4. Minutes of Discussions

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON THE PROJECT FOR
RURAL WATER SUPPLY AND SANITATION IN OYO STATE
IN THE FEDERAL REPUBLIC OF NIGERIA

In response to the request from the Government of the Federal Republic of Nigeria (hereinafter referred to as "Nigeria"), the Government of Japan has decided to conduct a basic design study on the Project for Rural Water Supply and Sanitation in Oyo State (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Nigeria the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Takashi Kato, Director, First Overseas Assignment Division, Secretariat of Japan Overseas Cooperation Volunteers, JICA, and is scheduled to stay in the country from September 24 to November 14, 2001.

The Team held discussions with the concerned officials of the Government of Nigeria, and conducted a field survey at the project site.

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

Abuja, 5 October 2001

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Basic Design Study Team
Japan International Cooperation Agency
Japan

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ATTACHMENT

1. Objective

The objective of the Project is to improve the health and living standard of the people who live in guineaworm endemic areas in Oyo State by providing potable water through the procurement of equipment related to groundwater development and construction of water supply facilities.

2. Project Sites

The Project sites requested by the Nigerian side are located at the sixteen (16) Local Government Areas of Akinyele, Afijio, Atiba, Ibarapa East, Ibarapa North, Ibarapa Central, Orire, Orelope, Iseyin, Itesiwaju, Lagelu, Ogo-Oluwa, Oyo West, Oyo East, Iwajowa and Surulere for drilling of new boreholes as shown in annex-1.

3. Responsible and Implementing Agencies

The responsible organization of the Project is the Federal Ministry of Water Resources (FMWR).
The implementing organization of the Project is the Oyo State Water and Sanitation Project (WATSAN), Office of the Executive Governor, Oyo State.
The organization chart is shown in annex-2.

4. Items Requested by the Federal Government of Nigeria

After a series of discussions with the Team, the Nigerian side requested the items shown in annex-3, which were different from the original ones. The Nigerian side explained that the new list was considered based on actual situation of drilling and related works and strengthening of community mobilization activity. The Japanese side explained that in Japan's Grant Aid, equipment and materials that are for general use and able to be procured locally would be prioritized lower.
Both sides confirmed that the appropriateness of the request shall be assessed according to the further studies and analysis in Japan and the final components of the Project shall be decided after the assessment.

5. Japan's Grant Aid System

(1) The Nigerian side has understood Japan's Grant Aid system explained by the Team as described in annex-4.
(2) The Nigerian side will take necessary measures, as described in annex-5, for smooth implementation of the Project, on condition that the Grant Aid Assistance by the Government of Japan is extended to the Project.

6. Schedule of the Study

(1) The consultants of the Team will proceed to carry out further studies such as interviews/surveys on socio-economy, hydrogeological investigation, water quality examination, management condition of the existing machinery and equipment and so on, in Nigeria until November 14, 2001.

(2) Based on the Minutes of Discussions and technical examination of the study results, JICA will prepare a draft report in English and dispatch a mission to Nigeria in order to explain its contents around February 2002.

(3) If the contents of the draft report are accepted in principle by the Nigerian side, JICA will complete the final report and send it to the Nigerian side around April 2002.

7. Other Relevant Issues

The following issues were discussed and confirmed by both sides.

(1) Responsibility of each organization concerning the Project

The FMWR shall collaborate with National Planning Commission and other Federal bodies to facilitate the implementation of the Project in such areas as exemption from taxes and so on, while the Oyo State WATSAN shall take responsibility of operation and maintenance of facilities and equipment and borehole construction through mobilization of Local Government Areas.

(2) Proposed Components of the Project

The Nigerian side requested as one of the components of the Grant Aid the consultancy services ("soft component") for assistance in community management of facilities and capacity building of Oyo State WATSAN in order to ensure the sustainability of the Project.

After discussions, both sides agreed that the Project would be composed of the following;

- Construction of maximum number of 100 boreholes Nigeria side
- Procurement of equipment and materials
- Assistance for implementation of community mobilization programme ("Soft Component")
- Assistance for implementation of operation, maintenance and management of equipment and materials ("Soft Component")

However, the final components of the Project shall be determined according to the result of further studies and analysis in Japan and further discussions between the Nigerian side and the Japanese side.

(3) Equipment and materials requested for procurement

Both sides agreed that the necessity of the equipment and materials requested by the Nigerian side as stated in annex-3 shall be examined from the view points of purpose of use, future project plan, technical and budgetary availability for operation and maintenance, conditions of the existing equipment, etc. The type, quantity and specification of these equipment and materials shall be determined on the minimum required and the easiest operation level.

(4) Screening of villages for borehole construction

The list of the candidate sites for borehole construction is shown in annex-6 in order of priority.

Both sides agreed that the sites are to be examined in terms of socio-economic aspect, ease of construction and hydrogeological conditions. Actual sites will be selected starting from the top of the list and applying criteria below;

- demographic condition
- number of guineaworm infection cases
- existing water facilities
- accessibility
- hydrogeological conditions
- water quality (applying WHO guidelines)
- capacity for operation and maintenance of the facilities at community level
- absence of water projects by other donors
- willingness to pay for operation and maintenance of water supply facilities by community
- assistance from Local Government Areas
- technical and managerial competence of the implementing organization
- sanitation and hygienic conditions
- financial stability of the project
- budgetary allocation of the Japanese side

Among the criteria, emphasis would be placed on demographic condition, number of guineaworm infection cases and existing water facilities.

(5) Unsuccessful borehole and alternative site

Both sides agreed that in case the first borehole at a certain site is unsuccessful, a second borehole would be drilled at an appropriate locality in the same site. However, if the second borehole is unsuccessful, the third would not be drilled. An alternative site on the candidate village list (annex-6) would be chosen with due priority consideration.

(6) Type of water supply facilities

Both sides agreed that basically water supply facilities under the Project would be boreholes equipped with handpumps. However if submersible pump is adjudged to be more appropriate, it would be installed provided technical and financial management by a community is proved to be feasible.

(7) Provision of existing equipment for the Project

The Nigerian side agreed to provide the existing equipment and vehicles for the smooth implementation of the Project.

(8) Operation and maintenance of facilities, equipment and materials

The water supply facilities requested by the Nigerian side shall be properly operated and maintained

by the respective communities and Local Government Areas with support by Oyo State WATSAN.
The equipment and materials requested by the Nigerian side shall be properly operated and maintained by the Water Supply Unit and Workshop Unit of Oyo State WATSAN respectively.
The Nigerian side shall make preparations for adequate workshops and stores to keep the equipment and materials before the implementation of the Project commences.

(9) Other Responsibilities of the Nigerian side

The Nigerian side agreed to be responsible for mobilizing villagers for timely construction of access roads, fences around the completed apron and the drainage pit.

(10) Cooperation with UNICEF

The Team and UNICEF discussed on the Project on September 26, 2001. The Japanese side and UNICEF would cooperate in rural water supply sector for the most effective path to achieve the objective of the Project.
The details of the cooperation plan will be developed during the further studies, and the consultants of the Team will visit UNICEF Lagos Office during the study to discuss the plan.
The Nigerian side agreed to play the leadership role and to coordinate the cooperation plan.

(11) Safety and security

The Nigerian side would ensure that necessary measures are taken for the safety and security of the Japanese nationals involved in the Project.

