


添付資料


MINUTES OF MEETING
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
AND
SERVICIO DE AGUA POTABLE Y ALCANTARILLADO DE LIMA (SEDAPAL)
ON
THE PROJECT FOR CAPACITY STRENGTHENING FOR NON-REVENUE
WATER MANAGEMENT OF SEDAPAL

In accordance with Record of Discussions for the Project for Capacity Strengthening for Non-Revenue Water Management of SEDAPAL (hereinafter referred to as "the Project") signed on 09 March 2012 (hereinafter referred to as "the R/D"), the Project has completed one of the pilot projects at Area N° 01 (sector 18) with successful result. However, since it took more time than the schedule mentioned in the R/D, some amendments of project components are required to complete the Project within the project period with the achievement of the project purpose.


Therefore, both Peruvian side and Japanese side had a series of discussion and agreed on the amendment of the project components as attached.

Lima, 30 ENE. 2015 2015


Mr. Noriji Sakakura
Chief Representative
Peru Office
Japan International Cooperation
Agency
(JICA)


Mr. Marco Vargas Medina
Gerente General (Encargado)
Servicio de Agua Potable y
Alcantarillado de Lima
(SEDAPAL)

Witnessed by


Francisco Adolfo Dumler Cuya
Ministro de Construcción y
Saneamiento
Ministerio de Vivienda, Construcción
y Saneamiento (MVCS)



ES COPIA FIEL DEL ORIGINAL
 HERNANDO Z. OJEDA BARAZORDA
 DIRECTOR GENERAL
 MINISTERIO DE VIVIENDA,
 CONSTRUCCION Y SERVICIOS URBANOS
 13 FEB. 2012

THE ATTACHED DOCUMENT

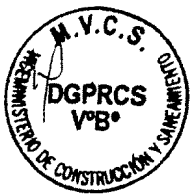
I. Amendment of the Project Components

1. Pilot Project Areas
 Area No. 3 shall be removed from the pilot project areas.
2. Technical Support
 The technical support for implementation of the Non-Revenue Water (NRW) reduction measures outside pilot areas shall be provided under the project activities.

II. Revision of the R/D

1. Pilot Project Areas
 "Area No. 3: Sector 308 in Villa El Salvador Service Center" shall be removed from the Pilot Project Areas mentioned in Main Point Discussed of the R/D.
2. Project Design Matrix (PDM) and Plan of Operation (PO)
 Project Design Matrix and Plan of Operation attached to the R/D shall be revised as shown in Annex I and II, based on the amendment of the project components mentioned above.
 Considering the current state of NRW in Area 2, 20% shall be set as a target NRW rate for Area 2 in the Project Design Matrix.
3. The implementation Structure of the Project
 The Implementation Structure of the Project attached to the R/D shall be revised as shown in Annex III

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|-----------|---|
| Annex I | Revised Project Design Matrix |
| Annex II | Revised Tentative Plan of Operation |
| Annex III | Revised Implementation Structure of the Project |
| Annex IV | Record of Discussions, dated 9 th March 2012 |

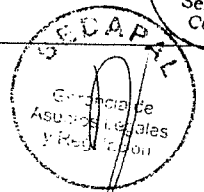
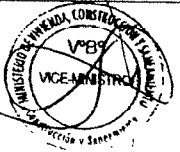




Project Title: Project for Capacity Strengthening for Non-Revenue Water Management of SEDAPAL
 Target Areas: Lima Metropolitan area

Project Period: June 2012 –June 2015
 Target Group: SEDAPAL staff related to NRW reduction

Narrative Summary of the Project	Indicators	Means of Verification	Important assumptions
<p>Overall Goal Non-revenue water (NRW) of SEDAPAL is reduced.</p>	Achieve the NRW rate agreed with SUNASS*. (2018: XX %)	Report of SEDAPAL to SUNASS	
<p>Project Purpose The capacity to reduce NRW of SEDAPAL is improved.</p>	<ol style="list-style-type: none"> 1. The Business Plan (Plan Operativo) of SEDAPAL takes into account the annual implementation plan to reduce NRW in each Service Center. 2. The senior management of SEDAPAL recognizes the financial benefit brought by reducing NRW and approves the budget for the implementation of annual NRW reduction plan of each Service Center. 	<ol style="list-style-type: none"> 1. Business Plan of SEDAPAL 2. Budget report of SEDAPAL 	The teams responsible for NRW reduction in SEDAPAL do not face major organizational reforms.
<p>Outputs</p> <ol style="list-style-type: none"> 1. The management capacity to reduce NRW is improved. <p style="text-align: center;">1 3</p> <ol style="list-style-type: none"> 2. The capacity to implement activities related to the reduction of NRW is improved. 	<ol style="list-style-type: none"> 1-1. The Management Team produces an evaluation report on the pilot project completion reports prepared by the Action Teams. 1-2. SEDAPAL approves the report on the costs and benefits analysis of NRW reduction and its financial implications for SEDAPAL's business operation. 1-3. The Management Team members give lectures in workshops to disseminate the annual implementation plans. 2-1 The NRW rate in each pilot project area reduces to: Area 1: 30% and Area 2: 20%. 2-2 The Action Team members give lectures in workshops on pilot projects. 2-3 Study (diagnosis) plans for NRW reduction are prepared for at least 1 place outside the pilot project areas. 	<ol style="list-style-type: none"> 1-1 Project report 1-2 Project report 1-3 Project report 2-1 Project report 2-2 Project report 2-3 Study (diagnosis) plans other than for pilot project areas. 	The staff trained by the Project remain in SEDAPAL.



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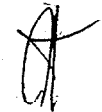
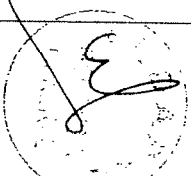
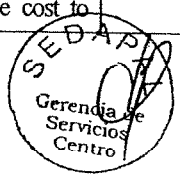
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 HERNANDO Z. OJEDA BARAZORDA
 Director General de Operaciones
 SEDAPAL
 13 FEB. 2015



