of some facilities had to be resettled, but there were no negative impacts because WASA-F handled it well by providing alternative staff residences to them. Other negative impacts have not been observed, either.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ③.

Status of Achievement of Utilization Status of the Proposed Plan and Expected Goals through the Proposed Plan

Aim	Indicators	Results				Source	
(Utilization Status of the Proposed Plan) N/A	1: The projects proposed in the M/P developed by this project are considered for realization either with self-finance or with support from JICA, other donors, etc.	Status of Utilization: Mostly utilized as planned. (Ex-post Evaluation) >M/P projects considered for realization (project number with possible funding source)				WASA-F	
		Phase	Sector	Total number. of M/P projects	By Target Year (PFY 2021)		After Target Year (as of July 2023)
		1	WS	5	1-1 (JICA), 1-2 (AFD) & 1-3 (AFD/GoPB)		(None)
			SD	2	1-1* (GoPB) & 1-2 (DANIDA)		(None)
		2	WS	5	(None)		2-1 (Asian Development Bank: ADB)
			SD	2	2-1* & 2-2* (GoPB)		2-2 **(ADB)
3	WS	3	(None)	3-1 (ADB)			

<sup>8</sup> ADP is prepared by the province where the budget allocation is made against each and every project. Once a project is approved, its budget is mentioned in ADP (yearly basis) until the project is completed.

<sup>9</sup> These 2 WS projects are funded by AFD’s “Extension of Water Resources for Faisalabad City Phase-II” (Credit Facility Agreement: May 2019).

		SD	2	3-1* & 3-2* (GoPB)	3-1**(ADB)
	4	WS	1	(None)	4-1 (ADB)
		SD	2	4-1* & 4-2* (GoPB)	4-1** (ADB)
		*Small projects extracted from M/P project considered. **Components of M/P project not covered by small-scale projects considered			
2: The results of this project are reflected in the Faisalabad Urban Planning/urban planning of Faisalabad.	Status of Utilization: Mostly utilized as planned (Ex-post Evaluation) >Target Year: The contents of the M/P developed under the project were reflected in the draft Master Plan of Faisalabad (MPF) (PFY2021-2044), which would supersede the FPUSP. > Ex-post evaluation (as of July 2023) The MPF, reflecting the contents of the M/P, was approved by the FDA in December 2022. It was suspended by the court in March 2023. , but the FDA is considering the development of the city as proposed in the MPF, including the contents of the M/P.				WASA-F
3: The priority projects proposed by this project are planned by the GoPB, and budgetary measures are taken for that purpose.	Status of Utilization: Mostly utilized as planned (Ex-post Evaluation) >Status of priority projects				WASA-F
	Sector	Implementation period proposed in the MP	Target Year (PFY 2021)	Ex-post Evaluation (As of July 2023)	
	WS	PFY2020-2023	Budgetary measure taken (Funding source: JICA) *	Construction	
	S&D	PFY2021-2024	Budgetary measure taken (Funding source*: DANIDA) *	Tendering	
	*In addition, local costs are funded by the GoPB.				
4: The policies/measures for the practice utilization of the M/P are implemented.	Status of Utilization: Not utilized (Ex-post Evaluation) >Status of the policies/measures for WS development projects/operation by the target year (PFY 2021) and at the time of ex-post evaluation (as of July 2023)				WASA-F
	Policies	Total number of measures	Status of measures		
			Ongoing	Not started (to be implemented later)	
	1) Create DMAs and improve WS services	4	0	4	
	2 Increase customer satisfaction and bill payment rate	6	5	1	
	3) Block-by-block expansion to cover the whole city	4	0	4	

### 3 Efficiency

Both the project cost and the project period were within the plan / as planned (the ratio against the plan: 96% and 100%, respectively). The project cost was reduced due to cost saving by competitive bidding to hire Japanese consultants (shown as “Mission Members” in “Project Outline”). Outputs were produced as planned. In the light above, the efficiency of the project is ④.

	Project Cost (Japanese side only, yen)	Project Period (months)
Plan (ex-ante)	624 million	36 months
Actual	597 million	36 months
Ratio (%)	96%	100%

### 4 Sustainability

#### <Policy Aspect>

The Pakistan Vision 2025 stated in “Relevance/Coherence” is still effective. In addition, the National Drinking Water Policy (2019) and the National Sanitation Policy on Sewerage (2006) support the improvement of water supply, sewerage, and drainage environments.

