

### O.3 Minutes of Meeting of the Third Steering Committee Meeting

**MINUTES OF MEETING  
ON  
THIRD STEERING COMMITTEE MEETING  
FOR  
JUBA URBAN WATER SUPPLY AND  
CAPACITY DEVELOPMENT STUDY  
IN SOUTHERN SUDAN**

AGREED UPON BETWEEN


**MINISTRY OF WATER RESOURCES AND IRRIGATION (MWRI)  
OF GOVERNMENT OF SOUTHERN SUDAN (GOSS)**  
AND  
**STUDY TEAM OF JAPAN INTERNATIONAL COOPERATION  
AGENCY (JICA STUDY TEAM)**


JUBA, 15<sup>th</sup> MAY 2009

  
Eng. Isaac Liabwel  
Undersecretary,  
MWRI, GOSS, and  
Chairperson of the Study Steering Committee

  
Mr. Hiroataka Sato  
Team Leader, JICA Study Team

Witnessed by

  
Eng. Chanfok Chung Witour  
Chairperson/General Manager,  
Southern Sudan Urban Water Corporation (SSUWC)

  
Mr. Kenichi Shishido  
Resident Representative  
JICA Sudan Office

In line with the Scope of Work for JUBA URBAN WATER SUPPLY AND CAPACITY DEVELOPMENT STUDY IN SOUTHERN SUDAN (hereinafter referred to as "the Study"), Japan International Cooperation Agency (JICA) has dispatched the Study Team headed by Mr. Hiroataka SATO to Southern Sudan in order to commence the Study.

The meeting of the third steering committee (S/C) was held in MWRI on 18<sup>th</sup> April, 2009 in order to present and discuss the contents of draft Juba Water Supply Mater Plan under the presence of the JICA Southern Sudan Office. The list of participants is attached in the Annex-I and the detailed memorandum is presented in Annex-II.

As a result of a series of discussions made between the Southern Sudan side and the Study Team, both sides agreed the following main items.

1. Acceptance of the contents of the presentation of draft Master Plan

The Steering Committee, in principle, agreed the contents of the presentation on the draft Master Plan including the following comments, and JICA Study Team will consider these comments in the Interim Report II and/or a further study for priority projects. Interim Report II will be prepared and submitted based on the presentation.

- (1) As a result of evaluation of ground water potential through trial wells, it has been concluded that ground water in Tokiman Poleochannel is not feasible as a water supply source for Juba urban area in terms of water quality and quantity but surface water of Bahr el-Jebel is feasible. Therefore, the Steering Committee agreed to adopt surface water as a source of water supply for the Juba urban area.
- (2) The expansion plan should be prepared so that the supply capacity satisfies the estimated average daily water demand at least.
- (3) The source of power supply for proposed water supply facilities should be considered.
- (4) The master plan should also be linked with the millennium development goals (MDG).
- (5) An outline of the study should be prepared for public awareness.
- (6) A recommendation on wastewater management should be made.
- (7) Jebel Kujur should be correctly named as Jebel Kirok.

2. The component of priority projects was confirmed among the participants as follows, which will be implemented by 2015 as a target year. JICA Study Team should carry out a feasibility study for the priority projects.

- 1) Improvement of existing water supply system including expansion of existing water treatment plant and rehabilitation of the existing distribution network

Annex-1: Attendance List of the Third Steering Committee Meeting

Venue: Ministry of Water Resources and Irrigation (GOSS)

Date: 18/04/2009

Time: 10:00 am – 13:00 pm

- 2) Construction of the first phase of new water supply system including the following facilities
- Proposed new water treatment plant in the west bank of Bahr el-Jebel river
  - One service reservoir each for low zone and high zone
  - Transmission pipeline system connecting these water treatment plants and service reservoirs
  - Development of distribution network which should be implemented by the target year of the priority projects

No.	Name	Title/organization
1.	Eng. Issac Liabwel (Chair)	Undersecretary, Ministry of Water Resources and Irrigation (MWRI)
2.	Eng. Chamjok Chung	Chairperson / General Manager, Southern Sudan Urban Water Corporation (SSUWC)
3.	Mr. Kiyotaka Tamari	JICA Southern Sudan Office
4.	Eng. Michael Mayik Ater	Director General for Physical Planning (MHPPE)
5.	Eng. Laurence Muluhyang	Director, Urban Water Projects (MWRI)
6.	Eng. Samuel Taban Longa	Deputy Area Manager of Southern Sudan UWC for Juba
7.	Eng. Manhiem Bol	Director Supply RWSSD (MWRI)
8.	Eng. Kuol Aluong Kong	Deputy Director O&M RWSSD (MWRI)
9.	Eng. Santurino Tongun	Director of Planning (SSUWC)
10.	Mr. Tag Elkhazin	Senior Advisor (MWRI)
11.	Mr. Hirotsuka Sato	Team Leader, JICA Study Team
12.	Mr. Komei Ozaki	JICA Study Team
13.	Dr. Alok Kumar	JICA Study Team
14.	Mr. John Manyok Wal	Office Manager, JICA Study Team

