

CHAPTER 3
PROJECT EVALUATION AND RECOMMENDATIONS

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effect

The table below shows the details of the effects and the extent of improvement from the current conditions expected from the implementation of the Project.

Table 3-1 Effects and Extent of Improvement from the Current Conditions expected from the Implementation of the Project

Current conditions and problems	Measures in the Project (Japanese assistance)	Direct effects/extent of improvement	Indirect effects/extent of improvement
While the design target of the proportion of people with access to water for 2015 is 90% (PRSP-II, 2006 and National Water Policy, 2006), the actual proportion is 64% according to DWR (2006) and 81% according to UNDP/UNICEF (2008). Thus, stable supply of safe drinking water has not been guaranteed sufficiently in rural villages.	<ul style="list-style-type: none"> ➤ Solar-powered water supply facilities construction at 15 sites ➤ Existing piped water supply facilities conversion to solar power system at 3 sites 	<ul style="list-style-type: none"> ➤ At the completion of the construction in 2012, 35ℓ/capita/day of safe drinking water will be available to ca. 43,200 residents in the 18 sites in the four regions. ➤ Safe drinking water in compliance with the Guidelines for Drinking-Water Quality of WHO will be supplied. 	<ul style="list-style-type: none"> ➤ Alleviation of labour required for fetching water is expected to give children and women more time to study and work. ➤ Supply of safe drinking water is expected to reduce cases of water-borne disease.
The low awareness of hygiene among rural residents has led to outbreak of water-borne diseases such as diarrhea.	➤ Implementation of assistance in awareness creation activities in health and hygiene	➤ The awareness creation activities will improve rural residents' awareness of hygiene.	➤ Dissemination of knowledge of hygiene is expected to reduce cases of water-borne diseases.

<p>There is a concern that the constructed facilities may be left without maintenance by rural residents.</p>	<ul style="list-style-type: none"> ➤ Implementation of “Soft Component” required for operation and maintenance of the facilities 	<ul style="list-style-type: none"> ➤ Village Water Committees will be established for the maintenance of each solar-powered water supply facility and the committee will maintain the facility in a sustainable way. ➤ Village Water Committees will conclude maintenance contracts with the OM companies under which the OM companies shall maintain the solar-powered pumping systems. ➤ Village Water Committees will be responsible for maintenance of the water supply facilities other than the solar-powered pumping systems. 	<ul style="list-style-type: none"> ➤ Establishment of self-reliant maintenance organization is expected to enhance autonomy of rural residents and to create independent activities. ➤ Adoption of measured rate system for both water rate collection and payment to the OM companies in accordance with the maintenance contracts is expected to maintain sustainability of the operation and maintenance system ➤ The same water rate (2.1GMD/m³) applies to the entire country. Since 50% of the amount of collected water rate is to be allocated to the OM companies as the repair and maintenance costs, their business is expected to be sustainable. ➤ Village Water Committees are expected to deposits 10% of the 50% of the amount of collected water rates they receive to a bank account maintained by DWR as collecting maintenance fund and to use the remaining 40% for payment of salaries to security guards and for repair and maintenance of the water supply facilities other than the solar-powered pumping systems independently. ➤ Through provision of technical assistance to rural residents, maintenance of the communal maintenance account and monitoring and evaluation of rural water supply projects in the established existing tripartite cooperation among “residents - the OM companies - administrative agency.” DWR is expected to perform its duties and fulfil its responsibilities more distinctively. ➤ Regular monitoring of water quality of water from boreholes is expected to ensure safe drinking water to rural residents.
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3-2 Recommendations

3-2-1 Problems to be solved by the Recipient Country and Recommendations

- (1) Recommendation for construction of facilities for safe and stable water supply using groundwater

UNDP/UNICEF/2008 reports that the proportion of people with access to water in the rural Gambia in 2006 was 81%, among which 5% had access to piped water and 76% to water supplied from facilities equipped with hand pumps or hand-dug wells. Thus, stable supply of

safe water has not been guaranteed sufficiently. The majority of the existing water sources are traditional hand-dug wells or concrete-lined shallow wells with depths of 20 – 30m. Since these water sources have been used for a long time, many of them are in unsanitary conditions with progress of organic contamination. The preparatory survey for the Project revealed that almost all existing water sources in the 18 survey sites were contaminated with plate count and/or coliform bacteria. The survey revealed that the proportions of people with access to safe drinking water were 0 – 23 % in the survey sites. This observation suggests the importance of both water quality and quantity in discussing the proportion of people with access to water and an urgent need to improve water supply facilities from those based on the existing traditional water sources to piped water supply facilities for safe and stable water supply.

In particular, as rural residents do not have habit of treating water, such as boiling, before drinking, they drink untreated contaminated water and, thus, are exposed to the risk of contracting water-borne diseases (cholera, amebic dysentery, diarrhea, etc.). Therefore, it will be necessary to continue constructing boreholes as safe water sources and solar-powered water supply facilities, which are environment-friendly and economical to rural residents, in the entire Gambia. Continuous assistance from development donors will be essential for the construction. It will be important to plan safe and stable use of groundwater paying attention to water quality and quantity. Moreover, it will be necessary for DWR to take its own initiatives to improve rural water supply using the experience from projects supported by donors, including the Project. Support to regional governments and local municipalities will also have to be strengthened. For these reasons, qualitative and quantitative human resource development for strengthening of the systems of DWR for project implementation and monitoring is recommended.

(2) Recommendation on monitoring and analyses of the monitoring results after the Project implementation

For effective and efficient use of the results of the Project in future, creation of a database of the results of surveys, implementation and monitoring of rural water supply programmes are recommended.

Moreover, through analyses of the results, an overall technical and social improvement of the state of operation and maintenance of rural water supply facilities will be achieved. Similarities among and lessons on problems and the best maintenance method can be deduced from the database of monitoring results after the project implementation. Implementation of follow-up activities every year will clarify extent of satisfaction of rural residents with the use of the water supply facilities after the project implementation, maintenance activities of the OM companies, activities and problems in the operation and maintenance by Village Water

Committees and importance of assistance from the regional governments and local municipalities.

The monitoring will be focused on implementation status of the programme, improvement in access to safe drinking water and the maintenance system under the tripartite cooperation among “residents - the OM companies - administrative agency,” which is being established. In order to utilize the monitoring results in future projects, survey and analysis on the following items are recommended.

- Extent of satisfaction of beneficiaries with the use of the water supply facilities.
- Degree of participation of rural residents in water supply projects
- Details of the activities of the OM companies.
- Details of the activities of Village Water Committees.
- Economic and financial balance and problems in the maintenance under the existing uniform water rate system

3-2-2 Technical Assistance and Cooperation with Other Donors

- (1) Strengthening of the operation and maintenance systems in The Gambia and cooperation with relevant organizations

In The Gambia, solar power generation is adopted as the power source of piped water supply facilities and the operation and maintenance system in which three parties, “residents - the OM companies - administrative agency,” cooperate are being established. In addition, a decentralization programme to transfer the authority to provide assistance to the operation and maintenance systems for these facilities to the regional governments and local municipalities is being facilitated. The Project will also contribute to realization of this programme by providing Soft Component assistance. Although donors share the same basic policies on the measured rate water rate collection, the uniform water rate in the entire country (2.1GMD/m³) and the management of the Collective Maintenance Fund by the executing agency of DWR in the current solar-powered water supply facilities as of 2010, their policies differ slightly in the details.

The basic concept of the Project is to ensure supply of safe drinking water with equal and minimum contribution from rural residents. Since this concept is in accordance with a poverty reduction target, maintenance of the current operation and maintenance systems is recommended. It supports systems, such as the Collective Maintenance Fund, in which Water Committees of the smallest village of a population of *ca.* 1000 to a large village of a population

of *ca.* 5000 adhere to a cooperation system and share the risk of repair costs of facilities of respective villages in a mutually supportive economic and financial relationship.

As search for the optimal maintenance programme is also in progress in programmes of other donors, sufficient information exchange and cooperation among donors are necessary. As means for such information exchange and cooperation, it is recommended for DWR to organize regular seminars and to coordinate projects and donors to share information for effective coordination and stronger cooperation among them in the project areas.

- Mutual participation in seminars by donors and regular meetings of donors
- Sharing of reports and information among donors

3-3 Relevance of the Project

The effects and the extent of improvement expected from the implementation of the Project are as follows:

- At the completion of the facility construction in 2012, 35l/capita/day of safe drinking water will be available to *ca.* 43,200 rural residents in the 18 sites in the four regions.
- Safe drinking water in compliance with the Guidelines for Drinking-Water Quality of WHO will be supplied.
- The awareness creation activities will improve rural residents' awareness of hygiene.
- A Village Water Committee will be established for the operation and maintenance of each piped water supply facility and the committee will operate and maintain the facility sustainably and independently.
- Village Water Committees will conclude maintenance contracts with the OM companies under which the OM companies shall maintain the solar-powered pumping systems continuously.

In addition, implementation of the Project under the grant aid cooperation of Japan is considered relevant from the following viewpoints:

- The purpose of the Project is improvement of water supply/hygienic environment, one of the Basic Human Needs (BHN).
- The water supply facilities to be constructed in the Project will be operated and maintained under the responsibility of Village Water Committees with the revenue raised by collecting water rates.
- The Project is to improve living standards of the people through improvement of sanitary environment in rural areas in accordance with MDGs, PRSP and Vision 2020.

- Since the Project is to construct facilities for small-scale water supply systems for villages, it will have no negative environmental or social impact derived from groundwater development or daily operation of water supply facilities.

3-4 Conclusion

The Project will contribute to improvement of BHN of residents in rural areas which have large number of people in poverty by providing assistance in increasing the proportion of people with access to water in The Gambia as mentioned above. Since the significance of implementing such a project in the grant aid cooperation scheme of Japan is considered high, the implementation of the Project has sufficient relevance.

