

**M I N I N F R A
EASTERN PROVINCE
REPUBLIC OF RWANDA**

**THE STUDY ON
IMPROVEMENT OF RURAL WATER SUPPLY
IN THE EASTERN PROVINCE
IN
THE REPUBLIC OF RWANDA**

**FINAL REPORT
DATABOOK**

November 2010

JAPAN INTERNATIONAL COOPERATION AGENCY

**JAPAN TECHNO CO., LTD.
NIPPON KOEI CO., LTD.**

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TABLE OF CONTENTS

- D1. Minutes of Meetings
 - 1.1 Scope of Work for the Study
 - 1.2 Minutes of Meetings on the Scope of Work
 - 1.3 Minutes of Meetings on Inception Report
 - 1.4 Minutes of Meetings on Progress Report
 - 1.5 Minutes of Meetings on Interim Report
 - 1.6 Minutes of Meetings on First Draft Final Report
 - 1.7 Minutes of Meetings on Second Draft Final Report
- D2. List of Water Source in Eastern Province
 - 2.1 Nyagatare District
 - 2.2 Gatsibo District
 - 2.3 Kayonza District
 - 2.4 Rwamagana District
 - 2.5 Ngoma District
 - 2.6 Kirehe District
 - 2.7 Bugesera District
- D3. List of Existing Water Supply Schemes of Eastern Province
 - 3.1 Nyagatare District
 - 3.2 Gatsibo District
 - 3.3 Kayonza District
 - 3.4 Rwamagana District
 - 3.5 Ngoma District
 - 3.6 Kirehe District
 - 3.7 Bugesera District
- D4. Eastern Province Water Supply Facilities Location Data
 - 4.1 Location Data of All Facilities
 - 4.2 Nyagatare District Facilities Location Map
 - 4.3 Nyagatare District Facilities Location Data
 - 4.4 Gatsibo District Facilities Location Map
 - 4.5 Gatsibo District Facilities Location Data
 - 4.6 Gicumbi District Facilities Location Data
 - 4.7 Kayonza District Facilities Location Map
 - 4.8 Kayonza District Facilities Location Data
 - 4.9 Rwamagana District Facilities Location Map
 - 4.10 Rwamagana District Facilities Location Data
 - 4.11 Ngoma District and Kirehe District Facilities Location Map
 - 4.12 Ngoma District Facilities Location Data

- 4.13 Kirehe District Facilities Location Data
- 4.14 Bugesera District Facilities Location Map
- 4.15 Bugesera District Facilities Location Data
- D5. Water Quality
- D6. Water Supply Plan for Each Secteur
 - 6.1 Nyagatare District
 - 6.2 Gatsibo District
 - 6.3 Kayonza District
 - 6.4 Rwamagana District
 - 6.5 Ngoma District
 - 6.6 Kirehe District
 - 6.7 Bugesera District
- D7. Geophysical Survey Data
 - 7.1 $\rho - a$ Curves
 - 7.2 Interpreted Data
- D8. Socio-Economic Survey Data
 - 8.1 General Information of Secteurs
 - 8.2 Water Supply Conditions of Secteurs
 - 8.3 Household Conditions of 7 Districts
 - 8.4 Priority Project Imidugudu Conditions
 - 8.5 Priority Project Household Conditions
- D9. Equipment used during Study to be Provided to Rwandan Side
- D10. Collected Information

D1. Minutes of Meetings

- 1.1 Scope of Work for the Study
- 1.2 Minutes of Meetings on the Scope of Work
- 1.3 Minutes of Meetings on Inception Report
- 1.4 Minutes of Meetings on Progress Report
- 1.5 Minutes of Meetings on Interim Report
- 1.6 Minutes of Meetings on First Draft Final Report
- 1.7 Minutes of Meetings on Second Draft Final Report

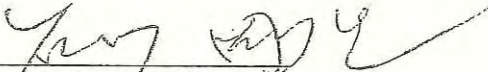
1.1 Scope of Work for the Study

*Scope of Work
for
The Study on Improvement of Rural Water Supply
in the Eastern Province*

