MINUTES OF MEETINGS
BETWEEN
THE MINISTRY OF IRRIGATION OF THE SYRIAN ARAB REPUBLIC
AND
THE JAPANESE EVALUATION TEAM
ON THE JAPANESE TECHNICAL COOPERATION
FOR THE ESTABLISHMENT OF WATER RESOURCES INFORMATION CENTER

The Japanese Evaluation Team (hereinafter referred to as "the Team") organized by the Japanese International Cooperation Agency (hereinafter referred to as the "JICA") visited the Syrian Arab Republic from 25 November to 14 December, 2006 in order to evaluate the implementation and achievements of the Establishment of the Water Resources Information Center (hereinafter referred to as "the Project"), based on the Record of Discussion signed on 23 March, 2005 for the two-years extension period.

During its stay in the Syrian Arab Republic, the Team held a series of discussions and exchanged views with the Syrian authorities concerned.

As a result of discussions, both parties agreed upon the matters referred to in the documents attached hereto.

Damascus, 13 December, 2006

Mr. Takeo Ishikawa
Leader
Japanese Evaluation Team
Japan International Cooperation Agency

Eng. Hussein Makhlouf
General Director
General Commission for Water Resources
Ministry of Irrigation
The Syrian Arab Republic

Attached Document I: Remarks

1. Position of the Local Centers of the Water Resources Information Center (LC-WRIC) in the Regional Water Resources Directorate (RWRD)

Syrian side confirmed that the LC-WRICs are under control of the Main Center of the WRIC in their technical duties and administratively under control of corresponding RWRDs and this status should be clearly shown in the organizational chart of the corresponding RWRDs.

2. Continuity of collaboration between the two parties

Syrian side raised the importance of Japanese support even after the Project. Japanese side expressed their appreciation of the human network and relationship so far built in the Project. Both sides acknowledged communication and collaboration to be maintained in appropriate ways.

Attached Document II

JOINT EVALUATION REPORT
ON JAPANESE TECHNICAL COOPERATION
FOR
ESTABLISHMENT OF
WATER RESOURCES INFORMATION CENTER

December 2006

Abbreviation and Acronym

C2C training	Counterpart-to-Counterpart training
CP	Counterpart Personnel
DAWSSA	Damascus City Water Supply and Sewerage Authority
DRD	Damascus and Rural Damascus
GCWR	General Commission of Water Resources
DIMWR	Directorate of Integrated Management of Water Resources
JICA	Japan International Cooperation Agency
MM	Man/Month
MOAAR	Ministry of Agriculture and Agrarian Reform
MOD	Ministry of Defense
MOHC	Ministry of Housing and Construction
MC	Main Center
MOI	Ministry of Irrigation
PCM	Project Cycle Management
PDM	Project Design Matrix
SP	Syrian Pounds
SPC	State Planning Commission
WRIC	Water Resources Information Center

Table of Contents

ANNEX

1. INTRODUCTION

1.1 The Evaluation Team

The Japanese Final Evaluation Mission, organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Takeo Ishikawa, visited the Syrian Arab Republic from 25 November to 14 December 2006 for the purpose of the joint final evaluation on the Japanese technical cooperation for the Establishment of Water Resources Information Center Project (hereinafter referred to as "the Project"). The Evaluation Team consisted of the Japanese Mission members (hereinafter referred to as "the Japanese Team") and the Syrian members (herein after referred to as "the Syrian Team").

The Japanese Team members are as follows:

Mr. Takeo Ishikawa	Team Leader
Mr. Yosuke Sasaki	Water Resource Management
Mr. Hisao Ushiki	Water Resource Management
Mr. Terumasa Matsuzaki	Evaluation Planning
Ms. Yoko Harada	Evaluation Analysis

The Syrian Team members are as follows:

Dr. Daoud Ma'an Daniel	Head, Water Resources Management Division, GCSAR/ANRR, MOAAR
Eng. Khaled Shalak	Deputy General Director, DAWSSA
Ms. Maysa Al-Awa	Director, Integrated Management of Water Resources, SPC
Dr. Rateb Saegh	Head, Water Resources and Information Dep't GCWR

Through careful studies and discussions, the Evaluation Team summarized the findings and observations as described in this document.

1.2 Methodology of Evaluation

The Joint Evaluation Team conducted the evaluation using the Project Cycle Management method (hereinafter referred to as "PCM" method). This method consists of the following three parts:

- Verification of the Project performance comparing the actual results of the Project

with the project design summarized in the Project Design Matrix 3 (hereinafter referred to as "PDM3") attached as Annex 1-4. The original PDM was agreed at the initial stage of the Project and was revised once in October 2003. The Evaluation Team reviewed the revised PDM and updated it to PDM3 in accordance with agreements reached among the stakeholders, who participated in the previous Final Evaluation Study in October 2004.

- Value judgment of the Project based on the five criteria, namely relevance, effectiveness, efficiency, impact and sustainability, the definitions of which are stated 1.3 below. The overall assessment will be described as A: Excellent (100-75%), B: Good (74-50%), C: Fair (49-25%) and D: Poor (24-0%).
- Recommendations for the Project and lessons learnt from the Project that may contribute to the planning and implementation of other project.

The data and information was collected through the literature review, the questionnaire survey to the Japanese experts and the Syrian Counterparts, the interview with concerned people and the field observation. The Evaluation Team focused its evaluation primarily on the period since October 2004 when the previous Final Evaluation Mission visited Syria and recommended the project extension by two years.

1.3 Key Criteria of Evaluation

The evaluation was conducted based on the following five criteria, which are the major points of consideration when assessing the JICA-supported technical cooperation projects.

1)	Relevance:	Relevance of the Project is reviewed by the validity of the Project Purpose and Overall Goal in connection with the development policy and the needs of the beneficial country.
2)	Effectiveness:	Effectiveness is assessed to what extent the Project has achieved its Project Purpose, clarifying the relationship between the Project Purpose and Outputs.
3)	Efficiency:	Efficiency of the Project implementation is analyzed with emphasis on the relationship between Outputs and Inputs in terms of timing, quality and quantity.
4)	Impact:	Impact of the Project is assessed in terms of positive/negative and intended/unintended changes taken place as a result of the Project.
5)	Sustainability:	Sustainability of the Project is assessed in terms of institutional/

political, financial and technical aspects by examining the extent to which the achievements of the Project will be sustained after the Project is completed.