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Annex-2: Detailed Memorandum of the Third Steering Committee Meeting

- the land acquisition. Based on the discussion, it was concluded that the land acquisition should be processed and the land should be owned by the SSUWC.
- 2) Advisor, MWRI appreciated the works by JICA Study Team and emphasized that this work is really very detail and extensive and has good results and requested the JICA Study Team to provide him with a soft copy. After going through the presentations, he would like to have meeting with JICA Study Team to discuss in detail about his comments. JICA Study Team agreed to it. The Advisor added following remarks:
    - a. The JICA Study Team should consider about source of power (electricity).
      - JICA Study Team responded that in its plan, it has considered the use of a generator in the beginning and expects that it would be replaced by city electricity supply later.
    - b. Advisor suggested that the plan should also be linked with the millennium development goals (MDG).
      - JICA Study Team agreed to this idea.
    - c. The JICA Study Team should prepare a simple outline of this project for public awareness.
      - JICA Study Team responded that 2-page outline of the plan was prepared and given for the participants of the Stakeholder Meeting and also summary of the report will be prepared.
    - d. Southern Sudan sides should attach their personnel as full-time counterparts to the Team so that they obtain benefits.
      - JICA Study Team responded that the Counterpart Team has been involved deeply from the beginning to collection of data and information. In the planning stage, the Counterpart formed a technical committee and master planning has been discussed in the committee meetings.
    - e. How about the funding source? Is Japan serious about funding?
      - JICA responded that it is willing to fund but has not committed. It will be decided by the Government of Japan based on the prerequisites.
  - 3) Mr. Lawrence, MWRI raised the following two issues:
    - b. The JICA Study Team has considered a population figure of 1.136 million for 2025 but the present population might be about 1 million or more.
      - JICA Study Team responded that as there is no official figure available on the population of Juba city, the population figure is based on the results of sample survey carried out by the study team to get population density and considering high population growth rates.
1. The meeting was introduced and started by the Undersecretary, MWRI.
2. The Team Leader, JICA Study Team, first explained on the recent major activities of the Study including capacity development and briefly presented the presentation of Stakeholders Meeting held earlier on 4<sup>th</sup> April 2009. Then, he presented the Master Plan prepared by the Study Team for Improvement of Water Supply in Juba.
  3. In the presentation, implementation plan of water treatment plant was discussed among the participants and it was concluded that the plan shall prepared so that water supply capacity satisfies the average daily water demand at least. According to this plan, the Phase 2 and Phase 3 shall be overlapped.
  4. The work of JICA Study Team was much appreciated. Questions and suggestions followed the presentation.
  5. Discussions
    - 1) The Undersecretary raised three issues:
      - a. What is the opinion of JICA Study Team regarding the use of groundwater for this project?
        - JICA Study Team responded that based on the result of the GW test wells in paleochannel, the yield is not sufficient to be used for a city of large scale like Juba. Also, the test results for quality of test wells indicates that of water is not of satisfactory level in terms of Fe, Mn, EC, and TDS. Also, the samples were collected from existing boreholes and were tested by the study team and results indicate that water in few of these wells contain Antimony, Fluoride, Chloride, Nitrate, Nitrite, Sodium, and TDS above the defined standard for Southern Sudan. Therefore, it is concluded that groundwater in paleochannel will not prove to be a good source of water for water supply in Juba City.
      - b. Jebel Kujur should be correctly named as Jebel Koriok.
        - JICA Study Team agreed it and shall incorporate.
      - c. How about the acquisition of the land for proposed facilities?
        - JICA Study Team responded that it was discussed in the stakeholders meeting held earlier, where the Minister, MOP(CE) and Juba Commissioner committed the land is not a problem and the Government shall follow the formal process of

