

## 4. 質問票および回答

QUESTIONNAIRE

ON

THE PRELIMINARY STUDY

ON

**THE PROJECT FOR THE SUPPLY OF EQUIPMENTS FOR GROUND WATER EXPLORATION TOWARDS POTABLE WATER SUPPLY AND HEALTH DELIVERY IN YOBE STATE IN FEDERAL REPUBLIC OF NIGERIA**

**For: Rural Water Supply Sanitation Agency (RUWASA), Ministry Of Water Resources And Rural Development (MWRRD)**

In order that the study will be carried out appropriately, please answer this questionnaire and provide us necessary data and information. Please provide us with the answer and /or data and submit to the Preliminary Study Team directly while their study period in Nigeria. Based on your answers, JICA preliminary Study team will carry out the field survey and make a report. Japanese Government and JICA Headquarters will examine the report with contents of your requests and decide the execution of the project. Therefore, please reply each question correctly and concretely.

**1.1 ORGANIZATION INFORMATION**

*Please provide us following information*

- 3.1 Organization chart and the role and number of staff each section shown blow.
  - See appendix I
- 3.2 The relationship between State Government and RUWASA
  - *The Agency is established and funded by Yobe State Government.*
- 3.3 Budgetary information of RUWASA
  - *150 million capital provision and 68,800,245 for recurrent. See Annex for 2006 Budget*
- 3.4 Finance situation including budget for consideration of well
  - *17,345,000 Budgeted for 2006 and 8,580,000 expanded as at now*

**2. IMPLEMENTATION OF THE PROJECT**

Please provide us the answer to questions and information mentioned bellow.

- 2.1 Please give us the well (or village) location map and location list describing the number of beneficiaries on the requested project.
  - *See political map of Yobe State and population is appropriately 1.2m*

- 2.2 Is the target area DAMATURU LGA?
- *No. it is comprising of all the 17 LGAs*
- 2.3 In your request, 100 boreholes will be drilled, how many drill units will you use and how long will it take the drilling work from beginning to end?
- *Drilling units 17 days per borehole x 20 = 340 days*
- 2.4 How many consultant firms relevant to well construction are there in Yobe State and whole country? If available, show us the list of them.
- *Geophic consultants in Yobe State. Others N.A*
- 2.5 List of the Executed, on-going and planned water supply and sanitation project with details information.
- *We planned this year 10 borehole, 170 cement wells, 170HPS, 12 VIP Latrine*
  - *Executed as per progress report*
- 2.6 The specification and structure of the borehole, which will be constructed by utilizing the equipment procured by Japanese Government.
- *See Annex III RWS 6" and 8"*
- 2.7 Hydro geological condition in the targeted area.
- *Semi confined to confined, 65 – 170 metre average.*
  - *Sedimentary formation (exception cases 400 – 500 m deep)*
- 2.8 Do you have any environmental aspects to be considered in the targeted area?
- *Drought and desertification. Guinea worm endemic*
- 2.9 Is there any other water supply and sanitation projects which overlaps the target area.
- *No.*

### 3 WELL AND DRILLING INFORMATION

Please provide us the answer to our questions and information mentioned bellow.

- 3.1 How many drilling have you implemented last 5 years?
- RUWASA – 38 Boreholes drilled*
- Ministry of Water Resource - 112 Boreholes drilled*
- 3.2 Please show us typical-platform drawings and its average construction cost.
- *Not applicable*
- 3.3 Please show us the Standard construction method of deep well and shallow well include the case of hard rock.
- *Deep – Rotary Mud circulation –Rig*

- *Shallow – Rotary Mud circulation – Rig /hand drill*
  - *Hard rock – use of hammering is desirable*
- 3.4 List of the equipment you have for well construction such as drilling
- *See Annex v. RWS*
- 3.5 Rig, compressor, supporting vehicle, with the information of the date of purchase, condition, country of origin, specification, drilling capacity of the drilling rig with specified diameter, geophysical logging equipment e.t.c
- *Nil.*
- 3.6 List of the equipment you have for the hydrogeological investigation such as geophysical exploration equipment, portable water quality analysis equipment, water quality analysis equipment in laboratory etc.
- *two water level indicators and 1 sounding wire*
- 3.7 When you drill one borehole, please tell us the number of working person and construction time such as drilling, pumping test, platform construction, installing hand pump and fencing.
- *10 persons and 17 days on mobilization*
- 3.8 Standard borehole structure
- *Yes*
- 3.9 Do you use any drilling contractors when you drill a borehole?
- *Yes*
- 3.10 How many contractors experienced in well construction are there in Yobe State? If possible, show us the list of contractor including work experience, number of employers with classification such as engineer, technician and labor, constructing machine and average turnover in 5 years.
- *12 CONTRACTORS Domine Nig. Ltd, Zarma Waters, FORTIA Nig. Ltd, DASMAN Nig. Ltd, Milestone Nig. Ltd, Solar Quartz Nig. Ltd, AQUA Fountain Nig Ltd, ATAS Drilling Engineers, Yobe Marchants, Chilariye Drillers, GEOPHIC Consultants and Majema Construction and Drilling Company Potiskum.*
- Please tell us the regulations relevant to contracting especially tender procedure.
- *Ministerial Tender Board*
- 3.11 Which is more common contracting in your state, lump sum or BOQ?

▪ BOQ

3.12 Please tell us availability and unit cost of items bellow.

Item	Availability Availability O Not available X	Unit	Unit cost NGN	Comment
Cement	0	Kg	33	
Sand	0	M3	1500/m3	
Aggregate	0	M3	8000/m3	Per m3 ¾
Iron bar kmm	0	Kg	1200	12mm/length of bote
Brick	0	Nos	80	9''
Casing	0	Nos	24.000	6'' API6m
Casing	0	No.	35,000	8''
Strainer	0	Nos	95.000	6'' Jss Screen
Strainer	0	Nos.	160,000.00	8'' JSS Screen
Submerged pump	0	Nos	370.000	5.5HP submersible pump
Submersible pump	0	Nos.	640,000.00	10 HP
Hand pump	0	Nos	50.000	Per jet
Vehicle	0	Nos	3,000,000	Sedan for 4 persons
Forman	0	Person. Day	1700/day	
Skilled labor	0	Person. Day	1700/day	
Unskilled labor	0	Person. Day	800/day	
Carpenter	0	Person. Day	1700.day	
Mason	0	Person. Day	1700.day	
Plumber	0	Person. Day	1700/ day	
Driver	0	Person. Day	1700/day	

3.13 Where have you procured the material for the water supply facility listed above?

- *Damaturu, Kano, Maiduguri and Lagos*

3.14 Do you have any database system including GIS related to water supply?

- *Yes*

#### 4 OPERATION AND MAINTENANCE

*For the equipment related to borehole drilling*

4.1 The ordinary method of the maintenance and repairing of the equipment related to the borehole construction ( Is it carried out by your own staff/or by any other private company outside?)

- *By our staff and other private companies*
- 4.2 List of staff for maintenance of the equipment in RUWASA and their task
  - *See Annex vii RWS 78 men*
- 4.3 List of the heavy and light duty mechanical tools
  - *See Annex vii RWS*
- 4.4 Do you have the workshop in your premises for the maintenance?
  - *No. We are in our temporarily office but it is planned in our permanent site under construction.*
- 4.5 The period of the experience of working at borehole drilling in RUWASA.
  - *15 years average. Variable, depend on entry to service*
- 4.6 Has the budget for the maintenance been allocated every year? If the answer is “Yes”, please provide us detail information.
  - *Yes – see budget N80,500,000.00 budgeted , N5,380,000.00 actual as at 30/6/2006*
- 4.7 What is the drilling cost for one borehole including fuel and lubricants in the recent activities in RUWASA?
  - *2.4 Million Naira for 6” Ø BH. For*
  - *4 million for 8” Ø BH*
- 4.8 Do you have any manual for the maintenance of the equipment?
  - *Yes e.g. for Generator Sets and Pump*

**For the water supply facilities**

- 4.9 Do you have any village level committee for the operation and maintenance of water supply facilities like a Village WATSAN committee (VWESC)?
  - *Yes in some communities*
- 4.10 Do you have any units for the operation and maintenance of water supply facilities?
  - *Yes*
- 4.11 What is the standard hand pump type of RUWASA (Is it VLOM type pump, Indian Mark III as same as kano State)?
  - *AFRIDEV/RUWATSAN III & I*
- 4.12 Please fill in the table below regarding O&M cost for one borehole.