2. BACKGROUND AND SUMMARY OF THE PROJECT

2.1 Background of the Project

In Syria the economic development and the rapid increase of urban population have aggravated the problems over water scarcity for the recent years and the decrease in precipitation in the country has further worsened the situation. In August 1996, JICA conducted "The Study on Water Resources Development in the Northwestern and Central Basins of the Syrian Arab Republic (PHASE I)" in response to a request from the Government of Syria. The purpose of the study was to prepare a master plan for the comprehensive development of water resources in the areas of five water basins: Barada-Awaj, Orontes, Coastal, Aleppo, and Steppe. JICA also conducted "The Study on Water Resources Development in the Northwestern and Central Basins of the Syrian Arab Republic (PHASE II)" as a feasibility study for priority projects.

Based on the results of these studies, the Government of Syria requested the Government of Japan to provide the project-type technical cooperation for the establishment of Water Resources Information Center (WRIC) in order to help it improve water resources information management. The Record of Discussions was signed on March 11, 2002 between both Governments and "the Project on the Establishment of Water Resources Information Center in Syrian Arab Republic" started on June 15, 2002.

Although the Project initially started for three years, the extension of the cooperation period by two years was suggested by the Final Evaluation Mission in October 2004 in order to fully achieve the expected project objective. Accordingly, the project was extended up to June 2007.

2.2 Objectives and Outputs of the Project

The objectives and outputs of the Project are stated in PDM3 as follows:

Long-term Goal:	Integrated and sustainable water resources management in the whole basins of the Syrian Arab Republic is achieved.
Overall Goal:	Integrated and sustainable water resources management in the Barada-Awaj Basin and the Coastal Basin is achieved.
Project Purpose:	A center enabling appropriate management of water resources

Information is established.

Outputs:

1) A water resources information system is established at Main center and two Basin centers of WRIC.

2) The WRIC staff acquire the necessary techniques for hydrological and meteorological observation, data collection and data processing.

3) A section is established within WRIC for capacity building and continuous human resources development is conducted.

4) A section is established within WRIC to maintain the water resources information system and the continuous maintenance is conducted.

5) A system is established to enable the staff of WRIC to provide necessary information on water resources management to decision-makers, planners and researchers by utilizing the water resources information system.

3. ACHIEVEMENTS AND IMPLEMENTATION PROCESS

3.1 Inputs

The following inputs have been made since October 2004.

(1) Japanese Side

- The Japanese side dispatched three long-term experts and seven short-term experts in various fields. In total, the total MM for the long-term experts will be 96 MM by the end of the Project. For the short-term experts, the MM by the end of the Project period will be 57 MM by the end of the Project. Their names, expertise and period of assignments are listed in Annex 2-1.
- As of November 2006 a total of 10 counterparts were trained abroad. Six of them were sent to Japan and the remaining four counterparts were trained in Egypt. In addition, eight counterparts participated in the study tours to Jordan and Egypt. Their names and expertise are listed in Annex 2-3.
- Major equipment provided by the Japan are listed in Annex 2-4.
- The estimated total operational cost supported by the Japanese side as of September 2006 was USD 167,128.06. The breakdown of the operational expenses is listed in Annex 2-5.

(2) Syrian Side

- 78 counterparts were assigned for the Project at the time of the Final Evaluation Study. Their names and expertise are listed in Annex 2-2.
- The Syrian side provided the project offices and facilities including the existing observation facilities and equipment in the Project area.
- As of September 2006 the Syrian side provided part of the operational expense, which totals 32,499,300 Syrian Pounds (equivalent to USD 632, 282.10[1]). The operational expense is listed in Annex 2-5.

3.2 Activities

The Project activities have been carried out as stated in PDM3. Although the Project was not able to complete all activities within the original cooperation period of three years, the two-year extension period has enabled the Project to satisfactory complete the planned activities. After the previous Final Evaluation Study, the Project drew up the detailed action plan to be implemented during the extension period in line with the recommendations submitted by the Evaluation Mission. Accordingly the Project activities have been carried out. The result of each activity is summarized in Annex 4-1.

3.3 Outputs

The expected outputs were mostly achieved as follows.

Output 1: A water resources information system is established at Main center and two Basin centers of WRIC.

The Output 1 targets the observation stations equipped with the equipment provided by the Project (nine equipment) and through the Grant Aid Assistance (248 equipment).

The targeted indicators are attained. Approximately 95% of the equipment provided to the Project during the cooperation period are in operation at the time of the Final Evaluation Study. New database and application software were fully developed to accommodate the data collected at the equipment provided through the Grant Aid Assistance (GA equipment). The application has been continuously improved as any shortcoming arises. Further, three centers have been connected with the ISDN lines for the transmission of the collected and processed data.

[1] SP 1.00 = USD 51.04 (as of December 6, 2006)

Output 2: The WRIC staff acquire the necessary techniques for hydrological and meteorological observation, data collection and data processing.

The Output 2 targets the pilot observation stations, the stations with the GA equipment and the stations under the Ministry of Irrigation (MOI) as well as the other Ministries in the Barada-Awaj Basin and the Coastal Basin.

The technology transfer for observation, data collection and data processing has been duly completed, and accordingly, the targeted indicators are mostly attained. In addition to the pilot and the GA equipmenttations, the observation data is collected from 97.5% of the 292 stations run by MOI as of October 2006. Further, the WRIC has been receiving the historical and the current data from MOD and MOAAR although the delivery of the data is usually delayed by almost a year. The collected data is processed in accordance with the established data processing procedure and its accuracy is confirmed in the process. The processed data is uploaded into the database, from which the graphs and charts are generated. The CP is advised to observe strictly the data processing procedures in order to enhance the accuracy of data and to follow the rule that the processed data should be uploaded to the MC database within three months after the raw data is collected.

Output 3: A section is established within WRIC for capacity building and continuous human resources development is conducted.

CP have been engaged in the Counterpart-to-Counterpart training (C2C training), which started in August 2005 aiming to secure the Project sustainability and to support MOI technically for the expansion of WRIC to other parts of the country. As of October 2006 57 training programs were organized and 893 in total participated. In general, the participants contented with the training.

Output 4: A section is established within WRIC to maintain the water resources information system and the continuous maintenance is conducted.

The technology transfer for the proper maintenance of WRIC equipment has been completed. The maintenance of the computer system, the IT hardware and the observation equipment have been properly conducted by CP in accordance with the manuals and the check lists prepared by the Project. So far, no major problem has been encountered. However, in order for the major maintenance tasks to be properly conducted, necessary budget should be allocated by MOI to WRIC.