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- It was concluded by the Undersecretary that let us continue with the population figure estimated by the JICA Study Team for this project. The planning methodology that has been used by JICA study team is more important.
- c. Some budget is available for the replacement of existing distribution network, can JICA Study Team suggest about replacements?
  - The Undersecretary suggested to leave this idea for the time being since this issue is unrelated to the Today's agenda.
- 4) Mr. Senturino, UWC HQ raised the following issues:
  - a. Why does the Study not include the improvement of boreholes for water supply in Juba?
    - It was concluded that based on the results of paleochannel and existing boreholes, improvement of boreholes is not a good idea.
  - b. JICA Study Team is only considering water supply. Sanitation plan should also be undertaken by the JICA study.
    - JICA Study Team responded that water supply is higher priority than sanitation or wastewater management. Once the water supply plan is prepared, it is easy to prepare sewerage plan. It was concluded that JICA Study Team shall include a recommendation on sanitation, by showing estimated figures on generated wastewater.
- 5) Mr. Kuol of RWSSD, MWRI raised the following issues:
  - a. The study on paleochannel is undertaken since long time and why this is not considered as a good source?
    - JICA Study team responded that it is based on the results of test wells and existing boreholes as explained earlier also. Undersecretary suggested that could groundwater in paleochannel be used for water supply in few zones only. The JICA Study Team feels that is it not realistic.
  - b. What process of water treatment is proposed by the JICA Study Team?
    - JICA Study team responded that rapid sand filter process of treatment shall be adopted for proposed WTP.
- 6. The contents of the draft Master Plan and components of priority projects were confirmed among the participants. JICA Study Team will take the next step and carry out a feasibility study for priority projects.
- 7. The Team Leader informed that Interim Report II will be submitted in May, 2009, and after that the next Steering Committee Meeting will be called.

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**O.4 Minutes of Meeting of the Fourth Steering Committee Meeting**

**MINUTES OF MEETING  
ON  
FIFTH STEERING COMMITTEE MEETING  
FOR  
JUBA URBAN WATER SUPPLY AND  
CAPACITY DEVELOPMENT STUDY  
IN SOUTHERN SUDAN**

AGREED UPON BETWEEN

**MINISTRY OF WATER RESOURCES AND IRRIGATION (MWRI)  
OF GOVERNMENT OF SOUTHERN SUDAN (GOSS)**

**AND  
STUDY TEAM OF JAPAN INTERNATIONAL COOPERATION  
AGENCY (JICA STUDY TEAM)**

JUBA, 7<sup>th</sup> AUGUST 2009

In line with the Scope of Work for JUBA URBAN WATER SUPPLY AND CAPACITY DEVELOPMENT STUDY IN SOUTHERN SUDAN (hereinafter referred to as "the Study"), Japan International Cooperation Agency (JICA) has dispatched the Study Team headed by Mr. Hirotsuka SATO to Southern Sudan in order to commence the Study.

The meeting of the fifth steering committee (SC) was held in MWRI on 7<sup>th</sup> August, 2009 in order to present and discuss the results of all study results including Assessment of Existing Conditions, Master Plan and Feasibility Study on the Priority Project under the presence of the JICA Southern Sudan Office. The list of participants is attached in the Annex-L.

As a result of series of discussions made between the Southern Sudan side represented by MWRI and the Study Team, both sides agreed the following main items.

**1. Acceptance of the DE/R and Comments**

MWRI in principle agreed the contents of the Draft Final Report (DE/R) with the following comments.

**1.1 Summary Report**

The following corrections shall be made on the summary report.

- The capacity of old water treatment plant
- Name of memorial ground
- The right terminology of "enjoy clean and safe water supply" is "access to clean and safe water supply."
- Other minor corrections (water related disease, Khor Ramla (Jondoro), involvement of private sector, internally displaced persons, etc.)

**1.2 Project Cost Estimation**

The definition of local and foreign currencies should be added in the summary report.

There is some discussion on exchange rate to be adopted for the Study. At the end, it is concluded that the rate that has been used in the Study is used in the report as it is preferable for the project cost estimation.

**1.3 Planning Capacity of Water Treatment Plant**

The planned water treatment capacity in 2025 is 237,000 m<sup>3</sup>/day but it shall be 250,000 m<sup>3</sup>/day

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Eng. Isaac Liabwel  
Undersecretary,  
MWRI, GOSS and  
Chairperson of the Study Steering Committee

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Witnessed by

*[Signature]*  
for  
Mr. Joseph Ebere Amosa  
Acting General Manager,  
Southern Sudan Urban Water Corporation  
(SSUWC)

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Mr. Hirotsuka Sato  
Team Leader, JICA Study Team

*[Signature]*  
Mr. Kenichi Shishido  
Resident Representative  
JICA Sudan Office

Southern Sudan side raised the issues on the rural water supply. There are several small water supply schemes in Yei. But it is not successful so far as the residents have refused to pay water charge. The staff in these areas shall be training also in technical cooperation project in Juba to manage community. Water supply facilities will be constructed in many small towns near future and the staff of these areas shall be also trained.

1.7 Water Tariff

Several opinions were exchanged related to water tariff structure, as described below.

- In order to attract people to house connection, tariff for public tap and water tanker should be raised and be same as the other tariff.
- Increased block tariff should be applied even for public tap and water tanker users.
- It is assumed that, in many cases, public tap and water tanker users are not affordable to pay for connection fee. Therefore these tariff should be low with due consideration of affordability of poor people.
- Increased block tariff is not practical for public tap and water tanker users since it is difficult to design the transition points of block tariff.