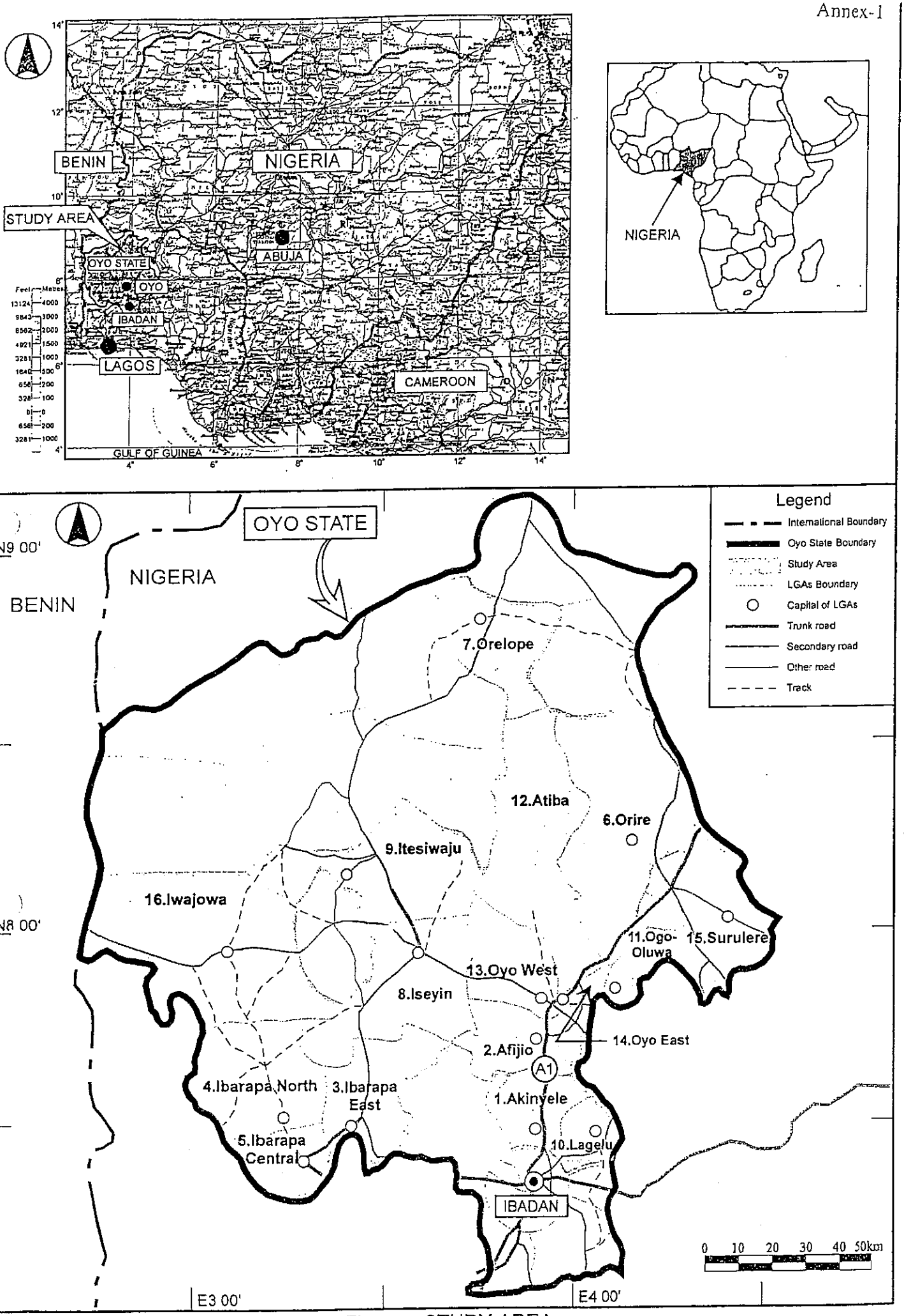
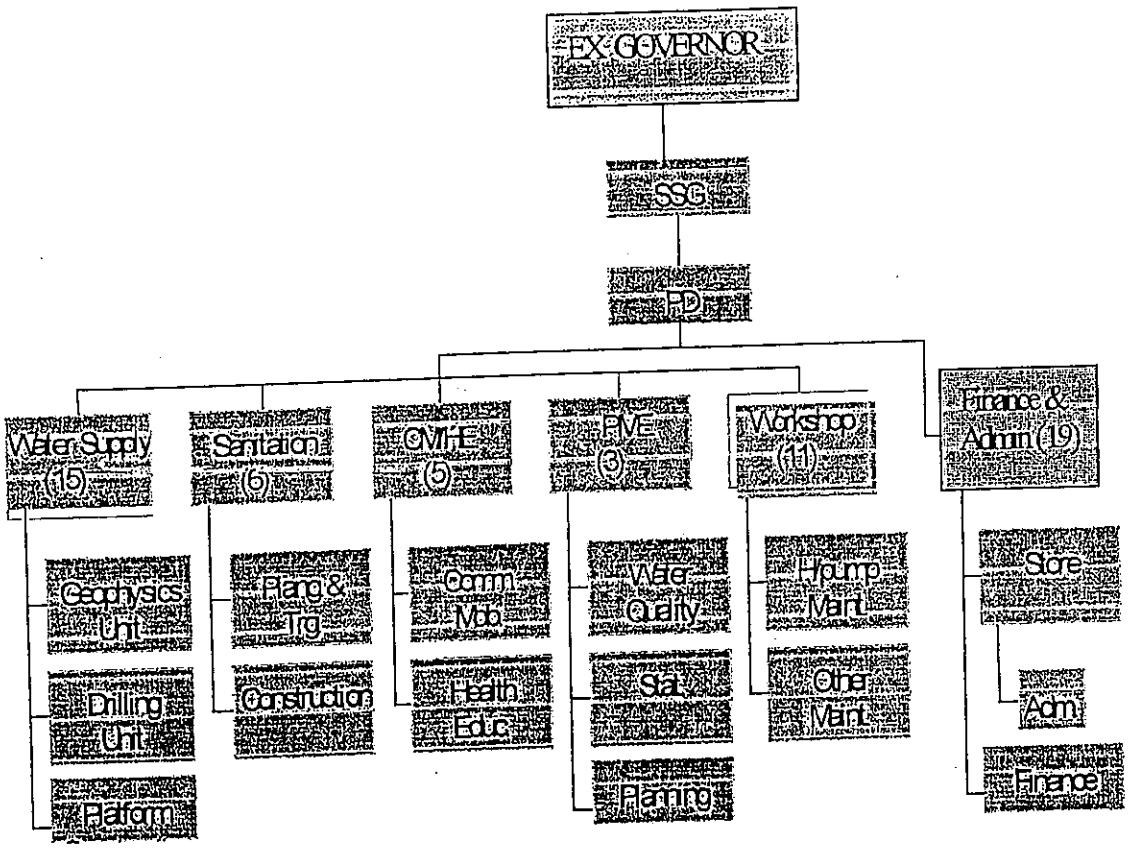


Fig. STUDY AREA

Organizational Chart

OYO STATE WATER & SANITATION



NOTE: SSG – Secretary to the State Government; PD – Project Director;
PME – Planning , Monitoring & Evaluation; CH/HE. – Community Mobilisation;
Health Educ. – Health Education; Stat. – Statistics; H/pump Maint. – Handpump Maintenance;
Adm. – Administration.

Annex-3

Items Requested by the Government of Nigeria

I. Construction of maximum number of 100 boreholes

II. Procurement of Equipment and Materials described in the list below

List of Equipment and Materials Requested

s/n	Items	Features	Quantity	Remarks
1	Drilling Rig	(1) Drilling Rig -Hydraulically powered -with Air/foam rotary drilling and down the hole drilling -Capable to drill 250mm (9 7/8") hole in soft overburden or 203mm (8") in medium-hard overburden plus 152m DHD in hard rock up to 250mm (830') -With air-cooled diesel deck engine -With a torque range of 35000-50000 lb-in -Mounted on a 6 to 10 wheel diesel engine truck (all wheel driven) -With facility for Mud-drilling (2) Standard Accessories and Tools for Rig	2 units 2 lots	
2	Compressor	-Actual free Air Delivery-350 –500 liters/s -Normal operating Pressure (11-12 bar) -With Automatic control solenoid or any other safety mechanism -Mounted on 6 or 10 wheel diesel engine truck (all wheel driven)	2unit	
3	Geophysical and Topographical Survey/ Research Equipment etc.	(1) Electromagnetic Survey Instrument (2) Resistivity Survey Instrument (3) Water Level Indicator (4) Water Flow Meters (5) GPS Instrument (6) Radio Telephone system (7) Pneumatic Grinding Machine (8) Centralizer	2sets 2sets 4units 4units 4units 4sets 2sets 4units	For each drilling teams (Drilling teams will be four). (5) For drilling teams and sanitation team (7) For grinding of blunt bottom bits
4	Computer	(1) Computer Machine & Accessories (2) UPS (3) LaserJet Printer	3sets 3units 2units	
5	Photocopying Machine		1unit	
6	Operation and Maintenance Materials and Management of	(1) Bearing pullers (2) Nozzle Remover (3) Pressurised Steam Washing Machine (4) Hydraulic Trolley Jack (3-6 tons)	4units 4units 2units 3units	

	Equipment	(5) Electrically operated Air Compressor (6) Heavy duty mechanical tool box (7) Light duty mechanical tool box (8) Riveting machine (9) Ruwatsan 1 Handpumps (10) Ruwatsan 1 Handpump Maintenance Kit (11) Village Level Operation and Maintenance Tool Box (12) Standard Maintenance Tool Box	1unit 3sets 3sets 2units 100units 1000sets 100sets 16sets	(10) To distribute LGAs on request form basis. (11) For each WATSAN Committees (12) For each LGAs
7	Water Testing Kit	(1) Spectrophotometer (Test Kit) (2) Water Quality Analysis Equipment (3) Distillation Machine (4) Chemical and Bacteriological Reagents	1units 2sets 1unit 1lot	(3) Necessary for pre-arrangement for reagents
8	Vehicles	(1) 4x4 Truck with 4-ton Crane (2) Light Vehicles- 4WD Pick-up	2units 3units	To serve as support vehicle for each set of drilling rig
9	Information, Education and Communication Materials (for community mobilization)	(1) Photo Camera (2) Megaphone (3) Public Address System	1unit 4units 4units	For community mobilization activities
10	Spare Parts	Spare Parts for the above items and for existing drilling rig and vehicles	1lot	Items should be cleared after further study
11	Casing and Screen pipes	(1) Casing Pipe (2) Screen Pipe	1lot 1lot	

III. Technical Assistance for Implementation of Community Mobilization Programme (equipment listed in "II" above, serial 9)

IV. Technical Assistance for the Implementation of Operation, Maintenance and Management of Equipment and Materials (equipment listed in "II" above, serial 6).

JAPAN'S GRANT AID

1. Japan's Grant Aid System

(1) Grant Aid Procedures

1) Japan's Grant Aid Program is executed through the following procedures.

- Application (Request made by a recipient country)
- Study (Basic Design Study conducted by JICA)
- Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet)
- Determination of the implementation
  (The Notes exchanged between the Governments of Japan and the recipient country)
- Implementation (Implementation of the Project)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using Japanese consulting firms.

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Programme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

(2) Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project"), is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

i) Confirmation of the background, objectives and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation;
ii) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic points of view;
iii) Confirmation of items agreed on by both parties concerning the basic concept of the Project;
iv) Preparation of a basic design of the Project; and
v) Estimation of costs of the Project.

The contents of the original request 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 Japan's Grant Aid Scheme.

The Government of Japan 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 through 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 the smooth implementation of the Study, JICA uses a registered consulting firm. JICA selects a firm based on proposals submitted by interested firms. The firm selected carries out a Basic Design Study and writes a report, based upon terms of reference set by JICA.