<p>The quality control capability related to the installation of service connections is improved</p>	<p>3-1 All the trainees participated in the service connection installation work course pass the hydraulic pressure test. 3-2 SEDAPAL approves the new technical specification guidelines for installation of service connections</p>	<p>3-1 Project Report 3-2 SEDAPAL guidelines</p>	
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<p>Activities</p>	<p>Inputs</p>		<p>Important assumptions</p>
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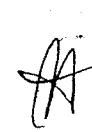
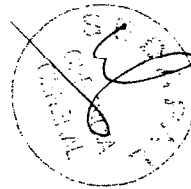
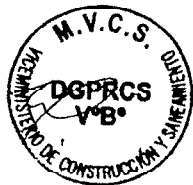
<p>1-1 To organize a NRW Management Team in SEDAPAL. 1-2 To identify NRW problems of SEDAPAL 1-3 To conduct a training course on NRW management for the Management Team 1-4 To analyze the costs and benefits of the NRW reduction activities based on the results of the pilot project 1-5 To evaluate the financial implications of NRW reduction for the overall business operation of SEDAPAL in future 1-6 To prepare an annual implementation plan to reduce NRW in each Service Center based on the activities 1-4 and 1-5 above and the business objectives of SEDAPAL 1-7 To conduct workshops in SEDAPAL to disseminate the annual implementation plan of each Service Center</p> <p>2-1 To organize Action Teams to reduce NRW in the pilot projects 2-2 To determine the pilot areas by confirming separation in hydraulic condition of the pilot project areas 2-3 To conduct training courses for the Action Teams on the implementation of NRW reduction measures 2-4 To prepare a study (diagnosis) plan by analyzing technical and commercial data in the pilot project areas and review the existing situations of NRW such as volumes of water distributed and billed, sectorization, and installation of meters 2-5 To install necessary valves, flow meter boxes and meters, and estimate the NRW rate in the pilot project areas before implementing the pilot project 2-6 To conduct field surveys to identify the causes of NRW (leakage, illegal connections and meter-related losses) and, based on the results of the surveys, prepare an implementation plan of NRW reduction measures in the pilot project areas 2-7 To implement NRW reduction measures in the pilot project areas 2-8 To estimate the NRW rate after completion of the activity 2-7 above 2-9 To prepare a completion report on NRW activities in the pilot project areas, which includes basic data for analyzing the costs and benefits such as the cost to</p>	<p>[Japanese side]</p> <p>1. Experts: - Leader/NRW management - NRW reduction planning - Leakage detection technology - Service connection installation technique - NRW reduction Advisor</p> <p>2. Training: - Training in Japan - Training in third country</p> <p>3. Equipment: - Water leakage detection unit - Vehicle for leakage detection (mobile laboratory) - Ultrasonic flow meter - Materials and equipment for service connection installation training - Vehicle for Japanese experts</p>	<p>[Peruvian side]</p> <p>1. Counterpart personnel: - Project Director - Project Manager - C/P from Leakage Control and Reduction Team - C/P from Network O & M Team for each pilot project area - C/P from Business Team of each pilot project area - C/P from Primary Distribution Team</p> <p>2. Facilities: - Office space for Japanese experts in SEDAPAL (for approx. 8 persons) - Office furniture - Internet connection - Training room (for approx. 20 persons) - Training space for installation of service connections (40m²) - Storage space for training equipment</p>	<p>No large scale natural disasters occur.</p>
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13 FEB. 2015

<p>implement NRW measures and increased volume of billed water</p> <p>2-10 To conduct workshops in SEDAPAL to disseminate the study and implementation plans, implementation processes and the results of the pilot projects</p> <p>2-11 To prepare study (diagnosis) plans for NRW reduction for places outside the pilot project areas</p> <p>2-12 To provide technical support for implementation of the NRW reduction measures outside the pilot projects areas</p> <p>2-13 To prepare an implementation manual of NRW reduction measures based on the results of the pilot projects and implementation processes outside the pilot project areas</p> <p>2-14 To conduct a seminar to disseminate the manual of NRW reduction measures</p> <p>3-1 To study and analyze the capacity of contractors for installation of service connections (service connection pipes and water meters)</p> <p>3-2 To review the existing technical specifications of SEDAPAL for installation of service connections</p> <p>3-3 To prepare the teaching materials for theoretical and practical trainings on installation of service connections</p> <p>3-4 To conduct theoretical and practical trainings on installation of service connections</p> <p>3-5 To prepare a technical specification guideline for installation of service connections</p> <p>3-6 To conduct workshops in SEDAPAL to disseminate the guideline</p> <p>57</p>		<p>3. Local Cost:</p> <ul style="list-style-type: none"> - Costs necessary for the implementation of the pilot projects (leakage repair, replacement and installation of meters and, accessories, and fuel for the mobile laboratory). - Administration costs of the project (electric power, telephone, Internet and water for the Japanese experts' office) - Police security services during night-time works in the field. - Customs Duties and Value Added Tax (CD-VAT), cost for customs clearance, storage and inland transportation to be incurred in relation to the import of equipment, if any, provided by the Japanese side - Expenses for maintenance of equipment provided by the Japanese side 	<p>Premises</p>
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*SUNASS: Superintendencia Nacional de Servicios de Saneamiento



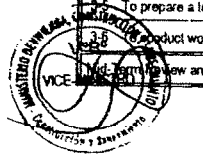
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HENRILDO Z. OVEDA BARRAZORDA
 Director de Proyecto
 Asesoría de Ingeniería y Construcción
 13 FEB. 2015



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To perform Review and Territorial Evaluation																																											



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 HERNANDO Z. OJEDA BARRAZORDA
 Ministro de Vivienda, Urbanismo y Construcción
 13 FEB 2015

Nº 094-2012-VIVIENDA

RECORD OF DISCUSSIONS

ON

**THE PROJECT FOR CAPACITY STRENGTHENING FOR
NON-REVENUE WATER MANAGEMENT OF SEDAPAL**

IN

THE REPUBLIC OF PERU

AGREED UPON BETWEEN

**PERUVIAN INTERNATIONAL COOPERATION AGENCY,
MINISTRY OF HOUSING, CONSTRUCTION AND SANITATION,**

AND

**THE JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**

Lima, March 9 , 2012

中 尾 誠

Mr. Makoto Nakao
Chief Representative
Peru Office
Japan International Cooperation
Agency (JICA)

Ing. René Cornejo Díaz
Minister
Ministry of Housing, Construction and
Sanitation (MVCS)

Mr. Álvaro Carrillo Mayanga
Executive Director (e)
Peruvian International Cooperation Agency
(APCI)

Based on the minutes of meetings on the Detailed Planning Survey on the Project for Capacity Strengthening for Non-Revenue Water Management of SEDAPAL (hereinafter referred to as "the Project") signed on 3rd of November, 2011 between Servicio de Agua Potable y Alcantarillado de Lima (hereinafter referred to as "SEDAPAL") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with Ministry of Housing, Construction and Sanitation (hereinafter referred to as "MVCS") and Peruvian International Cooperation Agency (hereinafter referred to as "APCI") of the Government of the Republic of Peru (hereinafter referred to as "GoP") to develop a detailed plan of the Project.

JICA and GoP agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that SEDAPAL, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of Peru. MVCS will be responsible for supervising the progress of the Project.

The Project will be implemented within the framework of the Agreement on Technical Cooperation between the Government of Republic of Peru and the Government of Japan signed on August 20, 1979 (hereinafter referred to as "the Agreement") and the Note Verbals exchanged on June 17, 2011 between the Government of Japan (hereinafter referred to as "GoJ") and GoP which approved the incorporation of specific technical cooperation projects into the Japanese cooperation program of fiscal year 2011.

Done in duplicate in the Spanish and English languages, both equally authentic. In case of any divergence of interpretation, the English text shall prevail.

Appendix 1: Project Description

Appendix 2: Main Points Discussed

Appendix 3: Minutes of Meeting on the Detailed Planning Survey on the Project for Capacity Strengthening for Non-revenue Water Management of SEDAPAL

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PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description agreed on in the minutes of meetings on the concerning Detailed Planning Survey on the Project signed on November 3, 2011 (Appendix 3).

I. BACKGROUND

Lima metropolitan area, which belongs to the desert climate region, is very poor in water resources. Especially in the dry season, water shortage becomes a very serious problem in the metropolitan area which is the home for approximately one-thirds of the total population in the country.

Under the circumstances, GoJ has been contributing to the development of water supply and sewerage networks mainly in Lima metropolitan area through Japanese Yen Loans. Despite the financial assistance from GoJ and other donors, however, water supply system in Lima still faces many problems to resolve, such as incomplete sectorization in distribution networks, many unused existing reservoirs and insufficient water pressure control and so on.

In addition, Non-Revenue Water (NRW) rate is also very high due to high incidence of water leakages and illegal connections, many unmetered service connections, and deterioration of water meters. NRW rate of Lima metropolitan area was 35.2% in September 2011.

SEDAPAL, responsible agency for water supply and sewerage services in Lima Metropolitan area, set a goal to reduce NRW rate to 25% and has been trying hard to achieve the goal.

Due to its weak capacity for NRW reduction, however, it is difficult for SEDAPAL to identify the causes of NRW and implement appropriate countermeasures against them. Under the circumstances, SEDAPAL, through the official channel, requested GoJ to conduct a technical cooperation project to strengthen its capacity for NRW reduction.