Agreed upon between

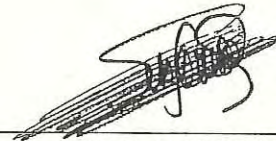
*Ministry of Land, Environment, Forestry, Water and Mines,
Eastern Province
and
Japan International Cooperation Agency*

Kigali, December 18, 2007



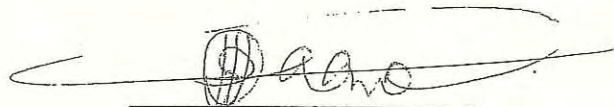
Mr. Takeo ISHIKAWA
Leader,
Preparatory Study Team,

Japan International Cooperation Agency



Mr. Emmanuel NSANZUMUGANWA
Secretary General,

Ministry of Land, Environment,
Forestry, Water and Mines,
Republic of Rwanda



Mr. Charles GASANA
Executive Secretary,
Eastern Province,
Republic of Rwanda

I. INTRODUCTION

In response to the official request of the Government of the Republic of Rwanda (hereinafter referred to as "the Rwandan Government") for the technical cooperation on the Development Study on Improvement of Rural Water Supply in the Eastern Province (hereinafter referred to as "the Study"), the Government of Japan decided to conduct the Study in accordance with relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation projects of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Rwandan Government.

The present document sets forth the scope of work with regard to the Study and will be valid after the approval by JICA Headquarters.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. to formulate the Water Supply Plan in the Eastern Province for the target year of 2020.
2. to conduct the preliminary design on the priority projects selected from the Water Supply Plan for the target year of 2015.

III. STUDY AREA

The Study will cover all seven (7) Districts in the Eastern Province. Annex I shows the Study area.

IV. SCOPE OF THE STUDY

PHASE I: Formulation of Water Supply Plan

- (1) Collection and review of existing data and materials
 - (a) Socio-economic condition
 - (b) Natural condition
 - (c) Socio-economic development plans, other development plans, policies of national and local governments and cooperation planning of other related donor agencies.
 - (d) Existing legal framework for water resources development, water supply, and sanitation
 - (e) Existing institutional framework for rural water supply
 - (f) Existing database related to water supply
- (2) Survey on current water supply situation
 - (a) Existing water supply scheme (facility conditions, water quality, operation and maintenance, water tariff etc.)
 - (b) Survey on rural inhabitants (actual condition of water consumption, settlement structure)
 - (c) Situation on rural electrification and future plan
- (3) Water demand projection
- (4) Study on water resources potential
 - (a) Review and analysis of meteorological, hydrological, and hydro-geological data and information
 - (b) Ground water survey (reading of aero photograph/satellite imagery, hydro-geological field survey, geophysical exploration, and analysis of existing borehole data)
 - (c) Surface water survey (observation of spring discharge, analysis of river discharge data, analysis of lake water levels, and present state of water utilization)

- (d) Water quality analysis
- (e) Preparation of preliminary hydro-geological map
- (f) Water balance analysis
- (g) Evaluation of water potential
- (5) Formulation of Water Supply Plan
 - (a) Water resources development plan
 - (b) Development and rehabilitation plan of water supply schemes
 - (c) Recommendation to the operation, maintenance and management plan (*) .
 - (d) Recommendation to the improvement plans for institutional framework (*) .
 - (e) Recommendation to the hygiene and sanitation promotion plan (*) .
 - (f) Approximate estimation of project implementation cost
 - (g) Technical assistance on Initial Environmental Examination (IEE) for environmental and social consideration (including public consultation with communities and stakeholders, if necessary)
 - (h) Project evaluation (economic, financial, institutional, technical, social, and environmental)

Note *: For those Recommendations, the output of the JICA's "Technical Cooperation Project for Improvement of Water Supply and Sanitation in Southern Part of Eastern Province" will be used. The cooperation period spans from Apr.2007 to Dec. 2010.

- (6) Selection of Priority Project(s)

PHASE II: Preliminary Design on Priority Project(s)

- (1) Collection of supplemental data
- (2) Supplemental field surveys
- (3) Designing preliminary facilities
- (4) Formulation of construction plan
- (5) Formulation of operation, maintenance and management plan (*) .
- (6) Preliminary cost estimation
- (7) Technical assistance on Environmental Impact Assessment (EIA) (if necessary)
- (8) Project evaluation (economic, financial, institutional, technical, social, and environmental)
- (9) Formulation of project implementation plan (target year: 2015)

Note *: For (5), the output of the JICA's "Technical Cooperation Project for Improvement of Water Supply and Sanitation in Southern Part of Eastern Province" will be used. The cooperation period spans from Apr.2007 to Dec. 2010.