The consultant firm used for the Study is recommended by JICA to the recipient country to also work in the Project's implementation after the Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay in implementation should the selection process be prepared.

(3) Japan's Grant Aid Scheme

1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non-reimbursable funds 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. Grant Aid is not supplied through the donation of materials as such.

2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

3) "The period of the Grant" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors and final payment to them must be completed.
However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

4) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments 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 consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

5) Necessity of "Verification"

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

6) Undertakings required to 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 the followings:

i) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction;

ii) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the site;

iii) To secure buildings prior to the procurement in case the installation of the equipment;

iv) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid;

v) 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 contracts;

vi) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such as facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work;

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

viii) "Re-export"
The products purchased under the Grant Aid shall not be re-exported from the recipient country.

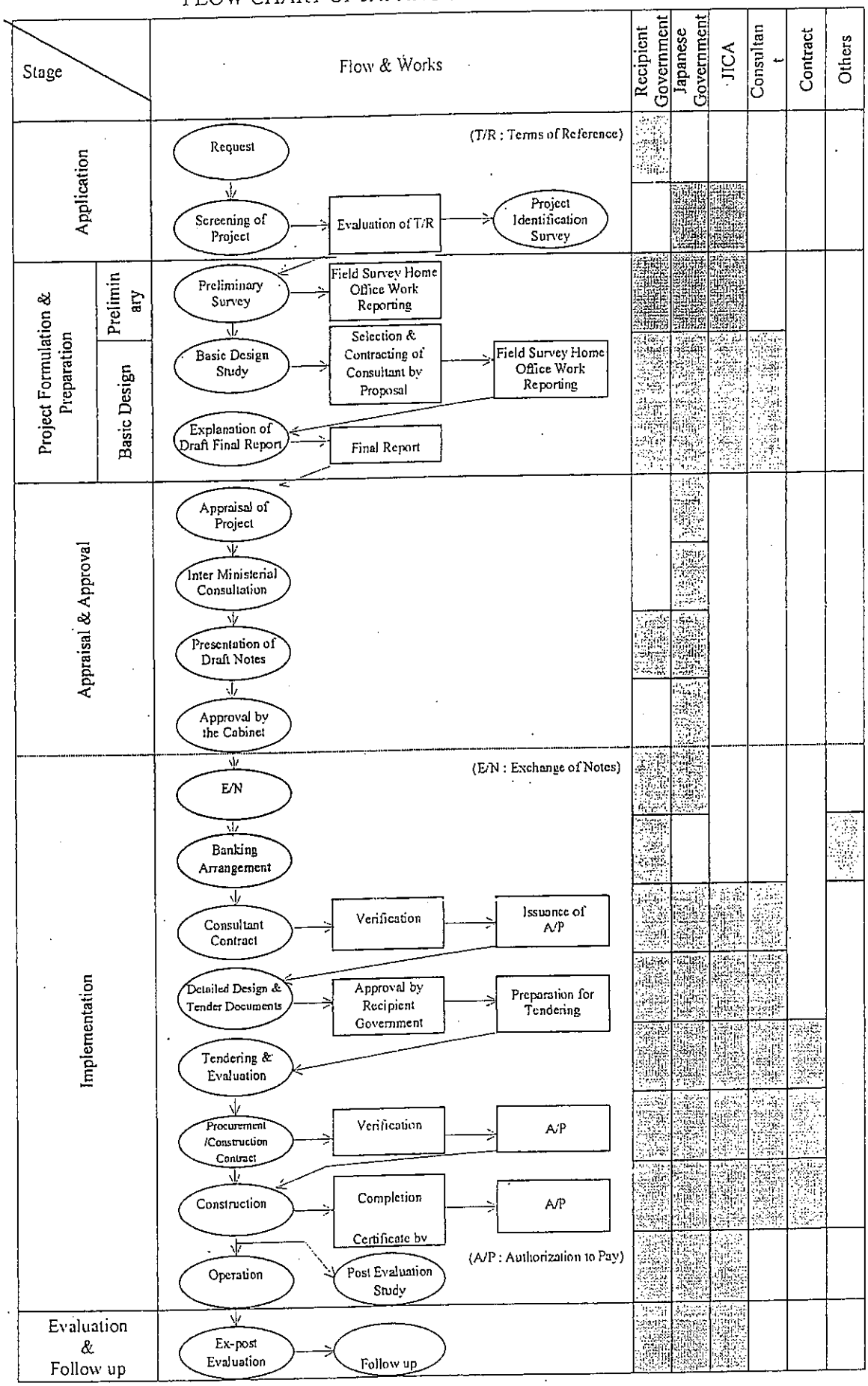
ix) Banking Arrangement (B/A)
a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute 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 the Government of Japan under an Authorization to Pay (A/P) issued by the Government of recipient country or its designated authority.

2. Grant Aid Procedure

(1) Flowchart of Japan's Grant Aid Procedures
Refer to Attachment 1.

(2) Major Undertaking to be taken by Each Government
Refer to Attachment 2.

FLOW CHART OF JAPAN's GRANT AID PROCEDURES



Attachment-2

Major Undertakings to be taken by Each Government

No	Items	To be covered by	
		Grant Aid	Nigeria
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 construct the parking lot	●	
5	To construct roads		
	1) Within the site	●	
	2) Outside the site		●
6	To construct the building	●	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1)Electricity		
	a.The distributing line to the site		●
	b.The drop wiring and internal wiring within the site	●	
	c.The main circuit breaker and transformer	●	
	2)Water Supply		
	a.The city water distribution main to the site		●
	b.The supply system within the site (receiving and/or elevated tanks)	●	
	3)Drainage		
	a.The city drainage main (for storm, sewer and others) to the site		●
	b.The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the sit	●	
	4)Gas Supply		
	a.The city gas main to the site		●
	b.The gas supply system within the site	●	
	5)Telephone System		
	a.The telephone trunk line to the main distribution frame/panel (MDF) of the building		●
	b.The MDF and the extension after the frame/panel	●	
	6)Furniture and Equipment		
	a.General furniture		●
	b.Project equipment	●	
8	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		●
9	To ensure prompt unloading and customs clearance at 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	●	

10	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		●
11	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 contracts		●
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
13	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		●

Necessary Measures to be Taken by Government of Federal Republic of Nigeria
On
Condition that Japan's Grant Aid is Extended

1. To support prompt execution for customs clearance of the equipment imported to country under the Grant Aid.

2. To accord Japanese nationals whose services may be required in connection with the supply of products and services under the verified contracts such facilities as may be necessary for their entry into the country and stay therein for the execution of their work;

3. To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in the country with respect to the supply of the products and services under the verified contracts.

4. To maintain and use the facilities and equipment constructed/procured under the Grant Aid properly and effectively and to assign the staff necessary for operation and maintenance for the facilities.

5. To bear all the expenses other than those to be borne by the Grant Aid necessary for the execution of the Project.

6. To bear advising commissions for Authorization to Pay and payment commission to a Japanese bank for the banking services based upon the banking arrangement.

Annex-6

LIST OF CANDIDATE SITES

S/N	LGA	VILLAGE COMMUNITY	POP.	G.W. CASES	REMARKS
1	Ibarapa N.	Isale -Akao	10,500	78	Existing source insufficient
2	"	Oke-Ola I	15,000	42	Existing source insufficient
3	Orire	Daodu	2,853	78	Existing source insufficient
4	"	Elekulu	1,500	96	Existing source insufficient
5	Afijio	Aba Ilorin	2,345	62	No safe source
6	Orire	Alangua	6,210	16	Existing source insufficient
7	Ibarapa North	A.U.D.(Igaagan)	5,500	23	Existing source insufficient
8	Afijio	Ilora	20,000	26	Existing source insufficient
9	Ibarapa North	Igitele	5,300	25	Existing source insufficient
10	"	Isale-Oja(Igangan)	10,300	17	Existing source insufficient
11	Iseyin	Ado-Awaye	10,500	14	Existing source insufficient
12	Ibarapa North	Oke-Olail	5,000	12	Existing source insufficient
13	"	Iwafin (Ayete)	3,000	20	Existing source insufficient
14		Imofin (Ayete)	3,000	13	Existing source insufficient
15	"	Asunara	1,080	31	Existing source insufficient
16	Iseyin	Iserin	1,000	20	Existing source insufficient
17	Ibarapa North	Idiyan	2,500	9	No safe source
18	"	Gbalekale	1,000	20	No safe source
19	"	Olore	1,000	28	
20	Orire	Eleyele	1,450	11	Existing source insufficient
21	Oyo West	Sookun	876	32	
22	Orire	Alaje	100	28	GW case> 10
23	"	Aheyese	180	25	GW case> 10
24	"	Igbo-Ayin I	280	23	GW case> 10
25	"	Onilu	200	32	GW case> 10
26	"	Eleru	250	20	GW case> 10
27	"	Alawodi	700	12	Existing source insufficient
28	Ibarapa Central	Apata	300	44	No safe source
29	Ogo-Oluwa	Otamokun	1,200	11	
30	"	Olorunda	500	18	
31	Ibarapa North	Akoya Ojelere	2,000	9	Existing source insufficient
32	Ibarapa East	Maya Ipa	2,000	6	
33	"	Maya	1,500	9	Existing source insufficient
34	Ibarapa North	Iwafin (Tapa)	3,000	6	Existing source insufficient
35	"	Ominigbo	2,000	7	Existing source insufficient
36	Suurulere	Elesinmeta	2,800	4	No safe source
37	Ibarapa North	Aba-Ibadan	1,100	8	Existing source insufficient
38	"	Aba Isale	1,000	9	Existing source insufficient
39	"	Eleede	1,000	9	Existing source insufficient
40	Orire	Adifila	5,830	2	Existing source insufficient
41	Ibarapa East	Isale Toogun	6,000	1	Existing source insufficient
42	Ibarapa Norh	Eleede Idifa	1,500	3	Existing source insufficient
43	Orire	Akute	750	5	Existing source insufficient
44	"	Alasapa	700	4	Existing source insufficient
45	"	Olokun	600	6	Existing source insufficient
46	Ibarapa East	Alapa	600	6	No safe source
47	Suurulere	Abogunde	700	5	No safe source
48	Orire	Okonimowaro	550	3	No safe source
49	"	Omidoyin	308	15	
50	Ibarapa North	Egbeomo	440	8	Existing source insufficient
51	Orire	Oloya	750	3	Existing source insufficient
52	Ibarapa East	Idi-Ope	350	8	Existing source insufficient
53	Ibarapa North	Kolawole-Akamo	350	11	No safe source

