付属資料－１　Scope of Work

SCOPE OF WORK

FOR

THE STUDY

ON

THE INTEGRATED WATER RESOURCES MANAGEMENT PLAN

IN THE HAOUZ PLAIN IN THE KINGDOM OF MOROCCO

AGREED UPON BETWEEN

THE MINISTRY OF LAND MANAGEMENT, WATER AND ENVIRONMENT

AND

THE JAPAN INTERNATIONAL COOPERATION AGENCY

Rabat, September 27, 2005

Mr. Mohamed Ameur
Secretary General
Ministry of Land Management, Water and Environment, Kingdom of Morocco

Le Ministre Chargé de l'Aménagement du Territoire, de l'Eau et de l'Environnement et par Délégation
Le Secrétaire Général
Signé: Mohammed AMEUR

Mr. Nagata Kenji
Leader of the Preparatory Study Team
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I. INTRODUCTION

In response to the official request of development studies from the Government of Kingdom of Morocco (hereinafter referred to as "the Government of Morocco"), the Government of Japan decided to conduct technical cooperation for the Study on the Integrated Water Resources Management Plan in the Haouz Plain (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

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

The present document sets forth the scope of work with regard to the Study and will be valid after the notification of approval by the JICA headquarters through the JICA Morocco office to the Government of Morocco.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. to formulate a master plan for the integrated water resources management in the Haouz Plain, and;
2. to transfer relevant skills and technologies to personnel concerned with the Study

III. STUDY AREA

The Study will cover the Haouz Plain as shown in Annex-1.

IV. SCOPE OF THE STUDY

The Study is divided into the following two (2) phases; Phase 1 is for understanding of present and future conditions, and Phase 2 is for formulation of the master plan for the integrated water resources management.

The scope of work for the Study shall cover the following items:

Phase 1: Understanding of Present and Future Conditions

1. Collection and review of existing data
   - (1) Socio-economic conditions (administrative division, population, industry, etc.)
   - (2) Socio-economic development plans and other development policies/ plans
   - (3) Natural conditions (hydrogeology, meteorology, hydrology, land use, etc.)

(1)

(4) Present water use conditions
(5) Irrigation and water-use facilities as well as water users' association
(6) Actual conditions of farmer's water use and consciousness on water issue
(7) Groundwater level/flow, present abstraction amount and groundwater problems
(8) Traditional waterways (Khettara) and its usage
(9) Review of existing projects and studies concerning with water resources
(10) Existing legal framework for water resources development and management as well as water supply and sanitation
(11) Existing institutional framework for operation, maintenance and management relevant to water resources
(12) Existing database related to water resources management

2. Study on water resources potential

(1) Groundwater, surface water, rainwater, treated/untreated waste water
(2) Water quality
(3) Present groundwater recharge
(4) Numerical modeling of groundwater basin (groundwater aquifer modeling, hydro-geological coefficients, model calibration)
(5) Hydrological water balance
(6) Sustainable water resources potential

3. Water demand projection

(1) Domestic use
(2) Agricultural use
(3) Industrial use
(4) Others (such as tourism)

4. Water balance study between water demand and potential

5. Study on the negative impacts to groundwater caused by over abstraction and effluent discharge

(1) Groundwater level declination
(2) Depletion of groundwater potential
(3) Deterioration of groundwater quality
(4) Drying out of the existing wells
(5) Others

6. Stakeholder meetings (public participation)

✓ Problems and issues on groundwater management

(2)

Phase 2: Formulation of the Master Plan for the Integrated Water Resources Management

1. Setup of water resources management strategy

   - ✓ Water resources development (groundwater, surface water, rainwater and treated/untreated waste water)
   - ✓ Water supply and sanitation for urban and rural areas
   - ✓ Irrigation water management
   - ✓ Water resources conservation
   - ✓ Groundwater management
   - ✓ Possibility of wastewater reuse to irrigation
   - ✓ Public participation into water resources management

2. Formulation of the master plan

   (1) Proper groundwater utilization plan

   - ✓ Definition of proper groundwater use concept to keep sound water cycle and natural/social environment as well as sustainable groundwater use
   - ✓ Best mixed policy of water sources (groundwater and surface water) and water uses (agriculture, industry, people's lives, tourism, etc.)
   - ✓ Formulation of groundwater utilization regulation
   - ✓ Permission and prohibition on groundwater abstraction