The system for operation and maintenance of the water supply facilities by the beneficiary rural residents in the tripartite cooperation among “residents - the OM companies - administrative agency” has been established in the project areas and the responsibilities of the rural residents in the system have been clearly defined. The same system has functioned satisfactorily in similar projects of other donors. Therefore, it will be possible for rural residents to operate and maintain the facilities to be constructed in the Project after completion of their construction using the experience in and lessons they have learned from the implementation of these other projects.

APPENDICES

APPENDIX 1 MEMBER LIST OF THE SURVEY TEAM

(1) 1st Field Survey

No	Name	Position	Affiliation
1	Mr. YONEZAKI Eiro	Team Leader	Director West and Central Africa Division 2, Africa Department, JICA
2	Mr. IKEURA Hiroshi	Project Coordinator	Water Resources Management Division 2, Water Resources and Disaster Management Group Global Environment Department, JICA
3	Ms. IDA Akiko	Officer	JICA Senegal Office
4	Mr. KAGAWA Shigeyoshi	Chief Consultant/ Water Supply Plan/ Water Supply Facility Design 2	Japan Techno Co., Ltd.
5	Mr. KOBAYASHI Toshimasa	Hydrogeological Survey/ Test Drilling/Geophysical Survey 1	Earth System Science Co., Ltd.
6	Ms. ITO Miki	Operation and Maintenance/ Socio-Economist	Japan Techno Co., Ltd.

(2) 2nd Field Survey

No	Name	Position	Affiliation
1	Mr. SASAKI Yosuke	Team Leader	Visiting Senior Advisor Water Resources, JICA
2	Mr. IKEURA Hiroshi	Project Coordinator	Water Resources Management Division 2, Water Resources and Disaster Management Group Global Environment Department, JICA
3	Mr. KAGAWA Shigeyoshi	Chief Consultant/ Water Supply Plan/ Water Supply Facility Design 2	Japan Techno Co., Ltd.
4	Mr. KOBAYASHI Toshimasa	Hydrogeological Survey/ Test Drilling/Geophysical Survey 1	Earth System Science Co., Ltd.
5	Mr. OHSHI Kengo	Hydrogeological Survey/ Test Drilling/Geophysical Survey 2	Earth System Science Co., Ltd.
6	Mr. MIYAUCHI Koji	Water Supply Facility Design 1	Japan Techno Co., Ltd.
7	Mr. MORI Naoki	Operation and Maintenance/ Socio-Economist	Japan Techno Co., Ltd.
8	Mr. ANDO Toshifumi	Decentralisation/PPP	Japan Techno Co., Ltd.
9	Mr. ARITA Kazuhiro	Construction & Equipment Planning/ Cost Estimation	Japan Techno Co., Ltd.
10	Mr. HONDA Kazuyoshi	Project Coordinator	Japan Techno Co., Ltd.

(3) Explanation of Draft Final Report

No	Name	Position	Affiliation
1	Mr. WAKUI Junji	Team Leader	Director Water Resources Management Division 2, Water Resources and Disaster Management Group, Global Environment Department, JICA
2	Mr. IKEURA Hiroshi	Project Coordinator	Water Resources Management Division 2, Water Resources and Disaster Management Group, Global Environment Department, JICA
3	Mr. KAGAWA Shigeyoshi	Chief Consultant/Water Supply Plan/ Water Supply Facility Design 2	Japan Techno Co., Ltd.
4	Mr. MIYAUCHI Koji	Water Supply Facility Design 1	Japan Techno Co., Ltd.

APPENDIX 2 SURVEY SCHEDULE

(1) 1st Field Survey

No.	Date	Day	Place to stay	Team Leader (JICA) Mr. Eiro YONEZAKI	Project Coordinator (JICA) Mr. Hiroshi IKEURA	Chief Consultant/Water Supply Plan/Water Supply Facility Design 2 Mr. Shigeyoshi KAGAWA	Hydrogeological Survey/Test Drilling/Geophysical Survey 1 Mr. Toshimasa KOBAYASHI	Operation & Maintenance plan/ Socio-Economic Survey Ms. Miki ITO
1	10	Tue	Dakar		Dep. from Narita, via Paris, Arr. in Dakar			
2	11	Wed	Banjul		Courtesy call and Meeting (JICA Senegal Office), Dep. from Dakar, Arr. in Banjul			
3	12	Thu	Banjul		Courtesy call on MFWRNAM, I/R Explanation and Meeting with DWR, Meeting with donors (EU/EDF/SSP)			
4	13	Fri	Banjul		Meeting with donors (UNICEF), Site Survey (WR)			
5	14	Sat	Banjul		Site Survey(NBR)			
6	15	Sun	Banjul	Dep. from Onagadougou Via Paris	Data Compilation	Data Compilation	Data Compilation	Data Compilation
7	16	Mon	Banjul	Via Dakar, Arr. in Banjul	I/R Explanation, Meeting and Preparation for Minutes of Discussion		Data Collection, Preparation for Survey	Data Collection, Preparation for Survey
8	17	Tue	Banjul	Team Meeting and Meeting with MFWRNAM			Data Collection, Preparation for Survey	Data Collection, Preparation for Survey
9	18	Wed	Banjul	Meeting with MFWRNAM and DWR, Signing on Minutes of Discussion			Data Collection, Preparation for Survey	Preparation for Subcontract (Socio-Economic Survey)
10	19	Thu	Banjul	Site Survey (CRR), UNDP/EDF/JICA sites and N-01, N-05				
11	20	Fri	Banjul	Dep. from Banjul, Via Dakar		Meeting with DWR, Preparation for Subcontract		
12	21	Sat	Banjul	Via Paris		Meeting with DWR, Preparation for Subcontract		
13	22	Sun	Banjul	Arr. in Tokyo		Team Meeting, Preparation for Subcontract		
14	23	Mon	Banjul		Data Collection and Compilation, Preparation for Site Survey			
15	24	Tue	Banjul		Site Survey (N-01, N-17)			
16	25	Wed	Banjul		Courtesy call on NBR, Site Survey (N-03, N-04), Preparation for tendering			
17	26	Thu	Banjul		Tender Evaluation, Site Survey (N-02, N-18, N-19, N-20)			
18	27	Fri	Banjul		Tender Evaluation, Negotiation with Subcontractor, Site Survey (N-07, N-08)			
19	28	Sat	Janjanbreh		Negotiation with Subcontractor Site Survey (N-09, N-10, N-16)			
20	29	Sun	Janjanbreh		Site Survey (N-11, N-12, N-15) Discussion with Subcontractor			
21	30	Mon	Mansa Konko		Courtesy call on CRR, Site Survey (N-13, R-03, R-02) Training for Subcontractor			
22	31	Tue	Banjul		Courtesy call on LRR, Site Survey (N-06, R-01, N-05) Training for Subcontractor			
23	1	Wed	Banjul		Discussion with Subcontractor, Preparation for Site Survey, Meeting with Labo, Private Company			
24	2	Thu	Banjul		Meeting with DWR, Data Compilation			
25	3	Fri	Banjul		Data Compilation, Meeting with DWR			Site Survey (N-05, N-06, R-03)
26	4	Sat	Banjul		Data Compilation			Site Survey (N-13, N-15)
27	5	Sun	Banjul	Data Compilation			Site Survey (N-11, N-14)	
28	6	Mon	Dakar	Dep. from Banjul, Arr. in Dakar			Site Survey (N-12, N-16)	
29	7	Tue	Airplane	Report to JICA Senegal Office and Embassy of Japan Dep. from Dakar, Via Paris			Site Survey (N-10, N-09)	
30	8	Wed	Tokyo	Arr. in Narita			Site Survey (N-08, N-07)	
31	9	Thu	Kerewan					Site Survey (N-03, N-04)
32	10	Fri	Kerewan					Site Survey (N-18, N-20)
33	11	Sat	Barra					Site Survey (N-19, N-02)
34	12	Sun	Banjul					Supervision of Subcontractor
35	13	Mon	Banjul					Supervision of Subcontractor
36	14	Tue	Banjul					Supervision of Subcontractor
37	15	Wed	Banjul					Discussion with GBS
38	16	Thu	Banjul					Site Survey (R-01, R-02)
39	17	Fri	Banjul					Data Compilation
40	18	Sat	Banjul					Discussion with Subcontractor
41	19	Sun	Banjul					Data Compilation
42	20	Mon	Dakar	Dep. from Banjul Arr. in Dakar			Report to JICA Senegal Office Dep. from Dakar	
43	21	Tue	Airplane				Via Paris	
44	22	Wed	Airplane				Arr. in Narita	
45	23	Thu	Tokyo					