54	Ibarapa North	Obape		10	Existing source insufficient
55	Orire	Alawowo	300		No safe source
56	"	Sansan-Alasapa	369	7	Existing source insufficient
57	Oyo West	Ounto	320	4	No safe source
58	Orire	Agabi	330	4	No safe source
59	Ibarapa North	Kajola Asipa	480	4	No safe source
60	Ibarapa East	Igbolaja	300	3	No safe source
61	Ibarapa Central	Abule-Oba	250	5	No safe source
62	Orire	Elebue	275	3	No safe source
63	Ibarapa East	Oke-Ola (Lanlate)	1,000	2	
64	Iseyin	Ajepero	800	2	Existing source insufficient
65	Ibarapa North	Osinago	125	17	
66	Atiba	Ola-opa	90	10	No safe source
67	Orire	Igbo-Ayin II	193	4	No safe source
68	"	Gaani	150	4	No safe source
69	Ibarapa North	Bogunde	600	2	Existing source insufficient
70	Ibarapa Central	Pako (Igboora)	4,000	1	Existing source insufficient
71	"	Onigbio (Idere)	3,000	1	Existing source insufficient
72	Ibarapa East	Oke-Imale (Lanlate)	3,000	1	Existing source insufficient
73	Suurulere	Iwafin	1,650	1	No safe source
74	Orire	Kajola	768	1	Existing source insufficient
75	"	Onigbin	250	2	No safe source
76	"	Afekulu	263	2	Existing source insufficient
77	Ibarapa North	Bello	250	2	Existing source insufficient
78	Ogo-Oluwa	Ayede	500	1	No safe source
79	"	Odo-Ifo	500	1	No safe source
80	Iseyin	Aba-Titun	300	1	No safe source
81	Ibarapa Central	Atokun	100	7	No safe source
82	"	Elegun	100	7	No safe source
83	Ibarapa North	Obape	185	2	Existing source insufficient
84	Oyo East	Olufayo	200	2	No safe source
85	Ibarapa East	Abule-Oba	200	2	No safe source
86	Ibarapa North	Idifa-Idere	700	1	No safe source
87	"	Idi-Ope	600	1	No safe source
88	"	Jagun-Olorunda	800	1	Existing source insufficient
89	Ibarapa East	Agbere	100	4	No safe source
90	Orire	Iroogbadun	150	2	No safe source
91	"	Ayepe Kangara	318	1	No safe source
92	"	Onira	138	1	No safe source
93	Ibarapa East	Opete	250	1	No safe source
94	Ibarapa North	Alasia	200	1	No safe source
95	Atiba	Osate	120	1	No safe source
96	"	Idi-Emi	100	1	No safe source
97	"	Sangodare	100	1	No safe source
98	Ibarapa Central	Jagode	100	1	No safe source
99	Lagelu	Oteda	100	1	No safe source
100	Orire	Olokoto	3,040	0	Existing source insufficient
101	Ibarapa Central	Oke-Iserin I	12,000	0	Existing source insufficient
102	Ibarapa East	Aborerin	600	0	Existing source insufficient
103	Itesiwaju	Ipapo	1,500	0	No safe source
104	Oorelope	Akingbasa	850	0	No safe source
105	Ibarapa North	Gbangbangere	700	0	Existing source insufficient
106	Iwajowa	Aba-Ibadan	120	0	No safe source
107	Ibarapa Central	Idofin (Igboora)	5,000	0	Existing source insufficient
108	"	Ajegunle (Igboora)	5,000	0	Existing source insufficient
109	"	Isale Oba (Igboora)	6,000	0	Existing source insufficient
110	"	Koso (Idere)	3,000	0	Existing source insufficient
111	"	Oke-Iserin I (Igboora)	12,000	0	Existing source insufficient

112	"	Oke-Iserin II (Igboora)	8,000	0	Existing source insufficient
113	Ibarapa East	Anko	4,500	0	Existing source insufficient
114	"	Isaba	4,000	0	Existing source insufficient
115	"	Isale Baie Alubata	2,500	0	Existing source insufficient
116	"	Oke Imale(Lanlate)	3,000	1	Existing source insufficient
117	"	Oke-Itabo (Lanlate)	3,000	0	Existing source insufficient
118	"	Oke-Otun (Lanlate)	4,000	0	Existing source insufficient
119	"	Sango	5,000	0	Existing source insufficient
120	Ibarapa North	Gaa Saliu	1,500	0	No safe source
121	Iseyin	Aba-Ibadan	1,200	0	No safe source
122	Lagelu	Idi-Iroko	680	0	No safe source
123	Ogo-Oluwa	Igbo-Ileoje	600	0	No safe source
124	Oyo West	Ilowagbade	1,235	0	No safe source
125	Suurulere	Baaya-Oje	2,500	0	No safe source
126	"	Iresapa	5,000	0	No safe source
127	"	Olooye	700	0	No safe source
128	"	Olowosoke	1,050	0	No safe source
129	Iwajowa	Elekokan	3,025	0	No safe source
130	"	Idiko-Ago	3,250	0	No safe source
131	"	Iganna	5,900	0	Existing source insufficient
132	Ibarapa East	Akeete	300	0	
133	"	Ayinde	400	0	No safe source
134	"	Ijeun	180	0	Existing source insufficient
135	"	Olawore	200	0	No safe source
136	"	Oloponda	120	0	No safe source
137	"	Oloro	80	0	No safe source
138	Ibarapa Central	Abomo	100	0	No safe source
139	"	Alaraba	100	0	No safe source
140	"	Araromi Idere	110	0	No safe source
141	"	Baba-Ode	80	0	No safe source
142	"	Balogun	100	0	No safe source
143	"	Gaa Abukele	120	0	No safe source
144	"	Gaa Balogun	64	0	No safe source
145	"	Iyaororan	60	0	Existing source insufficient
146	"	Jagun Olorunda	800	0	Existing source insufficient
147	"	Oba-Okegbodun	85	0	No safe source
148	"	Oba-Orile	110	0	No safe source
149	"	Odo-Eye	165	0	No safe source
150	"	Olowolayemo	130	0	
151	"	Sangote	200	0	No safe source
152	"	Sabaloju	180	0	No safe source
153	"	Tobalogbo	160	0	Existing source insufficient
154	"	Tuture	100	0	No safe source
155	Ibarapa North	Abidioki	495	0	Existing source insufficient
156	"	Araromi Alagba	80	5	No safe source
157	"	Ahoro	100	0	No safe source
158	"	Alafia	200	0	Existing source insufficient
159	"	Apodun	85	0	No safe source
160	"	Araromi	80	0	No safe source
161	"	Dagbere	230	0	No safe source
162	"	Okebi	240	0	Existing source insufficient
163	"	Onile	150	0	No safe source
164	"	Osairo	110	0	No safe source
165	"	Sando	100	0	No safe source
166	"	Temidire Alalade	250	0	No safe source
167	Iseyin	Aba-Agba	300	0	Existing source insufficient
168	"	Apenpe	550	0	Existing source insufficient
169	"	Finijo	300	0	Existing source insufficient

170	Iseyin	Sagboile	500	0	Existing source insufficient
171	"	Idi-Ori	350	0	No safe source
172	"	Iseyin Area		0	Existing source insufficient
173	Ogo-Oluwa	Igboileoje	600	0	No safe source
174	"	Temidire Ayinde	60	1	No safe source
175	Oorelope	Onipako	640	0	No safe source
176	Orire	Gbemi	1,710	0	Existing source insufficient
177		Tuwure	1,500	0	Existing source insufficient
178		Elerukanfila	1,050	0	Existing source insufficient
179		Baba-Eko	870	0	Existing source insufficient
180	"	Egbejoda	824	0	Existing source insufficient
181	"	Oniki	810	0	Existing source insufficient
182		Onikoko	730	0	Existing source insufficient
183	"	Agbadasaka	258	0	Existing source insufficient
184	"	Alapa	342	0	Existing source insufficient
185	"	Alapete	200	0	No safe source
186	"	Aribaba	300	0	Existing source insufficient
187	"	Budo-Odeolagbon	486	0	No safe source
188	"	Ideji-Okebe	204	0	No safe source
189	"	Igbo-Eleru	384	0	Existing source insufficient
190	"	Itamerin	228	0	No safe source
191	"	Kanbi	485	0	NE
192	"	Oke-Igba Alafia II	96	0	Existing source insufficient
193	"	Olugbodi	150	0	N
194	"	Onikeke	444	0	Existing source insufficient
195	Atiba	Latula	345	0	No safe source
196	"	Osuamo-(Kosoamo)	440	0	No safe source
197	Oyo West	Aketa	142	0	No safe source
198	"	Enuoroba	80	9	No safe source
199	Suurulere	Adudu	270	0	No safe source
200	"	Alakopo	150	0	No safe source
201	"	Alayin	260	0	No safe source
202	"	Atapa	160	0	No safe source
203	"	Idi Ose	200	0	No safe source
204	"	Ilenla Ifa	216	0	No safe source
205	"	Keewo	350	0	No safe source
206	"	Lekewogbe	200	0	No safe source
207	"	Odanbon I	210	0	No safe source
208	"	Onilu	80	0	No safe source
209	"	Opadoyin	200	0	No safe source
210	"	Saki	350	0	No safe source
211	"	Sekengbede	132	0	No safe source
212	Iwajowa	Aba-Ibadan	120	1	No safe source
213	"	Ayetoro-Ile	320	0	
214	"	Obelu	130	0	No safe source
215	"	Olopele	150	0	No safe source
216	"	Sabeleke	80	0	No safe source
217	"	Tudi	560	0	Existing source insufficient
218	Afijio	Aba-Kuti	60	2	No safe source
219	"	Jagun	50	2	
220	Oyo East	Bago	60	1	