	Item	Unit price	Quantity	Amount	Frequency of change

質問票に対する回答:ヨベ州地方給水局(RUWASA)

1	Replacement of spare parts	250,000	1	250,000	Annually
2	Maintenance Kit	50,000	L/S	50,000	Periodically
3	Cleaning of well	100,000	1	100,000	Every 2 years
4	Hand pump, pipe replacement	20,000	1	20,000	Every 2 years
5	Others, if any			720,000	Daily fuelling & monthly servicing

4.13 Which organisation is responsible for the maintenance cost?

Community? RUWASA? LG (Local Government Area)? And /or others

- *All of the three are involved*

4.14 How much does one beneficiary have to pay per year for the maintenance?

- *150 Nigeria Naira Annual*

4.15 Do you have the information about the affordability to pay and /or willingness to pay?

- *Yes*

4.16 Have you already provided the operation and maintenance manual for hand pump?

- *Yes*

## 5. WATER SUPPLY CONDITION

*Please provide us the following information*

5.1 Coverage of water supply in the targeted area

- *47 %*

5.2 The type of water supply and water source in the target area rural water supply borehole wells ponds

- *Rural Water Supply – Borehole Open well Hand pumps  
source - ground water*

5.3 Access time to water sources

- *6hrs for boreholes, 24hrs for open wells*

5.4 Time consumed for fetching water by child and woman

- *2hrs on average*

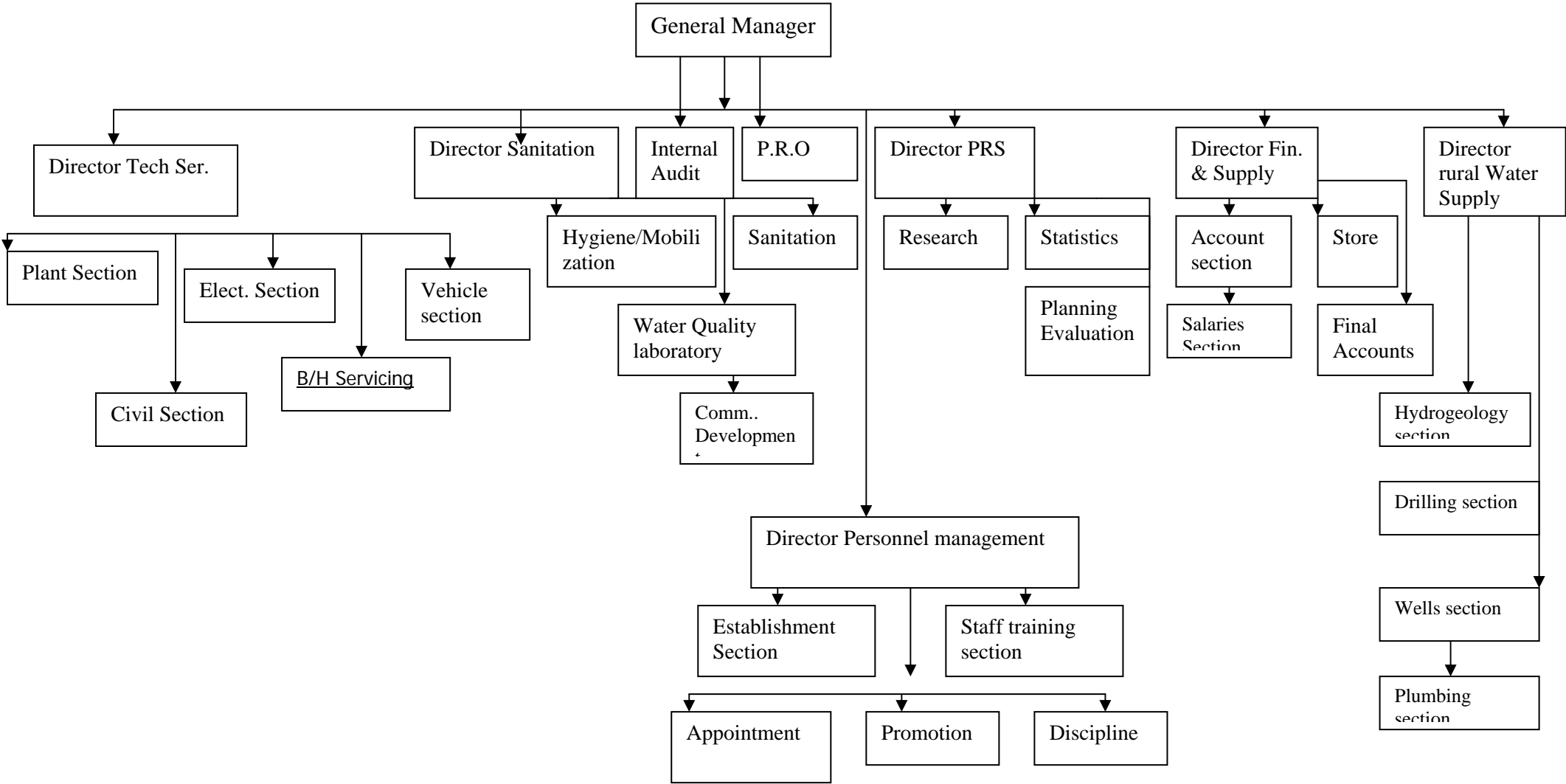
## 6. PREVIOUS STUDY REPORTS

*Please provide us the following reports and /or document available*

- 6.1 Borehole drilling result (geological log, geophysical log, pumping test results and water quality analysis).
  - *Yes RWS*
- 6.2 Hydrogeology, such as groundwater potential, development, usage etc.
  - *Yes RWS*
- 6.3 Socio-economic condition.
  - *Not good*
- 6.4 Geology and topography
  - *Yes RWS to contact Federal Survey*
- 6.5 Any reports regarding analysis and evaluation of groundwater
  - *Yes RWS*
- 6.6 Hydrological and meteorological report in Yobe State
  - *Not available*
- 6.7 Report provided by DAR-AL-HANDASAH
  - *To be Provided by Water Cooperation*



**ORGANISATION CHARTS OF RUWASA**  
**ORGANOGRAM YOBE STATE RURAL WATER SUPPLY AND SANITATION AGENCY (RUWASA)**



**RURAL WATER SUPPLY DEPARTMENT**

**3.1 HYDROGEOLOGY**

No of staf	Roles
	<ul style="list-style-type: none"> <li>- supervision of borehole drilling</li> <li>- Corry out Hydrogeological/ Geolophysical investigation</li> <li>- Hydrogeological/Hydroilocal Data collection/ Analysis</li> <li>- Planned and advice on all water resources Development in rural areas of the State.</li> <li>- Budget preparations</li> </ul>

**DRILLINGS**

No of staf	
	<ul style="list-style-type: none"> <li>- Carry out all drilling activiteies of RUWASA, in House/deposit works</li> <li>- Operate /maintain all drilling Rigs/ accessories.</li> <li>- Borehole servicing.</li> </ul>

**WATER SUPPLY.**

	<ul style="list-style-type: none"> <li>- Carry out new pipe laying to our rural Boreholes</li> <li>- Cary out pipeline extension in our rural areas</li> <li>- Repairs /maintenance of pipe lines in rural areas.</li> <li>- Installation of hand pump</li> <li>- Repairs/maintenance of hand pumps</li> <li>- Construction of Concrete lined Cement wells</li> <li>- Rehabilitation/ repairs of cement wells</li> <li>- Other –Spring water development ponds and infiltration galleries</li> </ul>
--	--

**3.1 DIRECTOR RURAL WATER SUPPLY**

HYDROGEOLOGY	DRILLING	WATER SUPPLY
<ul style="list-style-type: none"> <li>- Hydrogeology</li> <li>- hydrological</li> <li>- Borehole House drilling supervision</li> <li>- GI S</li> <li>- Questioners Development in Rural Areas of the Staff</li> </ul>	<ul style="list-style-type: none"> <li>- Borehole Drilling</li> <li>- Borehole Servicing</li> <li>- Maintenance of Rings and accessories</li> </ul>	<ul style="list-style-type: none"> <li>- Pipe laying</li> <li>- Cement wells</li> <li>- Hand pumps</li> <li>others- Springs, ponds galleries e.t.c</li> </ul>

3.4 3.5 4.3

S/N	EQUIPMENT	DATE OF PURCHASE	CONDITION	Country Origin	CAPACITY
1	Atlas Copco drilling	1978	Function	Sweden	200m-toinstall 4-10Ø
2	Maz Rigs with mounted mud pump and separate	19994	” ”	Russia	200- ” ”
3	MAZ Compressor	1994	Functional	Russia	20 Bars

**MOTORISED BOREHOLE SCHEME**

2.6

Drilling and installation of 6” Japan stainless screen of variable Depth. Provision of overhead tank, generator set, pump and accessories.