II. OUTLINE OF THE PROJECT

Details of the Project are described in the Logical Framework (Project Design Matrix: PDM) (Annex I) and the tentative Plan of Operation (Annex II).

1. Implementation Structure

The Implementation Structure of the Project is given in the Annex III. The roles and assignments of relevant organizations are as follows:

- (1) SEDAPAL
 - (a) Project Director



General Manager of SEDAPAL will be responsible for overall administration and implementation of the Project.

(b) Project Manager

Leader responsible for achieving the first level target of NRW reduction will be responsible for substantive implementation of the Project.

Three (3) Acting Project Managers will be assigned for the Project as shown below;

- Manager of Business Management
- Chief of Leakage Control & Detection Team
- Chief of Breña Network Operation & Management Team

(c) Other Counterpart Personnel

i) NRW Management Team

- Leader : Manager of Business Management
Support from
 - Manager of Development & Research Management
 - Managers of South and Central Service Managements
- Chief of Leakage Control & Detection Team
- Chief of Breña Network Operation & Management Team

ii) Three (3) NRW Action Teams (Brena, Surquillo and Villa El Salvador)

Members of Each Action Team

- Leader : Chief of Network Operation & Management (O&M) Team
- Chief of Business Team
- Analyst in Leakage Control & Detection Team
- Engineers and Technicians in Network O & M Team

(2) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to SEDAPAL on any matters pertaining to the implementation of the Project.

(3) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will approve an annual work plan, review overall progress, conduct monitoring and evaluation of the Project, and exchange opinions or major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in Annex IV.

2. Project Site(s) and Beneficiaries

Project Site: Lima Metropolitan area

Beneficiaries: SEDAPAL staff related to NRW reduction

3. Duration

The duration of the Project will be three (3) years from the date when Japanese

experts for the Project arrive in Peru.

4. Environmental and Social Considerations

SEDAPAL agreed to abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF SEDAPAL

1. SEDAPAL will take necessary measures:

- (1) to ensure that the technologies and knowledge acquired by the Peruvian nationals as a result of Japanese technical cooperation contributes to the economic and social development of Peru, and that the knowledge and experience acquired by the personnel of Peru from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
- (2) that all the privileges, exemptions and benefits will be granted under the provisions of the Agreement on Technical Cooperation between the Government of the Republic of Peru and the Government of Japan signed on August 20, 1979.

IV. EVALUATION

JICA and MVCS through Dirección Nacional de Saneamiento of Ministerio de Vivienda, Construcción y Saneamiento will jointly conduct the following evaluations and reviews.

1. Mid-term review at the middle of the cooperation term
2. Terminal evaluation during the last six (6) months of the cooperation term

JICA will conduct the following evaluations and surveys to mainly verify sustainability and impact of the Project and draw lessons. The SEDAPAL is required to provide necessary support for them.

1. Ex-post evaluation three (3) years after the project completion, in principle
2. Follow-up surveys on necessity basis

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, GoP and SEDAPAL will take appropriate measures to make the Project widely known to the people of Peru.

VI. MUTUAL CONSULTATION

JICA, GoP and SEDAPAL will consult each other whenever any major issues arise in the course of Project implementation.

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VII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and GoP.

The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

- Annex I Logical Framework (Project Design Matrix: PDM)
- Annex II Tentative Plan of Operation
- Annex III Implementation Structure of the Project
- Annex IV Functions and Members of Joint Coordinating Committee

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Annex I

Project Design Matrix (PDM)

Project Title: Project for Capacity Strengthening for Non-Revenue Water Management of SEDAPAL

Target Areas: Lima Metropolitan area

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Project Period: March 2012 – February 2015

Target Group: SEDAPAL staff related to NRW reduction

Narrative Summary of the Project	Indicators	Means of Verification	Important assumptions
<p>Overall Goal Non-revenue water (NRW) of SEDAPAL is reduced.</p>	<p>Achieve the NRW rate agreed with SUNASS*. (2018: XX %)</p>	<p>Report of SEDAPAL to SUNASS</p>	
<p>Project Purpose The capacity to reduce NRW of SEDAPAL is improved.</p>	<ol style="list-style-type: none"> 1. The Business Plan (Plan Operativo) of SEDAPAL takes into account the annual implementation plan to reduce NRW in each Service Center. 2. The senior management of SEDAPAL recognizes the financial benefit brought by reducing NRW and approves the budget for the implementation of annual NRW reduction plan of each Service Center. 	<ol style="list-style-type: none"> 1. Business Plan of SEDAPAL 2. Budget report of SEDAPAL 	<p>The function of the NRW Management Team is maintained even after the Project.</p>
<p>Outputs</p> <ol style="list-style-type: none"> 1. The management capacity to reduce NRW is improved. 2. The capacity to implement activities related to the reduction of NRW is improved. 3. The quality control capability related to the installation of service connections is improved. 	<ol style="list-style-type: none"> 1-1. The Management Team produces an evaluation report on the pilot project completion reports prepared by the Action Teams. 1-2. SEDAPAL approves the report on the costs and benefits analysis of NRW reduction and its financial implications for SEDAPAL's business operation. 1-3. The Management Team members give lectures in workshops to disseminate the annual implementation plans. 2-1 The NRW rate in each pilot project area reduces to: Area 1: XX%, Area 2: XX% and Area 3: XX%. 2-2 The Action Team members give lectures in workshops on pilot projects. 2-3 Study (diagnosis) plans for NRW reduction are prepared for at least (XX) places outside the pilot project areas. 3-1 All the trainees participated in the service 	<ol style="list-style-type: none"> 1-1 Project report 1-2 Project report 1-3 Project report 2-1 Project report 2-2 Project report 2-3 Study (diagnosis) plans other than for pilot project areas. 3-1 Project Report 	<p>The teams responsible for NRW reduction in SEDAPAL do not face major organizational reforms.</p> <p>The staff trained by the Project remain in SEDAPAL.</p>