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY (2)
ON THE PROJECT FOR
RURAL WATER SUPPLY AND SANITATION IN OYO STATE
IN THE FEDERAL REPUBLIC OF NIGERIA

From September to November 2001, Japan International Cooperation Agency (hereinafter referred to as "JICA") despatched Basic Design Study Team (1) on the Project for Rural Water Supply and Sanitation in Oyo State (hereinafter referred to as "the Project") to the Federal Republic of Nigeria (hereinafter referred to as "Nigeria").

After discussions on the study result in Japan, JICA sent to Nigeria the Basic Design Study Team (2) (hereinafter referred to as "the Team") in order to conduct further studies and discussions, headed by Mr. Umeo Koganemaru, Resident Representative, Nigeria Office, JICA. The Team is scheduled to stay in Nigeria from February 4 to March 14, 2002.

The Team held discussions with the concerned officials of the Government of Nigeria, and conducted a field survey at the project site.

In the course of the discussions and field survey, both parties have confirmed the main items of the Project as described on the attached sheets. The Team will carry out further works and prepare the Basic Design Study Report.

Abuja, 12 February 2002

Mr. Umeo Koganemaru
Leader
Basic Design Study Team
Japan International Cooperation Agency
Japan

Mr. A. Aletan
Deputy Director
Department of Water Supply and Quality Control
Federal Ministry of Water Resources
Federal Republic of Nigeria

Mrs. O. A. O. Bamiro
Project Director
Oyo State Water and Sanitation Project
Office of the Executive Governor
Oyo State
Federal Republic of Nigeria

ATTACHMENT

1. Contents of the Minutes of Discussions signed on 5 October 2001

The Nigerian side and the Japanese side confirmed the contents of the Minutes of Discussions signed on 5th October 2001.

2. Schedule of the Study

Both sides agreed on the schedule of the Study as follows:

(1) The consultants of the Team will carry out further studies such as hydrogeological investigation and test boring in Nigeria until March 14, 2002.

(2) Based on the minutes of discussions and technical examination of the study results, JICA will prepare a draft report in English and despatch a mission to Nigeria in order to explain its contents around April 2002.

(3) If the contents of the draft report are accepted in principle by the Nigerian side, JICA will complete the final report and send it to the Nigerian side around July 2002.

3. Responsibilities with regard to the construction work during the implementation stage

For efficient utilization of the Grant, the Team expressed that the construction work of the Project should be executed by the Nigerian side. The rationale for the above plan is as follows:

-- Based on the experience and past records of Oyo State WATSAN on construction of borehole facilities, it is considered that the agency has certain technical capability for executing construction work of the Project.

-- Within the limitation of Japan's Grant, it is recommended that the construction work shall be executed by Oyo State WATSAN for cost effectiveness.

The Nigerian side has agreed to the points expressed by the Team.
However, because of the restriction on the amount of the budget, the Nigerian side requested the Japanese side to provide technical guidance and procurement of part of the materials necessary for the construction work as described in Annex-1 and Annex-2.

In principle, the Nigerian side shall procure consumable materials such as bentonite, high early strengthening agent, fuel, lubricant and water. However, as for blowing agent and mud-water admixture, which are also consumable materials, the Nigerian side explained that these were not available in the domestic market. Usually these materials are procured and provided by UNICEF to Oyo State WATSAN, which has no experience of importation and therefore requested the Japanese side to procure them. Hence it was agreed that blowing agent and mud-water admixture should be

procured by the Japanese side because of difficulty of importation by the Nigerian side.

Furthermore it was agreed as follows that;

--- The number of boreholes to be constructed should be confirmed by both sides based on the capability of Oyo State WATSAN and result of the hydrogeological investigation and test boring
--- The Nigerian side shall take all the responsibility for execution of the construction work
--- The Japanese side shall procure necessary materials within the limitation of Japan's Grant Aid Scheme for the construction of certain number of boreholes mentioned above.
--- The Japanese side shall provide engineering guidance and assistance for the construction work as "soft component" during the implementation stage of the Project

However, the acceptance of the request shall be determined after further studies and analysis in Japan. The final components of the Project shall be decided after the assessment.

4. Other Relevant Issues

(1) Implementation set up for the construction work

Relationships between stakeholders concerning the construction work of the Project are shown in Annex-3.

(2) Existing equipment to be used for the Project

The Nigerian side confirmed to utilize following existing equipment and vehicles for the construction work of the Project.

- 1 number of Drilling Rig, Truck Mounted (Ingersoll Rand TH10, 1995)
- 1 number of High Pressure Air Compressor, Truck Mounted (Ingersoll Rand VHP700, 1992)
- 1 number of 3ton Crane Truck (Mercedez 911, 1993)
- 1 number of Pick-Up Van (Hilux, 1995)
- 1 set of Drilling Accessories/tools for the Drilling Rig and the Compressor

(3) Staff to be deployed for the construction work of the Project

The Nigerian side confirmed to assign the present three drilling teams for construction work of the Project.

(4) Estimated number of boreholes to be constructed

The Nigerian side explained that regarding their experience, organizational structure, technical capability and budgetary allocation, possible number of boreholes to be constructed would be 100 within the period of 12 months using 3 drilling teams.

Both sides have agreed that the final number of boreholes shall be determined based on the capability of Oyo State WATSAN, result of hydrogeological investigation and the equipment plan for the Project.

(5) Budgetary allocation for the construction work of the Nigerian side

The cost estimate for the construction work of the Project to be borne by the Nigerian side shall be Thirty-five million Naira (₦ 35,000,000)as shown in Annex-4.

The Nigerian side accepted that the assistance from the Japanese side shall be determined according to the budgetary allocation by the Nigerian side.

Thus the Nigerian side gave assurance that adequate fund will be provided for the cost of construction work except for those materials to be procured by the Japanese side.

Both sides confirmed the letter from the Executive Governor of Oyo State assuring budgetary allocation for the Project as attached in Annex-5.

The progress of the budgetary allocation and the total project cost to be borne by the Nigerian side shall be confirmed by both sides around April 2002.

(6) Storage for construction materials

The materials for the construction work requested by the Nigerian side would be properly stored by Oyo State WATSAN and the recipient Local Government Areas with support by Oyo State WATSAN.

The Nigerian side shall make preparation for adequate stores to keep the materials before the implementation of the Project.

Both sides agreed that the arrangement of proper storage for the materials should be confirmed around April 2002.

(7) Test boring

The Team is going to conduct 6 test boring on 6 sites in order to get detailed hydrogeological data during the study period. The test boring includes drilling, logging, pumping test, water quality analysis and casing.

The Nigerian side proposed that in case the boreholes by the test boring were judged as successful, the Nigerian side would be responsible for the completion of the water supply facilities.

Both sides agreed that the candidate sites for the borehole construction under the Project should be selected from the target sites of hydrogeological investigation from previous study in September 2001 and current study. These sites excludes the 6 sites for the test boring.

Annex-1

The Requested Allocation of the Construction Work

Item	Nigeria	Japan
Construction work	- Mobilization and demobilization of drilling rig - Drilling, Borehole logging, installation of casing & screen pipes, gravel packing, pumping test, water quality analyses, cementing, backfilling, and finishing - Bentonite, High early strengthening agent - Installation of hand pumps, construction of platform - Construction equipment, vehicle, labour expenses, cost of other consumables and water - Common temporary work expenses - Site expenditure, etc.	- Necessary materials for construction of borehole facilities (including procurement of Equipment) - cement, sand, gravel, cobble stone, brick, pebble stone, boulder, reinforced bar, form, foam, mud-water admixture, casing pipe, screen pipe, centralisers, bottom plug - Instruction for construction work of borehole facilities (technology transfer) Output: Construction manual and others
Cost	Cost necessary for the above-mentioned construction	Cost of above mentioned materials and engineer despatching expenses for instruction of construction
Construction period	Preparation of construction schedule in E/N period Construction completion within construction period If the construction is not completed, Nigerian side will take up the responsibility to complete the construction.	Instruction of construction planning, construction management, monitoring of schedule during E/N period The Instruction period: 7months 4months from beginning of construction with existing rig 3 months from beginning with procured rigs
Siting	The exact locations of boreholes will be decided by both sides after assessment of x sites with the Japanese side and the construction work will be done. When there are two unsuccessful boreholes in the same site, then the construction work will be carried out on an alternative site.	To decide the exact locations of boreholes of x sites by both sides after discussing with the Nigerian side on detailed design (DD), the geophysical survey will be carried out at the expense of the Japanese side.
Quantities of construction materials	The Nigerian side will be responsible for construction materials exceeding x' sites.	Cost estimation of materials of x ' sites and its charge. Monitoring of usage of the quantity of the estimated materials. (seven months)
The method of delivery materials	From office of recipient LGAs to each borehole site The Nigerian side will have the management responsibility of materials.	After attesting the supplier contract, the supplier promptly transports materials to the warehouse in WATSAN office in OYO State or to the office of recipient LGAs according to the instruction of the consultant.
Exemption of taxes	The Federal Ministry of Water Resources in collaboration with National Planning Commission prepare the document for exemption of taxes on materials to be purchased under the Grant Aid before the commencement of the construction. Such documents should be delivered to the Supplier by the FMWR.	The supplier should show the document to be prepared by the client when they purchase materials.
Quality control & Inspection	The Nigerian side will undertake the responsibility of quality control and compliance to specifications, etc.	Instruction concerning quality control and inspection of design specifications, etc. Output: Check list
Safety/ Security measures	Responsible for any accident during construction Anti-theft measures of the equipment and materials at the sites	Instruction and preparation of manual on safety measures Output: Safety measures manual
Warranty On borehole facilities	Responsible	None
Others	Improvement of access road Construction of fence around borehole facility	

Note: x' is value by which the success rate is considered for x.