At the end, all participants agreed that the proposed tariff in the Study should remain in the report and further discussion on water tariff should be made among the governments of Southern Sudan.

2. Donation of Equipment and Software

JICA will donate the equipment and software that were used in the Study to Southern Sudan side. JICA requested these equipment and software shall be used for coming technical cooperation project and therefore these should be kept in the counterpart organizations. Southern Sudan side replied that the location of these equipment and software will be decided through discussion by Southern Sudan side considering the JICA request.

3. Further Comments on the DF/R

MWRI will prepare the comments on the DF/R and submit them by 28<sup>th</sup> August 2009 to JICA Southern Sudan Field Office, Juba. JICA Study Team will consider them in preparation of Final Report.

4. Submission of Final Report (F/R)

Final Report will be submitted through JICA Southern Sudan Filed Office, after checking of the contents by JICA. The submission of the reports will be in October 2009.

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including allowances. JICA study team replied that the further future plan after 2025 shall be prepared before the target year comes, which should include further capacity expansion after 2025. Furthermore, Southern Sudan side adopted the highest population growth scenario in estimating future population. Therefore, the estimated water demand itself includes larger allowances, and 237,000 m<sup>3</sup>/day is enough to cover the future water demand up to 2025.

1.4 Wastewater Management

Southern Sudan side commented that the development of water supply and wastewater management should be implemented simultaneously and the Study should include wastewater management plan, although the report includes recommendation of wastewater management. After discussion, finally, it was concluded that the Study does not need to include wastewater management plan as it is not included in the scope of work of the Study, and recommendation of wastewater management in the report is additional work for the Study Team.

Southern Sudan side requested JICA to make another study for wastewater management. JICA representative replied that if wastewater management is higher priority in your government, it may be considered.

1.5 Institutional Capacity Development

Southern Sudan side requested that capacity development should include work tools and equipment. JICA study team replied that training equipment, some work tools, and software such as billing system have been included in the scope of technical cooperation project.

Furthermore, Southern Sudan side requested that computerized operation of water supply facilities shall be considered in the technical cooperation project. JICA study team replied that such system needs large investment and it is not possible to implement it in technical cooperation project.

1.6 Capacity Development

MWRI commented that the training opportunity should be opened to other states in addition to Central Equatoria States. The Japanese side agreed that it shall be implemented in Juba inviting the staff in the other states. Also pilot project site, which is planned to be constructed in technical cooperation, can be used for demonstration of technical training for the staff in the other areas. Furthermore, JICA added that the technical cooperation will focus on Juba, but if it is successful and returns satisfactory results, technical cooperation in the other areas will be considered and continued to the phase 2.

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Annex-1: Attendance List of the Fourth Steering Committee Meeting

**THE FIFTH STEERING COMMITTEE MEETING**  
ON  
**JUBA URBAN WATER SUPPLY AND CAPACITY DEVELOPMENT STUDY**  
IN THE SOUTHERN SUDAN

DATE: 07/08/2002

VENUE: MINISTRY OF WATER RESOURCES AND IRRIGATION (GOSS)

TIME: 10:00 AM

**ATTENDANCE LIST**

S. No.	Name	Organization	Position
1	Issac Liabwel	MWRI	Undersecretary
9	Peter Mahal Dhiou	MWRI	Director General for Rural Water Supply and Sanitation
7	Alier Oka	MWRI	Director General for Water Resources
2	Lawrence Muluhyang	MWRI	Director for Urban Water and Programme
6	Morris Lomondong	MHPPE	Director General for Sanitation
4	Michael Mayik Ater	MHPPE	Director for physical planning
3	Eng Samuel Taban	SSUWC- CES	Area Manager
5	Santurino Torgun	SSUWC	Director for Planning
8	Khor Guung Zou	SSUWC	S/Manager for Project
11	Shishido Kenichi	JICA	Resident Representative
10	Tanari Kiyotaka	JICA	Project Formulator
12	Sato Hirotsuka	JICA Study Team	Team Leader
13	Naoto Tshida	JICA Study Team	Deputy Team Leader
14	Joha Manyok Wal Ajang	JICA Study Team	Officer Manager

*Signatures*

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## O.5 Minutes of Meeting of the Fifth Steering Committee Meeting

**MINUTES OF MEETING  
ON  
FIFTH STEERING COMMITTEE MEETING  
FOR  
JUBA URBAN WATER SUPPLY AND  
CAPACITY DEVELOPMENT STUDY  
IN SOUTHERN SUDAN**