V. SCHEDULE OF THE STUDY

The Study will be carried out in the period of 15 months in accordance with the tentative schedule as attached in Annex II.

VI. REPORTS

JICA shall prepare and submit the following reports to the Rwandan Government.

- 1. Inception Report (English):

Fifteen (15) copies will be submitted at the commencement of the first phase in Rwanda. This report will contain the schedule and methodology of the Study as well as outline of the field survey.

- 2. Progress Report (English):

Fifteen (15) copies will be submitted during the first phase in Rwanda. The report contains the progress of the study, which will include the results of field survey and data analysis.

3. Interim Report (English):

Fifteen (15) copies will be submitted at the end of the first phase in Rwanda. The report contains the interim progress of the study, which will include Water Supply Plan and the selection of priority project(s).

4. Draft Final Report (English and French):

Fifteen (15) copies will be submitted at the commencement of final survey in Rwanda. The report contains the outcome of the study, which will include the preliminary design on the priority project(s). The Rwandan Government shall submit its comments within one (1) month after the receipt of the Draft Final Report.

5. Final Report (English and French):

Thirty (30) copies will be submitted within one (1) month after the receipt of the comments on the Draft Final Report.

VII. UNDERTAKINGS OF THE RWANDAN GOVERNMENT

1. The Rwandan Government shall accord privileges, exemptions and other benefits to the Japanese study team (hereinafter referred to as "the Team") in accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of the Republic of Rwanda, signed on January 14, 2005.
2. The Rwandan Government shall bear claims, if any arises, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the Team.
3. MINITERE and the Eastern Province shall act as counterpart agencies to the Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
4. MINITERE and the Eastern Province shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:
 - (1) security-related information on as well as measures to ensure the safety of the Team,
 - (2) information on as well as support in obtaining medical service,
 - (3) available data, information and studies related to the Study,
 - (4) counterpart personnel,
 - (5) suitable office space with necessary office equipment and furniture, and
 - (6) credentials or identification cards.