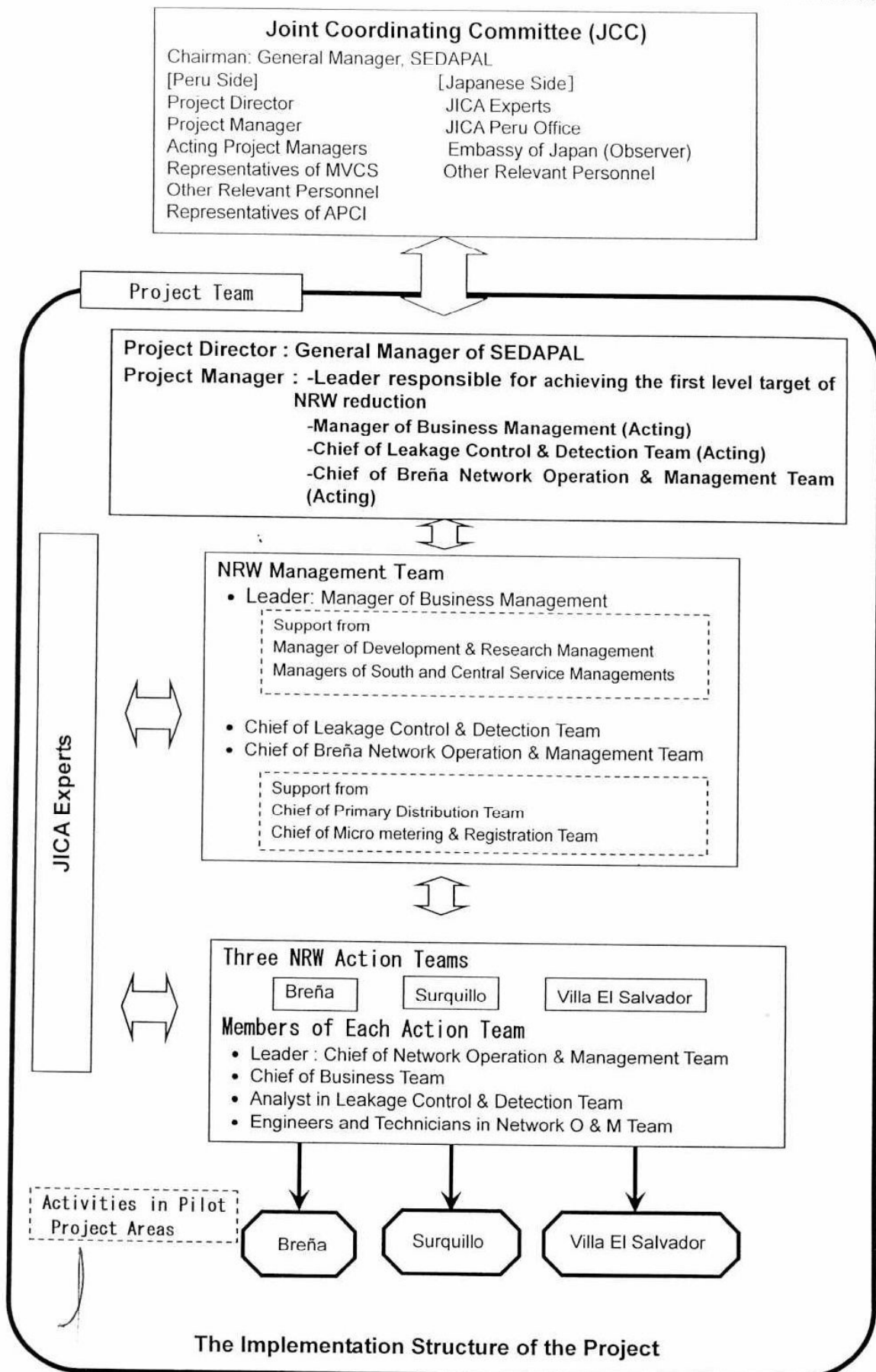
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	<p>connection installation work course pass the hydraulic pressure test. 3-2 SEDAPAL approves the new technical specification guidelines for installation of service connections</p>	<p>3-2 SEDAPAL guidelines</p>	
<p>Activities</p>	<p>Inputs</p>		<p>Important assumptions</p>
<p>1-1 To organize a NRW Management Team in SEDAPAL 1-2 To identify NRW problems of SEDAPAL 1-3 To conduct a training course on NRW management for the Management Team 1-4 To analyze the costs and benefits of the NRW reduction activities based on the results of the pilot project 1-5 To evaluate the financial implications of NRW reduction for the overall business operation of SEDAPAL in future 1-6 To prepare an annual implementation plan to reduce NRW in each Service Center based on the activities 1-4 and 1-5 above and the business objectives of SEDAPAL 1-7 To conduct workshops in SEDAPAL to disseminate the annual implementation plan of each Service Center</p> <p>2-1 To organize Action Teams to reduce NRW in the pilot projects 2-2 To conduct training courses for the Action Teams on the implementation of NRW reduction measures 2-3 To prepare a study (diagnosis) plan by analyzing technical and commercial data in the pilot project area No. 1 and review the existing situations of NRW such as volumes of water distributed and billed, sectorization, and installation of meters 2-4 To install necessary valves, ultrasonic flow meter boxes and meters, and estimate the NRW rate in the pilot project area No.1 before implementing the pilot project 2-5 To conduct field surveys to identify the causes of NRW (leakage, illegal connections and meter-related losses) and, based on the results of the surveys, prepare an implementation plan of NRW reduction measures in the pilot project area No. 1 2-6 To implement NRW reduction measures in the pilot project area No. 1 2-7 To estimate the NRW rate after completion of the activity 2-6 above 2-8 To prepare a completion report on NRW activities in the pilot project area No. 1, which includes basic data for analyzing the costs and benefits such as the cost to implement NRW measures and increased volume of billed water 2-9 To repeat the activities 2-3 to 2-8 above in the pilot project areas No. 2 and 3 2-10 To conduct workshops in SEDAPAL to disseminate the study and</p>	<p>[Japanese side]</p> <p>1. Experts: -Leader/NRW management -NRW reduction planning -Leakage detection technology -Service connection installation technique -NRW reduction Advisor</p> <p>2. Training: -Training in Japan -Training in third country</p> <p>3. Equipment: -Water leakage detection unit -Vehicle for leakage detection (mobile laboratory) -Ultrasonic flow meter -Materials and equipment for service connection installation training - Vehicle for Japanese experts</p>	<p>[Peruvian side]</p> <p>1. Counterpart personnel: -Project Director -Project Manager -C/P from Leakage Control and Reduction Team -C/P from Network O & M Team for each pilot project area -C/P from Business Team of each pilot project area -C/P from Primary Distribution Team</p> <p>2. Facilities: -Office space for Japanese experts in SEDAPAL (for approx. 8 persons) -Office furniture -Internet connection -Training room (for approx. 20 persons) -Training space for installation of service connections (40m²) -Storage space for training equipment</p> <p>3. Local Cost: -Costs necessary for the</p>	<p>No large scale natural disasters occur.</p>

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<p>implementation plans, implementation processes and the results of the pilot projects</p> <p>2-11 To prepare an implementation manual of NRW reduction measures based on the results of the pilot projects and conduct a seminar to disseminate the manual</p> <p>3-1 To study and analyze the capacity of contractors for installation of service connections (service connection pipes and water meters)</p> <p>3-2 To review the existing technical specifications of SEDAPAL for installation of service connections</p> <p>3-3 To conduct theoretical and practical trainings on installation of service connections</p> <p>3-4 To prepare a technical specification guideline for installation of service connections</p> <p>3-5 To conduct workshops in SEDAPAL to disseminate the guideline</p>		<p>implementation of the pilot projects (leakage repair, replacement and installation of meters and accessories, and fuel for the mobile laboratory).</p> <p>-Administration costs of the project (electric power, telephone, Internet and water for the Japanese experts' office)</p> <p>-Police security services during night-time works in the field.</p> <p>-Customs Duties and Value Added Tax (CD-VAT), cost for customs clearance, storage and inland transportation to be incurred in relation to the import of equipment, if any, provided by the Japanese side</p> <p>-Expenses for maintenance of equipment provided by the Japanese side</p>	<p>Premises</p>
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*SUNASS: Superintendencia Nacional de Servicios de Saneamiento



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Functions and Members of Joint Coordinating Committee

1. Functions

The Joint Coordinating Committee (JCC) shall be established for smooth and effective implementation of the Project. The JCC shall be convened at least once a year and upon necessity. The main functions of JCC shall be as follows:

- (1) To examine and approve the Annual Plan of Operations to be formulated by the Project;
- (2) To review the progress and achievements of the Project activities;
- (3) To exchange views on major issues arising from or in connection with the Project, and corrective measures against these issues; and
- (4) To coordinate with other relevant authorities.