Annex-2

The Requested Allocation for Materials

Material	Nigerian side	Japanese side
Cement		○
Sand		○
Gravel		○
Reinforced bar		○
Form		○
Cobble stone		○
Brick		○
Pebble stone		○
Boulder(rubble stone)		○
bentonite	○	
High early strengthening agent	○	
Foam (Blowing agent)		○
Mud-water admixture (polymer)		○
Casing pipe		○
Screen pipe		○
Centralisers		○
Bottom plug		○
Fuel	○	
Lubricant	○	
Water	○	

Annex-3

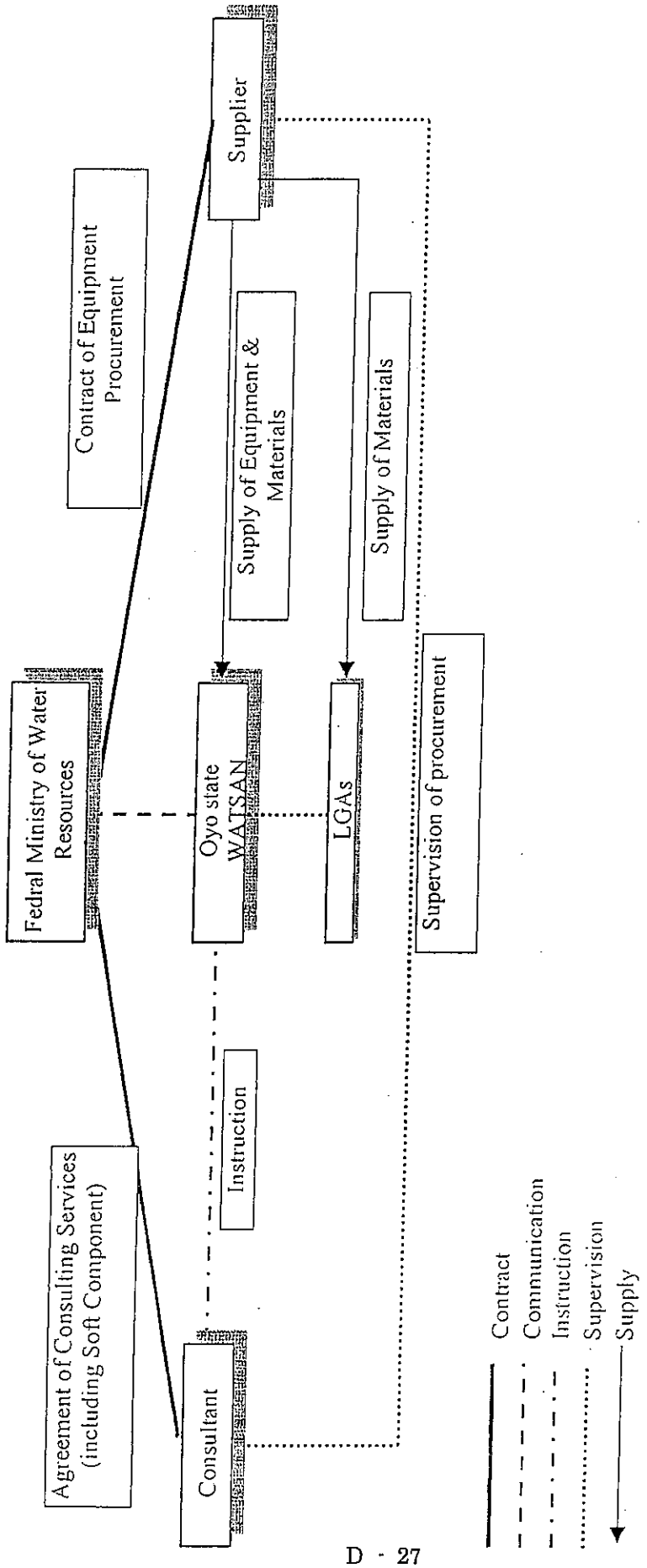


Fig.1 Implementation Set Up for the Construction Work

Annex-4

Cost Estimate of the Construction Work for the Project to be Borne by the Nigerian Side

Unit:Naira

	Unit Price (1 site)	Amount (100 sites)
Materials	30,000	3,000,000
Fuel, Others	140,500	14,050,000
Labor Cost	115,200	11,520,000
Maintenance Cost	64,300	6,430,000
Total	350,000	35,000,000

* The inflation rate is not considered in the above mentioned cost

Annex-5

Office of

The Executive Governor of Oyo State

Government Secretariat, Agodi, Ibadan.

Your Ref:.....

Our Ref: WT/PD/61/Vol.I/123

Date: February, 2002

Mr. Umeo Koganemaru
The Resident Representative
Japan International Cooperation Agency
Nigeria Office
P.M.B. 5090, Wuse
ABUJA

JAPANESE GRANT-AID FOR RURAL WATER SUPPLY AND SANITATION PROJECT IN OYO STATE

I hereby wish to thank the Japanese International Cooperation Agency - JICA for coordinating the Japanese Grant-Aid to Oyo State Government in the provision of 100 boreholes to guineaworm endemic communities of the State, supply of drilling equipment and other materials as stated in the minutes of discussions with the Japanese Basic Design Study Team and the Federal Ministry of Water Resources, Abuja.

2. I like to confirm the commitment of Oyo State Government in the implementation of the Rural Water Supply and Sanitation Project in the State.

3. Furthermore, the State Government has budgeted a sum of N35 million to complement the effort of Japanese Government in the eradication of guineaworm in the State.

4. Best regards.

Alhaji (Dr) Lamidi Onaolapo Adesina
Executive Governor
Oyo State

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON THE PROJECT FOR
RURAL WATER SUPPLY AND SANITATION IN OYO STATE
IN THE FEDERAL REPUBLIC OF NIGERIA
(EXPLANATION ON DRAFT REPORT)

In September 2001 and February 2002, Japan International Cooperation Agency (hereinafter referred to as "JICA") despatched Basic Design Study Teams on THE PROJECT FOR RURAL WATER SUPPLY AND SANITATION IN OYO STATE (hereinafter referred to as "the Project") to the Federal Republic of Nigeria (hereinafter referred to as "Nigeria"), and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult with Nigeria on the components of the draft report, JICA sent to Nigeria the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Umeo Koganemaru, Resident Representative, Nigeria Office, JICA, from 12 to 22 May 2002.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Abuja, 20 May 2002

小金丸梅夫

Mr. Umeo Koganemaru
Leader
Basic Design Study Team
Japan International Cooperation Agency
Japan

Mr. A. Aletan
Deputy Director
Department of Water Supply and Quality Control
Federal Ministry of Water Resources
Federal Republic of Nigeria

Bamiro

Mrs. O. A. O. Bamiro
Project Director
Oyo State Water and Sanitation Project
Office of the Executive Governor
Oyo State
Federal Republic of Nigeria

ATTACHMENT

1. Components of the Draft Report

The Government of Nigeria agreed and accepted in principle the components of the draft report explained by the Team.

2. Minutes of Discussions (5 October, 2001 and 12 February, 2002)

Both sides read and confirmed again all the contents of two previous Minutes of Discussions, one on the first basic design study of 5 October 2001 and the other on the second basic design study of 12 February 2002.

3. Japan's Grant Aid Scheme

The Nigerian side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Nigeria as explained by the Team and described in Annex-4 and Annex-5 of the Minutes of Discussions signed by both parties on 5 October, 2001.

4. Schedule of the Study

JICA will complete the final report in accordance with the items confirmed and send it to Nigeria around July 2002.

5. Other Relevant Issues

(1) Components of the Project

Both sides agreed that the Project would be composed of the following components when the Japanese Government finally decides to implement the Project.

- Procurement of equipment and materials listed in Annex-1
- Guidance for construction of borehole facilities ("Soft Component")
- Instruction on the equipment maintenance and management ("Soft Component")
- Support on public education and institutional strengthening for facility operation, maintenance and management by communities ("Soft Component")

(2) Communities for borehole construction

Both sides agreed that the target communities for borehole construction by the Nigerian side under the Project would be one hundred, one borehole for each community.

Among the one hundred communities, eighty were selected as a result of previous studies. As for remaining twenty communities, it has been agreed that the Nigerian side would conduct geophysical survey to select the communities and the result would be confirmed by the Nigerian side and the Team.