No.	Date	Day	Place to Stay	Team Leader (JICA) Project Coordinator Mr. Hiroshi KEURA	Chief Consultant/Water Supply Plan/Water Supply Facility Design 2 Mr. Shigeoyoshi KAGAWA	Hydrogeological Survey/Test Drilling/Geophysical Survey 1 Mr. Toshimasa KOBAYASHI	Decentralisation/PPP Mr. Toshihumi ANDO	Operation & Maintenance plan/Socio-Economic Survey Mr. Naoki MORI	Water Supply Facility Design 1 Mr. Koji MIYAUCHI	Hydrogeological Survey/Test Drilling/Geophysical Survey 2 Mr. Kengo OHASHI	Construction & Equipment Planning/Cost Estimation Mr. Kazuhiro ARIYA	Project Coordination Mr. Kazuyoshi HONDA
72	1	Sat	Fanokami						Site Survey (N-07,N-04)	Supervision of Test Drilling (N-01,N-11)	Meeting with Subcontractor	
73	2	Sun	Banjul						Site Survey (N-03)	Supervision of Test Drilling (N-01,N-11)	Survey for Cost Estimation	
74	3	Mon	Banjul						Data Compilation Meeting with DWR	Supervision of Test Drilling (N-01,N-11)	Survey for Cost Estimation	
75	4	Tue	Banjul						Data Compilation	Supervision of Test Drilling (N-01,N-11)	Survey for Cost Estimation Team Meeting	
76	5	Wed	Banjul						Data Compilation	Supervision of Test Drilling (N-01)	Survey for Cost Estimation	
77	6	Thu	Banjul						Data Compilation	Supervision of Test Drilling (N-01,N-10)	Survey for Cost Estimation	
78	7	Fri	Banjul						Data Compilation	Supervision of Test Drilling (N-01,N-10)	Meeting with DWR Team Meeting	
79	8	Sat	Banjul						Data Compilation	Supervision of Test Drilling (N-01,N-10)	Survey for Cost Estimation Team Meeting	
80	9	Sun	Banjul						Site Survey (N-01)	Supervision of Test Drilling (N-01,N-10)	Survey for Cost Estimation	
81	10	Mon	Banjul						Meeting with DWR	Supervision of Test Drilling (N-10)	Meeting with DWR Team Meeting	
82	11	Tue	Banjul						Data Compilation Meeting with DWR	Supervision of Test Drilling (N-16,N-10)	Meeting with DWR Team Meeting	
83	12	Wed	Mansa Konko						Site Survey (R-01)	Supervision of Test Drilling (N-16,N-10,N-09)	Meeting with DWR Team Meeting	
84	13	Thu	Banjul						Site Survey (R-02)	Supervision of Test Drilling (N-16,N-10,N-09)	Meeting with DWR Team Meeting	
85	14	Fri	Banjul						Data Compilation Meeting with DWR	Supervision of Test Drilling (N-16,N-10,N-09)	Meeting with DWR Team Meeting	
86	15	Sat	Banjul						Data Compilation	Supervision of Test Drilling (N-16,N-10,N-09)	Meeting with DWR Team Meeting	
87	16	Sun	Fanokami						Project Coordination	Supervision of Test Drilling (N-16,N-10,N-09)	Team Meeting Survey for Cost Estimation	
88	17	Mon	Banjul						Team Meeting Data Collection and Compilation Dep. from	Supervision of Test Drilling (N-16,N-10,N-09)	Team Meeting Survey for Cost Estimation	
89	18	Tue	Banjul						Survey for Cost Estimation	Supervision of Test Drilling (N-16,N-10,N-09)	Survey for Cost Estimation Data Compilation	
90	19	Wed	Banjul						Survey for Cost Estimation Dep. from Dakar	Supervision of Test Drilling (N-03,N-16,N-07,N-09)	Survey for Cost Estimation Data Compilation	
91	20	Thu	Banjul						Via Paris	Supervision of Test Drilling (N-03,N-16,N-07,N-09)	Survey for Cost Estimation Data Compilation	
92	21	Fri							Arr. in Nauria	Supervision of Test Drilling (N-07,N-09) Dep. from Banjul	Data Compilation Dep. from Banjul	
93	22	Sat								Via Brussels, Paris	Via Dakar	
94	23	Sun								Arr. in Nauria	Via Paris	
95	24	Mon									Arr. in Nauria	
96	25	Tue										
97	26	Wed										
98	27	Thu										
99	28	Fri										
100	29	Sat										
101	30	Sun										
102	31	Mon										
103	1	Tue										
104	2	Wed										
105	3	Thu										
106	4	Fri										
107	5	Sat										

No.	Date	Day	Place to Stay	Team Leader (JICA) Mr. Yosuke SASAKI Project Coordinator Mr. Hiroshi KEURA	Chief Consultant/Water Supply Plan/Water Supply Facility Design 2 Mr. Shigeoyoshi KAGAWA	Hydrogeological Survey/Test Drilling/Geophysical Survey 1 Mr. Toshimasa KOBAYASHI	Decentralization/PPP Mr. Toohitumi ANDO	Operation & Maintenance plan/ Socio-Economic Survey Mr. Naoki MORI	Water Supply Facility Design 1 Mr. Koji MIYAUCHI	Hydrogeological Survey/Test Drilling/Geophysical Survey 2 Mr. Kengo OHASHI	Construction & Equipment Planning/Cost Estimation Mr. Kazuhiro ARIYA	Project Coordination Mr. Kazuyoshi HONDA
108	6	Sun										Data Compilation
109	7	Mon										Data Compilation Meeting with DWR
110	8	Tue										Meeting with Lab, NEA
111	9	Wed										Discussion with subcontractor
112	10	Thu										Meeting with Local Consultants
113	11	Fri										Data Compilation
114	12	Sat										Data Compilation
115	13	Sun										Site Survey (N-17)
116	14	Mon										Data Compilation
117	15	Tue										Discussion with DWR, Subcontractor
118	16	Wed										Data Compilation
119	17	Thu										Discussion with subcontractor
120	18	Fri										Discussion with DWR Site Survey
121	19	Sat										Discussion with DWR
122	20	Sun										Data Compilation
123	21	Mon										Data Compilation
124	22	Tue										Data Compilation, Dep. from Banjul, Arr. in Dakar
125	23	Wed										Data Compilation, Dep. from Dakar
126	24	Thu										Via Paris Arr. in Niarta

(3) Explanation of Draft Final Report

No.	Date	Day	Place to Stay	Team Leader (JICA) Mr. Junji WAKUI	Project Coordinator Mr. Hiroshi KEURA	Chief Consultant/Water Supply Plan/Water Supply Facility Mr. Shigeoyoshi KAGAWA	Water Supply Facility Design 1 Mr. Koji MIYAUCHI
1	19	Sat		Dep. from Niarta	Via Paris	Dep. from Niarta, Via Paris, Arr. in Dakar	Water Supply Facility Design 1
2	20	Sun		Via Paris	Arr. in Banjul	Courtesy call on MFERNAM, Meeting with DWR	
3	21	Mon		Via Brussels, Arr. in Banjul	Meeting with DWR		
4	22	Tue			Singing on MFD, Site Survey		
5	23	Wed					
6	24	Thu		Dep. from Banjul		Dep. from Banjul, Via Dakar	
7	25	Fri		Via Brussels, Via Paris		Via Paris	
8	26	Sat		Arr. in Niarta		Arr. in Niarta	

APPENDIX 3 LIST OF PARTIES CONCERNED IN THE RECIPIENT COUNTRY

Department of State for Fisheries, Water Resources and National Assembly Matters

Hon.Antouman Saho	Minister
Hon.Yankuba Touray	Secretary of State
Mr. Amadou Saine	Permanent Secretary
Mr. Lami Deyabey	Permanent Secretary
Mr. Suwaren Jabai	Deputy Permanent Secretary

Department of Water Resources

Mr. Pa Ousman Jarju	Director
Ms. Amie Jarra	Deputy Director
Mr. Momodou S. Jallow	Principal Hydrologist
Mr. Alhagi Jabbi	Head of Rural Water Supply
Mr. Sulayman Bah	Hydrogeological Technician
Mr. Foday Conteh	Principal Scientific Officer
Mr. Lamin Danso	Principal Technical Officer
Mr. Lamin Saidyleigh	Senior Motivator/LRR
Mr. Sheriff Bojang	Motivator/WR
Mr. Sheriff Mboge	Motivator/NBR
Mr. Isatou Bah	Motivator/CRR

Governor's Office-Western Region

Mr. Lamin Sarneh	Governor
Ms.Sainabou Faal	Deputy Governor

European Community

Mr. Laura Lindoro	EU Officer
Mr. Danio Brown	Water resources Economist
Mr. Momodou,S,Ceesay	Coordinator
Mr. David Karari	Technical Assistance

United Nation Children's Fund

Ms.Min-Whee Kang	Representative
Mr. Jawara S. Saidykhan	Health Specialist
Mr. Musa Drammeh	Water Sanitation and Hygiene

National Environmental Agency

Mr. Momodou B.S Canteh	Director Technical Services Network
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APPENDIX 4

MINUTES OF DISCUSSIONS

APPENDIX 4 MINUTES OF DISCUSSIONS

(1) 1st Survey

MINUTES OF DISCUSSIONS
ON
THE PREPARATORY SURVEY
OF
THE PROJECT FOR RURAL WATER SUPPLY PHASE III
THE REPUBLIC OF THE GAMBIA

In response to a request from the Government of the Republic of The Gambia (hereinafter referred to as "The Gambia"), the Government of Japan decided to conduct a Preparatory Survey of the Project for Rural Water Supply Phase III in The Gambia (hereinafter referred to as "the Project") and entrusted the Study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to The Gambia the First Preparatory Survey Team (hereinafter referred to as "the Team"), which is headed by Mr. Eiro YONEZAKI, Director, West and Central Africa Division II, Africa Department, JICA, and is scheduled to stay in the country from 11th March 2009 to 20th April 2009.

The Team held the series of discussions with the officials concerned of the Government of The Gambia and conducted a field survey in the Project area.

In the course of discussions and field survey, both parties have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.



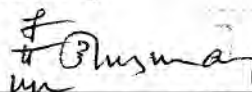
Mr. Eiro YONEZAKI
Leader
Preparatory Survey Team
Japan International Cooperation Agency



Mr. Lamin NYABAYE
Permanent Secretary
Department of State for Fisheries, Water
Resources and National Assembly
Republic of The Gambia



Witnessed by



Mr. Pa Ousman JARJU
Director
Department of Water Resources
Republic of The Gambia

ATTACHMENT

1. Objective of the Project

The immediate objective of the Project is to provide clean and stable water supplies to the villages at the Project sites by constructing water supply facilities and the medium/long term objective is to improve the living standards of the beneficiaries by facilitating access to portable water.

2. Project site (s)

The site of the Project is as shown in Annex-1.