Output 5: A system is established to enable the staff of WRIC to provide necessary information on water resources management to decision-makers, planners and researchers by utilizing the water resources information system.

The targeted indicator has been achieved. The Monthly Report has been distributed to MOI (Minister, Vice Minister, and each directorate office), MOD, MAAR and Ministry of Housing and Construction (MOHC) since March 2006.

3.4 Project Purpose

The Project Purpose has been already achieved. The Annual Records of Hydrology and the Water Resources Report have been duly published, utilizing the database developed and maintained by the Project. Although the quality of both publications is a subject to the further improvement, their contents and formats are continuously revised, incorporating the comments from users.

3.5 Implementation Process

During the extension period, the Project has been implemented smoothly rather than the initial three years. The activities planned for the extension period have been either completed or is expected to be completed before the termination of the Project although the moving into the new Ministry building is unlikely to take place since the construction of the building has been delayed considerably. The Project has been actively communicating with various stakeholders in the water section in Syria. The Water Symposium is organized annually from 2003 to present the activities and the achievements of the Project, participated by more than 600 stakeholders in total from both governments and donors. The Project consultation team dispatched in October, 2003 modified PDM jointly with the Project reflecting the achievements made by then. The number of activities was reduced and some of the indicators to assess the outputs and the achievements were revised. However, some indicators are found neither quantifiable nor objective. This caused some difficulties to the stakeholders on how to monitor and evaluate the Project achievements.

4. EVALUATION BY FIVE CRITERIA

4.1 Relevance

Overall evaluation result: A

The 10th Development Policy issued in May 2006 emphasizes the importance to formulate and enact the sound and sustainable water resources management policy to effectively mitigate the serious water shortage faced by the country. The data and information collected and accumulated by the WRIC through the Project implementation greatly supports the government in this aspect. The Project also conforms the JICA's Country Strategy Plan which expresses its strong commitment to the area of water resources management and efficient water use in Syria.

4.2 Effectiveness

Overall evaluation result: A

The Project Purpose has been already achieved. The Annual Records of Hydrology and the Water Resources Report have been already published. Although the quality of the Reports is a subject to further improvement, their contents and formats are continuously under revision, incorporating the comments from users. The extension period was well utilized for the Project to produce the expected outputs and, subsequently, to achieve the Project Purpose.

4.3 Efficiency

Overall evaluation result: A

Most of the inputs were appropriate in terms of number/volume, quality and timeliness of provision. The inputs were utilized well and contributed to the realization of expected outputs. By introducing the C2C training, without additional inputs from the Japanese experts, much more staff acquired knowledge and skills than originally expected. However, the turn-over rate of trained CP remains high and the Project was required continuously to train new staff throughout the Project period, which had an adverse influence on the progress of the Project.

4.4 Impact

Overall evaluation result: A

The 10th Development Policy confirms that one of the most important achievements in the irrigation sector made during the period of the 9th Development Policy was the establishment of WRIC in cooperation with JICA. Further, the one of the objectives to be attained for the effective water resources management and development during the period of the 10th Development Policy is the establishment of a complete information network linked to the information centers at the basin level. Further, the close contact established and maintained by the Project with the other donors involved in the water resources management sector, which has

contributed to the facilitation of the donor cooperation and synergy to the great extent.

As regards the Overall Goal, the prospects of its attainment is fairly high, taking into consideration a number of water-related projects in pipeline to mitigate the water shortage in the capital, Damascus, which place high demand on the accurate hydrological and meteorological data and information. On the other hand, there is some concern over the staff continuity and the organizational structure of MOI in which some duplication of mandates and tasks between WRIC and the Directorate of Integrated Management of Water Resources (DIMWR) have been observed. Further, no detail budget plan for 100 million SP earmarked to WRIC in the 10th Development Policy has been released by the government.

4.5 Sustainability

Overall evaluation result: B

a) Policy / Institutional aspect

The 10th Development Policy stresses the need to establish an information network linked with the regional information center and MOI has committed itself to the expansion of the WRIC covering all seven basins in the country. In view of the severe water shortage faced especially by the residents in the capital, Damascus, the government commitment towards the effective utilization of the available water resources is highly likely to be continued in future. The managerial performance of WRIC has improved since the previous evaluation study in 2004. However, there is a room for further improvement in order to effectively manage and coordinate the activities of not only the existing WRIC but also those new centers to be established in the coming years.

b) Financial aspect

As regards the financial sustainability, the 10th Development Policy earmarked 100 million SP for the WRIC. However, considering the discrepancy between the planned budget and the actual disbursement for the past years, it is not necessarily certain that the disbursement is effected as planned.

c) Technical aspect

The level of technical capability of the core staff is highly satisfactory. It is expected that they will be able to sustain and expand the present WRIC activities after the completion of the Project. However, the number of the core staff with sufficient technical capability is minimum so that any activity could be stagnated in case of their resignation.

To ensure the technical sustainability, WRIC should create a firm system in which the in-service

training and OJT are effectively managed and the technology transfer is continuously carried out among CP. In this aspect, the sufficient financial and logistical support from the government and the MOI is essential.

5. CONCLUSIONS

The WRIC was established with an aim to collect, process and analyze the water resources information of the country, based on which the sound and sustainable water resources management policy is formulated and enacted. The water situation in the big cities and the surrounding areas in some hydrological basins has never been eased for the last five years so that the mandate of the WRIC is still highly relevant with the policy agendas of the country. With the extension of its cooperation period by two years, the Project managed to overcome the shortcomings which were pointed out at the previous Final Evaluation Study in October 2004 and has successfully produced its expected outputs and, subsequently, has achieved the Project Purpose. The perspective of the attainment of the Overall Goal is also fairly high with the condition that the enhancement of the technical capacity of the WRIC staff and the improvement of the management system in WRIC are carried out continuously. Thus, the Evaluation Team has reached the conclusion that the Project is to be finalized in June 2007 as planned.
In order to assure the sustainability of the Project after its completion, the Evaluation Team has prepared the recommendations to be implemented both before and after the termination in the following section.

6. RECOMMENDATIONS

For securing the sustainability of the WRIC, following measures are recommended.

1) Within the project period

(1) Intensification of C2C, with the policy of nation-wide expansion of WRIC

Training of the counterparts by the counterparts (Counterpart to Counterpart Training) has been carried out during the two-year extended phase with good responses from the participants.

C2C should be continued within the project period and succeeded in the WRIC's nation-wide extension. The activities should be recorded with the prescribed schedule of 2006/2007 and its detailed accomplishments by the WRIC.