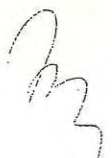
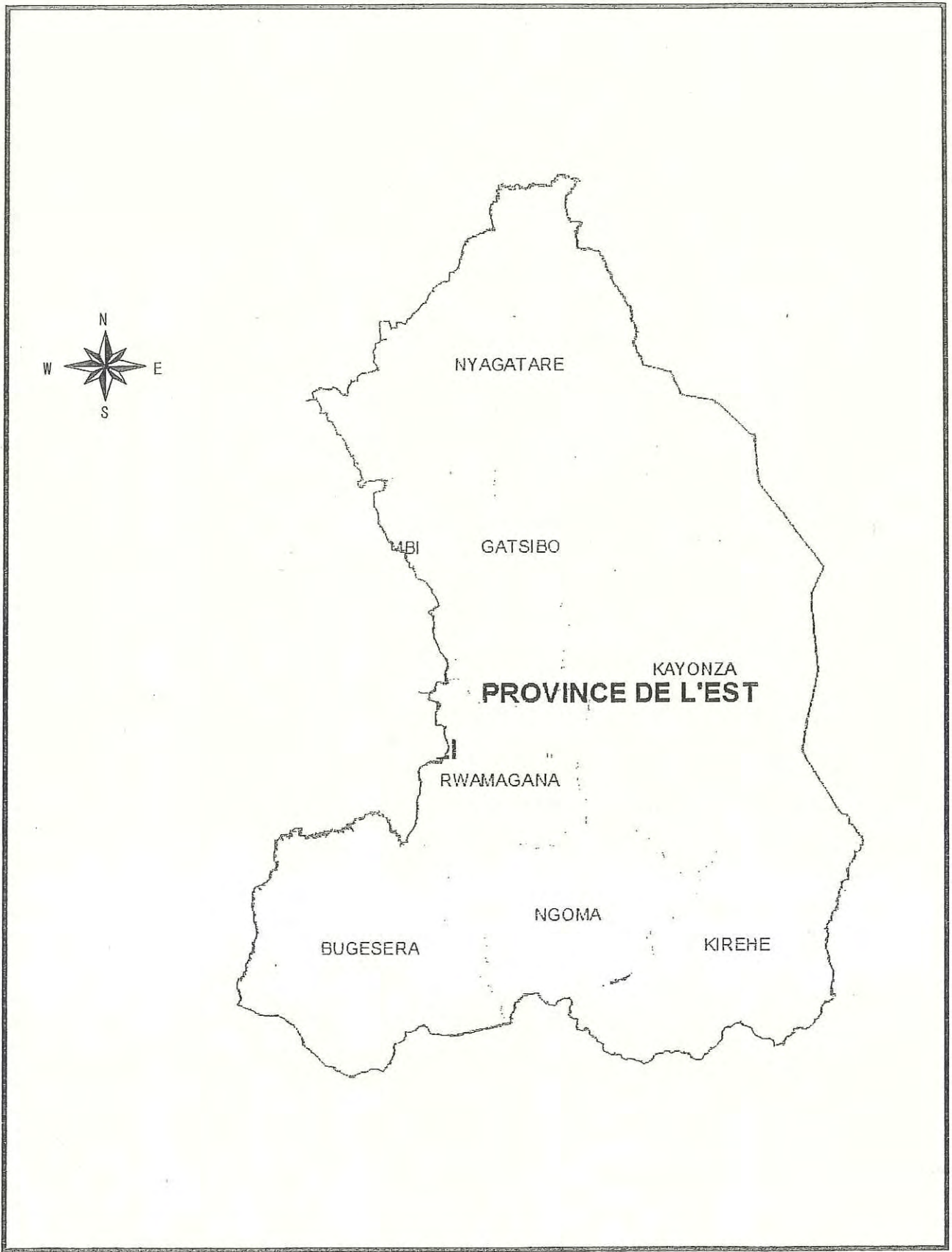
VIII. CONSULTATION

JICA, MINITERE, and the Eastern Province shall consult with each other in respect of any matter that may arise from or in connection with the Study.

ANNEX-1 Map of the Study Area

ANNEX-2 Tentative Schedule

ANNEX-1 Map of the Study Area



Annex-2 Tentative Schedule

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Phase	← Phase 1 →								← Phase 2 →						
Working Period	■								□						
Report	IC/R					P/R		IT/R				DF/R		F/R	

IC/R=Inception Report
P/R=Progress Report
IT/R=Interim Report
DF/R=Draft Final Report
F/R=Final Report

□ working in Japan
■ working in Rwanda

1.2 Minutes of Meetings on the Scope of Work

*Minutes of Meetings
on
the Scope of Work
for
The Study on Improvement of Rural Water Supply
in
The Eastern Province*


Agreed upon between

*Ministry of Land, Environment, Forestry, Water and Mines,
Eastern Province
and
Japan International Cooperation Agency*

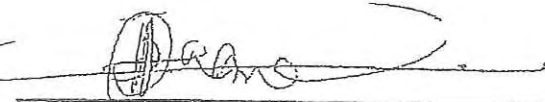
Kigali, December 18, 2007



Mr. Takeo ISHIKAWA
Leader,
Preparatory Study Team,
Japan International Cooperation Agency



Mr. Emmanuel NSANZUMUGANWA
Secretary General,
Ministry of Land, Environment,
Forestry, Water and Mines,
Republic of Rwanda



Mr. Charles GASANA
Executive Secretary,
Eastern Province,
Republic of Rwanda

In response to the official request of the Government of the Republic of Rwanda (hereinafter referred to as "the Rwandan Government"), the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team (hereinafter referred to as "the Team"), headed by Mr. Takeo ISHIKAWA, to Rwanda from December 2 to December 20, 2007 to discuss the Scope of Work (hereinafter referred to as "the S/W") for the Development Study on Improvement of Rural Water Supply in the Eastern Province (hereinafter referred to as "the Study").

