

# Business Trip Report to Egypt for visiting Water Resource Management in Egypt

## 1. Outline

WRIC staffs, JICA Experts and JICA Syria Officer visited some organizations which are related to Water Resource Management in Egypt to refer their activity and to exchange experience and knowledge.

Egypt is well known which has long irrigation history from cradle of human era. Nowadays, it has international river issue and developing ground water usage for expanding human activities. UN and other international organizations have committed to set up applied water management program in Egypt, as a regional model.

## 2. Objective

- To know about Egyptian water resources situation and their management.
- To refer and apply above information to WRIC activity.
- To keep good relationship between Egyptian and Syrian ministry officers.

## 3. Activity Program

Date: 12 – 15 January, 2004

Visited Place: Ministry of Water Resources and Irrigation, Egypt / Cairo

- RCTWS (Regional Center for Training and Water studies)
- Nile Forecast Center, Planning Sector
- Telemetry Sector
- Head of Minister Technical Office
- Qanater Operation Center (Telemetric Station)
- National Water Research Center (Research Institute for Groundwater, Central Laboratory for Environmental Quality Monitoring, Hydraulics Research Institute)
- JICA Egypt Office
- WMIP (Water Management Improvement Project in the Nile Delta)

Participants: Mr. Kazuhisa ITO / Chief Advisor of WRIC Project

- Mr. Takehiko SOMEYA / Hydrology Expert
- Mr. Nobuo SUGIURA / Project Coordinator
- Dr. Hafez al-SADEK / JICA Syria Office
- Mr. Mohammad YASMINEH / WRIC Main Centre C&C Section
- Mr. Shaher ABDULLAH / WRIC Main Centre C&C Section
- Mr. Mohammad SAI / WRIC GDCB Centre C&C Section

#### 4. Summary of Interviews and Grand tours

13<sup>th</sup> January

Dr. Dalal Alnaggar / Director of the Regional Center for Training and Water Studies (RCTWS)

Dr. M. Bakr Abd El Ghany / Assistant Director

##### – About RCTWS

- It was established in 1994 funded by Egyptian Government. It started as a training center for the Ministry, later on it became a Regional Training Center under umbrella of UNESCO in 2001, to take an initiative and to provide applies training for concerning water management to the Nile basin, African, and whole world. Many international donors support for program budgets and non-budget matter.
- Major international partners are follows; UNESCO, IHE, GTZ, ITC (International Telemetric GIS Center/Netherlands), Urban Management Institute (Iran), USAID, UNDP, World Bank, etc.
- In the training field, there are three layers for National level, Nile basin level and Regional level.
- National level is order to train for 60,000 staff in the Ministry of Water Resources and Irrigation. And 3,000 staff have participated in the last year.
- Language in a training course is Arabic and English. French interpreter is also available.
- They have founded “High Technical Committee”, contains board members from 30 universities in Egypt, for conducting necessary training programs.
- Meanwhile, Training Assessment review after a course to evaluate and improve it.
- There is Five Year Plan and they make yearly plan based on it.
- Instructors are not only coming from Egyptian Universities, but also international institute, such as IHE.
- RCTWS has 6 branches include water quality laboratory.
- RCTWS provides training for the trainer.
- Staff number is 97 (15 Engineers, 45 Administrators, 37 Drivers & Workers).
- For the accommodation and security service, private company staff works on it.
- Egypt is suitable for water management training; because of there are all kind of water issue (international river, groundwater, irrigation, drainage,

desalination, etc.), religions (Islam, Christianity) and budget.

- An example of course fee is \$3,000 per person for five weeks with full board accommodation except air ticket, or \$400 for one week without accommodation.