See diagram below.

**RURAL WATER SUPPLY AND SANITATION AGENCY. YOBE STATE,**  
**DAMATURU**  
**DIRECTOR PERSONNEL MANAGEMENT**  
**HIS FUNCTIONS**

1. Staff welfare.
2. Staff promotion/upgrading
3. Employment and deployment
4. Staff dieseline
5. Staff accommodation
6. Man power training and Development
7. Procession of staff retirement/ transfer
8. Records keeping
9. Dissemination of official circulars to staff

**SANITATION DEPARTMENT STAFFSTRESH AND ROLES**

The department has 8 members of Staff as follows.

- |  |     |
|--|-----|
| (a) Head of department                 | - 1 |
| (b) Sanitation Unis                    | - 2 |
| (c) Water quality Unit                 | - 2 |
| (d) Hygiene education and mobilisation | -3  |

**ROLES**

**1. SANITATION UNIT**

- inspection and assessment of Sanitary facilities in School and Communities
- Training of Community artisan
- Monitoring and supervision of latrines construction
- Establishment of Community Sani- centres

**2 WATER QUALITY UNIT**

- Collection of water samples for physico-chemical and bacterio logical analysis
- Chemical treatment of polluted suspicious water sources
- Water Quality surveillance.

**2. HYGIENE EDUCATION AND MOBILISATION UNIT**

- training of teachers on personal hygiene.
- Formation of Enviromental health clubs in Schools.
- Orientation of PTA members and WASLOM on personal hygiene promotion

- Sensitization and mobilisation of Communities on good personal hygiene practices
- Mobilisation of Communities on guinea worm eradication.
- Formation of WASCONM.

**FINANCE & SUPPLIES DEPARTMENT**  
**ROLE AND NUMBER OF STAFF**

**The role of Department**

1. taking record of funds received by the Agency and how the funds are being disbursed.
2. taking record of items (Stook) received by the Agency and how they are being issued out.
3. taking record of any financial commitment by the Agency ( for instance liabilities against the Agency and debts receivable by the Agency).
4. preparation of financial statement for guidance of the agency, s management in decision making and also as an information for other interest groups (e.g. the State Government and donor Agencies like UNICEF, National water Rehabilitation Scheme, e.t.c).
5. Offer advise to the management in respect of finance matters.

**Staff Strength of the department**

There are twelve (12) Staff in department with their designation as stated below:

(a) Director of finance and supplies	-	1
(b) Chief Accountant	-	1
(c) Cashier	-	1
(d) accountant (Salaries)	-	1
(e) Accountant (Final Account)	-	1
(f) Accounting and Stores Assistant	-	5
(g) messenger	-	1
(h) Store Officer	-	1
<b>Total</b>	-	<b>12</b>

27  
07/28  
ヨベ

**QUESTIONNAIRE  
ON  
THE PRELIMINARY STUDY  
ON  
THE PROJECT FOR THE SUPPLY OF EQUIPMENTS FOR GROUND WATER  
EXPLOITATION TOWARDS POTABLE WATER SUPPLY AND HEALTH  
DILVERY IN YOBE STATE, FEDERAL REPUBLIC OF NIGERIA**

**For: Ministry of Water Resources and Rural Development (MWRRD), Yobe State**

In order that the study will be carried out appropriately, please answer this questionnaire and provide us necessary data and information. Please provide us with the answer and/or data and submit to the Preliminary Study team directly while their study period in Nigeria. Based on your answers, JICA Preliminary Study team will carry out the field survey and make a report. Japanese government and JICA headquarters will examine the report with contents of your request and decide the execution of the project. Therefore, please reply each question correctly and concretely.

**1.0 ORGANIZATION INFORMATION**

*Please provide us the following data*

1.1 Organisation chart of the MWRRD.

*As attached*

1.2 The relationship between MWRRD and FMWR

*The relationship between the two Ministries is that of partnership in progress towards ensuring that all water related policies both International and National are pursued in unison. These are achieved through interactions in conferences, seminars, workshops, the National Council on Water Resources meetings and assistance on Water Projects.*

1.3 Budgetary information of MWRRD including Rural Water Supply and Sanitation Sector.

*The Budgetary Provisions for the Ministry for two years are:*

<i>Year</i>	<i>Approved Budget</i>	<i>Actual Performance</i>
<i>2005</i>	<i>₦1.60 Billion</i>	<i>40%</i>
<i>2006</i>	<i>₦1.00 Billion</i>	<i>20%</i>

1.4 Financial situation including budget for construction of wells

Year	Approved Budget	Actual Performance
2005	₦395.00 Million	₦ 194.51 Million
2006	₦310.00 Million	₦ 98.00 Million

### 2.0 WATER SUPPLY PROJECT AND CONDITION

Please provide us the following information

- 2.1 On-going or expected projects similar to the required project in Yobe State.  
*No on-going or expected projects of similar nature. However the Government has been providing potable water to the populace from its budgetary provisions.*
- 2.2 On-going or expected projects assisted by foreign donors relevant to water and sanitation sector in Yobe State.  
*European Union and UNICEF intervention support in the Urban and Rural Water Supply and Sanitation sub-sector to improve the service delivery.*
- 2.3 On-going or expected activities of NGO relevant to water and sanitation sector or rural development in Yobe State.  
*Available.*
- 2.4 The relationship between Water Board and RUWASA.  
*Both are Government Agencies saddled with the responsibility of providing potable water to the Urban and Rural populations of the State respectively.*
- 2.5 Does the Water Board have any information of Rural Water Supply and Hydrogeology in digital data?  
*None.*
- 2.6 Type of water supply system and water source in the Yobe State.  
*Systems: Boreholes, hand pumps and Cement Wells.  
Source: Groundwater.*



2.7 Coverage of Water Supply in Yobe State.

*50%*

2.8 Unit water consumption in Yobe State.

*60 Lcd*

### **3.0 PLAN, STRATEGY AND REGULATIONS**

*Please provide us the followings and other information related with.*

3.1 Yobe State Government Rolling Plan

*Not available.*

3.2 State Economic Empowerment and Development (SEEDS)

*Available*

3.3 Regulation and/or the procedure to be taken for the construction of water supply facilities and groundwater development.

*Regulation/procedure for construction of water supply facilities and structures are available in both WATER CORPORATION and RUWASA Edicts.*

3.4 Is there any water supply and sanitation projects which overlap the targeted area?

*No.*

### **4.0 OTHERS**

*Please provide us the following data or inform us the contact address where we are able to obtain*

4.1 Meteorological data in Yobe State.

*Likely with the Federal Ministry of Aviation, Nigerian Meteorological Agency (NIMET) Abuja. They are on line.*