(2) Allocation of budget for the maintenance of the WRIC facility, securing procurement route of spare parts only available from abroad.

Self-reliance is indispensable for WRIC to sustain operation after the project termination, so the sustainability should be pursued through securing the budget and spare parts procurement for the system.

(3) Conservation of well-ordered data-flow

Data-flow from the WRIC to other institution of the Ministry, in particular, DIMWR should be kept in the prescribed order. All the data from the Local Center of WRIC must be transferred solely to the Main Center at the first step. Further transfer should be monopolized and authorized by the Main Center.

Data legitimacy is important in operating WRIC, therefore the well-ordered data-flow should be kept as its authorized function.

2) After the project period

(1) Establishment of routine activities to cooperate and coordinate within the WRIC institutions for the water resources management in Syria

Regular meetings and trainings have been established during the project execution, and provided remarkable effects to the organized works among the centers. These should be maintained further after the project termination

(2) Creation of regular activities for the regional cooperation with neighboring countries

Water resources are the common international issue in the region where Syria is located. Syrian achievement in WRIC project may be reflected to the bilateral cooperation with neighboring countries. Regular events such as symposiums and training courses, organized by WRIC, will be welcomed in the region. These events on water resources will enhance integration, consistency and cooperation there.

(3) Incentives for the WRIC personnel

High-level and long-experienced technical personnel are the essential components of the WRIC work. In order to secure such personnel and to expand such human resources, incentives are to be used effectively. Ministry budget should be allocated for this purpose.

(4) Demarcation of functions between WRIC and DIMWR

WRIC was designed for comprehensive management of water resource information; monitoring system, data acquisition, data storage, data analysis and authorized information service. Some duplication of the duty exists between WRIC and DIMWR of the Ministry at present. It is necessary to define the roles of WRIC and DIMWR after establishing WRIC local centers in the

whole Syria in a way that WRIC will be in charge of data collection, quality control, data input and analysis, basin water balance, and provision of water resource information. Whereas DIMWR will be in charge of water policies, water law, water resource management, IWRMP. For the time being, WRIC solely will be responsible for the above mentioned tasks in the areas where WRIC centers have been established.
Therefore, DIMWR should restrict itself to the tasks not being undertaken by WRIC.

(5) Moving in to the Ministry's new headquarters

Long-waited Ministry's headquarters building is coming near the completion. Many subordinate offices, so far scattered elsewhere in Damascus, will be soon accommodated in a single complex. WRIC should be effectively integrated into the new headquarters both in physical sense and organizational sense.

7. LESSONS LEARNT

(1) Importance of incentives to promote positive attitude of the counterparts.

The job undertaken by the counterparts is not necessarily satisfactorily rewarded comparing to the equivalent jobs in non-governmental or commercial sector. This fact has brought a serious set back for the Syrian counterparts to engage in their duties with positive prospect.
Incentives for human resources in the counterpart agency, therefore, should be carefully examined and discussed in the preparation period of the project.

(2) Collaboration and mutual understanding between the field work members and office work members.

Through giving opportunities to the office work members (data processor, analysis etc.) to get to know the field work (data observation and collection) in the Centers, a working atmosphere which promotes collaboration among them and mutual understanding has been enhanced with improvement of the self esteem of the field members.
Therefore, it is important that the project facilitate the site visits by the office workers.

(3) Promotion of recognition and coordination with other related agencies through symposium

The project has organized International symposiums for the last four years annually on the water

resources management, inviting related governmental, non-governmental organizations, as well as other related donor agencies, totaling nearly 600 participants.
These events have contributed to increase the recognition of the project activities to create an environment in which donor coordination be promoted.

(4) Human network and reliance between both parties

Through a series of cooperation in the past decades, human network and mutual reliance have established between the both parties. Participation of those involved in the human network from both sides has created a good atmosphere in which the both parties dedicate to attain the project goal.

(5) **Project Design Matrix**

PDM, especially verifiable indicators for the capacities ante-ex project in quantitative manner, should be carefully elaborated in order that the project be monitored and evaluated appropriately, avoiding ambiguity.

ANNEX

Schedule of the Japanese Evaluation Team

	Date		Activities
1	24.Nov.	Fri	Departure from Tokyo (Consultant)
2	25.Nov.	Sat	Arrival at Damascus
3	26.Nov.	Sun	09:30 Meeting with JICA Syria 12:00 Courtesy Call and Interview DG of GCWR 13:30 Observation of MC 14:00 Meeting with JICA experts
4	27.Nov.	Mon	08:30 Interview WRIC Director 09:30 Interview Counterparts in MC 13:00 Meeting with Director, Dep't of Modern Irrigation, MOAAR 14:30 Meeting with DEITEX project, GCSAR 17:00 Meeting with JICA Syria
5	28.Nov.	Tue	09:00 Interview DG of DRD 09:30 Interview Director of DRD Center 10:30 Interview Counterparts in DRD Center 13:00 Courtesy Call and Interview Vice Minister, MOHC Damascus→Lattakia
6	29.Nov.	Wed	09:00 Interview Director of Lattakia Center 10:00 Interview DG of Lattakia 10:30 Interview Counterparts of Lattakia Center
7	30.Nov.	Thu	Lattakia→Tartus 09:30 Interview DG of TAR 10:00 Interview Director of Tartous Center 11:00 Interview Counterparts of Tartous Center Tartus→Damascus
8	1.Dec.	Fri	Data analysis
9	2.Dec	Sat	Mr. Ushiki arrived at Damascus Internal meeting
10	3.Dec.	Sun	08:30 Meeting with JICA experts 10:00 Interview Director of Climate, Meteorological Dep't 12:00 Interview WRIC Director 15:00 Meeting with DG of GCWR
11	4.Dec.	Mon	09:00 Interview DG of DRD 10:00 Observation of Observation Stations (Al-Tkeah, Zabadani and Maysalon) Damascus→Lattakia
12	5.Dec.	Tue	08:30 Observation of Lattakia Center 09:30 Interview DG of Lattakia 10:00 Observation of Observation Stations (16 Teshreen Dam, 16 Tashreen, Bait Ana) 14:30 Interview DG of Tartous 15:30 Observation of Observation Stations (Markia, Ainal Tahum) Tartous→Damascus
13	6.Dec.	Wed	10:00 1st Evaluation Committee Meeting 15:30 Mr. Ishikawa and Mr. Matsuzaki arrived at Damascus 18:00 Internal Meeting
14	7.Dec.	Thu	09:00 Interview of Vice Chairman of SPC 10:00 Courtesy Call to Minister of Irrigation 11:00 Meeting with JICA Syria 13:30 Meeting with Director of Directorate of Integrated Management of Water Resources 14:30 Courtesy Call to Embassy of Japan
15	8.Dec.	Fri	Internal Meeting
16	9.Dec.	Sat	Mr. Sasaki arrived at Damascus Internal meeting
17	10.Dec.	Sun	08:30 Interview Director of DRD Center 09:30 Interview Head of Water Resources Dep't, DRD 11:00 Visit the Integrated Management of Water Resources in MOI 13:30 Interview Director of WRIC Center and Interview JICA experts 17:00 2nd Evaluation Committee, reviewing M/M draft
18	11.Dec.	Mon	10:00 Meeting with DG of GCWR, Director of WRIC and Director, DIMWR 11:00 JCC, reviewing and discussion on M/M draft Preparation of final M/M draft
19	12.Dec.	Tue	Preparation of final M/M draft
20	13.Dec.	Wed	Signing M/M at MOI Report to Minister of Irrigation
21	14.Dec.	Thu	Report to JICA Syria Report to the Embassy of Japan Departure from Damascus