2. Chairperson and members

(1) Chairperson

Project Director

(2) Committee Members

[Peruvian side]

- Project Director
- Project Manager
- Acting Project Managers
- Representatives of MVCS
- Other Relevant Personnel
- Representative of APCI
-

[Japanese side]

- JICA Experts of the Project
- Representatives of JICA Peru Office
- Representatives of the Embassy of Japan (Observer)
- Other Relevant Personnel



MAIN POINTS DISCUSSED

1. Pilot Project Areas

JICA and GoP agreed that the pilot project will be conducted in the following three (3) sectors in the Lima Metropolitan area;

Area No.1: Sector 18 in Breña Service Center

Area No.2: Sector 67 in Surquillo Service Center

Area No.3: Sector 308 in Villa El Salvador Service Center

2. NRW Management Team and Action Teams of SEDAPAL

Both sides agreed that SEDAPAL will establish the NRW Management Team and Action Teams in accordance with the implementation structure of the Project shown in Annex III for the effective implementation of the activities for Outputs 1, 2 and 3 enumerated in the PDM.

3. Budgetary Arrangement by SEDAPAL

Both sides agreed that budgetary arrangement by SEDAPAL is the key to the successful implementation of the Project, especially for the timely implementation of pilot projects for NRW reduction.

4. SEDAPAL's Role in the Project

The Japanese side explained and SEDAPAL understood the principle of JICA's technical cooperation project that SEDAPAL should play a major role with a strong sense of ownership in achieving the Project objectives while the role of JICA's experts would remain supportive.

5. Member of Counterpart Personnel of SEDAPAL

Both sides agreed that the members of the Management Team should remain untransferred until the completion of the Project while the members of the Action Teams should remain untransferred until the completion of each pilot project.



**MINUTES OF MEETING
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
AND
SERVICIO DE AGUA POTABLE Y ALCANTARILLADO DE LIMA. (SEDAPAL)
ON
THE PROJECT FOR CAPACITY STRENGTHENING FOR NON-REVENUE
WATER MANAGEMENT OF SEDAPAL**

The Japanese Detailed Planning Survey Mission (hereinafter referred to as "the Mission") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") visited the Republic of Peru from 16th October to 10th November, 2011 for the purpose of conducting a detailed planning survey of the technical cooperation for the "Project for Capacity Strengthening for Non-revenue Water Management of SEDAPAL" (hereinafter referred to as "the Project").

During its stay in Peru, the Mission had a series of discussions and exchanged views with Peruvian officials concerned in constructive and cooperative manners for the Project implementation.

As a result of the discussions, both the Mission and the Peruvian side (hereinafter referred to as "both sides") agreed on the following:


1. The basic framework of the Project shall be as shown in the "Attached Document"; and
2. The Project shall start by both sides signing the "Record of Discussion (hereinafter referred to as "R/D")", which will be finalized afterward based on the project framework laid out in this Minutes of the Meetings. The draft of R/D is provided in the Annex I of the Attached Document.

These texts were done in both English and Spanish, each text being equally authentic. In case of any divergence of interpretation, the English text shall prevail.

Lima, 3rd November 2011

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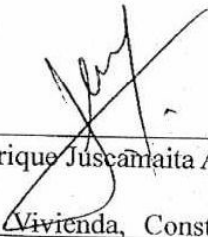
Mr. Sadanobu Sawara
Leader
Detailed Planning Survey Mission
Japan International Cooperation Agency
(JICA)



Ing. Javier López Rafael
Gerente General (Acting)
Servicio de Agua Potable y Alcantarillado
de Lima (SEDAPAL)

Witnessed by:





Ing. Carlos Enrique Juscamaíta Arangüena
Vice Minister
Ministerio de Vivienda, Construcción y
Saneamiento (MVCS)

THE ATTACHED DOCUMENT

I. Basic Framework of the Project

1. Project Title

After consultation with Japanese authorities concerned, the Project title may be changed from "Project for Capacity Strengthening for Non-Revenue Water of SEDAPAL" to "The Project for Capacity Strengthening for Non-Revenue Water Management of SEDAPAL".

2. Implementing Organization

Servicio de Agua Potable y Alcantarillado de Lima (hereinafter referred to as "SEDAPAL") is the Implementing Agency for the Project.

3. Purpose of the Project

The capacity to reduce NRW of SEDAPAL is improved.

4. Outputs

- (1) The management capacity to reduce NRW is improved.
- (2) The capacity to implement activities related to the reduction of NRW is improved.
- (3) The quality control capability related to the installation of service connections is improved.

5. Activities

- 1-1 To organize a NRW Management Team in SEDAPAL
- 1-2 To identify NRW problems of SEDAPAL
- 1-3 To conduct a training course on NRW management for the Management Team
- 1-4 To analyze the costs and benefits of the NRW reduction activities based on the results of the pilot projects
- 1-5 To evaluate the financial implications of NRW reduction for the overall business operation of SEDAPAL in future
- 1-6 To prepare an annual implementation plan to reduce NRW in each Service Center based on the activities 1-4 and 1-5 above and the business objectives of SEDAPAL
- 1-7 To conduct workshops in SEDAPAL to disseminate the annual implementation plan of each Service Center

- 2-1 To organize Action Teams to reduce NRW in the pilot projects
- 2-2 To conduct training courses for the Action Teams on the implementation of NRW reduction measures
- 2-3 To prepare a study (diagnosis) plan by analyzing technical and commercial data in the pilot project area No. 1 and review the existing situations of NRW such as volumes of water distributed and billed, sectorization, and installation of meters
- 2-4 To install necessary valves, ultrasonic flow meter boxes and meters, and estimate the NRW rate in the pilot project area No.1 before implementing the pilot project
- 2-5 To conduct field surveys to identify the causes of NRW (leakage, illegal connections and meter-related losses) and, based on the results of the surveys, prepare an implementation plan



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- of NRW reduction measures in the pilot project area No. 1
- 2-6 To implement NRW reduction measures in the pilot project area No. 1
 - 2-7 To estimate the NRW rate after completion of the activity 2-6 above
 - 2-8 To prepare a completion report on NRW activities in the pilot project area No. 1, which includes basic data for analyzing the costs and benefits such as the cost to implement NRW measures and increased volume of billed water
 - 2-9 To repeat the activities 2-3 to 2-8 above in the pilot project areas No. 2 and 3
 - 2-10 To conduct workshops in SEDAPAL to disseminate the study and implementation plans, implementation processes and the results of the pilot projects
 - 2-11 To prepare an implementation manual of NRW reduction measures based on the results of the pilot projects and conduct a seminar to disseminate the manual
- 3-1 To study and analyze the capacity of contractors for installation of service connections (service connection pipes and water meters)
 - 3-2 To review the existing technical specifications of SEDAPAL for installation of service connections
 - 3-3 To conduct theoretical and practical trainings on installation of service connections
 - 3-4 To prepare a technical specification guideline for installation of service connections
 - 3-5 To conduct workshops in SEDAPAL to disseminate the guideline

6. Duration of the Project

The duration of the Project will be three (3) years from the date when Japanese experts for the Project arrive in Peru. Both sides shared a mutual understanding that the Project was expected to commence in March 2012 or earlier if possible. And both sides agreed to take necessary actions to fulfill the agreements herein to realize timely commencement.

7. Joint Coordinating Committee

The Joint Coordinating Committee (hereinafter referred to as "JCC") will be formulated and the JCC meeting will be held at least once a year and upon necessity for the smooth implementation of the Project.

8. Project Design Matrix (PDM)

Project Design Matrix (hereinafter referred to as "PDM") as a tool for monitoring, evaluation and management of the activities of the Project is shown in Annex II. The PDM will be modified as needed during the Project implementation stage after mutual consultations between JICA and SEDAPAL.

9. Tentative Plan of Operation (PO)

The Project will be carried out in accordance with the Tentative Plan of Operation (hereinafter referred to as "PO") shown in Annex III. The details of the Project will be decided in the course of the first several months of the Project through the detailed analysis on the Project. The schedule is tentative and subject to be modified if such necessity should arise and mutually agreed by JICA and SEDAPAL.