During its stay in Rwanda, the Team held a series of meetings with Ministry of Land, Environment, Forestry, Water and Mines (hereinafter referred to as "MINITERE"), the Eastern Province and its seven Districts and other authorities concerned and conducted site surveys.

As a result of the discussions, both sides came to an agreement on the S/W, which was signed on December 18, 2007.

The Minutes of Meetings have been prepared for the better understanding of the S/W. Both sides agreed and confirmed the following points for the smooth implementation of the Study.

1. Validity of the S/W

Both sides confirmed that the S/W would come into effect after the approval of the JICA Headquarters.

2. Areas for the Formulation of the Water Supply Plan

Both sides agreed that the Japanese side would conduct the survey for the formulation of the Water Supply Plan in the Areas selected with the criteria such as;

- 1) Areas where existing water supply schemes are not covering,
- 2) Areas where no development plans of water resources nor supplies are formulated by other donors,
- 3) Areas where existing water supply schemes are not functioning.

The area selection will be conducted based on the information collected from Rwandan Authorities and reviewed by the Study team.

Therefore, both sides also agreed that based on the official request issued by the Executive Secretary of the Eastern Province to the respective seven (7) Districts (Annex 1), the Eastern Province would submit the "Initial Inventory of current water supply" to JICA Rwanda office by the end of January, 2008.

3. Target Year for the Water Supply Plan and for the Preliminary Design

Both sides agreed that the target year for the Water Supply Plan would be year 2020 according to the Rwandan Policies (Vision 2020, EDPRS) and the target year for the Priority Projects would be 2015.

4. Tentative Criteria for the Selection of Priority Projects

Both sides agreed to the tentative criteria for the selection of Priority Projects as below. The

Criteria would be revised during the Phase 1, having consultation with Rwandan side.

- 1) scarcity of potable water
- 2) water resource potential
- 3) effectiveness to approach to poorer and socially vulnerable people
- 4) willingness to pay and feasibility of operation and maintenance.
- 5) environmental impact
- 6) no duplication with other projects related to the rural water supply, and
- 7) priority by the Districts

5. Utilization of the Outputs of the JICA's Technical Cooperation Project

Both sides agreed that as for elaboration of Recommendation to the operation, maintenance and management plan, Recommendation to the improvement plans for institutional framework and Recommendation to the hygiene and sanitation promotion plan as part of Water Supply Plan and Operation, maintenance and management plan as parts of Preliminary Design on Priority Projects, the output of the JICA's Technical Cooperation Project "Improvement of Water and Sanitation in the Southern Part of the Eastern Province" would be fully utilized in the Study.

6. Pre-Estimation of the Water Supply Plan

Both sides confirmed that the total cost and population to be served by the Water Supply Plan would be the one as shown in the Table-1. The figures shown in the Table are derived from very rough estimation by the Team and subject to be a full revision and re-calculation by the Study team.

Table-1 Pre- estimation of Water Supply Plan

District	Present Status			(ref:estimation by the mission)		Water Supply Plan (2010-2020)			
	Population (2007/ thousand)	Coverage Ratio (2007/%)	Served population (thousand)	Coverage Ratio (2007/%)	Served population (thousand)	Population (2020)	Population to be Served by the Projects	Coverage Ratio (2020)	Cost for Construction (thousand US\$)
Rwamagana	256	48.0%	123	54.1%	138	348	225	100%	12,439
Kayanza	234	49.9%	117	48.9%	114	319	202	100%	13,260
Ngoma	235	64.0%	150	26.0%	61	320	170	100%	9,511
Kirche	292	38.0%	111	17.0%	50	398	287	100%	15,855
Gatsibo	283	38.0%	108	49.3%	140	386	278	100%	15,894
Nyagatare	329	46.0%	151	58.1%	191	447	296	100%	18,251
Bugesera	274	63.8%	175	69.4%	190	373	198	100%	12,156
TOTAL	1,903	49.1%	935	46.5%	884	2,590	1,656	100%	97,366

Remarks:

DDPs

DDPs

estimated by the mission

2.4% per year

based on the Rwandan unit cost

Note: The cost for rehabilitation is not included.