Annex 1-2

Observation Stations Visited by the Japanese Team

December 4, 2006 – Barada & Awaj Basin

	Type	Water Point ID	Station Name	Remarks
Ground Water	GA	BA-GW00042[BA]	Harasta	In DRD Directorate premise (in operation)
Surface Water	GA	BA-RI00001[BA]	Altkeah	Equipment provided by the Project was replaced with the GA equipment (Feb. 8, 2006)
Meteorological	Pilot	BA-ME00085[BA]	Zabadani	In operation
Ground Water	Manual	BA-GW00149[BA]	Misalon	GA equipment removed (November 13, 2006)

December 5, 2006 – Coastal Basins

	Type	Centers	Water Point ID	Station Name	Remarks
Meteorological	GA	Lattakia	CB-ME00044[CB]	16 Teshreen Dam	
Evaporation	GA	Lattakia			
Meteorological	-	MOD	CB-ME00024[MD]	16 Teshreen	Located next to 16 Teshreen Dam
Meteorological	Pilot	Lattakia	CB-ME00043[CB]	Bait Ana	
Surface Water	Pilot	Tartous	CB-RI10026[CB]	Markina	
Ground water & Water quality	GA	Tartous	CB-GW10001[CB]	Ainaltahum	

Annex 1-3

People Interviewed

Ministry of Irrigation	
Eng. Nader Al-Bunni	Minister
Eng. Hussein Makhlouf	General Director, GCWR
Dr. Jamil Fallouh	General Director, Directorate of DRD
Eng. Samir Haifa	General Director, Directorate of Lattakia
Eng. Abd Alfatif Mahamoud Ahmad	Director, Tartous Irrigation Branch
Dr. Basam Zakar	Director, Directorate of Integrated Management of Water Resources
Ms. Hilda Ishak	Directorate of Integrated Management of Water Resources
Mr. Fuad Saadeddin	Head, Water Resources Dep't, DRD
Water Resources Information Center	
Main Center	
Dr. Bachar Faiad	Director
Mr. Yahia Tujjar	Deputy Director/Head, Technical Support Section
Mr. Kamal Shahada	Programmer
Mr. Saher Abdullah	Head, Data Collection & Classification Section
Ms. Suad Obeid	Database Administrator
DRD Center	
Mr. Kassem Natouf	Director
Mr. Andre Tome	Head, Technical Support Section
Ms. Naheda Fallouh	Head, Data Analysis Section
Mr. Yassin Touma	Head, Data Collection & Classification Section
Latlakia Center	
Mr. Faheem Assad	Director
Mr. Mazen Naaman	Head, Data Analysis Section (DB Administrator)
Mr. Mohammad Sai	Head, Data Collection & Classification Section
Mr. Ali Estanboly	Head, Data Analysis Section (GIS)
Mr. Tmim Ali	Data Collection & Classification Section

Tartous Center

Mr. Ali Assad	Director
Mr. Bassam Jamala	Head, Technical Support Section
Mr. Maarouf Ghanem	Head, Data Collection & Classification Section
Ms. Hanadi Yousef	GIS, Data Analysis Section
Ms. Zeinab Mousa	GIS, Data Analysis Section

Japanese Experts

Mr. Noriyuki Mori	Chief Advisor
Ms. Nobuo Sugiura	Coordinator
Mr. Atsushi Suzuki	Hydrology
Mr. Izumi Kato	Total Computer System Engineer
Mr. Makoto Kodama	Hydrological Observation
Mr. Fumio Kanayama	GIS & Management of Database
Mr. Hideki Umeda	GIS & Management of Database
Mr. Takeshi Sasahara	Management Network and System
Mr. Kazuhisa Ota	Analysis of Water Balance and Ground Water

State Planning Commission

Mr. Talal Bakfalouni	Deputy Head
Ms. Nibal Chakbazof	Secretary to Vice Chairman
Mr. Emad Kwifi	Integrated Water Resources Management Division

Ministry of Agriculture and Agrarian Reform

Dr. Maamoun Malakani	Director, Modern Irrigation Directorate

Ministry of Defense

Dr. Ied Ibrahim	Director of Climate, Meteorological Department

Ministry of Housing and Construction

Dr. Kamal Al Sheikha	Vice Minister

Development of Efficient Irrigation Techniques and Extension Project

Mr. Akira Koto	Sub-Leader

Federal Institute for Geoscience and Natural Resources	
Dr. Gerhard Rappold	Project Coordinator, Advisory Service for MOI
Embassy of Japan	
Mr. Satoshi Baba	Second Secretary, Economic Cooperation
JICA Syria Office	
Mr. Kazuhide Nagasawa	Resident Representative
Mr. Yosuke Tamabayashi	Deputy Resident Representative
Ms. Reiko Funaba	Assistant Resident Representative
Mr. Rouand Sido	Programme Officer

Project Design Matrix (PDM)

Annex 1-4

Project name: Establishment of Water Resources Information Center

Project Period : June 15, 2002 to June 14, 2007

Project site : Damascus (Ministry of Irrigation)

Target group :

Date: December 11, 2006

Target area: The Barada-Awaj Basin and Coastal Basin

Staff of Ministry of Irrigation, Water Resources Information Center,
General Directorate of the Barada-Awaj Basin,
General Directorate of the Coastal Basin