   (2) Groundwater monitoring plan

   - ✓ Structure, distribution and number of monitoring wells
   - ✓ Monitoring system
   - ✓ Data arrangement and reporting
   - ✓ Evaluation and recommendation

   (3) Groundwater management plan

   - ✓ Groundwater management method in cases of normal time, drought time and disaster time
   - ✓ Possibility of artificial groundwater recharge
   - ✓ Groundwater management manual
   - ✓ Groundwater management system (responsible body/person for groundwater management, monitoring body/person, transmission of monitoring information, public relations and guidance)

   (4) Plan for institutional and organizational strengthening

   - ✓ Capacity development of Agency of the Tensift Hydraulic Basin (hereinafter

referred to as "ABHT")

- ✓ Plan for regulatory framework for water resources management especially conserving groundwater for sustainable use
- ✓ Public participation (communication and coordination among stakeholders, raising general awareness on water problems and solutions)
- ✓ Water demand management
- ✓ Saving of irrigation water use (improvement of irrigation efficiency, creating non-agriculture employment opportunities)

(5) Operation and maintenance plan

(6) Initial environmental examination (IEE)

Technical assistance on initial environmental examination (IEE) for environmental and social consideration (including public consultation with communities and stakeholders) shall be conducted for groundwater management.

(7) Implementation plan

(8) Cost estimate

3. Evaluation on the master plan

4. Proposal of action plans

(1) Selection of priority projects

(2) Action plans

5. Stakeholder meetings (public participation)

(1) Discussion on the master plan

(2) Discussion on the action plan

V. SCHEDULE OF THE STUDY

The Study will be carried out in accordance with the tentative schedule as attached in Annex-2. The schedule is tentative and subject to be modified when both parties agree upon any necessity that will arise during the course of the Study.

VI. REPORTS

JICA shall prepare and submit following reports in English to the Government of Morocco.

1. Inception Report:

Twenty (20) copies will be submitted at the commencement of the phase 1 work period in Morocco. This report will contain the schedule and methodology of the Study.

2. Progress Report I:

Twenty (20) copies will be submitted at the time of fourth (4th) month after the commencement of the phase 1 work period in Morocco.

3. Interim Report:

Twenty (20) copies will be submitted at the end of the phase 1 work period. This report will summarize the findings of the phase 1 of the Study. The discussion on it will be held at the beginning of the phase 2 work period.

4. Progress Report II:

Twenty (20) copies will be submitted at the time of about fourth (4th) month after the commencement of the phase 2 work period in Morocco.

5. Draft Final Report:

Twenty (20) copies will be submitted at the end of the phase 2 work period in Morocco. The Government of Morocco shall submit its comments within one (1) month after the receipt of the Draft Final Report.

6. Final Report:

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

VII. UNDERTAKINGS OF THE GOVERNMENT OF MOROCCO

1. To facilitate the smooth conduct of the Study; the Government of Morocco shall take necessary measures:
   a. to secure safety of the Japanese study team (hereinafter referred to as "the Team");
   b. to permit the members of the Team to enter, leave and sojourn in Morocco for the duration of their assignments therein, and exempt them from foreign registration requirements and consular fees;
   c. to exempt the members of the Team from taxes, duties and any other charges on equipment, machinery and other material brought into and out of Morocco for the implementation of the Study;
   d. to exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study;
   e. to provide necessary facilities to the Team for the remittance as well as utilization of the funds introduced into Morocco from Japan in connection with the implementation of the

Study;

f. to secure permission for the Team to enter into private properties or restricted areas for the implementation of the Study;

g. to secure permission for the Team to take all data and documents including photographs and maps related to the Study out of Morocco to Japan;

h. to provide medical services as needed. Its expenses will be charged on the members of the Team.

2. The Government of Morocco shall bear claims, if any arises, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the Team.

3. On the parts of the Government of Morocco, ABHT, under the Ministry of Land Management, Water and Environment, shall act as the counterpart agency to the Team for the Study and also as the coordinating body in relation to other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

4. Ministry of Land Management, Water and Environment of Morocco shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:

   a. Security-related information on as well as measures to ensure the safety of the Team;

   b. Information on as well as support in obtaining medical service;

   c. Available data (including maps and photographs) and information related to the Study;

   d. Counterpart personnel;

   e. Suitable office space with necessary equipment; and

   f. Credentials or identification cards.

VIII. CONSULTATION

JICA and the Ministry of Land Management, Water and Environment shall consult with each other in respect of any matter that may arise from or in connection with the Study.