3. Responsible and Implementing Organization

The Responsible Organization is the Department of State for Fisheries and Water Resources and Implementing Organization is the Department of Water Resources (hereinafter referred to as "DWR").

The organization chart is shown in Annex-2.

4. Items requested by the Government of The Gambia

After discussions with the Team, the items described in Annex-3 were finally requested by the Government of The Gambia. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

5-1. The Gambian side understood the Japan's Grant Aid Scheme explained by the Team, as described in Annex-4 and 5.

5-2. The Gambian side will take the necessary measures, as described in Annex-6, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

5-3. JICA will report to The Gambian side if there are any other undertakings based on the result of this survey.

6. Schedule of the Survey

6-1. Consultant members will proceed to further studies in The Gambia by 20th April 2009.

6-2. JICA will send the Second Preparatory Survey Team based on the result of this Survey from the end of May to the end of August 2009.

6-3. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around the early September 2009.

6-4. In case of that the contents of the report is accepted in principle by the Government of The Gambia, JICA will complete the final report and send it to the Government of The Gambia around February 2010.

7. Other relevant issues

7-1. Contents of the Project

7-1-1. Construction of Water Supply Facilities

Both sides agreed that the water supply facilities will be constructed in 15 villages at the maximum. The Gambian side requested the Team to include rehabilitation to change from the diesel pumping facilities to the solar pumping facilities in 3 sites of the JICA Project Phase I. The Team answered and The Gambian side agreed that the Team will report on the additional request for rehabilitation to the Government of Japan and will assess the appropriateness of the request.

7-1-2. Procurement of Equipments

To ensure effective use management and sustainability of water supply facilities which to be constructed by JICA, The Gambian side requested for the equipment as shown in Annex-7.

The Team explained that the procurement of multi purpose equipments such as vehicles, video and GPS will be excluded from the contents of the Project. In addition, the Team explained that the procurement of compressor mounted truck, submersible pump, pumping test generator and borehole logging equipment will be excluded from the contents of the Project because the drilling section of DWR will cease to exist by the restructuring of DWR.

The Gambian side explained DWR has a responsibility to conduct monitoring and supervision of the borehole construction by the private drilling company and strongly requested to procure above equipments. The Gambian side also explained that DWR has the geophysical survey section and conduct geophysical survey for all drilling sites by DWR's direct management, therefore, The Gambian side also requested geophysical resistivity survey equipment.

Regarding water quality analysis equipments, the Team explained that the Japanese side can not provide the consumable materials such as chemicals and so on. The Gambian side explained that the needs for the water quality analysis for the drinking water is increasing, however DWR has not be allocated enough budget to buy enough equipments and materials, and strongly requested to the Team to procure those materials.

The Team answered and The Gambian side agreed that the Team will report on the above requests regarding procurement of equipments to the Government of Japan and will assess the appropriateness of the requests.

7-2. Target Year for the Project

Both sides agreed that the target years for the Project will be set as the year 2020 based on "Vision 2020".

7-3. Quantity of Water Supply

Both sides agreed that quantity of water supply will be set as 35 L/day/person.

7-4. Candidate Project Sites

The Team explained and The Gambian side agreed that 8 villages which are located around the border with Casamance region of Senegal will be excluded from the requested villages for safety reasons. Moreover, both sides agreed that 12 villages which are overlapping with other project supported by other donor agencies will be excluded from the requested villages. The Gambian side requested to add 10 villages and submitted new list of the 20 candidate villages including 5 villages for substitution in case any of the 15 has been identified not suitable. Both sides agreed that the Team will report on the alternative villages to the Government of Japan and the Project sites will be selected from the candidate villages as shown in Annex-7, if the alternative villages are accepted.

7-5. Screening and priority of the requested water supply facilities

Both sides agreed that the all requested water supply facilities will be prioritized through the field study and internal analysis based on the flowchart described in Annex-8.

7-6. Type of Water Supply Facilities

The Team explained that type of water supply facilities will be selected from 3 types, public faucet scheme with pipeline (hereinafter referred to as "Piped scheme"), public faucet scheme for small communities (hereinafter referred to as "Mini-system") and hand pump scheme based on the population of the target year, density and distribution of houses and sub-villages, groundwater potential, benefit/cost analysis and so on. In addition, the Team explained that the solar pumping facility will be applied for the Piped scheme and Mini-system, if the village has the capability for operation and maintenance of the solar pumping facilities.

Regarding hand pumps, The Gambian side is explicit on the policy of direction which state that: population of villages 400 and below should be provided with hand pumps, population of villages 400 and above should be provided with solar power reticulation systems. The villages have at least 700 people in each village bearing in mind of population growth from 2003 to 2009. Implying that 15 beneficiary villages are to be given reticulation systems.

The Team answered that the Team will report on the above contention by The Gambian side to the Government of Japan and will discuss type of facilities which to be constructed.

7-7. Qualifications for successful wells

Both sides agreed the qualifications of successful wells for each scheme are listed in the below table;

Categories	Standards for Successful Wells
Quantity	Piped scheme ; should be over 5.0 m ³ /hour
	Mini-system ; should be over 0.7 m ³ /hour
Water Quality	should meet the Water Quality Standard of WIIO

7-8. Undertakings Specific to the Project

The Team explained that the fence around the site will be constructed by The Gambian side based on the Major Undertakings of Japan's Grant Aid Project as shown in Annex-6. The Gambian side requested that the Japanese side will construct the fence because it will be difficult for The Gambian side to secure the budget for construction of the fence. The Team answered that the Team will report on the request to the Government of Japan and will consider its possibility.

7-9. Environmental and Social Considerations

The Team requested to The Gambian side will take necessary measures regarding environmental and social considerations for implementation of the Project, if necessary. The Gambian side answered that Environmental Impact Assessment is necessary for implementation of the project in general, however, it is not necessary for this Project because the pipeline will be installed in the existing road and the impact for environment will be not serious. In addition, The Gambian side explained that The Gambian side will be able to secure necessary land easily for construction of the pump, solar panel, water distribution tank and so on in the target villages.