4.2 Socio-economic condition in Yobe State

*Not good.*

4.3 Environmental Consideration (Environmental Act.)

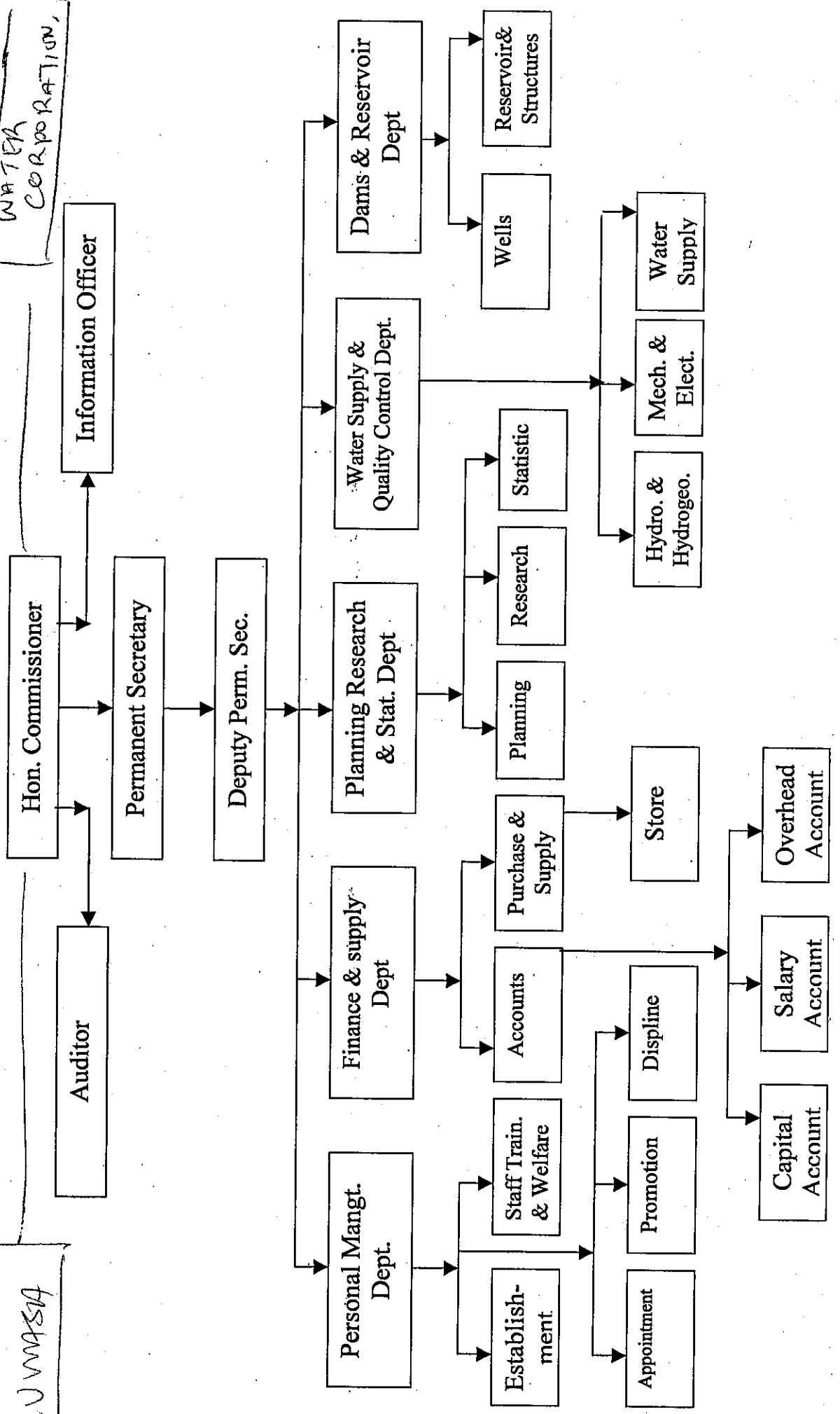
*Yobe State Applies the Federal Environmental Act..*

WATER CORPORATION

RUMASA

# YOB STATE MINISTRY OF WATER RESOURCES

## ORGANIZATIONAL CHART



**QUESTIONNAIRE  
ON  
THE PRELIMINARY STUDY  
ON  
THE PROJECT FOR THE SUPPLY OF EQUIPMENTS FOR GROUND WATER  
EXPLOITATION TOWARDS POTABLE WATER SUPPLY AND HEALTH  
DELIVERY IN YOBE STATE IN FEDERAL REPUBLIC OF NIGERIA**

**For : Federal Ministry of Water Resources (FMWR)**

In order that the study will be carried out appropriately, please answer this questionnaire and provide us necessary data and information. Please provide us with the answer and/or data and submit to the Preliminary Study team directly while their study period in Nigeria. Based on your answers, JICA Preliminary Study team will carry out the field survey and make a report. Japanese government and JICA headquarters will examine the report with contents of your request and decide the execution of the project. Therefore, please reply each question correctly and concretely.

**1.1 ORGANIZATION INFORMATION**

*Please provide us the following information.*

1.1 Organization chart of the FMWR.

回 答 : 作成中

1.2 The relationship between FMWR and MWRRD

回 答 : 国家給水衛生政策(National Water Supply and Sanitation Policy)に記載されている。

1.3 Budgetary information of FMWR including rural water supply and sanitation sector

**2. WATER SUPPLY PROJECT**

*Please provide us the following information.*

2.1 On-going or expected projects similar to the required project in Nigeria.

回 答 : ・ AfDBによるRural Water Supply Programm 2005～2009

- ・ ナイジェリア国政府による全国を対象としたFederal RWS Program(2004 ～2006)
- ・ 連邦水資源省は給水施設を建設するまでだが、維持管理を行うよう指導している。

2.2 On-going or expected projects assisted by foreign donors relevant to water and sanitation sector in Nigeria.

回 答 : ある。

2.3 On-going or expected activities of NGO relevant to water and sanitation sector or rural development in Nigeria.

回 答 : ある。

2.4 Present situation of **Kano and Oyo states water supply project assisted by Japanese**

## 質問票に対する回答:連邦水資源省(FMWR)

**government**, especially constructing formation, result, condition of the equipment procured, the condition of the water supply facilities constructed by you, the situation of the operation and maintenance of the VWESC.

回 答 : オヨ案件については次の通りである。

2006年時点で98%が終了している。供与された機材は現在でも機能している。  
水監理委員会 (WATSAN) も機能している。

### 3 PLAN, STARATEGY AND REGULATIONS

*Please provide us following information.*

4.1 National policy of water and sanitation sector

回 答 : ある。(入手済み)

4.2 Any documents related to water supply and sanitation in Nigeria provided by donors.

回 答 : AfDBが作成している。

4.3 Other donor's plan for water supply and sanitation sector for Yobe state

### 4 Others

4.1 Please tell us how to obtain the meteorological date in Nigeria and Yobe state.

回 答 : 空港にある気象観測所で入手可能である。また、ヨベ州のデータは州都の Damaturuで入手可能である。

4.2 Environmental Consideration (Environmental Act)

4.3 Please tell us how to obtain the data on socioeconomic condition in Nigeria and Yobe state. The needed socioeconomic condition are listed below

回 答 : 社会状況データは国家統計局(National Bureau of Statistics)にて入手可能である。

質問票に対する回答: 連邦水資源省 (FMWR)

Items
Basic Indicators
Total population
GDP per capita
GDP per capita average annual growth rate (%)
Annual population growth rate
Under-5 mortality rate
Infant mortality rate
Life expectancy at birth (years)
Total adult literacy rate (%)
% of population urbanized
Average annual growth rate of urban population (%)
% of population using improved drinking water sources (total)
% of population using improved drinking water sources (urban)
% of population using improved drinking water sources (rural)
% of population using adequate sanitation facilities (total)
% of population using adequate sanitation facilities (urban)
% of population using adequate sanitation facilities (rural)
total area (km <sup>2</sup> )
Map of Target Area
A map indicating service area within the country
A map indicating location and districts of target area
Photographs (about 30 photos, with description)
Surrounding environment
Social condition of target area
Present Situation of National Water Supply
Water supply in general
* Urban
* Rural
* Total
Yearly changes of population served and service targets
* Urban
* Rural
* Total
Tap water utilities
Specially noted items for traditional water use (if any)

質問票に対する回答: 連邦水資源省 (FMWR)

Improvements Needed in Waterworks (National level)
Problems in Drinking Water Supply in Target Area
Present Condition of Drinking Water Supply in Service Area
* Description of water supply facilities
* Basic indicators such as population served
* Tariff system
* Water quality management system
* Water supply condition in dry/ wet season
* State of water use
* Attitude of people in target area regarding water use
* Public attitude of problems in waterworks
* Special attention needed for water supply in poverty area
* Comments and questions
Relevant Policies
Relevancy with national plans, etc.
* PRSP and water supply
* National development plan and water supply
* Sectoral program
* Other related plans
Relevancy with regional development plan
Existing M/P, F/S and their names related to target project
Urgency and priority of target project (sectoral)
Comparison of candidate projects
Other Sectoral Information
Discharge conditions
Impact of water contamination to water supply
Relation with other sanitation projects
Mobility of water-borne diseases
Condition of water fetching
Responsive Ministry, Implementing and Maintenance Agency
* Undertakings of ministry and implementing agency
* Organization chart of agency and number of staffs
* Implementing division and number of staffs (administrative, engineers, operators, etc.)
* Maintenance division and number of staffs
* Profile of implementing agency (budgets, etc.)
Cooperation by Japan
* List of projects
* Present status of implemented projects

質問票に対する回答:連邦水資源省(FMWR)