However, due to the labour strike in Oyo State, the Nigerian side has only conducted ten out of twenty geophysical surveys. Therefore, the Nigerian side should complete geophysical survey for the remaining ten communities and the result and data should be reported to JICA Nigeria Office by OYO State WATSAN by the end of May 2002.

The target communities for borehole construction up to ninety are listed in Annex-2.

(3) Siting for borehole construction

Among the one hundred sites under the Project, twenty sites would be decided by the result of geophysical survey from the Nigerian side. Fifty-one sites had already been decided and confirmed by both sides based on the result of geophysical survey during previous studies.

As for the remaining twenty-nine sites, which are indicated with star-mark (*) in Annex-2, both sides agreed that siting would be conducted by the Japanese side during Detail Design Study stage.

However, the siting by the Japanese side will be limited for first drilling at each site. In case a borehole is judged unsuccessful, the siting for an alternative borehole has to be conducted by the Nigerian side at their own expense.

(4) Recruitment of necessary personnel

Under the Project, it is required that the construction work shall be carried out with two geophysical survey teams, three drilling teams, two pumping test teams and two platform construction teams.

To form the required teams, Oyo State WATSAN needs to recruit two hydrogeologists, two plumbers and four assistants for pumping test teams.

The Nigerian side promised to recruit necessary number of personnel before the commencement of the construction work.

(5) Collaboration with UNICEF

The Team and staff from Oyo State WATSAN visited UNICEF Lagos office on 17 May 2002.

The Team explained the basic design of the Project and discussed on "soft component", distribution system of maintenance kit for handpump and so on with UNICEF.

UNICEF, Oyo State WATSAN and the Team agreed to:

I. collaborate in implementing the Project, especially in the field of the "soft component" activity for support on public education and institutional strengthening for facility operation, maintenance and management by communities.

II. continue discussions to develop detail collaboration plan.

(6) Budgetary Allocation on the Nigerian side

The Nigerian side explained that the budget for the construction work of the Project, which was estimated at thirty-five million Naira (₦ 35,000,000) and confirmed by both sides as Annex-4 and Annex-5 of the Minutes of Discussions signed on 12 February 2002, has been approved by Oyo State Government.

The Nigerian side agreed to proceed necessary budgetary allocation to cover required amount of cost shown in Annex-3.

(7) Storage for construction materials

The Nigerian side explained that OYO State WATSAN has informed the recipient LGAs and visited some LGAs in order to confirm adequate preparation of storage facilities for construction materials procured under the Project.

Both sides confirmed that the construction materials delivered to OYO State WATSAN would be judiciously managed under the supervision of the Project Director. In the case of recipient LGA, the Executive Chairman will be responsible for proper management and security of the materials.

(8) Safety and security

The Nigerian side will ensure that necessary measures are taken for the safety and security of the Japanese nationals involved in the Project.

Annex-1 Specifications and quantity of equipment and materials

Specifications and quantity of equipment and materials

No	Equipment	Main Specification and Component	Quantity	Unit
1	Drilling Equiment			
1 - 1	Drilling Rig	Type : Truck mounted Drilling methods : DTH／Mud rotary drilling、 Max. drilling depth in plan : 100m、Max. drilling diameter : 12-1/4"~8-5/8"、 Truck : 4x4(P.T.O)	2	units
1 - 2	Drilling Tools and Accessories	Drilling Strings, DTH hammer,Casing pipes, etc.	2	sets
1 - 3	Driiling Tools	Drilling bits, DTH hammers for100 boreholes	1	set
1 - 4	Grouting Pump	Discharge volume : ≧23liter/min、Hopper capacity : ≧200 liter	2	units
1 - 5	Grouting Mixer	Volume : 200literÂ~2tanks	2	units
1 - 6	Air Compressor	① : High pressure (Truck mounted) Air volume : ≧30.0m³/min、Pressure : ≧2.01MPa (20.5kgf/cm²) ② : Truck Diesel、Load cap. : ≧7ton、Drive : 4Â~4	2	units
2	Geophysical survey Equipment			
2 - 1	Electromagnetic Survey Equipment	Frequency : ≧100Hz : Survey Dpth100m、including analysis software	1	unit
2 - 2	Resistivity Survey Equipment	Survey depth : 100m Including nanalysis software	1	unit
3	Survey Equipment			
3 - 1	Water Level Detector	Survey depth : 100m、Detecting type : Buzzer	2	units
3 - 2	Triangular Weir	JIS Standard、Notch : 0.07 m 、Dimension : 900Â~600Â~600 mm	2	units
3 - 3	GPS	Measuring items : Latitude、Longitude, Alutitude,Tolerance 15RMS、	2	units
3 - 4-1	Radio Telecommunication Equipment(Basecamp)	HFRadio、Frequency Range : 3.0~30MHz Communication distance : ≧150Km	1	unit
3 - 4-2	Radio Telecommunication Equipment(mobile)	HFRadio、Frequency Range : 3.0~30MHz Communication distance : ≧150Km	3	units
3 - 5	Borehole logging Equipment	Measuring items : SP,Gamma,Resistivity	2	units
3 - 6-1	Submersible Pump	Capacity:50liter/min.80m depth for 6" casing pipe	2	units
3 - 6-2	Submersible Pump	Capacity:100liter/min.80m depth for 6" casing pipe	2	units
3 - 7	Diesel Engine Generator	Diesel, 3-phase, Not less than 10kW	2	units
4	Operation and Maintenance Equipment			
4 - 1	Bearing Puller	for general vehicles、Pulling Cap.≧17ton	2	units
4 - 2-1	Nozzle andInjection Puller	for Large size	2	units
4 - 2-2	Nozzle andInjection Puller	for Small size	2	units
4 - 3	Pressurized steam washing machine	Applicable Hot and Cold Water、Discharge volume : ≧600liter/hr、 Pressure : ≧7MPa(70kgf/cm²)	1	unit
4 - 4	Hydraulic Garage Jack	Removal type、Capacity : ≧15ton	2	units
4 - 5	Air compressor	Discharge volume : ≧250liter/min、Pressure : ≧0.9MPa	1	unit
4 - 6	Mechanical Tools	Operation and Maintenance Tools for vehicle	2	sets
4 - 7	Riveting Machine	Revet Diameter : 2.4,3.2,4.0,4.8mm、including each revets	2	sets
5	Hand pump and tools			
5- 1	Hand Pump	Type : VLOM Type India Mark Ⅲ、Setting depth : 40m、 including connecting stainless rods and uPVC riser pipe	100	sets
5 - 2	Maintenace Kits	Spare parts for Hand Pump(6-1)	100	sets
5 - 3	Village mechanical Tools	Village level Tools for Hand Pump(6-1)	100	sets
5 - 4	LGA Maintenace Kits	LGA level Tools for Hand Pump(6-1)	16	sets
6	Water Analyisis Apparatus			
6 - 1	Reagent	for existing model"DREL-2000"and 400 samples(100boreholes)	1	lot
6 - 2	Spectrophotometer	Ultraviolet type(equivalent with HACK2000	1	unit
7	Vehicles			
7 - 1	Pick up Car	Diesel Engine、Water cooled、Double cabins、4Â~4drive Load cap.≧900kg	3	units

Annex-1 Specifications and quantity of equipment and materials

No	Equipment	Main Specification and Component	Quantity	Unit
7 - 2	Cargo Truck with Crane Car	Diesel Engine, Water Cooled, Road Cap. : 6t, Crane Cap. : 3t, 4Å~4Drive : Length≧6.2m	2	units
7 - 3	Water Tanker	Diesel Engine, Water cooled, Tank Cap. : 8,000liter, 4Å~4drive	2	units
8	Borehole Construction Materials			
8 - 1	Casing Pipe	uPVC 6", Screwed joint, Thickness : ≧6.0mm	3,885	m
8 - 2	Screen Pipe	uPVC 6", Screwed Joint, Thickness : ≧6.0m, Slot width : 1mm	1,665	m
8 - 3	Casing Centralizer	for uPVC 6"and drilling diameter 8-5/8"	555	p.s
8 - 4	Bottom Plug	for uPVC 6"	111	p.s
8 - 5	End Cap	for uPVC 6"	111	p.s
8 - 6	Cement	Portland cement	121.9	ton
8 - 7	Fine Aggregate	for concrete	49.5	m^3
8 - 8	Coarse Aggregate	Max Dia. : 2mm	96.1	m^3
8 - 9	Re-Bar	D10mm	4.7	ton
8 - 10	Form	Steel form	3	sets
8 - 11	Cobble Stone	Dia. : 80~130mm	85.4	m^3
8 - 12	Sand	forfilter of Soakage Pit	15.8	m^3
8 - 13	Brick	for filter of Soakage Pit, Dimension : 18Å~10Å~5cm	25,000	p.s
8 - 14	Gravel	for filter of Soakage Pit Dia. : 20~40mm	27.0	m^3
8 - 15	Gravel	for filter of Soakage Pit, Dia. : 50~100mm	72.0	m^3
8 - 16	Gravel	for Gravel Pack of boreholes, Dia. : 2~6mm	93.4	m^3
8 - 17	Sand Bag	for anti suction, Dimension : 100Å~50cm	400	sheets
8 - 18	Forming Agents	for DTH Hammer drilling	3,751.8	kg
8 - 19	Mud-Water Admixure	for mud rotary drilling	285.3	kg
9	Tools and Accessasories for Existing Rig	for drilling of 100 boreholes such as Cross over sub., Drill collar, Bit sub.,etc.	1	set

Equipment for "soft component"