Annex-1 Project Site

Annex-2 Organization Chart of the Implementation Agency

Annex-3 Contents of the Project

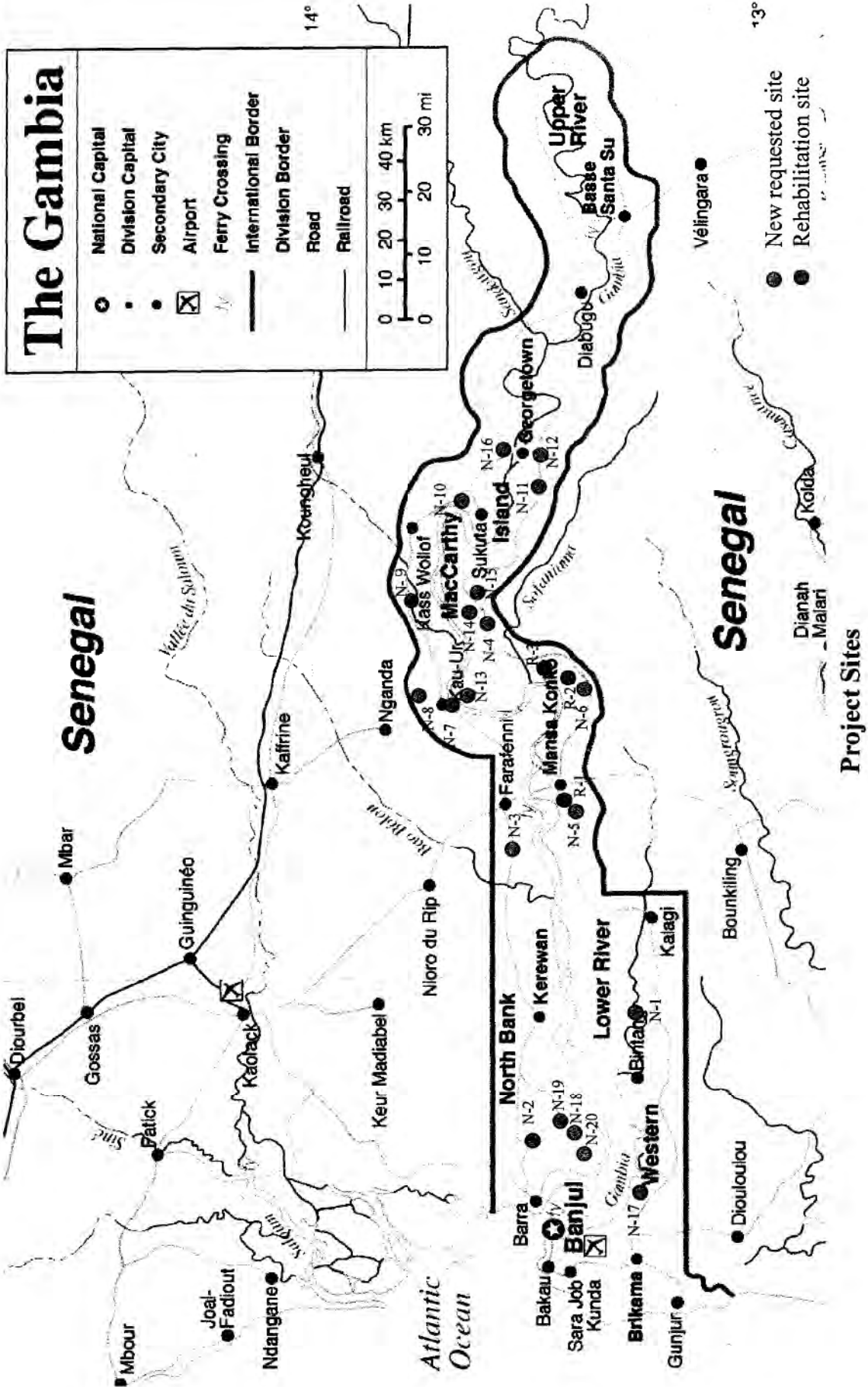
Annex-4 Japan's Grant Aid Scheme

Annex-5 Flow Chart of Japan's Grant Aid Procedures

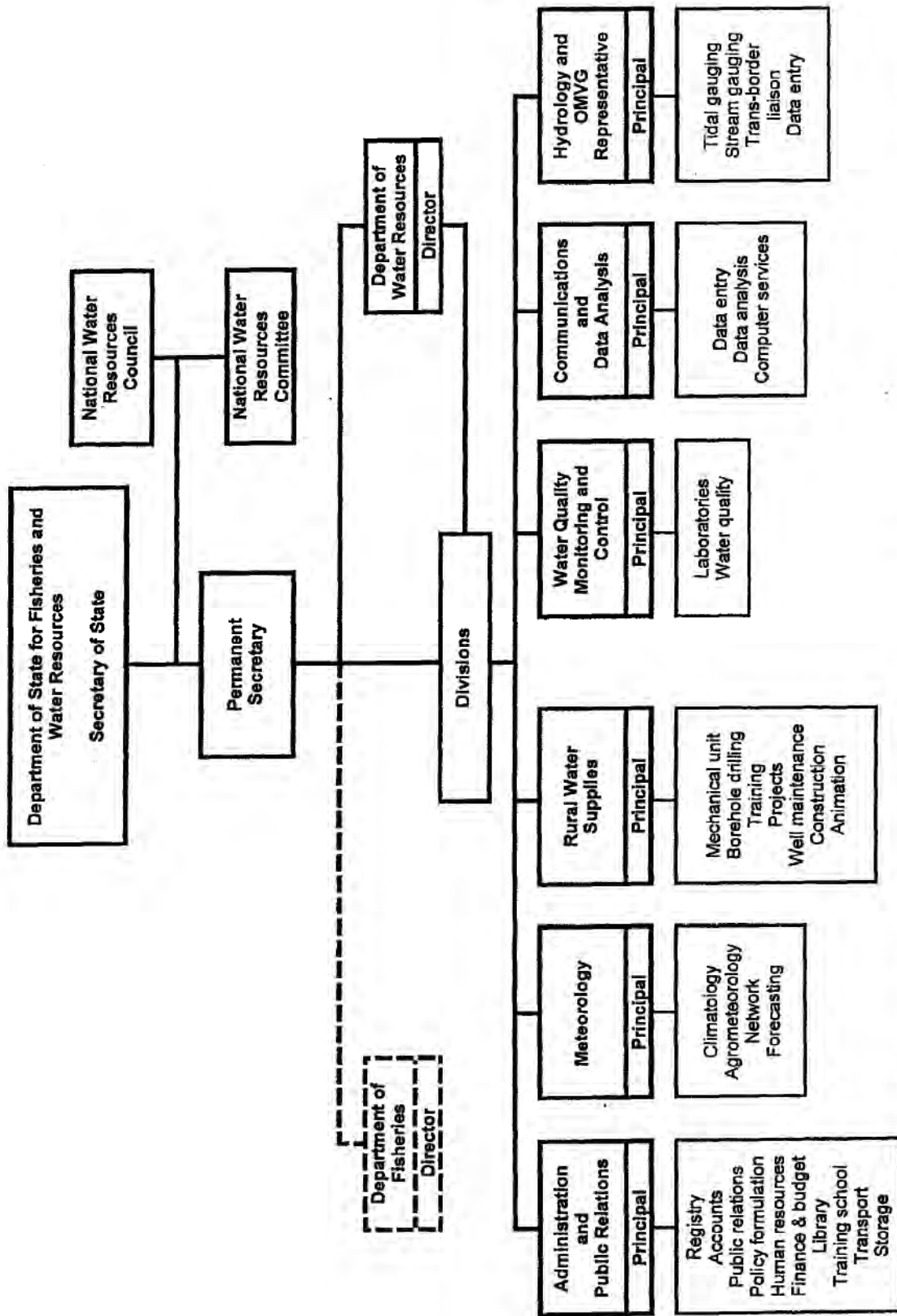
Annex-6 Undertakings by the Government of the Recipient Country

Annex-7 Candidate Village List

Annex-8 Screening Process



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Organization Chart of the Implementation Agency (Department of Water Resources) (2009 restructuring)

Contents of the Project

(1) Construction of Water Supply Facilities

- 1) Construction of 15 boreholes and water supply facilities with solar pumping system
- 2) Rehabilitation of 3 diesel pumping facilities change to solar pumping facilities in 3 sites of the JICA Project Phase I

(2) Procurement of Equipment

- | | |
|---|--------|
| 1) Pick-up Truck : | 2 lots |
| 2) Cargo Truck: | 1 lot |
| 3) Station Wagon: | 1 lot |
| 4) Compressor mounted on truck: | 1 lot |
| 5) Pumping Test Generator 35 KVA: | 1 lot |
| 6) High capacity Submersible pump for pumping test: | 1 lot |
| 7) Water quality analysis equipment: | 1 lot |
| 8) Video: | 1 lot |
| 9) Geophysical Resistivity Survey Equipment: | 1 set |
| 10) Borehole Logging Equipment: | 1 set |
| 11) GPS: | 1 lot |
| 12) Spare parts for the above: | 1 lot |

(3) Technical Assistance for the capacity building of hydrogeological Technicians in groundwater monitoring and supervision of borehole drilling

(4) Soft wear component for the sustainability of the solar pumping system

JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as “the GOJ”) is implementing the organizational reforms to improve the quality of ODA operations, and as part of this realignment, JICA was reborn on October 1, 2008. After the reborn of JICA, following the decision of the Government of Japan (hereinafter referred to as “the GOJ”), Grant Aid for General Project is extended by JICA.

Grant Aid is non-reimbursable fund to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

Japanese Grant Aid is conducted as follows-

- Preparatory Survey (hereinafter referred to as “the Survey”)
 - the Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by The GOJ and JICA, and Approval by the Japanese Cabinet
- Determination of Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as “the G/A”)
 - Agreement concluded between JICA and a recipient country
- Implementation - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide a basic document necessary for the appraisal of the Project by JICA and the GOJ. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the implementation of the Project.

- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

The Report on the Survey is reviewed by JICA, and after the appropriateness of the Project is confirmed, JICA recommends the GOJ to appraise the implementation of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the E/N will be signed between the GOJ and the Government of the recipient country to make a plea for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

The consultant firm(s) used for the Survey Will be recommended by JICA to the recipient country to also work on the Project's implementation after the E/N and the G/A, in order to maintain technical consistency.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(4) Necessity of "Verification"

The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex-5.

(6) "Proper Use"

The Government of recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

(7) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making

payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

- b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

(10) Social and Environmental Considerations

A recipient country must ensure the social and environmental considerations for the Project and must follow the environmental regulation of the recipient country and JICA socio-environmental guideline.

(End)

FLOW CHART OF JAPAN'S GRANT AID PROCEDURES

Stage	Flow & Works	Recipient Government	Japanese Government	JICA	Consultant	Contract	Others
Application	<p>(T/R : Terms of Reference)</p> <p>Request</p> <p>↓</p> <p>Screening of Project → Evaluation of T/R → Project Identification Survey</p>						
Project Formulation & Preparation	<p>Preparatory Survey</p> <p>Preliminary Survey → Field Survey Home Office Work Reporting</p> <p>↓</p> <p>Basic Design Study → Selection & Contracting of Consultant by Proposal → Field Survey Home Office Work Reporting</p> <p>↓</p> <p>Explanation of Draft Final Report → Final Report Final Report</p>						
Appraisal & Approval	<p>Appraisal of Project</p> <p>↓</p> <p>Inter Ministerial Consultation</p> <p>↓</p> <p>Presentation of Draft Notes</p> <p>↓</p> <p>Approval by the Cabinet</p>						
Implementation	<p>(E/N : Exchange of Notes, G/A: Grant Agreement)</p> <p>E/N & G/A</p> <p>↓</p> <p>Banking Arrangement</p> <p>↓</p> <p>Consultant Contract → Verification → Issuance of A/P</p> <p>↓</p> <p>Detailed Design & Tender Documents → Approval by Recipient Government → Preparation for Tendering</p> <p>↓</p> <p>Tendering & Evaluation</p> <p>↓</p> <p>Procurement /Construction Contract → Verification → A/P</p> <p>↓</p> <p>Construction → Completion Certificate by Recipient Government → A/P</p> <p>(A/P : Authorization to Pay)</p> <p>↓</p> <p>Operation → Post Evaluation Study</p>						
Evaluation & Follow up	<p>Ex-post Evaluation → Follow up</p>						

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Major Undertakings to be taken by Each Government

NO	Items	To be covered by the Grant	To be covered by Recipient side
1	To secure land		•
2	To clear, level and reclaim the site when needed		•
3	To construct gates and fences in and around the site		•
4	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		•
	2) Payment commission		•
5	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	•	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		•
	3) Internal transportation from the port of disembarkation to the project site	(•)	(•)
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		•
7	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		•
8	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		•
9	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		•

(B/A: Banking Arrangement, A/P: Authorization to pay)