7. Availability of the Funds for the Implementation of the Water Supply Plan

Rwandan side confirmed that the total cost of US\$ 97 million in the period of 2010-2020 (US\$ 8.8 Million per year) necessary for the implementation of the Water Supply Plan would be affordable, and would take necessary measures to bring the donor funds, taking into consideration the total amount of RWF 16.9 Billion (US\$ 31 million) and RWF 22.1 Billion (US\$ 40.6 million) invested for the water supply in Rwanda in the fiscal year 2006 and 2007 respectively.

8. Rain Water Harvesting

Both sides confirmed that the Study would not treat rainwater as an alternative for potable water, although in some DDPs (District Development Plans) the possibility and plan of utilizing the rain water harvesting is mentioned.

9. Counterpart Personnel

Both sides agreed that MINITERE, the Eastern Province, and its each district would allocate the following number of engineers in charge of water as counterpart personnel before the end of January, 2008.

- MINITERE : Two or Three (2-3) Engineers
- Eastern Province : One (1) Engineer
- Each District : One (1) Engineer each

10. Seminars and Site Surveys

Both sides agreed that the counterparts would actively participate in the technical seminars to be held during the Study and also would actively accompany with the Study team in the site surveys, at their own expense, so that the progress and results will be shared by both sides.

11. Steering Committee

Both sides agreed that the Rwandan side would establish the Steering Committee, co-chaired by the Secretary General of MINITERE and Executive Secretary of the Eastern Province in order to share the results and to give feedbacks to the progress of the Study.

The committee will comprise MINITERE, the Eastern Province and its each District, and other related partners. The committee meetings will be held four (4) times during the Study Period as shown in the Annex 2 of the S/W.

12. Reports

Both sides agreed that the Final Report should be open to the general public in order to share the Study results with relevant organizations as many as possible.

13. Environmental and Social Consideration

The Team explained the JICA's Environmental and Social Consideration Guideline to be applied to the Study. The Rwandan Government understood the policy of JICA's guideline, and agreed in principle to the following responsibilities and requirements.

- (1) Based on the guideline, the Rwandan Government shall be responsible for conducting Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) in accordance with environmental laws and regulations of the Rwandan Government, in collaboration with JICA.
- (2) JICA shall provide MINITERE with technical support in order to conduct IEE and EIA.
- (3) In the course of conducting IEE and EIA, public consultations with communities and stakeholders shall be included, if necessary.
- (4) The disclosure of information such as Study Reports is necessary to ensure the participation and dialogues with various stakeholders, in order to achieve appropriate environmental and social considerations.

14. Office Space

MINITERE and the Eastern Province agreed to provide adequate office space, necessary office equipment and furniture both at MINITERE in Kigali and at Rwamagana.

15. Provision of the Necessary Information

In accordance with the Article VII.4.(3) of the S/W, both sides confirmed that Rwandan side would provide the necessary information with the Study Team, including the following items ;

- a) Aerial photograph of the target area
- b) Re-settlement Policy (Imidugudu Policy) in the Eastern Province
- c) Hydro-geological data conducted by PDRCIU projects.
- d) Progress on the sector reform on water supply
- e) Water supply projects to be conducted by the other donor funds and
- f) Financial status of the related organizations such as District.

16. Position of the Study in the National Policies

Both sides confirmed that the Study is consistent with the Policies such as Vision 2020, EDPRS and shall be utilized in order to concretize the District Development Plans (DDPs).

17. Vehicles

MINITERE requested the Team that the Japanese side would arrange an appropriate number of vehicles with drivers. The Team would convey this request to JICA HDQs.



ANNEX 1: Draft of the letter to be issued by the Eastern Province on the submission of "Initial Inventory of current water supply"

Logo of the Republic of Rwanda
with
Address of the Eastern Province

Pre-Inventory information for JICA Study on Rural Water Supply

To the District Mayors. (all)

The Eastern Province in cooperation with Japan International Cooperation Agency (JICA) will conduct a development study on rural water supply Plan for the whole Province in order to attain the target, 100% of coverage ratio by year 2020.

For the efficient and smooth implementation, we would like to conduct pre-inventory survey before commencement of this Study.

Thus, we would like you to fill out the questionnaire attached, and send it back to us before the end of January, 2008.

Thanking you.

*yours faithfully,
Mutsindashyaka Théoneste,
Governor*