AGREED UPON BETWEEN

**MINISTRY OF WATER RESOURCES AND IRRIGATION (MWRI)  
OF GOVERNMENT OF SOUTHERN SUDAN (GOSS)  
AND  
STUDY TEAM OF JAPAN INTERNATIONAL COOPERATION  
AGENCY (JICA STUDY TEAM)**

JUBA, 7<sup>th</sup> AUGUST 2009

Eng. Isaac Lalawel  
Undersecretary,  
MWRI, GOSS and  
Chairperson of the Study Steering Committee

Mr. Hirotsuka Sato  
Team Leader, JICA Study Team

Witnessed by

Eng. Joseph Ehete Amosa  
Acting General Manager,  
Southern Sudan Urban Water Corporation  
(SSUWC)

Mr. Kenichi Shishido  
Resident Representative  
JICA Sudan Office

In line with the Scope of Work for JUBA URBAN WATER SUPPLY AND CAPACITY DEVELOPMENT STUDY IN SOUTHERN SUDAN (hereinafter referred to as "the Study"), Japan International Cooperation Agency (JICA) has dispatched the Study Team headed by Mr. Hirotsuka SATO to Southern Sudan in order to commence the Study.

The meeting of the fifth steering committee (SC) was held in MWRI on 7<sup>th</sup> August, 2009 in order to present and discuss the results of all study results including Assessment of Existing Conditions, Master Plan and Feasibility Study on the Priority Project under the presence of the JICA Southern Sudan Office. The list of participants is attached in the Annex-1.

As a result of series of discussions made between the Southern Sudan side represented by MWRI and the Study Team, both sides agreed the following main items.

1. Acceptance of the DF/R and Comments

MWRI in principle agreed the contents of the Draft Final Report (DF/R) with the following comments.

1.1 Summary Report

The following corrections shall be made on the summary report.

- The capacity of old water treatment plant
- Name of memorial ground
- The right terminology of "enjoy clean and safe water supply" is "access to clean and safe water supply.
- Other minor corrections (water related disease, Khor Ramla (Jondoru), involvement of private sector, internally displaced persons, etc.)

1.2 Project Cost Estimation

The definition of local and foreign currencies should be added in the summary report.

There is some discussion on exchange rate to be adopted for the Study. At the end, it is concluded that the rate that has been used in the Study is used in the report as it is preferable for the project cost estimation.

1.3 Planning Capacity of Water Treatment Plant

The planned water treatment capacity in 2025 is 237,000 m<sup>3</sup>/day but it shall be 250,000 m<sup>3</sup>/day

*SA* *Joseph Amosa* *Kenichi Shishido* *55*  
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Southern Sudan side raised the issues on the rural water supply. There are several small water supply schemes in Yei. But it is not successful so far as the residents have refused to pay water charge. The staff in these areas shall be training also in technical cooperation project in Juba to manage community. Water supply facilities will be constructed in many small towns near future and the staff of these areas shall be also trained.

#### 1.7 Water Tariff

Several opinions were exchanged related to water tariff structure, as described below.

- In order to attract people to house connection, tariff for public tap and water tanker should be raised and be same as the other tariff.
- Increased block tariff should be applied even for public tap and water tanker users.
- It is assumed that, in many cases, public tap and water tanker users are not affordable to pay for connection fee. Therefore these tariff should be low with due consideration of affordability of poor people.
- Increased block tariff is not practical for public tap and water tanker users since it is difficult to design the transition points of block tariff.

At the end, all participants agreed that the proposed tariff in the Study should remain in the report and further discussion on water tariff should be made among the governments of Southern Sudan.

#### 2. Donation of Equipment and Software

JICA will donate the equipment and software that were used in the Study to Southern Sudan side. JICA requested these equipment and software shall be used for coming technical cooperation project and therefore these should be kept in the counterpart organizations. Southern Sudan side replied that the location of these equipment and software will be decided through discussion by Southern Sudan side considering the JICA request.

#### 3. Further Comments on the DE/R

MWRI will prepare the comments on the DE/R and submit them by 28<sup>th</sup> August 2009 to JICA Southern Sudan Field Office, Juba. JICA Study Team will consider them in preparation of Final Report.

#### 4. Submission of Final Report (F/R)

Final Report will be submitted through JICA Southern Sudan Field Office, after checking of the contents by JICA. The submission of the reports will be in October 2009.

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including allowance. JICA study team replied that the further future plan after 2025 shall be prepared before the target year comes, which should include further capacity expansion after 2025. Furthermore, Southern Sudan side adopted the highest population growth scenario in estimating future population. Therefore, the estimated water demand itself includes larger allowances, and 237,000 m<sup>3</sup>/day is enough to cover the future water demand up to 2025.