D

Candidate Village List

New Requested Sites

NO.	VILLAGE NAME	REGION	DISTRICT	POPULATION 2003	POPULATION 2009	REMARK
N-1	KABOCORR TAMPAPU & KILLING	WR	FONI BINTANG	842	1010	
N-2	BERENDING	NBR	LOWER NUJIMI	1440	1728	
N-3	KEKUTA KUNDA COMPLEX	NBR	CENTRAL BADDIBU	1008	1209	
N-4	KERR KATIM WOLOF + FULA	NBR	CENTRAL BADDIBU	820	984	
N-5	MADINA KAIF (SANCHI)	LRR	KIANG EAST	966	1159	
N-6	DONGORоба	LRR	JARRA EAST	898	1077	
N-7	BALLANGHARR COMPLEX (KERR NDERY, MBENTENKI, HOI)	CRR NORTH	LOWER SALOUM	2340	2808	
N-8	JIMBALA COMPLEX	CRR NORTH	LOWER SALOUM	1147	1376	
N-9	FASS	CRR NORTH	UPPER SALOUM	937	1124	
N-10	KUNTAUR FULA KUNDA & JAKABA	CRR NORTH	NIANI	1177	1412	
N-11	KEREWAN SAMBA SIRA	CRR SOUTH	FULLADU WEST	1589	1906	
N-12	FULA BANTANG & SINCHU SORA	CRR SOUTH	FULLADU WEST	1111	1333	
N-13	JISSADI	CRR SOUTH	NIAMINA DKK	910	1092	
N-14	SOTOKOI	CRR SOUTH	NIAMINA EAST	897	1076	
N-15	MAKA AND NIJE KUNDA	CRR SOUTH	NIAMINA EAST	1252	1502	

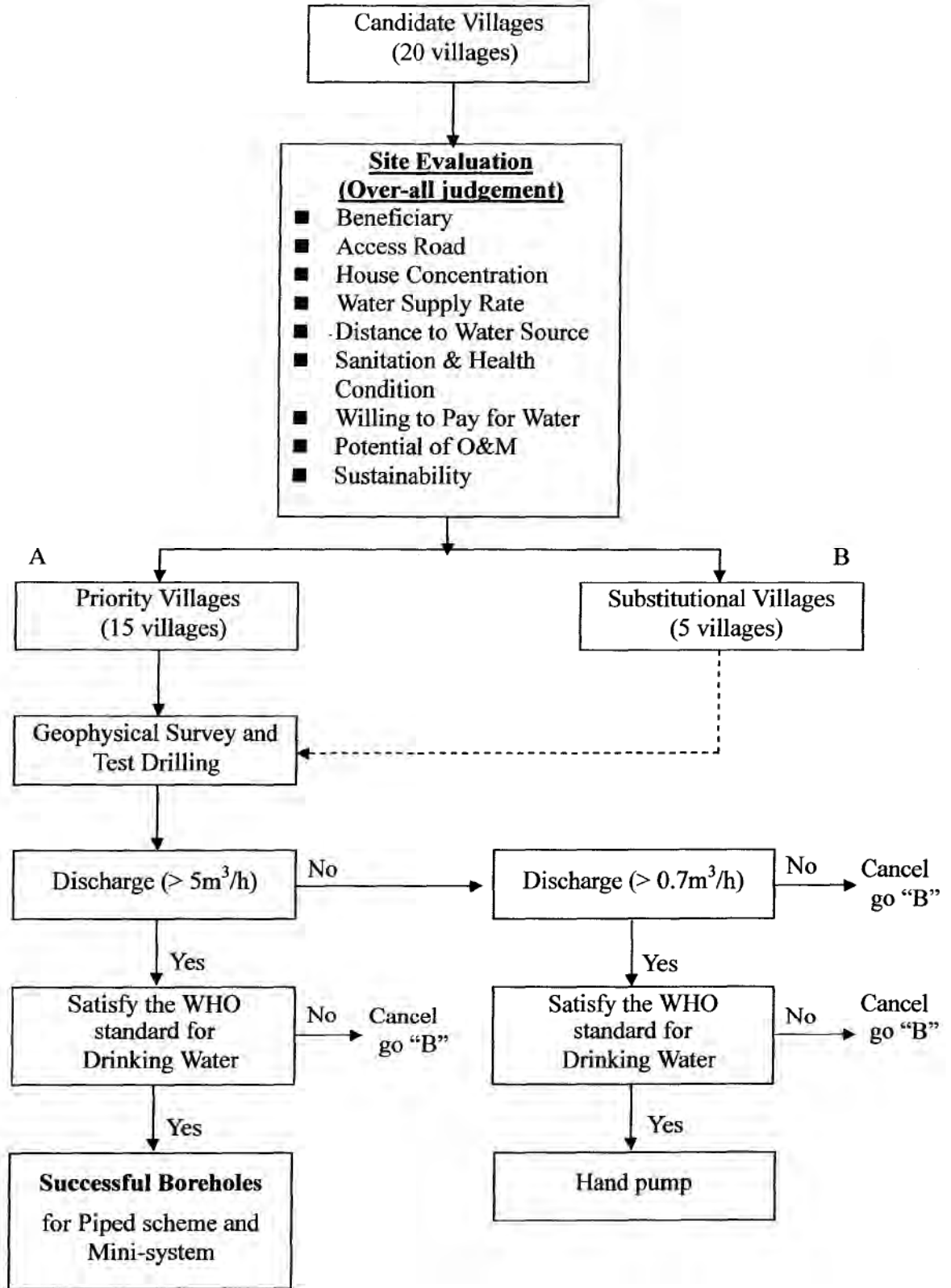
SUPPLEMENTRY LIST

N-16	LAMIN KOTO + BADALA + SOTOKOI	CRR NORTH	SAMI	1400	1680	
N-17	GIDDA + TALOKOTO	WR	KOMBO EAST	870	1044	
N-18	KERR MAMA	NBR	UPPER NUJIMI	560	672	
N-19	KERR CHERNO	NBR	UPPER NUJIMI	803	963	
N-20	BANTA KILLING	NBR	UPPER NUJIMI	724	868	

Rehabilitation Sites (Conversion Site From Diesel Generator to Solar)

R-1	TONIATABA	LRR	JARRA WEST	1228	1473	
R-2	BURENG	LRR	JARRA EAST	1434	1720	
R-3	BARROW KUNDA	LRR	JARRA EAST	2314	2776	

Criteria for the Selection of Project Sites



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MINUTES OF DISCUSSIONS
ON
THE PREPARATORY SURVEY
OF
THE PROJECT FOR RURAL WATER SUPPLY PHASE III
IN
THE REPUBLIC OF THE GAMBIA

In response to a request from the Government of the Republic of The Gambia (hereinafter referred to as "The Gambia"), the Government of Japan decided to conduct a Preparatory Survey of the Project for Rural Water Supply Phase III (hereinafter referred to as "the Project") and entrusted the Study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to The Gambia the Second Preparatory Survey Team (hereinafter referred to as "the Team"), which is headed by Mr. Yosuke SASAKI, Visiting Senior Advisor, JICA, and is scheduled to stay in the country from 24th May 2009 to middle of September 2009.

The Team held the series of discussions with the officials concerned of the Government of The Gambia and conducted a field survey in the Project area.

In the course of discussions and field survey, both parties have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

佐々木 洋介

Mr. Yosuke SASAKI
Leader
Preparatory Survey Team
Japan International Cooperation Agency



Banjul, 28th May 2009

Mr. Lamin NYABALLY
Permanent Secretary
Ministry of Fisheries, Water Resources and
National Assembly Matters
Republic of The Gambia

Witnessed by

Amie Jara

Mrs. Amie Jara
Deputy Director
Department of Water Resources
Ministry of Fisheries, Water Resources and
National Assembly Matters
Republic of The Gambia

ATTACHMENT

1. Objective of the Project

The immediate objective of the Project is to provide clean and stable water to the villages at the Project sites by constructing water supply facilities and the medium/long term objective is to improve the living standards of the beneficiaries by facilitating access to portable water.

2. Project site (s)

The site of the Project is as shown in Annex-1.

3. Responsible and Implementing Organization

The Responsible Organization is the Ministry of Fisheries, Water Resources and National Assembly Matters, and Implementing Organization is the Department of Water Resources (hereinafter referred to as "DWR").

The organization chart is shown in Annex-2.

4. Items requested by the Government of The Gambia

After discussions with the Team, the items described in Annex-3 were finally requested by the Government of The Gambia. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

5-1. The Gambian side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of The Gambia explained by the Team, as described in Annex-4, 5 and 6 of the Minutes of Discussions signed by both parties on 18th March 2009.

5-2. JICA will report to The Gambian side if there are any other undertakings based on the result of this survey.

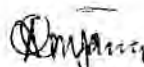
6. Schedule of the Survey

6-1. Consultant members will proceed to further studies in The Gambia by middle of September 2009.

6-2. JICA will prepare the draft report of the survey in English and dispatch a mission to The Gambia in order to explain its contents around the end of November 2009. around December.

6-3. In case of the contents of the draft report are accepted in principle by the Government of The Gambia, JICA will complete the final report and send it to the Government of The Gambia around February 2010.

6-4. The Team explained that implementation of the preparatory survey is not a commitment of the approval of the Project



7. Other relevant issues

7-1. Contents of the Project

7-1-1. Priority of the Survey Sites

The Team explained the process and the result of the selection of survey sites based on the result of the first preparatory survey. Both sides agreed to replace the order of priority of N-13 site (16th priority) with N-17 site (14th priority), because the demand of water in N-13 is higher rather than that in N-17 site which has already had mini solar system constructed by NGO in Talokoto village. Both sides agreed that the geophysical survey and the test drilling will be conducted on the 15 high priority sites. The priority survey sites are shown in Annex-3. Both side also agreed that the Site N-2 will be eliminated from candidate sites because of duplication with other project and Talokoto village will be excluded from N-17 site.

7-1-2. Rehabilitation of the Diesel Pumping Systems

Both sides agreed that the Team will survey three (3) sites of diesel pumping systems which were constructed in the JICA Project Phase I to judge the appropriateness of their rehabilitating and refurbishment to solar pumping systems in the Project. In addition, both sides agreed that R-1 site which has electric supply nearby the pump will be also considered to refurbish to the pumping system using public electricity.