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II. Measures to be taken by both sides

For the implementation of the Project, both sides will take the following necessary measures:

1. The Japanese Side

(1) Dispatch of experts

The fields of experts will be as follows:

- Leader/NRW management
- NRW reduction planning
- Leakage detection technology
- Service connection installation technique
- NRW reduction Advisor

(2) Provision of equipment

Equipment necessary for the Project will be provided within the budget allocated for the technical cooperation under JICA.

A list of presumed equipment is as follows:

- Water leakage detection unit
- Vehicle for leakage detection (mobile laboratory)
- Ultrasonic flow meter
- Materials and equipment for service connection installation training
- Vehicle for Japanese experts

(3) Training in Japan

Training in Japan for SEDAPAL counterpart personnel related to the Project will be conducted.

(4) Training in the Third Country

Training in the Third Country for SEDAPAL counterpart personnel related to the Project will be conducted.

2. The Peruvian side

(1) Assignment of Counterpart Personnel

The Peruvian side will assign suitable number of capable counterpart personnel as shown in Annex IV in order to ensure the smooth and effective implementation of the Project.

(2) Work space to be used by JICA Experts

The Peruvian side shall provide office space and office furniture for JICA Experts (for approx. 8 persons) as well as other facilities shown below within SEDAPAL Head Office.

- Training room (for approx. 20 persons)
- Training space for installation of service connections (40m²)
- Storage space for training equipment

(3) Allocation of Necessary Budgets

The following expenses will be borne by SEDAPAL to ensure effective and timely



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implementation of the Project.

- a. Costs necessary for the implementation of the pilot projects (leakage repair, replacement and installation of meters and, accessories, and fuel for the mobile laboratory).
- b. Administration costs of the project (electric power, telephone, Internet and water for the Japanese experts' office).
- c. Police security services during night-time works in the field
- d. Customs Duties and Value Added Tax (CD-VAT), cost for customs clearance, storage and inland transportation to be incurred in relation to the import of equipment, if any, provided by the Japanese side
- e. Expenses for maintenance of equipment provided by the Japanese side

(4) Providing necessary information

The Peruvian side will provide Japanese experts with data and information required for the implementation of the Project, including digitized data and information.

III. Main Points Discussed

1. Pilot Project Areas

Both sides agreed that the pilot project will be conducted in the following three (3) sectors in the Lima Metropolitan area;

Area No.1: Sector 18 in Brena Service Center

Area No.2: Sector 67 in Surquillo Service Center

Area No.3: Sector 308 in Villa El Salvador Service Center

2. NRW Management Team and Action Team

Both sides agreed that SEDAPAL will establish the NRW Management Team and Action Teams in accordance with the implementation structure of the Project shown in Annex IV for the effective implementation of the activities for Outputs 1, 2 and 3 enumerated in the PDM.

3. Budgetary Arrangement by SEDAPAL

Both sides agreed that budgetary arrangement by SEDAPAL is the key to the successful implementation of the Project, especially for the timely implementation of pilot projects for NRW reduction.

4. SEDAPAL's Role in the Project

The Japanese side explained and SEDAPAL understood the principle of JICA's technical cooperation project that SEDAPAL should play a major role with a strong sense of ownership in achieving the Project objectives while the role of JICA's experts would remain supportive.

5. Member of Management Team of SEDAPAL

Both sides agreed that the members of the Management Team should remain untransferred until the completion of the Project while the members of the Action Teams should remain untransferred until the completion of each pilot project.



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6. Project Review and Evaluation

SEDAPAL understood that Mid-Term Review of the Project would be conducted jointly by JICA and SEDAPAL in the middle of the Project term and Terminal Evaluation would be conducted six months before the termination of the Project in order to examine the achievements and performance in the Project.

7. Draft of Record of Discussions

Both sides agreed to recommend to their respective governments the matters referred to in the draft of Record of Discussions (hereinafter referred to as "R/D") as shown in Annex I. The R/D would be signed between JICA and the Peruvian sides after the approval of the JICA headquarters.

8. Early Commencement of the Project

SEDAPAL committed to get approval of R/D from the Peruvian International Cooperation Agency as soon as possible in order to launch the Project in March 2012 or earlier if possible.



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| Annex I | Draft of Record of Discussions |
| Annex II | Project Design Matrix |
| Annex III | Tentative Plan of Operation |
| Annex IV | Implementation Structure of the Project |

Annex I

RECORD OF DISCUSSIONS

ON

THE PROJECT FOR CAPACITY STRENGTHENING FOR
NON-REVENUE WATER MANAGEMENT OF SEDAPAL

IN

THE REPUBLIC OF PERU

AGREED UPON BETWEEN

SERVICIO DE AGUA POTABLE Y ALCANTARILLADO DE LIMA
(SEDAPAL)

AND

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

Lima, November , 2011



Mr. Makoto NAKAO
Chief Representative
Japan International Cooperation
Agency (JICA)
Japan

OOOO
President
Servicio de Agua Potable y
Alcantarillado de Lima (SEDAPAL)
The Republic of Peru

Witnessed by:

OOOO
(役職名)
Peruvian International Cooperation
Agency (APCI)
The Republic of Peru

OOOO
(役職名)
Ministerio de Vivienda, Construcción
y Saneamiento (MVCS)
The Republic of Peru

The Republic of Peru

The Republic of Peru

Based on the minutes of meetings on the Detailed Planning Survey on the Project for Capacity Strengthening for Non-Revenue Water Management of SEDAPAL (hereinafter referred to as "the Project") signed on 3rd of November, 2011 between Servicio de Agua Potable y Alcantarillado de Lima (hereinafter referred to as "SEDAPAL") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with SEDAPAL and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that SEDAPAL, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of Peru.

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on August 20, 1979 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on June 17, 2011 between the Government of Japan (hereinafter referred to as "GOJ") and Peru.

Appendix 1: Project Description

Appendix 2: Main Points Discussed

Appendix 3: Minutes of Meeting on the Detailed Planning Survey on the Project for Capacity Strengthening for Non-revenue Water Management of SEDAPAL



PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description agreed on in the minutes of meetings on the concerning Detailed Planning Survey on the Project signed on November 3, 2011 (Appendix 3).

I. BACKGROUND

Lima metropolitan area, which belongs to the subtropical and desert climate region, is very poor in water resources. Especially in the dry season, water shortage becomes a very serious problem in the metropolitan area which is the home for approximately one-thirds of the total population in the country.

Under the circumstances, the Government of Japan (hereinafter referred to as "GoJ") has been contributing to the development of water supply and sewerage networks mainly in Lima metropolitan area through Japanese Yen Loans. Despite the financial assistance from GoJ and other donors, however, water supply system in Lima still faces many problems to resolve, such as incomplete sectorization in distribution networks, many unused existing reservoirs and insufficient water pressure control and so on.

In addition, Non-Revenue Water (NRW) rate is also very high due to high incidence of water leakages and illegal connections, many unmetered service connections, and deterioration of water meters. NRW rate of Lima metropolitan area was 35.2% in September 2011.

Servicio de Agua Potable y Alcantarillado de Lima (SEDAPAL), responsible agency for water supply and sewerage services, set a goal to reduce NRW rate to 25% and has been trying hard to achieve the goal.

Due to its weak capacity for NRW reduction, however, it is difficult for SEDAPAL to identify the causes of NRW and implement appropriate countermeasures against them. Under the circumstances, SEDAPAL, through the government of Peru, requested GoJ to conduct a technical cooperation project to strengthen its capacity for NRW reduction.