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Super Goal Integrated and sustainable water resources management in the whole basins of the Syrian Arab Republic is achieved.			
Overall Goal Integrated and sustainable water resources management in the Barada-Awaj Basin and the Coastal Basin is achieved.	1) Appropriate project designs are made in the Barada-Awaj Basin and the Coastal Basin. 2) Master plans for Water resources are made in the Barada- Awaj Basin and the Coastal Basin. 3) Reports for water balance in the Barada-Awaj Basin and the Coastal Basin are made.	1) Report of MOI 2) Master plan of MOI 3) Report of MOI	
Project Purpose A center enabling appropriate management of water resources information is established.	1) Annual records of Hydrology are published by the year 2005. 2) Water Resources Report for Barada-Awaj Basin and Coastal Basin is published by the year 2005.	1) Annual records of Hydrology 2) Water Resources Report of MOI.	・MOI does not change the policy concerning the Establishment of WRIC. ・Necessary budget is allocated to operate and maintain WRIC after established.
Outputs 1) A water resources information system (hydrological and meteorological observation stations, computer system, and computer network) is established at Main Center and two Basin Centers of WRIC. – 9pilot stations and Equipments provided through the Grant Aid Assistance.	1)-1 Observation Activity is conducted continuously and accurately at stations in two Basins and the rate of operating station is over 95% 1)-2 In three centers, the materials (outputs) such as tables, graphs, and maps are produced through the database. 1)-3 In three centers, exact information is transmitted periodically.	1)-1 Project records 1)-2 Databook and Monthly Reports 1)-3 Project record	・Trained technical staff stays in WRIC.
2) The staff of WRIC acquires the necessary techniques for hydrological and meteorological observation, data collection, and data processing. – 9 pilot stations, Observation stations under MOI and related agencies, and equipment provided through the Grant Aid Assistance (as regards 2)-1 the observation stations under related agencies shall not be included)	2)-1 Accurate data is collected from more than 80% of stations and processed in accordance with the data processing procedure estab lished by the Project. 2)-2 Observation Data in the database is accumulated periodically. 2)-3 The materials for the periodical reports such as Data book,Monthly Report, Annual Records of Hydrolog y and Water Resources Reports, are prepared by utilizing the database.	2)-1Project records 2)-2 Data book 2)-3 Periodical report	
3) A section is established within WRIC for capacity building, and continuous human resources development is conducted	3)-1 To prepare guidelines for guidance 3)-2 To conduct training by Syrian side	3)-1 Guidelines for guidance 3)-2 Report on staff training	

Project Design Matrix (PDM)

4) A section is established within WRIC to maintain the water resources information system, and the continuous maintenance is conducted. – 9 stations, observation stations under MOI and the equipment provided through the grant aid assistance.	4)-1 Appropriate operation do and system down time is less than 10% of total working hours. 4)-2 More than 80% of the equipment is in good condition to obtain the observed data.	4)-1 Operation and management record on system 4)-2 Operation and Management Report on observation equipment and observation stations	
5) A system is established to enable the staff of WRIC to provide necessary information on water resources management to decision-makers, planner s and researchers by utilizing the water resources informa tion system.	5)-1 Monthly reports of water resources information are submitted to decision-makers periodically.	5) Stock of Monthly reports.	

Activities	Inputs		
[1)-1 To design equipment for Meteorological and hydrological stations] 1)-2 To install the observation equipment at the stations. 1)-3 To conduct a basic design for computer system and install hardware and software such as OS at Main Center and two Basin Centers. 1)-4 To design database and establish at Main Center and two Basin Centers. 1)-5 To connect GIS with database systems at Main Center and two Basin Centers. 1)-6 To establish network at Main Center and two basin Centers 2)-1 To prepare a monitoring program of meteorological, hydrological, groundwater, water quality data in the Barada-Awaj Basin and the Coastal Basin. 2)-2 To rehabilitate the hydrological and meteorological observation stations of the Barada-Awaj Basin and the Coastal Basin. 2)-3 To get technique for observation and processing of observed data, etc. at two Basin Centers. 2)-4 To collect and process meteorological and hydrological data 2)-5 To input data to Database 2)-6 To storage and maintenance plan for collected data 2)-7 To prepare periodical report such as monthly report, annual records of Hydrology 2)-8 To prepare periodical Water resources Report 3)-1 To prepare guidelines for guidance of establishment of new basin center, capacity building plan, observation techniques, processing, processing technique of observed data, and information technology (IT),preparing several kinds of report, including annual hydrological report and monthly report. 3)-2 To conduct training regularly for observation technique, information technology, and preparation of several kinds of report. by Syrian side 4)-1 To conduct continuous operation and maintenance of Database and GIS 4)-2 To conduct continuous operation and maintenance of network	Syrian Side 1. Personnel Assignment of Counterpart 2. Provision of facilities, equipment ·Headquarter of WRIC, including the office space for Japanese Experts. ·Existing monitoring facilities and equipment. 3. Project implementation cost ·Recurrent cost for project.	Japanese Side 1. Dispatch of Japanese Experts 1) Long-term experts ·Chief Advisor ·Hydrologist ·Coordinator 2) Short-term experts (3 to 4 person per year) 2. Counterpart Training in Japan (at least 3 person per year) 3. Provision of equipment ·Computers including network system ·Computer software ·Hydrological monitoring equipment ·Vehicles	· MOI will keep the staff (quality and quantity) at WRIC. · The data provided by the related-ministries is accurate and reliable. **Pre-conditions** 1) The Syrian Government does not significantly change its policy concer ning water resources. 2) Implementation of this Project is agreed upon by Syrian organizations that are concerned with water resources information management in Syria. **Pre-project Obligations** 1) The Syrian side will collect historical data according to the format designed by the Syrian and Japanese sides. MOI will collect necessary data on water resources and water demand from related agencies for input into the database of WRIC before the start of the Project. 2) The number of water resources monitoring points will not decrease. Significant decreases in the number of