Cooperation by Other Donors
Types and number of projects related to target project
* Cooperation projects near target area in past 10 years
* State of other donors
Condition and result of request for target project
* Opinions of other donors
* Status of the request
Possibility of cooperation with other donors
Reason of other donors not adopting the target project
Description of Target Project
Land use and urban development policy for target area
Location of present facilities
Name, size and number of facilities needed to be improved
Name, size and number of equipment needed to be improved
Site condition
Exact location
Status of land acquisition (any involuntary resettlement)
Level of difficulty during construction and possibility of forest cutting
Amount of available water resources and their amount of intake
Accessibility by paved road
Accessibility during wet season
Accessibility to power supply and communication service
War or conflict near target area
Opposition movement against target project
Effect of implementation of project
Importance of target area within regional and national level
Economic and social level of target area
Fulfillment of BHN
Effects for environmental and living sanitation
Reduction of water fetching labor
Development of commerce in target area
Technological transfer

質問票に対する回答: 連邦水資源省 (FMWR)

Items for Feasibility and Maintenance
Institutional capacity for business administration
Institutional capacity for construction
Institutional capacity for maintenance
Agreement with inhabitants of maintenance after construction
Agreement with inhabitants of tariff collection
Relevancy of burden of fund by recipient (if required)
Present condition of waterworks indicators
Profit and loss statement
Balance sheet
Cash flow
Financial analysis chart
Expected financial state after project implementation
Design criteria of the country
Technical acceptability of project
Improvements required from point of appropriate technology
Staff location, working status, and technical training
Operation and maintenance guidelines
Daily check system and check list
Operation manual in case of facility disruption
Social Environmental Considerations
Avoidance of regional dividing because of project implementation
Existence of national park, endangered species, etc.
Nationally-designated protected areas
Large-scale groundwater pumping
Water pollution in closed water area caused by increased water discharge



**QUESTIONNAIRE  
ON  
THE PRELIMINARY STUDY  
ON  
THE PROJECT FOR THE SUPPLY OF EQUIPMENTS FOR GROUND WATER  
EXPLOITATION TOWARDS POTABLE WATER SUPPLY AND HEALTH  
DELIVERY IN YOBE STATE IN FEDERAL REPUBLIC OF NIGERIA**

For **:the person in charge of water and sanitation, United Nations Children's Fund (UNICEF)**

In order that the study will be carried out appropriately, please answer this questionnaire and provide us necessary data and information. Please provide us with the answer and/or data and submit to the Preliminary Study team directly while their study period in Nigeria. Based on your answers, JICA Preliminary Study team will carry out the field survey and make a report. Japanese government and JICA headquarters will examine the report with contents of your request and decide the execution of the project. Therefore, please reply each question correctly and concretely.

**1. WATER SUPPLY AND SANITATION**

*Please provide us the information and the answer to the following questions.*

1.1 Do you have any on-going and/or planned projects related to the water supply and sanitation sector in Yobe State?

1.2 If the answer to the question 1.1 is "yes", please provide us detail information.

回答: (RUWASAにて回答を得た。) 3 LGA (Machina、Yusufari、Glani) における給水施設の建設と WESCOM の設立支援、および維持管理担当 LGA スタッフへの支援を 2003 年から実施している。

1.3 Water supply and sanitation programme which you have carried out in Yobe State

1.4 Do you have any strategy paper regarding the water supply and sanitation sector in both whole country and Yobe state?

回答: ある。

1.5 Do you have any manuals for operation and maintenance for water supply facility with hand pump?

回答: UNICEF でも入手可能である。

1.6 Do you have any information about health condition in Yobe state?

回答: ヨベ州の保健省で入手可能である。

**QUESTIONNAIRE  
ON  
THE PRELIMINARY STUDY  
ON  
THE PROJECT FOR THE SUPPLY OF EQUIPMENTS FOR GROUND WATER  
EXPLOITATION TOWARDS POTABLE WATER SUPPLY AND HEALTH  
DELIVERY IN YOBE STATE IN FEDERAL REPUBLIC OF NIGERIA**

For : National Planning Commission (NPC), Federal Republic of Nigeria

In order that the study will be carried out appropriately, please answer this questionnaire and provide us necessary data and information. Please provide us with the answer and/or data and submit to the Preliminary Study team directly while their study period in Nigeria. Based on your answers, JICA Preliminary Study team will carry out the field survey and make a report. Japanese government and JICA headquarters will examine the report with contents of your request and decide the execution of the project. Therefore, please reply each question correctly and concretely.

**1 ORGANIZATION INFORMATION**

*Please provide us the following information.*

1.1 The position and task of the NPC for the water supply field.

回答：全国の水資源関連プロジェクトの実施の調整業務として、モニタリングと評価を実施している。また、ドナーによる技術協力や国内における各分野のプロジェクトの調整を行っている。

1.2 Government organization chart

回答：

**2 SOCIOECONOMIC CONDITION**

*Please provide us the following information.*

2.1 We would like to know the progress and the schedule of the publishing of Census 2005.

回答：2006年10月に中間報告が出る。また、最終版は2006年4月に発刊予定。

2.2 The results of the previous census in Nigeria.

回答：NPC(National Population Commission)で入手可能。

**2 PLAN AND STRATEGY**

*Please provide us the following information.*

3.1 Position of the water supply and sanitation in the whole country in your strategy.

回答：連邦水資源省で入手可能である。

3.2 Position of the water supply and sanitation sector in the Poverty Reduction Strategy Paper

**質問票に対する回答: 国家計画庁 (National Planning Commission, NPC)**

3.3 Position of the water supply and sanitation sector in the Millennium Development Goals (MDGs)

回答: 連邦水資源省で入手可能である。

3.4 National Economic Empowerment and Development Strategy

回答: オリジナルはある。

3.5 Any other national plan and/or strategy which mention the water supply and sanitation

## 5. 収集資料リスト

# 収 集 資 料 リ ス ト

主管部長	文書管理課長	主管課長	情報管理課長	技術情報課長

地域		調査団等名称	ヨベ州地方給水・衛生改善プロジェクト予備調査	調査の種類	予備調査	作成部課	
	ナイジェリア連邦共和国			現地調査機関	2006年 7月 25日～ 2006年 8月 18日 年 月 日～ 年 月 日	担当者氏名	

平成 年 月 日 作成

番号	資料の名称	形態	版型	頁数	オリジナル・コピーの別	部数	収集先名称又は発行機関	寄贈・購入の別	取扱区分	利用表示	利用者所属氏名	納入予定日	納入確認欄
<b>P</b>	<b>政策、組織</b>												
P-1	Yobe State of Nigeria Gazette(RUWASA設立の趣旨、機能)	図書	A4		コピー	1	RUWASA						
P-2	Need	図書											
P-3	Need (Digest)	図書											
P-4	NATIONAL WATER SUPPLY AND SANITATION POLICY	図書	A4		コピー		FEDERAL MINISTRY OF WATER RESOURCES						
P-5	NATIONAL RURAL WATER SUPPLY AND SANITATION PROGRAMME A STRATEGIC	図書	A4		コピー		FEDERAL MINISTRY OF WATER RESOURCES						
P-6	BADE LGA組織図	図面	A4		コピー	1	BADE LGA						
P-7	連邦水資源省組織図	図面	A4		コピー	1	連邦水資源省						
P-8	RUWASA組織図	図面	A4			1	RUWASA						
<b>E</b>	<b>社会経済</b>												
E-1	Annual Abstract of Statistics, 2001 Edition	図書	A4		コピー	1	National Bureau of Statistics						
E-2	2005 Collaborative Survey of Socioeconomic Activities in Nigeria(抜粋)	図書	A4		コピー	1	National Bureau of Statistics						
E-3	ヨベ州およびヨベ州のLGAの人口(1991センサスデータ)	図書	A4		コピー	1	National Population Commission						
E-4	ナイジェリア社会指標(2004年12月31日)	図書	A4		コピー	1	Annual Report and Statement of Accounts for the Year Ended 31st December, 2004						
E-5	Core Welfare Indicators Questionnaire Survey Yobe State: Main Report, October, 2002	図書	A4		コピー		Federal office of Statistics, Yobe State Statistical Agency						

# 収 集 資 料 リ ス ト

主管部長	文書管理課長	主管課長

情報管理課長	技術情報課長

地域		調査団等名称	ヨベ州地方給水・衛生改善プロジェクト予備調査	調査の種類	予備調査	作成部課	
国名	ナイジェリア連邦共和国			現地調査機関	2006年 7月 25日～ 2006年 8月 18日 年 月 日～ 年 月 日	担当者氏名	