#### 1.4 Wastewater Management

Southern Sudan side commented that the development of water supply and wastewater management should be implemented simultaneously and the Study should include wastewater management plan, although the report includes recommendation of wastewater management. After discussion, finally, it was concluded that the Study does not need to include wastewater management plan as it is not included in the scope of work of the Study, and recommendation of wastewater management in the report is additional work for the Study Team.

Southern Sudan side requested JICA to make another study for wastewater management. JICA representative replied that if wastewater management is higher priority in your government, it may be considered.

#### 1.5 Institutional Capacity Development

Southern Sudan side requested that capacity development should include work tools and equipment. JICA study team replied that training equipment, some work tools, and software such as billing system have been included in the scope of technical cooperation project.

Furthermore, Southern Sudan side requested that computerized operation of water supply facilities shall be considered in the technical cooperation project. JICA study team replied that such system needs large investment and it is not possible to implement it in technical cooperation project.

#### 1.6 Capacity Development

MWRI commented that the training opportunity should be opened to other states in addition to Central Equatoria States. The Japanese side agreed that it shall be implemented in Juba inviting the staff in the other states. Also pilot project site, which is planned to be constructed in technical cooperation, can be used for demonstration of technical training for the staff in the other areas. Furthermore, JICA added that the technical cooperation will focus on Juba, but if it is successful and returns satisfactory results, technical cooperation in the other areas will be considered and continued to the phase 2.

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Annex-1: Attendance List of the Fourth Steering Committee Meeting

**THE FIFTH STEERING COMMITTEE MEETING**  
ON  
**JUBA URBAN WATER SUPPLY AND CAPACITY DEVELOPMENT STUDY**  
**IN THE SOUTHERN SUDAN**

**DATE: 07/08/2009**

**VENUE: MINISTRY OF WATER RESOURCES AND IRRIGATION (GROSS)**

**TIME: 10:00 AM**

**ATTENDANCE LIST**

S. No.	Name	Organization	Position
1	Isaac Liabwel	MWRI	Undersecretary
9	Peter Mahal Dhielu	MWRI	Director General for Rural Water Supply and Sanitation
7	Alter Oka	MWRI	Director General for Water Resources
2	Lawrence Mulabiyang	MWRI	Director for Urban Water and Programme
6	Morris Lemoulong	MHPPE	Director General for Sanitation
4	Michael Mayrik Ater	MHPPE	Director for physical planning
3	Eng Samuel Taban	SSUWC- CES	Area Manager
5	Santurino Tongun	SSUWC	Director for Planning
8	Khor Guang Zoa	SSUWC	S/Manager for Project
11	Shishico Kemichi	JICA	Resident Representation
10	Tamari Kiyotaka	JICA	Project Formulator
12	Sato Hirotsuka	JICA Study Team	Team Leader
13	Naoto Tohda	JICA Study Team	Deputy Team Leader
14	John Manyok Waj Ajang	JICA Study Team	Officer Manager

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## O.6 Memorandum of Meeting of Stakeholder Meeting for Master Plan

**MINUTES OF INITIAL STAKEHOLDERS MEETING  
ON  
DRAFT WATER SUPPLY MASTER PLAN AND PRIORITY PROJECTS  
IN  
JUBA URBAN WATER SUPPLY AND CAPACITY DEVELOPMENT STUDY  
IN THE SOUTHERN SUDAN  
GOVERNMENT OF SOUTHERN SUDAN AND JICA**

Date: 4th April 2009

Time: 10:00 – 14:00

Venue: Juba Grand Hotel

Attendants: Attachment

### 1. Program

10:00	Introduction of Attendees	Dr. Alok Kumar Water Expert, JICA Study Team
10:10	Opening Address	H.E. Dr. Pius Vincent Subek Juba County Commissioner
10:20	Keynote Speech	H.E. Prof. Paul Lodu Bureng Honorable Minister, MOPI/CES
10:30	Presentation of draft Water Supply Master Plan and Priority Projects	Mr. Naoto Tohda Dy Team Leader, JICA study Team Mr. Hironori Kuroki Env. & Social Consideration, JICA S/T
11:40	Exchange of Opinions	Stakeholders
12:40	Summary of Meeting	Mr. Hirotaka Sato Team Leader, JICA Study Team
12:50	Closing Remarks	Mr. Denis Daramollo <u>Chairman</u> , Honorable Paramount Chief

### 2. Presentation by Study Team

The presentation on the following contents was made by JICA Study Team.

- Necessity of stakeholders meeting
- Existing water supply conditions
- Necessity of water supply master plan
- Explanation of water supply system
- Contents of master plan
- Benefits & negative impacts of the Project

### 3. Discussions and Exchange of Opinions

In the section on land acquisition, JICA study team asked about the owners of proposed sites for water supply facilities. First, JICA study team asked about Memorial grounds where a reservoir is proposed.

Mr. Morris Lomondong (MHPPE)/GOSS answered that the memorial ground is under Government of Southern Sudan authority.