7-1-3. Procurement of Equipment

Both sides agreed that the Team will examine the necessity of the procurement of equipment for pumping test, borehole logging, geophysical survey and GPS in the Second Preparatory Survey.

The Team explained that the procurement of vehicles will not be approved basically, however, the Team will examine the necessity of minimum number of vehicles such as pick up truck for the pumping test, borehole logging and geophysical survey based on the past performance and the future plan. The Team requested that The Gambian side will provide the justification for the necessity of the vehicles,

The Gambian side requested for the procurement of laboratory equipment and materials for water quality analysis and video. The Team replied that the procurement of these equipment and materials will not be accepted.


7-1-4. Fence Surrounding the Site

The Team explained that, in case of the solar pumping system will be constructed in the Project, construction of the fence surrounding the system will be considered as a component of the Project since the fence is essential for the system in terms of protection and proper management, especially for solar panels

7-2. Type of Water Supply Facilities

Both side agreed that the sites which are suitable for hand pump scheme rather than piped scheme such as solar pumping system will be eliminated from the priority survey sites based on the result of the survey and replace the sites with the another sites listed in the supplementary



2
A-29 



survey sites as shown in Annex-5.

The Team explained that the solar pumping system will be applied for the Piped scheme, if the village has the enough capability for operation and maintenance of the solar pumping system.

7-3 Number of Successful Boreholes

Both sides agreed that maximum 15 successful boreholes will be drilled in 19 sites listed in Annex-4. In addition, both sides agreed that test hole will be drilled in the 15 priority sites. In the event of unsuccessful test hole within the 15 priority, then supplementary list will considered for substitution. The Team explained and The Gambian side agreed that new alternative sites other than 19 survey sites will not be accepted as the candidate survey sites despite that 15 successful boreholes will not be drilled in 19 survey sites.

The Team explained and The Gambian side understood that all of test drilling may not be finished during the survey period because of the difficult situation such as climate condition, ground condition and so on.

Both sides agreed that as the successful boreholes will be eventually used as production wells in the Project if the implementation of the Project will be approved by the Government of Japan, The Gambian side will take appropriate measures for their protection until water supply system will be constructed.

7-4 Environmental and Social Consideration

The Gambian side explained that Environmental Impact Assessment (hereinafter referred to as "EIA") is not necessary for implementation of the Project because the pipeline will be installed along the existing road and the impact to environment will not be expected to be so serious. The Team requested to The Gambian side to submit the evidence of the above explanation to the Team such as official letter from National Environment Agency or the copy of pertinent laws and regulations. The Gambian side agreed to submit it to the Team by the end of June 2009.

Annex-1 Project Site

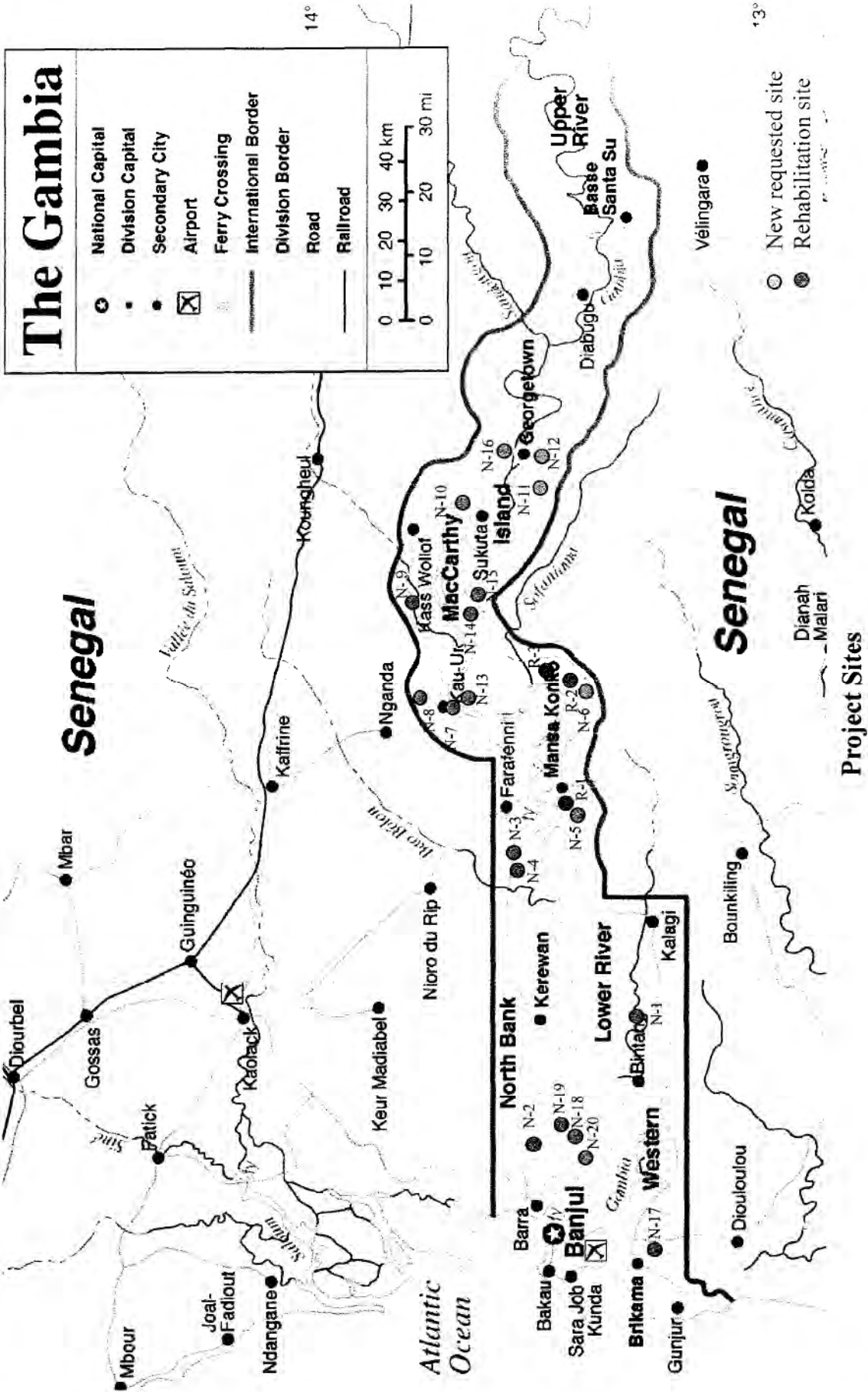
Annex-2 Organization Chart

Annex-3 Contents of the Project

Annex-4 Priority of the Candidate Project Sites

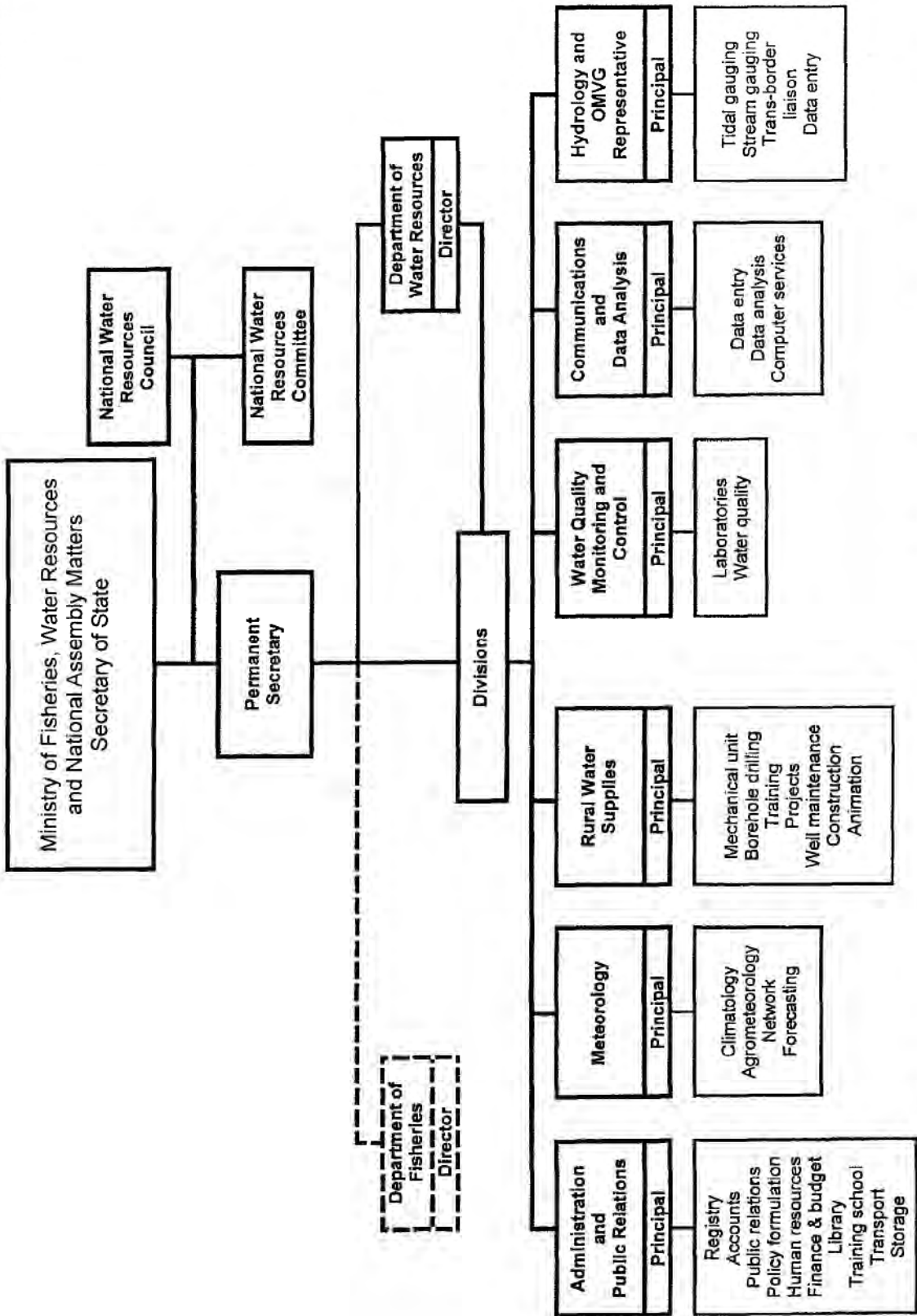
Annex-5 Criteria for the Selection of Project Sites