平成 年 月 日 作成

番号	資料の名称	形態	版型	頁数	オリジナル・コピーの別	部数	収集先名称又は発行機関	寄贈・購入の別	取扱区分	利用表示	利用者所属氏名	納入予定日	納入確認欄
E-6	YOBE STATE a decade of EXISTENCE	図書	A4		オリジナル		Ja'afu Muhammad Nejo						
E-7	YOBE STATE ECONOMIC REFORM AGENDA (YOSERA)	図書	A4		コピー		YOBE STATE GOVERNMENT						
E-8	Nigeria Statistical Year Book 1996	図書	A4		オリジナル	1	National Bureau of Statistic	寄贈					
E-9	The Nigerian Statistical Fact Sheets on Economic & Social Development 2005	図書	A4		オリジナル	1	National Bureau of Statistic	寄贈					
E-10	National Population Commission CENSUS '91Final Results Yobe State	図書	A4		コピー	1	Yobe State National Population Commission	寄贈					
E-11	Poverty Profile for Nigeria 2004	図書	A4		コピー		National Bureau of Statistic						
E-12	Yobe State Poverty Status Map	図書	A4		コピー		RUWASA						
N	自然条件等												
N-1	地形図(1・50,000) :Potiskum S.W.	図面			オリジナル		Federal Survey, Nigeria						
N-2	地形図(1・50,000) :Damaturu S.W.	図面			オリジナル		Federal Survey, Nigeria						
N-3	地形図(1・100,000) :Nafda	図面			オリジナル		Federal Survey, Nigeria						
N-4	YEAR 2005 RAINFALL PREDICTION AND SOCIAL-ECONOMIC IMPLICATIONS FOR ALL STATE: May	図面	A4		コピー		NIGERIA METEOROLOGICAL AGENCY						
N-5	深井戸リスト(1960-2005年)	書類	A4		コピー		RUWASA						
N-6	RUWASA掘削ポアホール資料	書類	A5		コピー		RUWASA						
N-7	Geological and Mineral Resources Map of Yobe State, Nigeria (1:400,000)	図面			オリジナル		Nigeria Geological Survey Agency						

# 収 集 資 料 リ ス ト

主管部長	文書管理 課長	主管課長

情報管理 課長	技術情報 課長

地域		調査団 等名称	ヨベ州地方給水・衛生改善プ ロジェクト予備調査	調査の種類	予備調査	作成部課	
国名	ナイジェリア 連邦共和国			現地調査機関	2006年 7月 25日～ 2006年 8月 18日 年 月 日～ 年 月 日	担当者 氏名	

平成 年 月 日 作成

番号	資料の名称	形態	版型	頁数	オリジナル・コピーの 別	部数	収集先名称又は発行機関	寄贈・購 入の別	取扱 区分	利用 表示	利用者所属氏 名	納入予 定日	納入 確認欄
N-8	NIGERIA ROAD ATRAS (1:700,000)	図面			オリジナル		Maplt Nigeria Limited						
<b>H</b>	<b>保健衛生</b>												
H-1	Nigerian Guinea Worm Edadication Programme (NIGEP)		A4		コピー		Federal Ministry of Health						
H-2	Report on Skeletal and Dental Fluorosis Problem in Ajari/Pawari Words, Damaturu, Yobe State	図書	A4		オリジナル		Yobe State Water Corporation						
H-3	Information on Ministry of Health				コピー		State Ministry of Health						
<b>W</b>	<b>給水関連</b>												
W-1	Handpump Manual	図書	A5	75	オリジナル	1	RUWASA						
W-2	Handpump Catalogue	カタログ	A4		コピー	1	RUWASA						
W-3	井戸構造標準図	図面	A4		コピー	1	RUWASA						
W-4	Damaturu Water Supply Scheme, Preliminary Design Main Report Volume 1/2 (抜粋)	図書	A4		コピー	1	Dar al-handasah						
W-5	2005年1月時点における井戸掘削監理委員会と監理する井戸のリスト	書類	A4		コピー	1	ヨベ州水資源省						
<b>C</b>	<b>ナイジェリア規格</b>												
C-1	Nigerian Industrial Standard, NIS:198/1984, Specification for Steel Pipes (Welded and Seamless) for Water Pipelines	図書	A5		オリジナル	1	Standard Organization of Nigeria						

# 収集資料リスト

主管部長	文書管理課長	主管課長

情報管理課長	技術情報課長

地域		調査団等名称	ヨベ州地方給水・衛生改善プロジェクト予備調査	調査の種類	予備調査	作成部課	
国名	ナイジェリア連邦共和国			現地調査機関	2006年 7月 25日～ 2006年 8月 18日 年 月 日～ 年 月 日	担当者氏名	

平成 年 月 日 作成

番号	資料の名称	形態	版型	頁数	オリジナル・コピーの別	部数	収集先名称又は発行機関	寄贈・購入の別	取扱区分	利用表示	利用者所属氏名	納入予定日	納入確認欄
C-2	Nigerian Industrial Standard, NIS: 325:1997, General Requirements for Deep Well Hand Pump (Ruwatsan 1) for	図書	A4		オリジナル	1	Standard Organization of Nigeria						
C-3	Nigerian Industrial Standard, NIS: 326:1997, General Requirements for Deep Well Hand Pump (Ruwatsan 2) for	図書	A4		オリジナル	1	Standard Organization of Nigeria						
C-4	Nigerian Industrial Standard, NIS: 327:1997, General Requirements for Direct Action Hand Pump for Rural	図書	A4		オリジナル	1	Standard Organization of Nigeria						
42													
43													
44													
45													
46													
47													
48													
49													
50													
51													
52													



## 6. 图表

RUWASA が保有する井戸掘削関連資機材

	掘削機 メーカー	掘削方式	掘削能力	調達時期	現況
1	Maz、 ロシア製	ターンテーブル式	6”：750m	1993年 ヨベ州水資源省購入	使用可能*
2	Atlas Copco、 アメリカ製	油圧式	6”：800m	1978年 ヨベ州水資源省購入	使用可能*

\*：補足説明

① ロシア製のリグ（Maz社製、1993年購入）

ロータリーテーブルタイプ。掘削に時間がかかることや広い敷地が必要である。比較的容易な構造で運転や維持管理が容易であるが、ロシア製のため正規のスペアパーツの入手が困難である。スタッフがナイジェリアで入手したものを加工して使用するなど工夫して利用しているが、時間がかかる。

② スウェーデン製のリグ（Atlas Copco社製1978年購入）

トップドライブタイプ（油圧式）。掘削はロータリーテーブルタイプに比較して早いですが、油圧式のためスペアパーツの入手が非常に困難である。老朽化が進んでおり故障も頻繁に発生する。また、エンジンも老朽化しているために潤滑油の消耗が非常に多い。

	コンプレッサー	能力	調達時期	現況
1	Maz ロシア製	25 bar	1993年 ヨベ州水資源省購入	使用可能
2	Maz ロシア製	25 bar	1981年？ ヨベ州水資源省購入	使用不可能 空気吐出部分が故障
3	Ingasor Rand	15 bar	購入時期不明 他省が購入	使用不可能

	給水車	タンク容量	調達時期	現況
1	Stayer社製	不明	不明	使用不可能（修理可能）

	サービスリグ（井戸修復用リグ）	調達時期	現況
1	車両：Mercedes、 機材部：Ruston Bucyrus	2004年 RUWASAが購入	使用可能

	トラック	能力	調達時期	現況
1	クレーン付トラック DAF2300	15 ton crane（クレーン部）	調達時期不明 ヨベ州水資源省	使用不可能
2	トラック Mercedes	-	調達時期不明 ヨベ州水資源省	使用可能 リア・アクセルが使用不可能

揚水試験用機材		能力	調達時期	現況
1	発電機 ヤンマー	14kVA	1994年 ヨベ州水資源省	使用不可能 2005年に故障。スペアパーツの入手が不可能
2	水中ポンプ ゲルト・フォス	3 HP 1.5 liter/sec at 120m	調達時期不明 ヨベ州水資源省	使用可能
3	水中ポンプ ゲルト・フォス	5 HP 2.2 liter/sec at 150m	調達時期不明 ヨベ州水資源省	使用可能
4	水中ポンプ ゲルト・フォス	5.5 HP 2.2 liter/sec	調達時期不明 ヨベ州水資源省	使用不可能
5	Riser Pipes	φ 2" : 70m φ 3" : 170m	調達時期不明 ヨベ州水資源省	使用可能
6	水位計	500m まで測定可能	調達時期不明 ヨベ州水資源省	使用不可能 井戸内にスタックし、回収不可能