No.	Equipment	Main Specification and Component	Quantity
S-1	O&A		
S1-1	Personnel Computer	Desk Top, Display:>15", CPU:>Pentium III 600 MHz, HD:>15GB Memory:>64MB, OS: Windows 2000(English version), Soft:Office2000(English)	2units
S1-2	UPS	For above computer, 0.5 hour	2units
S1-3	Printer	Monochrome, Size:A5-A3, Resolution:>1,200DPI	2units
S1-4	Photocopy machine	Monochrome, Size:A5-A3, Zoom	1unit
S2	Enlightment Activity		
S2-1	Portable megaphone	Output:15W, distance of transmission:300m	2units
S2-2	Vehicle mounted megaphone	Output:40W, distance of transmission:500m	2units

Annex-2 Target Communities for borehole construction

S/N		Priority	LGA	Community	Location					
					Latitude(N)			Longitude(E)		
1		3	Orire	Daodu	8°	25'	21"	4°	7'	55"
2	*	6	Orire	Alangua	8°	25'	31"	4°	10'	22"
3		7	Ibarapa North	A.U.D.(Igangan)	7°	40'	15"	3°	11'	9"
4		8	Afijio	Ilora	7°	48'	7"	3°	54'	3"
5		9	Ibarapa North	Igitele	7°	40'	45"	3°	10'	59"
6	*	10	Ibarapa North	Isale-Oja(Igangan)	7°	40'	53"	3°	10'	58"
7	*	11	Iseyin	Ado-Awaye	7°	50'	8"	3°	25'	44"
8		12	Ibarapa North	Oke-Ola II	7°	40'	54"	3°	10'	57"
9		13	Ibarapa North	Iwafin (Ayete)	7°	32'	47"	3°	13'	24"
10	*	15	Ibarapa North	Asunara	7°	39'	17"	3°	6'	50"
11	*	16	Iseyin	Iserin	7°	46'	48"	3°	17'	44"
12		18	Ibarapa North	Gbelekale	7°	37'	4"	3°	7'	20"
13		19	Ibarapa North	Olore	7°	43'	22"	3°	16'	36"
14		22	Orire	Alaje	8°	27'	59"	4°	16'	44"
15		23	Orire	Aheyese	8°	28'	1"	4°	7'	12"
16	*	24	Orire	Igbo-Ayin I	8°	27'	34"	4°	10'	22"
17		25	Orire	Onilu	8°	26'	44"	4°	14'	18"
18	*	27	Orire	Alawodi	8°	27'	16"	4°	8'	49"
19		28	Ibarapa Central	Apata	7°	23'	39"	3°	10'	52"
20	*	32	Ibarapa East	Maya Ipa	7°	40'	44"	3°	23'	47"
21		34	Ibarapa North	Iwafin (Tapa)	7°	33'	56"	3°	13'	51"
22		35	Ibarapa North	Ominigbo	7°	44'	51"	3°	6'	58"
23		36	Surulere	Elesinmeta	8°	7'	35"	4°	25'	47"
24	*	38	Ibarapa North	Aba Isale	7°	43'	53"	3°	7'	28"
25		40	Orire	Adafila	8°	27'	27"	4°	14'	2"
26		41	Ibarapa East	Isale Togun	7°	35'	59"	3°	26'	58"
27	*	42	Ibarapa North	Eleede Idifa	7°	34'	27"	3°	8'	16"
28		46	Ibarapa East	Alapa	7°	39'	14"	3°	32'	11"
29		47	Surulere	Abogunde	8°	13'	8"	4°	15'	13"
30		49	Orire	Omidoyin	8°	20'	49"	4°	16'	19"
31	*	50	Ibarapa North	Egbeorno	7°	45'	8"	3°	11'	55"
32		51	Orire	Oloya	8°	20'	31"	4°	11'	56"
33		52	Ibarapa East	Idi-Ope	7°	25'	59"	3°	29'	45"
34		54	Ibarapa North	Obape	7°	39'	56"	3°	17'	56"
35	*	55	Orire	Alawowo	8°	26'	31"	4°	11'	56"
36		57	Oyo West	Ounto	8°	'	47"	3°	45'	12"
37		58	Orire	Agabi	8°	23'	37"	4°	13'	55"
38	*	59	Ibarapa North	Kajola Asipa	7°	34'	51"	3°	7'	14"
39		60	Ibarapa East	Igbolaja	7°	39'	41"	3°	28'	51"
40		61	Ibarapa Central	Abule-Oba	7°	28'	39"	3°	16'	55"
41	*	62	Orire	Elebue	8°	21'	25"	4°	14'	55"
42		63	Ibarapa East	Oke-Ola (Lanlate)	7°	32'	12"	3°	24'	52"
43		64	Iseyin	Ajepero	7°	55'	"	3°	41'	39"
44		66	Atiba	Ola-opa	8°	2'	50"	3°	55'	19"
45	*	67	Orire	Igbo-Ayin II	8°	27'	43"	4°	9'	58"
46	*	68	Orire	Gaani	8°	28'	6"	4°	9'	29"
47		70	Ibarapa Central	Pako (Igboora)	7°	25'	40"	3°	17'	38"
48		71	Ibarapa Central	Onigbio (Idere)	7°	29'	44"	3°	14'	36"
49		72	Ibarapa East	Oke-Imale I(Lanlate)	7°	35'	25"	3°	26'	54"
50		73	Surulere	Iwafin	8°	9'	41"	4°	23'	55"
51		74	Orire	Kajola	8°	25'	51"	4°	16'	7"
52		75	Orire	Onigbin	8°	28'	46"	4°	9'	36"
53	*	77	Ibarapa North	Bello	7°	37'	18"	3°	7'	55"
54		79	Ogo-Oluwa	Odo-Ifo	7°	58'	59"	4°	9'	"
55		80	Iseyin	Aba-Titun	7°	47'	6"	3°	40'	12"
56	*	81	Ibarapa Central	Atokun	7°	27'	9"	3°	8'	21"
57		83	Ibarapa East	Aborerin II	7°	38'	36"	3°	24'	11"
58	*	84	Oyo East	Olufayo	7°	44'	14"	3°	59'	"
59	*	87	Ibarapa North	Idi-Ope	7°	46'	37"	3°	6'	52"

Annex-2 Target Communities for borehole construction

S/N		Priority	LGA	Community	Location					
					Latitude(N)			Longitude(E)		
60	*	88	Ibarapa North	Jagun-Olorunda	7°	38'	38"	3°	8'	50"
61		91	Orire	Ayepe Kangara	8°	24'	8"	4°	15'	13"
62		92	Orire	Onira	8°	21'	30"	4°	14'	22"
63	*	93	Ibarapa East	Opete	7°	27'	46"	3°	28'	49"
64		94	Ibarapa North	Alasia	7°	37'	23"	3°	9'	2"
65	*	95	Atiba	Osate	8°	8'	45"	3°	48'	33"
66		97	Atiba	Sangodare	8°	1'	57"	3°	55'	43"
67	*	98	Ibarapa Central	Jagode	7°	23'	23"	3°	14'	11"
68		99	Lagelu	Oteda	7°	31'	58"	4°	'	1"
69	*	100	Orire	Olokoto	8°	35'	3"	4°	17'	53"
70		110	Ibarapa Central	Koso (Idere)	7°	29'	49"	3°	14'	29"
71	*	120	Ibarapa North	Gaa Saliu	7°	40'	36"	3°	11'	4"
72		128	Surulere	Olowosoke	8°	28'	27"	4°	9'	7"
73	*	133	Ibarapa East	Ayinde	7°	30'	"	3°	28'	29"
74		135	Ibarapa East	Olawore	7°	30'	7"	3°	29'	29"
75	*	139	Ibarapa Central	Alaraba	7°	28'	14"	3°	9'	39"
76		146	Ibarapa North	Alagbaa	7°	35'	5"	3°	7'	12"
77		151	Ibarapa Central	Sangote	7°	31'	30"	3°	10'	24"
78		154	Ibarapa Central	Tuture	7°	31'	30"	3°	10'	24"
79		171	Iseyin	Idi-Ori	7°	45'	47"	3°	17'	41"
80	*	179	Orire	Egbejoda	8°	12'	30"	4°	8'	14"
81		1	Ibarapa North	Isale- Akao	7°	40'	38"	3°	11'	5"
82		14	Ibarapa North	Imofin-Ayete	7°	32'	22"	3°	13'	13"
83		33	Ibarapa East	Maya	7°	40'	43"	3°	26'	43"
84		44	Orire	Alasapa	8°	31'	17"	4°	9'	15"
85		65	Ibarapa North	Osinago	7°	40'	1"	3°	6'	42"
86		69	Ibarapa North	Bogumbe	7°	25'	9"	3°	6'	48"
87		76	Orire	Afekulu	8°	29'	57"	4°	12'	29"
88		90	Orire	Iroogbadun	8°	27'	20"	4°	8'	57"
89		156	Ibarapa North	Araromi Alagba	7°	32'	22"	3°	7'	36"
90		166	Ibarapa North	Temidire Alalade	7°	34'	36"	3°	6'	44"

Note: * The siting for first drilling shall be conducted by the Japanese side during Detailed Design Stage.

Annex-3

Project costs borne by the Government of Nigeria

Total expenses borne by the Government of Nigeria (Unit: million Naira)

Description	Expenses	Remarks
(1) Land for the facilities	-	Coordination and confirmation with communities for all the lands are required.
(2) Construction of access roads and protection fences	-	By beneficiary communities
(3) Materials	3.00	Construction cost for 100 sites
(4) Fuel, others	14.05	ditto
(5) Personnel expenses of Labour	11.52	ditto
(6) Maintenance cost	6.43	ditto
Total	35.00	