Juba County Commissioner Dr. Pius (CES) answered that if the area falls in any Payam location, the authority responsible is the Payam administration.

JICA study team asked about the owner of reservoir sites of North and South of Jebel Körök.

Paramount Chief Denis answered that about 100 meters from the foot of the Mountain down ward belong to the people according to the Payam location.

Dr. Pius, Juba county commissioner CES Suggested that let JICA Study Team identify the candidate sites and then all the authorities and land owners concerned will visit the sites to confirm whom the located area belong to and discussion shall be made followed by these visits.

Prof. Paul Lodu, Minister of Physical Infrastructure (CES) suggested that since JICA Study Team is not investing this project as private agency, Study Team should just identify the land and the CES Government shall carry out all the formalities to acquire the identified lands.

Next, comments and questions on the contents of draft master plan were invited from the participants and answered by JICA study team.

1. Project monitoring & evaluation will be done using the logical framework.
2. Will training be provided for the Project?

JICA study team answered that these questions meant ensuring the sustainability of the project.

- JICA has a similar monitoring and evaluation tool for the project implementation; PDM (Project Design Matrix). Using this, the project will be monitored and evaluated. If required, the modification of the project will be made based on the results of evaluation. The results will be also published.
- In the master plan, capacity development plan is under preparation. According to this plan, training of the staff of UWC (Urban Water Corporation) will be provided, through which water supply system will be managed appropriately.

3. Wastewater and solid waste management are required in addition to water supply?

JICA study team answered:

- As water supply quantity increases sewage quantity increases and pollute the city. Therefore, wastewater management is also required. However, these infrastructures require large investment. With limited financial resources, it is not possible to do both of these facilities at the same time. Prioritization is required. If you have to select one of these, first you have to select water supply. In Nairobi, the situation is same, where water supply coverage has increased but wastewater coverage is still very low. Also once water supply plan is ready, it is very easy to prepare wastewater management plan.

4. Does water not come until 2025 at the completion of the project?

JICA study team answered:

- The project is very large so it is not possible to construct all the facilities at once. Therefore, the master plan proposes phased development. In the first step, an immediate impact project will be undertaken, in which existing water treatment plant will be expanded and existing distribution network will be rehabilitated. This will enable the city to get benefit to some extent. Followed by this, the construction of new water supply system will be started and gradually water supply area will be expanded phasewise.

5. In 2006, 8 public taps were constructed in Munuki area but water has not yet been received in those taps for last 2 years.

JICA study team answered:

- Previous JICA study team constructed 8 public taps and 3 boreholes. But unfortunately they found Arsenic in ground water. Arsenic severely affects human health. Therefore, they abandoned the boreholes. Then JICA decided to send water from the water treatment plant under construction. When the present JICA study team came to Juba in August 2008, at that time the water treatment plant was supposed to be completed and water be made available to Munuki area also. But water treatment plant has not yet been completed. However, we heard that water treatment plant will be inaugurated in April (this month). Hence, it is expected that water will come soon to Munuki once water treatment plant is ready. Now JICA is preparing for this and repairing the damaged public taps.

6. I heard the population in Juba is more than one million. But your estimate is very small.

JICA study team answered:

- The result of population census was supposed to be published in November 2008. If it were published then JICA study team could use it for planning. However, it has not been published yet. Therefore, JICA study team made a sample survey to estimate current population. Study team selected 10 typical sample localities in Juba city and counted the number of heads and households in these areas and estimated population density. Multiplying the total area by the population density, the existing population was estimated. Also, the study team calculated past population growth rate of Juba. It is about 12 or 13 %. This is a very high growth rate, comparing the neighboring cities; 5 % in Nairobi and 3 -4 % in Uganda. For future population projection for Juba, we have considered that this high growth trend will continue up to 2025. So we have not underestimated the population projections in Juba. Once the population census is published, the master plan shall be revised according to the actual population.

7. What is the role of international organizations or NGOs in the Project?

8. How to taking-over the Project

9. Will the report be opened to public?

10. How much is the cost of the project?

Large cost but if you phase, it is not so big step wise

JICA study team answered:

- This is a planning stage and not the implementation stage of project. Involvement of NGOs shall be considered in the implementation stage. We have not yet proposed the role of NGOs in the project under the plan. We will try to include a recommendation on involvement of NGOs in the plan. The project will be implemented considering the recommendations.
- Now operation and maintenance plan and capacity development plan for UWC are under preparation. According to this plan, capacity of UWC will be strengthened. The current number of staff of UWC is just about 130 but the number will increase to about 800 in 2015 for required level of management. To manage the proposed system adequately, the staff shall be increased and trained adequately. The master plan includes the plan of these training activities and the facilities constructed will be taken over.
- If you need information on the plan, you can come to our office and we will provide any information. The report will be uploaded in JICA homepage and you can download it.
- The direct construction cost is about 250 million USD, the project cost including engineering and administration costs is 310 million USD and the fund requirement including contingency and price escalation is 450 USD up to 2025. The total cost is very large but if you divide the project into several phases, the cost by phase is not so big. Therefore, the project is implementable. We have divided it into 4 phases for implementation.