その他機材		仕様	調達時期	現況
1	GPS 1	Garmin XL12	不明	使用可
2	GPS 2	Garmin	不明	使用可
3	工具類	通常の工具	-	使用可
4	溶接機	-	不明	使用不可能、何度も修理したがすぐに壊れる。

## 添付資料 6.2

### 水資源省保有機材

掘削機 メーカー	掘削方式	掘削能力	調達時期	現況
Dand イタリヤ製	油圧式	6", 1,000 m	2004 年 水資源・地方開発省購入	使用可能

## 添付資料 6.3

### 水供給公社保有機材

サービstrup(井戸修復用リク)		調達時期	現況
1	車両：Mercedes, 機材部：Ruston Bucyrus	1977 年	使用可能
2		ヨベ州水資源・地方開発省購入	使用可能
3		2004 年	使用可能
4		水公社購入	使用可能

## 添付資料 6.4

### ローカルコンサルタント・業者（井戸掘削）

業者名		住所	連絡先	担当者
1	African Water Engineering Services Ltd	Plot 497 Bangui Street, Off Adetocunbo Ademola Crescent, Wuse II, Abja	09-523-7136	Mr. Tony Y. Dzegede
2	Fortia Water (Nig.) Ltd.	Plot 16 & 18 City Centre, Kano. P.O.Box4770	064-31-1291 080-3787-3769	Mr. Jamu Baba Dan' Agundi, Director
3	Domine Geo. Tech. Services	Maiduguri, Borno State	080-3645-3780	Mr. Hohamad, Managing Director
4	Monarch Hydro Works	RUWASA から入手した井戸掘削業者リストより引用。現地調査期間中には連絡先、担当者は入手できなかった。		
5	Dumba Inv.Ltd			
6	Milestone Inv.Ltd			
7	Zarma Waters			
8	Dasman Nig Ltd.			
9	Solar Quartz Nig. Ltd			
10	Aqua Fountain Nig. Ltd			
11	Atlas Drilling Engineers			
12	Yobe Marchants			
13	Chilariye Drillers			
14	Geophic Consultants			
15	Majema Construction and Drilling Company Potiskum			

### ローカルコンサルタント・業者（社会状況調査）

業者名		住所	連絡先	担当者
1	Fortia Water (Nig.) Ltd.	Plot 16 & 18 City Centre, Kano. P.O.Box4770	064-31-1291 080-3787-3769	Mr. Jamu Baba Dan' Agundi, Director
2	Imisi O. Water Services (Nig.) Ltd.	KM 4 Izom Road Opp. Sharia Court of Appeal Gwagwalada, Abja	09-882-1673, 09-670-7763 080-3358-0715	Mr. Emman Ladi Fatile, Managind Director

### ローカルコンサルタント・業者（物理探査）

業者名		住所	連絡先	担当者
1	African Water Engineering Services Ltd	Plot 497 Bangui Street, Off Adetocunbo Ademola Crescent, Wuse II, Abja	09-523-7136	Mr. Tony Y. Dzegede
2	Fortia Water (Nig.) Ltd.	Plot 16 & 18 City Centre, Kano. P.O.Box4770	064-31-1291 080-3787-3769	Mr. Jamu Baba Dan' Agundi, Director
3	Domine Geo. Tech. Services	Maiduguri, Borno State	080-3645-3780	Mr. Hohamad, Managing Director
4	Imisi O. Water Services (Nig.) Ltd.	KM 4 Izom Road Opp. Sharia Court of Appeal Gwagwalada, Abja	09-882-1673, 09-670-7763 080-3358-0715	Mr. Emman Ladi Fatile, Managind Director
5	Shabel Hydro Ltd.	No 10 City Centre Layout Zaria Road Kano, Kano State	064-96-0670 080-3971-3035	Mr. Awal Lawal Yola

ローカルコンサルタント・業者（水質分析）

	業者名	住所	連絡先	担当者
1	Yobe State Water Corporation	Yobe State	074-522500	Dr.A.G.Iliya, General Manager
2	Borno State Water Corporation	Borno State	入手できず	入手できず
3	Fortia Water (Nig.) Ltd.	Plot 16 & 18 City Centre, Kano. P.O.Box4770	064-31-1291 080-3787-3769	Mr.Jamu Baba Dan' Agundi, Director
4	Imisi O. Water Services (Nig.) Ltd.	KM 4 Izom Road Opp. Sharia Court of Appeal Gwagwalada, Abja	09-882-1673, 09-670-7763 080-3358-0715	Mr. Emman Ladi Fatile, Managind Director

ローカルコンサルタント・業者（既存井戸調査）

	業者名	住所	連絡先	担当者
1	Fortia Water (Nig.) Ltd.	Plot 16 & 18 City Centre, Kano. P.O.Box4770	064-31-1291 080-3787-3769	Mr.Jamu Baba Dan' Agundi, Director
2	Imisi O. Water Services (Nig.) Ltd.	KM 4 Izom Road Opp. Sharia Court of Appeal Gwagwalada, Abja	09-882-1673, 09-670-7763 080-3358-0715	Mr. Emman Ladi Fatile, Managind Director

添付資料 6.5 ヨベ州における村落部の現況の給水率と給水施設整備の基本方針(RUWASA)

Year	Rural Population in Yobe State	Number of Safe Water Resources (nos)				Number of People Access to Safe Water in Rural Area (nos)				Total Coverage Rate in Yobe State (%)			
		Cement Open Wells	Boreholes	Hand Pump	Total	Cement Open Wells	Boreholes	Hand Pump	Total	Cement Open Wells	Boreholes	Hand Pump	Total
2005	710,000	320	80	220	620	64,000	160,000	110,000	334,000	9.0	22.5	15.5	47.0
2006	727,750	370	92	250	712	74,000	184,000	125,000	383,000	10.2	25.3	17.2	52.6
2007	745,944	420	104	280	804	84,000	208,000	140,000	432,000	11.3	27.9	18.8	57.9
2008	764,592	470	118	360	948	94,000	236,000	180,000	510,000	12.3	30.9	23.5	66.7
2009	783,707	520	132	440	1,092	104,000	264,000	220,000	588,000	13.3	33.7	28.1	75.0

- 1) Number of people covered by Cement Open well, Borehole and Hand Pump is 200, 2000 and 500, respectively.
- 2) MICA project will cover 100 hand pump boreholes during the period from 2008 to 2009.
- 3) Cement open well constructed after the year 2000 is regarded as safe water resources.
- 4) The 2005 year population was calculated based on the 1991 Census data and yearly increasing rate of rural population is estimated to be 2.5 %.

**添付資料 6.6 JICA に対する申請 100 村落**

	<u>BADE LOCAL GOVERNMENT AREA:</u>		<u>POPULATION</u>
A.	1. Dala	-	527
	2. Tasga	-	572
	3. Azubak	-	2,822
	4. Jabba	-	1,990
	5. Usur	-	644
	6. Ngelbuwa	-	763
B.	<u>BURSARI LOCAL GOVERNMENT AREA:</u>		
	1. Jawa	-	679
	2. Illela Garun Dole	-	1,096
	3. Danga Kanamma	-	612
	4. Harunari	-	519
	5.. Bururu	-	359
	6. Mala Wango Fulatari	-	890
	7. Bayamari	-	2,168
	8. Koromari	-	958
C.	<u>DAMATURU LOCAL GOVERNMENT AREA:</u>		
	1. Maisandari	-	4,000
	2. Dikumari	-	1,500
	3. Maduri	-	970
	4. Malum Matari	-	543
D.	<u>FIKA LOCAL GOVERNMENT AREA</u>		
	1. Tadangara	-	4,500
	2. Sabon Fegi Fika	-	536
	3. Fusarni	-	2,065
	4. Garin Balde	-	1,351
	5. Gurjaje	-	655
	6. Yaba-Ngalda	-	1,425
	7. Garin Chindo	-	2,760
E..	<u>FUNE LOCAL GOVERNMENT AREA</u>		
	1. Jajere (SG)	-	523
	2. Ngelshengele	-	545
	3. Dumbulwa	-	557
	4. Nyakire	-	1,261
F.	<u>KARASUWA LOCAL GOVERNMENT AREA</u>		
	1. Bukarti	-	2,700
	2. Askinari & others	-	688
	3. Garin Gawo	-	456
	4. Gasma	-	906
	5. Karasuwa Galu B	-	374
	6. Karasuwa Garin Guna	-	1,568
G.	<u>MACHINA LOCAL GOVERNMENT AREASSSS</u>		
	1. Tauna	-	575
	2. Taganama	-	1,110
	3. Damai	-	1,387
	4. Majeri	-	683
	5. Bogo	-	1,901
H.	<u>NGURU LOCAL GOVERNMENT AREA:</u>		
	1. Dogon Jeji		512
	2. Yamdugo		881
	3. Maidashi		4,370
	4. Wachakal 'B'	-	1,315
	5. Dumsai		554
	6. Bambori		2,106
	7. Maja Kura		602
I.	<u>NANGERE LOCAL GOVERNMENT AREA</u>		
	1. Garin Gada	-	876
	2. Garin Baba	-	898
	3. Dawasa		4,120
	4. Gamarum		1,236
	5. Duddaye B	-	396
J.	<u>POTISKUM LOCAL GOVERNEMNT AREA</u>		
	1. Adaya		1,112
	2. Mazagane		520
	3. Mamudo		2,399