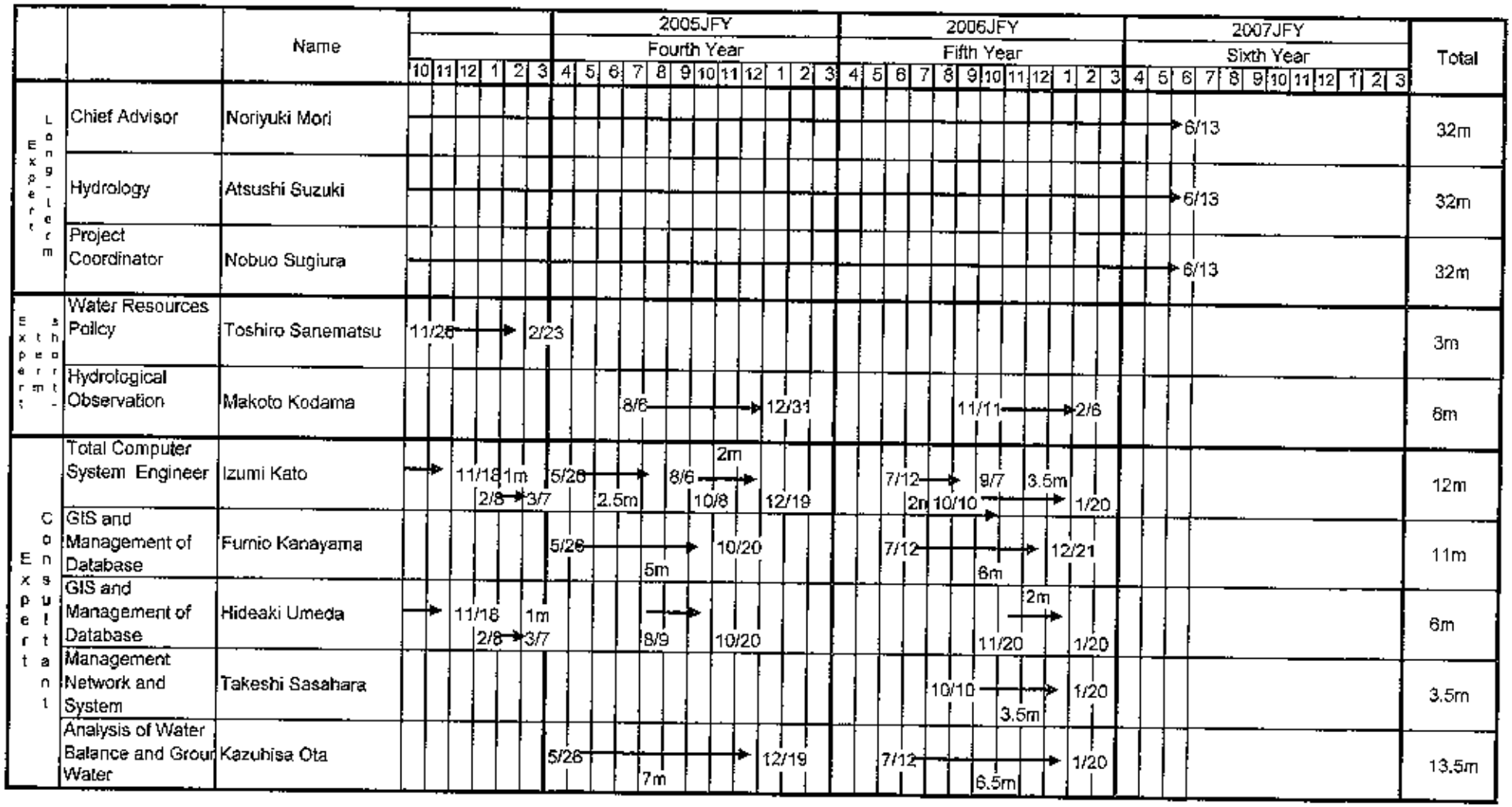
Project Design Matrix (PDM)

4)-3	To conduct continuous operation and maintenance of observation equipment		existing hydrological/meteorological stations in the two basins will not be allowed to hinder the implementation of the Project.
5)-1	To provide decision-makers with Water Resources Information		

* Activity 1-1 is bracketed because a whole activity placed under them was completed in the original cooperation period of three years.