11. How is involvement of local people and training in the Project?

JICA study team answered:

- This is not an implementation stage so that we have not yet considered the involvement of local people. This shall be considered in implementation stage and by contractors. We or other consultants may come for project implementation and they should consider the involvement of local people. The involvement of local people should be encouraged.

12. We cannot find any facility in Northern Bari. Does this mean no water in Northern Bari?

JICA study team answered:

- The service area covers Gudele in the Northern Bari. In the plan, water will be supplied from the proposed reservoir near the parliament and proposed high reservoir at the foot of the mountain. Therefore, water can be distributed to your area although water supply facilities have been not located in that area.

13. I heard that locating water reservoir on the top of mountain expands service area. Why the reservoir has not been located at the top only?

JICA study team answered:

- In the plan we plan to separate the service area in high and low zones and try to minimize electricity consumption by pumps and reduce leakage. If a reservoir is located at the top of the mountain only, we need a lot of energy to pump up the entire amount of water to the mountain and it causes high pressure, and therefore high leakage. This is waste of money. Therefore, we have tried to reduce O&M cost by locating reservoirs at appropriate elevation considering availability of sufficient pressure.

#### 4. Conclusions

JICA study team leader concluded the meeting with following contents:

- 1) The Planning side (MWRI/GOSS, MOPI/CES and JICA study team) informed draft Juba Water Supply Master Plan and Priority Projects to the Stakeholders
- 2) The Stakeholders understood
  - Water supply system
  - Purpose of the Master Plan
  - Priority projects to be constructed before 2015
  - Benefits and Costs/Negative Impacts of implementation of the Plan
- 3) Both sides exchanged opinions and the planning side will consider participants opinions in the Master Plan

- 4) Both sides have built a basic consensus on the JUBA Water Supply Master Plan
- 5) The planning side will go to next steps (feasibility study for priority projects)

In the next week, following leaders of stakeholder will be contacted and go to sites to decide the facility locations.

- 1) The Commissioner of Juba county
- 2) Paramount Chief
- 3) Payam Directors

Finally, Paramount Chief Mr. Denis delivered the closing remarks to the Participants.

We are very grateful to the JICA Study Team work in our area. So I urge all of us beneficiaries to cooperate with JICA in order to carry out their works smoothly without any hindrance or delay in their plan. If we do not cooperate, we are at suffering side due to water borne diseases. Therefore, we must allow JICA to work and train our young engineers for the development of this country.

THANKS YOU VERY MUCH



## **O.7 Memorandum of Meeting of Stakeholder Meeting for Proposed West Water Treatment Plant**

Date: 24th April 2009

Time: 10:00 – 12:00

Venue: Filed in Tokiman, Rejaf Payam

Attendants:

- The paramount chief tokiman and the community at large agree the treatment plan project.
- The chief also added that the project will make them benefit from it e.g. create employment to them; bring development to the area and many others.
- The community said they wanted road to their garden because the location of treatment plan has close there road.
- The location was identified by every member in meeting and they said it okay for the community.
- The chief said the second meeting will be facing the development committee also to comment /agree on the project

### O.8 Request Letter of Installation of a Hand Pump in the Constructed Test Well

25<sup>th</sup> June 2009

To: Mr. Hirotaka Sato, Team Leader, JICA Study Team, Juba Urban Water Supply and Capacity Development Study in Southern Sudan

Re: Installation of a Hand Pump for Constructed Well

Dear Sir,


We, hereby, request the JICA Study Team to install a hand pump to the well constructed by JICA Study Team as a part of the Juba Urban Water Supply and Capacity Development Study. This well and the installed hand pump will be used for local water needs for Tokiman Community around the well.

Tokiman Community will cooperate with JICA Study Team to install the hand pump. After the completion of the work, the following Tokiman Community will take responsibility of maintenance and management of the hand pump use. The following people will be benefitted from this hand pump.

Responsible person: Mr. <sup>Mogga</sup> D. A. M. Tokiman Community  
Responsible organization: Tokiman Development Committee  
Beneficiaries: 1636 persons in Tokiman Community

Tokiman Community would appreciate very much the installation of hand pump and this hand pump will promote the health of the people of the Tokiman Community.

Sincerely Yours

  
Platip Denta Dera... Famba  
President  
Tokiman "B" Court  
Ref of payment.  
30/6/2009.