II. OUTLINE OF THE PROJECT

Details of the Project are described in the Logical Framework (Project Design Matrix: PDM) (Annex I) and the tentative Plan of Operation (Annex II).

1. Implementation Structure

The Implementation Structure of the Project is given in the Annex III. The roles and assignments of relevant organizations are as follows:

(1) SEDAPAL

(a) Project Director

General Manager of SEDAPAL will be responsible for overall administration and implementation of the Project.



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(b) Project Manager

Leader responsible for achieving the first level target of NRW reduction will be responsible for substantive implementation of the Project.

Three (3) Acting Project Managers will be assigned for the Project as shown below;

- Manager of Business Management
- Chief of Leakage Control & Detection Team
- Chief of Brena Network Operation & Management Team

(c) Other Counterpart Personnel

i) NRW Management Team

- Leader : Manager of Business Management
Support from
 - Manager of Development & Research Management
 - Managers of South and Central Service Managements
- Chief of Leakage Control & Detection Team
- Chief of Brena Network Operation & Management Team

ii) Three (3) NRW Action Teams (Brena, Surquillo and Villa El Salvador)
Members of Each Action Team

- Leader : Chief of Network Operation & Management (O&M) Team
- Chief of Business Team
- Analyst in Leakage Control & Detection Team
- Engineers and Technicians in Network O & M Team

(2) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to SEDAPAL on any matters pertaining to the implementation of the Project.

(3) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will approve an annual work plan, review overall progress, conduct monitoring and evaluation of the Project, and exchange opinions or major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in Annex IV.

2. Project Site(s) and Beneficiaries

Project Site: Lima Metropolitan area

Beneficiaries: SEDAPAL staff related to NRW reduction

3. Duration

The duration of the Project will be three (3) years from the date when Japanese experts for the Project arrive in Peru.



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4. Environmental and Social Considerations

SEDAPAL agreed to abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF SEDAPAL AND THE GOVERNMENT OF PERU

1. SEDAPAL and the government of Peru will take necessary measures to:

- (1) ensure that the technologies and knowledge acquired by the Peruvian nationals as a result of Japanese technical cooperation contributes to the economic and social development of Peru, and that the knowledge and experience acquired by the personnel of Peru from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
- (2) grant privileges, exemptions and benefits to the JICA experts referred to in II-1 (2) above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in Peru.

IV. EVALUATION

JICA and SEDAPAL will jointly conduct the following evaluations and reviews.

1. Mid-term review at the middle of the cooperation term
2. Terminal evaluation during the last six (6) months of the cooperation term

JICA will conduct the following evaluations and surveys to mainly verify sustainability and impact of the Project and draw lessons. The SEDAPAL is required to provide necessary support for them.

1. Ex-post evaluation three (3) years after the project completion, in principle
2. Follow-up surveys on necessity basis

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, SEDAPAL will take appropriate measures to make the Project widely known to the people of Peru.

VI. MUTUAL CONSULTATION

JICA and SEDAPAL will consult each other whenever any major issues arise in the course of Project implementation.



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VII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and SEDAPAL

The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

- Annex I Logical Framework (Project Design Matrix: PDM)
- Annex II Tentative Plan of Operation
- Annex III Implementation Structure of the Project
- Annex IV Functions and Members of Joint Coordinating Committee

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MAIN POINTS DISCUSSED

1. Pilot Project Areas

Both sides agreed that the pilot project will be conducted in the following three (3) sectors in the Lima Metropolitan area;

Area No.1: Sector 18 in Brena Service Center

Area No.2: Sector 67 in Surquillo Service Center

Area No.3: Sector 308 in Villa El Salvador Service Center

2. NRW Management Team and Action Teams

Both sides agreed that SEDAPAL will establish the NRW Management Team and Action Teams in accordance with the implementation structure of the Project shown in Annex III for the effective implementation of the activities for Outputs 1, 2 and 3 enumerated in the PDM.

3. Budgetary Arrangement by SEDAPAL

Both sides agreed that budgetary arrangement by SEDAPAL is the key to the successful implementation of the Project, especially for the timely implementation of pilot projects for NRW reduction.

4. SEDAPAL's Role in the Project

The Japanese side explained and SEDAPAL understood the principle of JICA's technical cooperation project that SEDAPAL should play a major role with a strong sense of ownership in achieving the Project objectives while the role of JICA's experts would remain supportive.

5. Member of Counterpart Personnel of SEDAPAL

Both sides agreed that the members of the Management Team should remain untransferred until the completion of the Project while the members of the Action Teams should remain untransferred until the completion of each pilot project.



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Annex II

Project Design Matrix (PDM)

Project Title: Project for Capacity Strengthening for Non-Revenue Water Management of SEDAPAL

Target Areas: Lima Metropolitan area

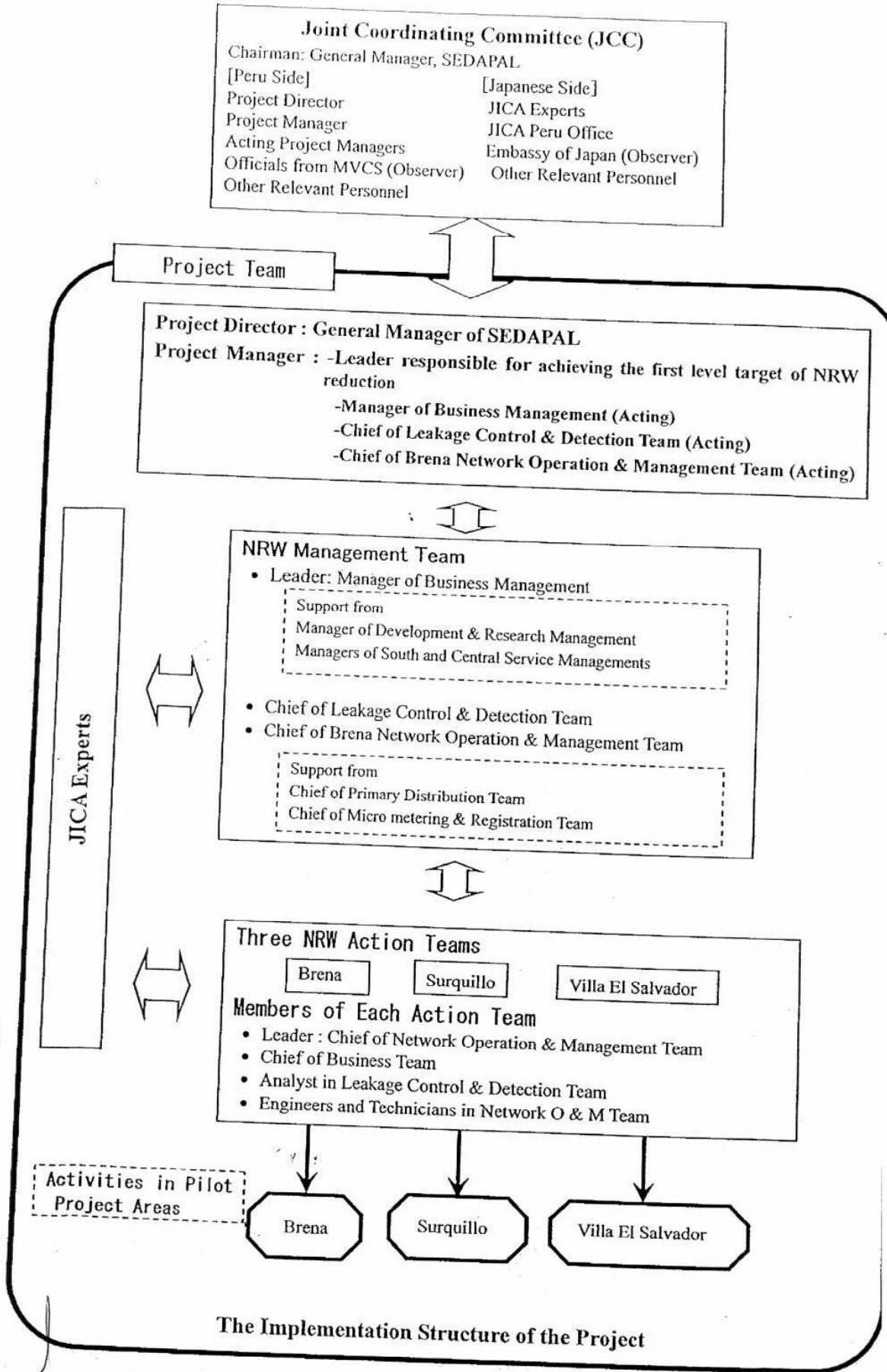
Project Period: March 2012 – February 2015