– Remarks

- Privatization; it goes to more privatize within five years, with income from the training course, to provide accommodation and facilities, and to undertake to analyze for private company.
- Regional roles; it takes initial position to provide and coordinate, information and techniques for regional countries.
- To design a project from a lower officer is able to realize it. (eg. 3 years project with GTZ on 5million euro from the year 2004)

Mr. Mohamad Abdel Aty / Manager Nile Forecast Center (NFC)

– About Nile Forecast Center

- It has been established in 1991 supported by USAID and FAO using MFS (Monitoring, Forecasting and Simulation) Project. USAID cooperation had been continued till 1998.
- The Nile discharge average is 84 billion m<sup>3</sup> per year. 85% of it comes from Ethiopia and rest of it comes from Victoria Lake basin, thus to have necessary reliable information of meteorology and hydrology in these areas. Egypt has an agreement with Sudan about to receive 55 billion m<sup>3</sup> per year.
- There are 2 meteorologists, 2 IT engineers, 3 junior engineers.
- MWRI pays 10,000euro per year for buying to get and use of satellite images which down loads through internet. These analyzing data are provided by WMO called MFS system.
- Cairo University collaborates with NFC to make the analyze model.
- They store about 100 years historical discharge data
- NFC also does runoff analysis and consider system to connect MFS system and runoff analysis in the future.

– Remarks

- The NFC bulletins are regularly produced and disseminated to the Government authorities and top managers concerned with Nile water resources planning and development.

Ms. Elaine Adib KOLTA / Under Secretary Telemetry Sector

- About Telemetry Sector
  - Telemetry Project (The Main System Management), a part of The Irrigation Management Systems, implementation period was 1989-1995. It was funded by USAID.
  - More than 80% of 760 stations are in active.
  - There are 12 remote control sites and 22 master stations.
  - 22 Operation and Maintenance staff and 40 vehicles belong to the project.
  - They set up LAN in the MWRI. Minister, Planning Sector and others can access the data.
  - They sent 10 staff to a graduate school in the U.S. 384 staff participated course from foreign countries and 2,120 staff participated the country course in the last year.
  - Data base software is based on *ACCESS*.
- Remarks
  - Daily report is submitted to decision maker.
  - Operation System will be revised, but there is some difficulty due to the special version using for it.

Dr. Hussein ATTY / Head of Ministers Technical Office

- Relationship with Syria is good and tight.
- We thank him about coordinate appointment with NWRC (National Water Research Center) and Delta Barrage.
- From 1998, Prime Ministers among the Nile Basin hold regular meeting each half year. "win-win" is motto in this meeting and there are 22 projects under discussion.

Mr. Taro AZUMA / Assistant Resident Representative

- JICA assistance policy in Egypt are mainly as following 5fields; Economics, Agriculture and Water Resources, Environment, Medical Service and Education.
- One of related project in Water Resources is WMIP (Water Management Improvement Project in the Nile Delta). And Japan supports rehabilitation of Barrage in the scheme of Grant Aid. Two of Three Barrages have been finished.
- In the last year, a short-term expert related water sector was dispatched to Egypt, and JICA Egypt Office is considering a third country training course.

14<sup>th</sup> January

#### Qanater Operation Center and Delta Barrage automatic observation station

- Sub station transmits data time to time to main center.
- Every 10 days, data copy to backup.
- There is a training room is equipped as same condition and specification which was donated by USAID.

#### National Water Research Center

Dr. Mohamed Hussein A. Abd El Karim / Secretary General, Research Institute for Ground Water

- About Research Institute for Ground Water
  - Established in 1953 contents 4 departments, Nile Basin, Desert, Specialize study and Information.
  - 512 observation wells are belong to the institute include 211 for water quality.
  - As for the institute, 76 staff (Dr. 21, M.Sc 11, B.Sc 38 and others 6) work for.
  - Only 1% of groundwater is under use, there is potential to use for 200 years with expanding population. But recharge of the aquifer in Nubian Desert is very rare.
  - Five years ago, a committee has launched to coordinate on the issue of Nubian Aquifer among four countries; Egypt, Libya, Sudan and Chad.
  - Toshka Project; to develop farmland and to reserve overflow water from Nasser Lake.
- Remarks
  - They provide a booklet for public awareness of consuming water to children.