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Organization Chart of the Implementation Agency (Department of Water Resources) (2009 restructuring)

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Contents of the Project

(1) Construction of Water Supply Systems

- 1) Construction of 15 boreholes and water supply facilities with solar pumping system
- 2) Rehabilitation of 3 diesel pumping systems change to solar pumping systems in 3 sites of the JICA Project Phase I

(2) Procurement of Equipment

- | | |
|---|----------------|
| 1) Vehicles : | minimum number |
| 2) Compressor mounted on truck: | 1 lot |
| 3) Pumping Test Generator 35 KVA: | 1 lot |
| 4) High capacity Submersible pump for pumping test: | 1 lot |
| 5) Geophysical Resistivity Survey Equipment: | 1 set |
| 6) Borehole Logging Equipment: | 1 set |
| 7) GPS: | 1 lot |
| 8) Spare parts for the above: | 1 lot |

(3) Soft wear component for the sustainability of the solar pumping system

Anyama

Hob

Phiso

List of Priority Candidate Survey Sites

Priority Survey Sites

Site No.	Village Name	Region	District	Population in 2003	Population to be expected in 2020	Remark
N-1	Kabocorr Tampapo & Killing	WR	Foni Bintang	842	1,369	
N-3	Kekuta Kunda Complex	NBR	Central Baddibu	1,008	1,639	
N-4	Kerr Katim Wolof + Fula	NBR	Central Baddibu	820	1,334	
N-5	Madina Kaif (Sancha)	LRR	Kiang East	966	1,571	
N-6	Dongoroba	LRR	Jarra East	898	1,460	
N-7	Ballangharr Complex (Kerr Ndery, Mbentenki, Hoi)	CRR North	Lower Saloum	2,340	3,805	
N-8	Jimbala Complex	CRR North	Lower Saloum	1,147	1,865	
N-9	Fass	CRR North	Upper Saloum	937	1,523	
N-10	Kuntaur Fula Kunda & Jakaba	CRR North	Niani	1,177	1,914	
N-11	Kerewan Samba Sira	CRR South	Fulladu West	1,589	2,583	
N-12	Fula Bantang & Sinchu Sora	CRR South	Fulladu West	1,111	1,806	
N-13	Jissadi	CRR South	Niamina DKK	910	1,480	
N-14	Sotokoi	CRR South	Niamina East	897	1,458	
N-15	Maka and Njie Kunda	CRR South	Niamina East	1,252	2,035	
N-16	Lamin Koto + Badala + Sotokoi	CRR North	Sami	1,400	2,277	

Supplementary Survey Sites

N-17	Gidda	WR	Kombo East	211	337	
N-18	Kerr Mama	NBR	Upper Nuimi	560	911	
N-19	Kerr Cherno	NBR	Upper Nuimi	803	1,305	
N-20	Banta Killing	NBR	Upper Nuimi	724	1,176	

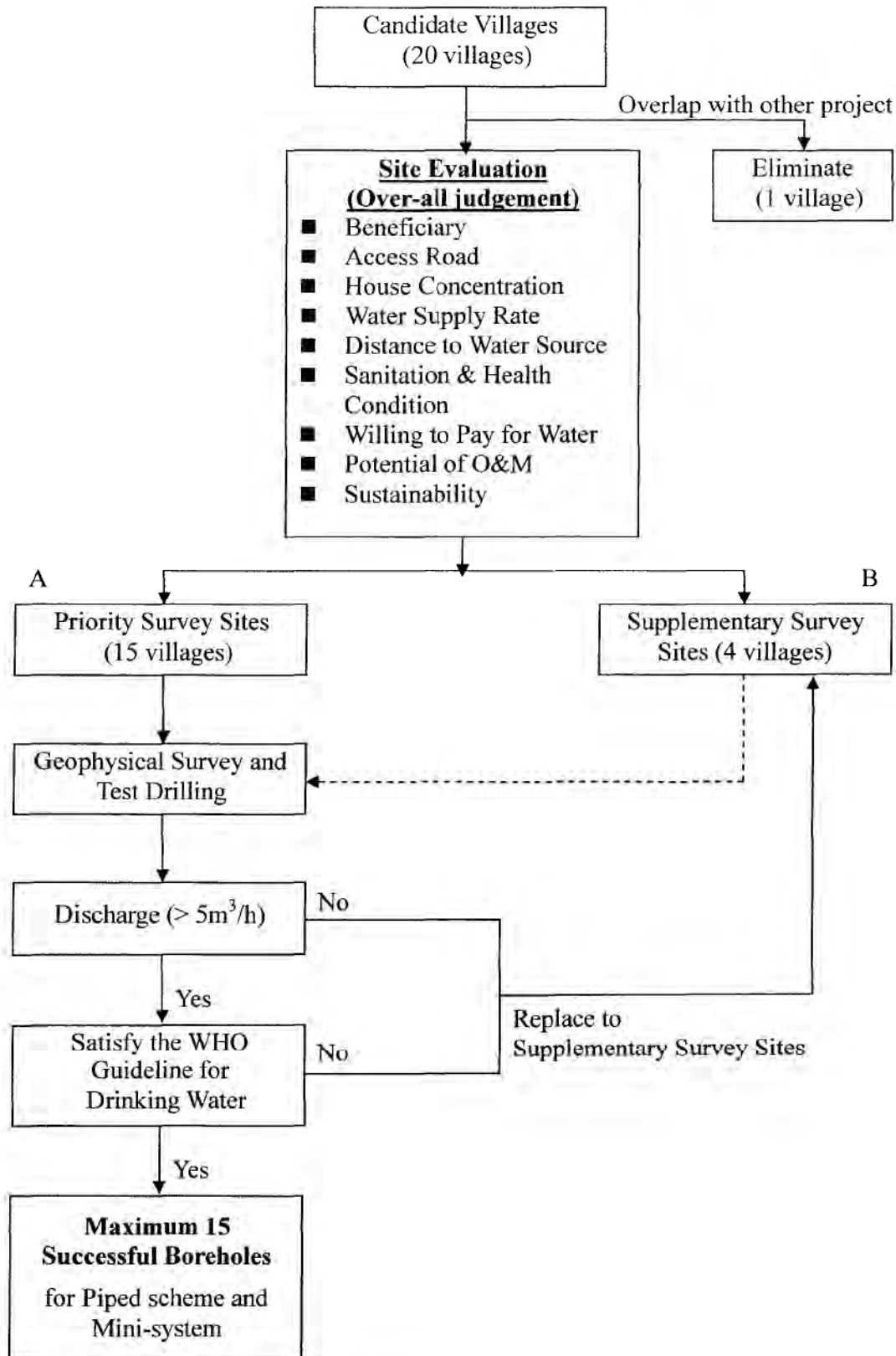
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N-2	Berending	NBR	Lower Nuimi	1,440	2,342	Overlap
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Rehabilitation Sites (Conversion Site from Diesel Generator to Solar)

R-1	Toniataba	LRR	Jarra West	1,228	1,473	Electricity
R-2	Bureng	LRR	Jarra East	1,434	1,720	
R-3	Barrow Kunda	LRR	Jarra East	2,314	2,776	

Criteria for the Selection of Project Sites



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REPUBLIC OF



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Department of State for Fisheries, Water Resources &
National Assembly Matters
7, Marina Parade, Banjul The Gambia

THE PREPARATORY SURVEY
OF
THE PROJECT FOR RURAL WATER SUPPLY PHASE III
IN
THE REPUBLIC OF THE GAMBIA

ATTENDANCE REGISTER

DISCUSSION ON THE PROJECT OUTLINE 26TH MAY 2009

ITEM	NAME	DESIGNATION	SIGNATURE
	Lamin Nyabaly	Permanent Secretary	
	SASAKI Yosuke	Team Leader	
	IKEURA Hiroshi	Team Member	
	KAGAWA SHIGEHOSHI	Consultants Leader	
	Anne Ferra	Deputy Director - DWR	
	Alhaji Jabba	Senior Hydrolician	

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THE PREPARATORY SURVEY
OF
THE PROJECT FOR RURAL WATER SUPPLY PHASE III
IN
THE REPUBLIC OF THE GAMBIA

ATTENDANCE REGISTER

DISCUSSION ON THE MINUTES 27TH MAY 2009

ITEM	NAME	DESIGNATION	SIGNATURE
	Lamin Nyabally	Permanent Secretary	
	Mohobou S. JALLO	Principal Hydrologist	
	IKEURA Hiroshi	Team Member	
	SASAKI Yosuke	Team Leader	
	KAGAWA SHIGEYOSHI	Consultant Leader	
	Amie Janga	Deputy Director - DWR	
	Alhaji Tubbi	Senior Hydraulic En.	

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OF
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ATTENDANCE REGISTER

SIGNING OF THE MINUTES OF THE DISCUSSION 28TH MAY 2009

ITEM	NAME	DESIGNATION	SIGNATURE
	SASAKI Yosuke	Team Leader	
	IKEURA Hirosh.	Team Member	
	KAGAWA SHIGEO SHI	Consultants Leader	
	Momobou S. JALLOW	Principal Hydrologist	
	Anne Jara	Deputy Director - DOR	
	Lamin Nyabally	Permanent Secretary	
	Alhaji Jabbi	Senior Hydrographer	

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