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Target Group: SEDAPAL staff related to NRW reduction

Narrative Summary of the Project	Indicators	Means of Verification	Important assumptions
<p>Overall Goal Non-revenue water (NRW) of SEDAPAL is reduced.</p>	<p>Achieve the NRW rate agreed with SUNASS*. (2018: XX %)</p>	<p>Report of SEDAPAL to SUNASS</p>	
<p>Project Purpose The capacity to reduce NRW of SEDAPAL is improved.</p>	<ol style="list-style-type: none"> 1. The Business Plan (Plan Operativo) of SEDAPAL takes into account the annual implementation plan to reduce NRW in each Service Center. 2. The senior management of SEDAPAL recognizes the financial benefit brought by reducing NRW and approves the budget for the implementation of annual NRW reduction plan of each Service Center. 	<ol style="list-style-type: none"> 1. Business Plan of SEDAPAL 2. Budget report of SEDAPAL 	<p>The function of the NRW Management Team is maintained even after the Project.</p>
<p>Outputs</p> <ol style="list-style-type: none"> 1. The management capacity to reduce NRW is improved. 2. The capacity to implement activities related to the reduction of NRW is improved. 3. The quality control capability related to the installation of service connections is improved. 	<ol style="list-style-type: none"> 1-1. The Management Team produces an evaluation report on the pilot project completion reports prepared by the Action Teams. 1-2. SEDAPAL approves the report on the costs and benefits analysis of NRW reduction and its financial implications for SEDAPAL's business operation. 1-3. The Management Team members give lectures in workshops to disseminate the annual implementation plans. 2-1 The NRW rate in each pilot project area reduces to: Area 1: XX%, Area 2: XX% and Area 3: XX%. 2-2 The Action Team members give lectures in workshops on pilot projects. 2-3 Study (diagnosis) plans for NRW reduction are prepared for at least (XX) places outside the pilot project areas. 3-1 All the trainees participated in the service 	<ol style="list-style-type: none"> 1-1 Project report 1-2 Project report 1-3 Project report 2-1 Project report 2-2 Project report 2-3 Study (diagnosis) plans other than for pilot project areas. 3-1 Project Report 	<p>The teams responsible for NRW reduction in SEDAPAL do not face major organizational reforms.</p> <p>The staff trained by the Project remain in SEDAPAL.</p>

Activities	Inputs	Important assumptions
<p>1-1 To organize a NRW Management Team in SEDAPAL</p> <p>1-2 To identify NRW problems of SEDAPAL</p> <p>1-3 To conduct a training course on NRW management for the Management Team</p> <p>1-4 To analyze the costs and benefits of the NRW reduction activities based on the results of the pilot project</p> <p>1-5 To evaluate the financial implications of NRW reduction for the overall business operation of SEDAPAL in future</p> <p>1-6 To prepare an annual implementation plan to reduce NRW in each Service Center based on the activities 1-4 and 1-5 above and the business objectives of SEDAPAL</p> <p>1-7 To conduct workshops in SEDAPAL to disseminate the annual implementation plan of each Service Center</p> <p>2-1 To organize Action Teams to reduce NRW in the pilot projects</p> <p>2-2 To conduct training courses for the Action Teams on the implementation of NRW reduction measures</p> <p>2-3 To prepare a study (diagnosis) plan by analyzing technical and commercial data in the pilot project area No. 1 and review the existing situations of NRW such as volumes of water distributed and billed, sectorization, and installation of meters</p> <p>2-4 To install necessary valves, ultrasonic flow meter boxes and meters, and estimate the NRW rate in the pilot project area No.1 before implementing the pilot project</p> <p>2-5 To conduct field surveys to identify the causes of NRW (leakage, illegal connections and meter-related losses) and, based on the results of the surveys, prepare an implementation plan of NRW reduction measures in the pilot project area No. 1</p> <p>2-6 To implement NRW reduction measures in the pilot project area No. 1</p> <p>2-7 To estimate the NRW rate after completion of the activity 2-6 above</p> <p>2-8 To prepare a completion report on NRW activities in the pilot project area No. 1, which includes basic data for analyzing the costs and benefits such as the cost to implement NRW measures and increased volume of billed water</p> <p>2-9 To repeat the activities 2-3 to 2-8 above in the pilot project areas No. 2 and 3</p> <p>2-10 To conduct workshops in SEDAPAL to disseminate the study and</p>	<p>[Japanese side]</p> <p>1. Experts:</p> <ul style="list-style-type: none"> -Leader/NRW management -NRW reduction planning -Leakage detection technology -Service connection installation technique -NRW reduction Advisor <p>2. Training:</p> <ul style="list-style-type: none"> -Training in Japan -Training in third country <p>3. Equipment:</p> <ul style="list-style-type: none"> -Water leakage detection unit -Vehicle for leakage detection (mobile laboratory) -Ultrasonic flow mater -Materials and equipment for service connection installation training - Vehicle for Japanese experts 	<p>[Peruvian side]</p> <p>1. Counterpart personnel:</p> <ul style="list-style-type: none"> -Project Director -Project Manager -C/P from Leakage Control and Reduction Team -C/P from Network O & M Team for each pilot project area -C/P from Business Team of each pilot project area -C/P from Primary Distribution Team <p>2. Facilities:</p> <ul style="list-style-type: none"> -Office space for Japanese experts in SEDAPAL (for approx. 8 persons) -Office furniture -Internet connection -Training room (for approx. 20 persons) -Training space for installation of service connections (40m²) -Storage space for training equipment <p>3. Local Cost:</p> <ul style="list-style-type: none"> -Costs necessary for the
	<p>connection installation work course pass the hydraulic pressure test.</p> <p>3-2 SEDAPAL approves the new technical specification guidelines for installation of service connections</p>	<p>3-2 SEDAPAL guidelines</p>



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ANNEX IV

Functions and Members of Joint Coordinating Committee

1. Functions

The Joint Coordinating Committee (JCC) shall be established for smooth and effective implementation of the Project. The JCC shall be convened at least once a year and upon necessity. The main functions of JCC shall be as follows:

- (1) To examine and approve the Annual Plan of Operations to be formulated by the Project;
- (2) To review the progress and achievements of the Project activities;
- (3) To exchange views on major issues arising from or in connection with the Project, and corrective measures against these issues; and
- (4) To coordinate with other relevant authorities.



2. Chairperson and members

(1) Chairperson

Project Director

(2) Committee Members

[Peruvian side]

- Project Director
- Project Manager
- Acting Project Managers
- Officials from MVCS (Observer)
- Other Relevant Personal

[Japanese side]

- JICA Experts of the Project
- Representatives of JICA Peru Office
- Representatives of the Embassy of Japan (Observer)
- Other Relevant Personnel