#### < Institutional/Organizational Aspect>

The overall organizational structure of WASA-F to implement the M/P has remained unchanged and is functioning, and it has been further enhanced through the implementation of the proposed organizational reform stated in “Effectiveness/Impact”. The structural change that would negatively affect the implementation of the M/P is not envisaged. WASA-F has the necessary number of staff to implement the M/P (around 200 each for WS and S&D MPs as well as 250-300 for the OMIP and around 200 for policies/measures for WS projects/operations with most of them involved in other works concurrently). WASA-F and the GoPB guarantee that the necessary staff will be sustained in the future because the staff engaged in the implementation of the M/P are mostly regular employees of WASA-F, and few of them work on contract-bases that will end after the completion of the M/P project. Coordination with the stakeholders, such as the GoPB, the related donors, and politicians, has been established to implement the M/P.

#### <Technical Aspect>

The capacity of WASA-F to implement the M/P has been sustained. WASA-F has been trying utmost efforts to sustain the necessary skills and knowledge to implement the M/P successfully through providing various training opportunities for their staff, such as on-the-job training, training at the WASA-F’s in-house academy, foreign training under various ongoing and past projects, and training conducted in local governmental academies in other cities. The relevant skills and knowledge are likely to be maintained in the future in a similar way. It is noted that the JICA’s technical cooperation project stated in “Effectiveness/Impact” has played an important role in enhancing the necessary skills and knowledge to implement the M/P projects in the WS sector and to develop a future Business Plan.

#### <Financial Aspect>

As for the M/P projects, the necessary budget has been secured for the implementation of 4 out of 7 projects in Phase 1 (3 WS and 1 S&D projects) and small projects extracted from 3 S&D projects in Phases 2 to 4 based on the priorities (see “3. Effectiveness/Impact” for

budget sources). WASA-F confirmed that it will secure the required budget for the other M/P projects in the coming years since the M/P is the official development plan of WASA-F. Regarding the OMIP, the necessary budget has been secured to implement the proposals for organizational reform and HRD from WASA-F, the GoPB, ongoing technical cooperation of JICA, and the M/P projects funded by AFD and DANIDA. Based on the past trend, the budget is likely to be secured in the future. Once the 2nd Business Plan is approved by the GoPB, the necessary budget is expected to be secured for its implementation. Regarding policies/measures for WS projects/operations, the necessary budget has been secured from WASA-F to implement the policy on customer satisfaction and bill payment rate and will be secured to implement the other 2 policies on the creation and expansion of DMAs in the future because the budget to create DMAs will be provided by the GoPB under the above-mentioned sub-project of a Phase-1 WS project from PFY 2023.

<Environmental and Social Aspect>

The risks in the environmental and social aspects identified in the M/P have been monitored according to the Environmental and Social Management and Monitoring Plan proposed in the M/P, and necessary measures have been taken according to the monitoring results, such as occupational health and safety measures, installation of temporary silt traps, minimized removal of vegetation, etc.

<Evaluation Result>

In light of the above, slight problems have been observed in terms of the financial aspect of the implementing agency. Therefore, the sustainability of the project effects is ③.

### 5 Summary of the Evaluation

The project prepared an integrated M/P (PFY2018-2038), recommended policies and measures for WS development projects and services, and enhanced the institutional capacity of WASA-F for the implementation of the M/P. After the project completion, the proposed plan has been mostly utilized as planned as the M/P projects have been considered for realization, the contents of the M/P have been reflected in urban planning of Faisalabad, and budgetary measures have been taken for priority projects. Regarding Sustainability, no problems have been observed in terms of policy, institutional/organizational, technical, and environmental/social aspects. As for Consistency, cooperation/coordination with AFD was implemented as planned, and positive effects were confirmed. Considering all of the above points, this project is evaluated to be highly satisfactory.

### III. Non-score Items

Adaption and Contribution:

-JICA headquarters and Pakistan office, Japanese consultants (mission members), and local consultants and contractors fulfilled their duties and carried out supervision and support for the implementing agency. Communications and partnerships with the implementing agency was also ensured.

Additionality and Creative Values:

-Provision of Japan's knowledge and experiences by the project and cocreation in the project became lifetime experiences for the staff of WASA-F. Innovation in the project became good experiences for the staff of WASA-F.

### IV. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- It is recommended that WASA-F have project timelines effectively met as proposed in the M/P by allocating enough resources in good interest of the organization.

Lessons Learned for JICA:

-According to WASA-F, when laying trunks sewer and arterial mains, their routes had to change from the routes proposed in the M/P because unexpected gas and other underground buried objects were found on them. In order to avoid this in similar projects of JICA (i.e., technical cooperation development study projects and technical cooperation projects in WS and S&D sectors), JICA consultants /expert team should conduct detailed field survey including underground services at the project sites at the time of field survey during the project implementation. Before JICA conducts such a survey (since the buried object survey fee needs to be included in the stage of preparing terms of reference (TOR) and predetermined price), with the support of the oversea office, JICA should obtain the information from the implementing agency, whether they do or do not have it. If they do not, at least the implementing agency should conduct a sample test at a few locations, so as JICA gets a grip of how many locations these tests will be needed, and the budget is enhanced to the TOR of the survey.