	4.	Lai-Lai		1,350
	5.	Lakwaya		415
	6.	Dumbulwa		732
K		<u>GEIDAM LOCAL GOVERNMENT AREA</u>		
	1.	Kawari Lawanti		504
	2.	Dajina		330
	3.	Damakarwa	-	1,200
	4.	Kelluri		2,692
	5.	Nguluri		385
	6.	Borko		370
	7.	Ajiri	-	275
L.		<u>GULUNI LOCAL GOVERNMENT AREA:</u>		
	1.	Daddawel		1,162
	2.	Sollari		526
	3.	Chandam		872
	4.	Badago/Badigore		721
	5.	Bagardo		427
M.		<u>GUJBA LOCAL GOVERNMENT AREA:</u>		
	1.	Katarko		2,535
	2.	Tetteba		2,945
	3.	Horanyiwa		914
	4.	Ligdir		671
	5.	Kukuwa		2,172
N.		<u>JAKUSKO LOCAL GOVERNMENT AREA:</u>		
	1.	Yim	-	776
	2.	Adiya		842
	3.	Tajuwa		1,425
	4.	Jammel		1,692
	5.	Tajuwa		824
O.		<u>TARMUWA LOCAL GOVERNMENT AREA</u>		
	1.	Dabalam	-	385
	2.	Koriyel	-	1,137
	3.	Dumbari	-	296
	4.	Manda -da'a	-	445
	5.	Bonegaral	-	373
P.		<u>YUSUFARI LOCAL GOVERNMENT AREA:</u>		
	1.	Mayori West	-	615
	2.	Mayori East	-	2,008
	3.	Shettimari (Abbagari & others)	-	475
	4.	Tulo-tulowa	-	3,166
	5.	Bukora	-	895
	6.	Kaluwa	-	521
	7.	Garin Tsangai	-	1,438
Q.		<u>YUNUSARI LOCAL GOVERNMENT AREA:</u>		
	1.	Bula Moduye	-	583
	2.	Kalgi	-	974
	3.	Toshia	-	1,584
	4.	Dalari	-	360
	5.	Buhari	-	287
	6.	Bultuwa	-	234
	7.	Ngormadi	-	320
	8.	Bulabulin	-	1,139

添付資料 6.7 ヨベ州 RUWASA による掘削実績(深井戸)：2001年～2006年月

S/No.	掘削地点 LOCATION	地方政府 (LGA)	掘削深度 (m)	井戸深度 (m)	静水位 (M)	掘削径 Ø	揚水量	完成日時	リグの種類
1	Kalallawa	Damaturu	155	153	67	6"	3 L/S	December, 2001	Maz
2	GGSS Potiskum	Potiskum	83	76	40	"	2 L/S	2003	"
3	Emirs Palace	Potiskum	84	80.93	22	"	3 L/S	April, 2005	"
4	Gremari	Yunusari	155	150	30	"	2 L/S	2002	"
5	Jigawa	Bade	87.3	75	15	"	3 L/S	June, 2001	"
6	Nayinawa	Damaturu	150	147	64	"	"	2001	
7	Karage	Jakusko	80	66.69	18	"	"	August, 2002	
8	Shetima Shitiri	Gujba	91.20	84.57	30	"	2 L/S	March, 2003	
9	Mashio	Fune	157.67	157	60	"	4 L/S	July, 2001	Maz
10	Bindigi	"	134	130	32	"	3 L/S	January, 2002	"
11	Dazigau	Dazigau	69	68	32	"	2.2 L/S	July, 2002	Atlas Copco
12	Shekau	Tarmuwa	132	121	60	"	3 L/S	March, 2002	"
13	D/ Kuka	Fune	88	87	38	"	"	June, 2001	Maz
14	Gamboiri	Damaturu	150	147	65	"	"	2005	Atlas Copco
15	Bara Town	Gulani	108.40	106.40	60	"	2 L/S	March, 2003	Maz
16	Toshia	Yunusari	100	78	30	"	"	September, 2001	Atlas Copco
17	Dapsa	Damaturu							
18	Yobe Mosque	Damaturu	153	147	54	"	5 L/S	June, 2006	Maz
19	Governor's House	Damaturu	150	148	45	"	"	May, 2006	"
20	Juluri	Bursari	138	74	12.8	6"	2.5 L/S	2003	
21	Dumbari	Jakusko	100	63	14	"	2 L/S		
22	Sunomari	Yusufari	90	70	12	"	"	June, 2001	Maz
23	Alajiri	Damaturu	144	138	55	"	6 L/S	February, 2005	
24	Chilariye	Nangere	82	81	60	"	3 L/S	September, 2004	Maz
25	Gotala Kundiliari	Gujba	160	104.94	18	"	3 L/S	January, 2004	"
26	Tandari	Potiskum	90	79.5	22	"	5 L/S	September, 2001	
27	Wagir	"	145	143	50	"	2 L/S	January, 2004	Maz
28	Mangari	Damaturu	154	151	72	"	3 L/S	January, 2002	"
29	Goniri	Gujba	84	80	60	"	3 L/S	November, 2005	"
30	Sindiri	Damaturu	180	117.64	55	"	4 L/S	November, 2005	Maz
31	Kuchi-kuchiri	Bursari	124.40	121.60	35	"	3 L/S	July, 2001	
32	Shanga	Fune	105	102	35	"	3 L/S	December, 2004	Maz

33	Dumbullwa	Fika	168	164	30	“	4 L/S	October, 2005	
34	Gashua Town	Bade	100	69	12	“	4 L/S		
35	Lantewa	Tarmuwa	120	111	45	“	3 L/S	2003	Maz
36	Sugum	Bade	82	72.96	12	“	4 L/S	June, 2001	
37	Sabon Gari	Bade	90	88	10	“	3.5 L/S	May, 2001	Maz
38	Damai	Machina	92.83	88.57	40	“	4 L/S	February, 2001	Maz

**GOVERNMENT HOUSE, DAMATURU**Reference No: GH/S/GEN/7/T.Date: 11<sup>th</sup> August, 2006

The Resident Representative,  
Japan International Cooperation Agency Nigeria Office,  
2<sup>nd</sup> Floor AP Plaza; Adetukumbo Ademola Crescent,  
Wuse II,  
Abuja.

**RE: REQUEST FOR PARTICIPATION OF YOBE STATE IN  
JICA PROGRAMME FOR JAPANESE GRANT AID**

I have the pleasure on behalf of the Yobe State to extend my appreciation to the Japanese Government for the provision of potable water to one hundred rural communities in Yobe State. This indeed is a great assistance. Further more, the delegation for the preliminary study on the project were here in Yobe State as earlier scheduled and they have already conducted the preliminary studies.

Accordingly, I wish to reiterate that the Yobe State Government is fully committed towards fulfilling her own part of the financial requirements for the drilling, installation and maintenance of the one hundred (100) hand pump boreholes in the State once the materials requested are supplied by the Japanese Grant Aid through the JICA Programme.

Please accept the assurances of my highest esteem.

**ALHAJI (DR) BUKAR ABBA IBRAHIM FNIQS  
EXECUTIVE GOVERNOR, YOBE STATE**