Dr. Tarik A. Tawfic / Director of Central Laboratory for Environmental Quality Monitoring

Dr. Atef K. Farid / Head of Information & Computer Center (LIMS)

- About Central Laboratory for Environmental Quality
  - It has been established in 1995, cooperate with Canada.
  - There are two main sections. The one is laboratory, the other one is computer.
  - Central Lab made an analyze manual for national standard.

- Staff number is 135 include 83 professional staff (PhD, M.Sc) and other outsource.
- Laboratory section measure and analyze Organic, Inorganic, Biological heavy metal, Soil lab, Chemical, Plant analysis etc. Computer section set up the network in the central laboratory and headquarters of MWRI.
- Software for database is using *ACCESS*.
- Canada and Germany dispatch experts, also there are two projects cooperate with Italia for wetland.
- Remarks
  - Central Lab takes analyze for private company to get income from it.
  - Above income distribute to government/40%, chemical/20% and staff/40%, thus to give incentive for staff.

Dr. Moustafa Graweesh / Director of Hydraulics Research Institute

- About Hydraulics Research Institute
  - Former institute started in 1936, and then Hydraulics Research Institute was established in 1947, and in 1975, NWRC has been established.
  - It has 4 components as follows; Physical Modeling Department (3 ground), Mathematical Modeling Department (WENDY, TRISULA/3D, SOBEK, WANDA, UNIBAT etc.), Sedimentation and Field Measurement Department, also Calibration and Instrumentation Department.
  - There are many international support and partners; DHV, LAM, Bectel, HALROW, Sogkah, USAID, WMO, UNESCO, DHI, ALECSO, CEDARI and other Arab and African countries.
  - There are 3 months and a couple of weeks training courses with full board accommodation, it began from 1996.
  - Staff numbers is 320 people and annually budget is 1~1.5 million LE.
- Remarks
  - Staff works recognize as study of master or PhD degree, they are able to get degree from a graduate school.
  - All of new comer is “excellent” or “very good” in their score of university.
  - Institute takes consulting works for other organization, foreign country or company to get income from out source.
  - Above income distribute to Ministry of Finance/15%, MWRI/10% and Institute/75%. Also institute distribute to procurement of equipment/20% and

staff/40% as incentive for them; and incentive rate is higher than governmental pay.

15<sup>th</sup> January

Mr. Akira HASHIMOTO / Chief Advisor of Water Management Improvement Project

- Project purpose is to improve method of irrigation in Nile delta.
- Objectives are improvement of irrigation facilities and to formulate farmer's water management organization.

#### **5. Remarkable Points**

- There are many donors such as USAID, UNESCO, IHE, GTZ, CIDA, WB etc.
- The condition is quite different compare with Syria. Especially U.S. affects Egypt.
- Privatization is one of main key-words in every organization.
- Egyptian government is familiar with assistance from Foreign Countries and Institutional Organization, and then they intend to do the advantage of it.
- They train many officers in the Nile Basin.
- Arab and African countries by using technique which they got from foreign countries. They are proud of that Egypt is a leader in the region.
- The cost of training is cheaper than Europeans. And we, Japanese side, realize again Arabic as common language among Arabic countries.

END

Appendix: Photos in this trip.

Appendix



RCTWS institute building (left)



RCTWS accommodation building (right)



PC training room (left)



Interview with RCTWS Director (right)



Nile Forecast Center (left)



Telemetry section Operation room (right)



Interview with Head of Minister Technical Office



JICA Egypt Office



Qanater Operation Center Simulation room and Telemetric station at Delta Barrage



National Water Research Center (Research Institute for Groundwater (left), Central Laboratory for Environmental Quality Monitoring (right))



Hydraulics Research Institute (Physical Modeling (left) and Accommodation (right))



Interview with Chief Advisor of WMIP