Dispatched Japanese Experts

Annex 2-1



付属資料 1

付属資料 1
Annex 2-2

WRIC Conterpart

Centre	Section	Name	Role in WRIC	Expertise	PhD,MSc	WRIC Assign. (full:1,not full:2)
Main	Director	Bachar Faiad	WRIC Director	Hydrogeologist	PHD	1
Main	Ad	Waset Al Hajjch	Clerical Staff	Administration		1
Main	Ad	Radwan BazAllah	Clerical Staff	Administration		1
Main	CC	Shaher Abdullah	Section Leader	Hydrologist		1
Main	CC	Ali Abdullah	Data collection& processing	Civil Eng.		1
Main	CC	Safaa Al-Arab	Data collection& processing (meteorology)	Assistant Eng.		1
Main	CC	Omran Al-Mohammad	Data collection& processing (water quality)	Assistant Eng.		1
Main	CC	Myassar Salhab	Data collection& processing (meteorology)	Assistant Eng		1
Main	CC	Suha Nemra	Clerical Staff	Assistant Eng.		1
Main	CC	Sami Jumaa	Data collection& processing(agriculture data)			1
Main	CC	Qassem Al-Mussalam	Data Collection	Civil Eng.		1
Main	AS	Samar Al-rayes	Section Leader / GIS Engineer	Electrical Eng.		1
Main	AS	Suad Obeid	DB Administrator	Civil Eng.	MS	1
Main	AS	Taghreed Al-Saleh	GIS Engineer	Civil Eng.		1
Main	AS	Kamal Shahada	Programmer	Electrical Eng.		1
Main	AS	Mamdouh Sakr	GIS Section	Civil Eng.		1
Main	AS	Insaf Al-Shiekh	GIS Section	Civil Eng.		1
Main	AS	Hyam Al-Ashkr	GIS Section	Civil Eng.		1
Main	AS	Mohanad Dieb	GIS Section	Civil Eng.		1
Main	TS	Yahia Tujjar	Section Leader / Deputy Director / Sys. Man.	Civil Eng.		1
Main	TS	Ziad Wahab	System Maintenance	Mechanical Eng.		1
DRD	Director	Kassem Nahlouf	WRIC Director	Hydrogeologist	MS	1
DRD	CC	Bashir Sawan	Section Leader Data C&C	Geologist		1
DRD	CC	Yasin Toameh	Data collection& processing(groundwater)	Geologist		1
DRD	CC	Amir Alwadi	Data collection& processing(water facility)	Agriculture Eng.		1
DRD	CC	Mohamad Rifaee	Data collection& processing(groundwater)	Geologist		1
DRD	CC	Ali Ghorra	Data collection& processing(surfacewater)	Assistant Eng.		1
DRD	CC	Abdulkarim Khalil	Data collection& processing(groundwater)	Assistant Eng.		1
DRD	CC	Ali Alali	Data collection& processing(groundwater)	Assistant Eng.		1
DRD	CC	Mahmoud Almahmoud	Data collection& processing(surfacewater)	Assistant Eng.		1
DRD	CC	Basim Hamoud	Data collection& processing(groundwater)	Assistant Eng.		1
DRD	CC	Mazin Attouq	Data collection& processing(meteorology)	Assistant Eng.		1
DRD	AS	Naheda Failouh	GIS Eng.	Civil Eng.		1
DRD	AS	Qasim Shraydih	Data Analysis	Geologist		1
DRD	AS	Wail al Najm	Data Processing	Assistant Eng.		1
DRD	TS	Andree Toumeh	Section Leader / System Man.	Electrical Eng.		1
DRD	TS	Abdel Ghani Ajjan	System Mentenance	Electrical Eng.		1
DRD	TS	Raafat Dosbol	System Mentenance	Civil Eng.		1
DRD	TS	Meziad Alshufi	Data collection& processing(water quality)	Assistant Eng.		1
Lattakia	Director	Fahem Asaad	WRIC Director	Civel Eng.		1
Lattakia	Ad	Fadi Haydar	Administrative + Warehouseman	Assistant Eng.		1
Lattakia	CC	Muhammad Sei	Section Leader (surface water)	Civil Eng.		1
Lattakia	CC	Bashar Qabanee	Data collection& processing(surface water)	Civil Eng.		1
Lattakia	CC	Fuad Al farwi	Data collection(meteorology)	Math.Degree		2
Lattakia	CC	Bashar Ibrahim	Data collection& processing(groundwater)	Assistant Eng.		1
Lattakia	CC	Yara Jdeed	Data input	Assistant Eng.		1
Lattakia	CC	Ismael Shbib	Data collection (measurement)	Assistant Eng.		1
Lattakia	CC	Mohsen Ra'awan	Data collection (measurement)	Assistant Eng.		1
Lattakia	CC	Ramadan Deeb	Data collection(measurement)	Assistant Eng.		1
Lattakia	AS	Mazen Naaman	Section Leader / DB administrator	Hydrologist	MS.	1
Lattakia	AS	Ansam Chareef	Data analysis	Civil Eng.		1
Lattakia	AS	Yasra katrawi	Data analysis AS.Eng.	Assistant Eng.		1
Lattakia	AS	Ali Estanboly	Section Leader / GIS file server	Civil Eng.		1
Lattakia	AS	Abeer Mehjazi	GIS Eng.	Civil Eng.		1
Lattakia	AS	Samah Makhlouf	GIS AS.Eng.	Assistant Eng.		1
Lattakia	TS	Nazeeh Bourish	Section Leader / System manager	Civil Eng.		1

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Annex 2-2

WRIC Conterpart

Centre	Section	Name	Role in WRIC	Expertise	PhD,MSc	WRIC Assign. (full:1,not full:2)
Lattakia	TS	Aatef Layka	System Mentenance	Electrical Eng.		1
Lattakia	TS	Ahmad Kna'an	System+equipment Mentenance	Technician		1
Lattakia	TS	Shadi Zaza		Mechanicall Eng.		1
Lattakia	AS	Hanan Esmail	GIS AS.Eng.	Assistant Eng.		1
Lattakia	CC	Tamim Ali	Data collection& processing(water qrality)	Agriculture Eng.		2
Tartus	Director	Ali Assad	WRIC Director	Civil Eng.		1
Tartus	CC	Yarub Saleh	Data collection& processing	Civil Eng.		1
Tartus	CC	Mearouf Ganem	Data collection& processing	Civil Eng.		1
Tartus	CC	Thaer Saleh	Data collection& processing	Assistant Eng.		1
Tartus	CC	Adel Yones	Data collection& processing	Civil Eng.		1
Tartus	CC	Badea Khayleh	Data collection (measurement)	Assistant Eng.		1
Tartus	CC	Sameer Hossin	Data collection (measurement)	Civil Eng.		1
Tartus	AS	Zeinab Mousa	Data Processing	Civil Eng.		1
Tartus	AS	Hanadi Yousef	Head of GIS file server .	Agriculture Eng.		1
Tartus	AS	Husein Hassan	GIS	Assistant Eng.		1
Tartus	AS	Lubna Mahmmoud	Data Processing	Assistant Eng.		1
Tartus	AS	Lamis Mansour	Data Processing	Assistant Eng.		1
Tartus	AS	Aida YOUSEF	GIS	Civil Eng.		1
Tartus	AS	Asma Hsamo		Civil Eng.		1
Tartus	AS	Read younes	DB administrator (tartous office) DB	Civil Eng.		1
Tartus	TS	Bassan Jamala	Head of TS ,System Mentenance	Electrical Eng.		1
Tartus	TS	Rami Yousef	System Mentenance	Electrical Eng.		1

As of Oct. 2006

WRIC Counterparts by Section

	Main	DRD	Lattakia	Tartous	Total
Director	1	1	1	1	4
CC	8	10	9	6	33
AS	8	3	7	8	26
TS	2	4	4	2	12
Administration	2	0	1	0	3
Total	21	18	22	17	78

* Ad: Administration Section
CC: Data Collection and Classification Section
AS: Data Analysis and Management Section
TS: Technical Support Section

Counterpart Training and Study Tours
(October 2004 -November 2006)

Training Course in Japan and Egypt

	Period	Subject	Participants	Job Title
2005	May 7 - May 14	Japan (Water Resources Management/ Integrated Management)	Mr. Nader Al-Bunni	Minister of Irrigation
			Dr. Bachar Faiad	WRIC Director
	Dec. 3 - Dec. 24	Japan (Hydrological Observation)	Mr. Mazen Naaman	Leader
			Mr. Bachar Ibrahim	GDCB/Lattakia CC staff
			Mr. Mandoukh Sakr	MC
			Mr. Yasin Toume	GDBAB CC staff
	July 16 - Aug. 12	Egypt (Training Course, IT-Network)	Mr. Nazeeh Bourish	GDCB/Lattakia TS Leader
			Mr. Andre Toumeh	GDBAB TS Leader
			Mr. Ziad Wahab	MC TS staff
			Mr. Bassan Jamala	GDCB/Tartous

Study Tour

	Period	Subject	Participants	Job Title
2005	Jan. 31 - Feb. 2	Jordan (Visit to Ministry of Water and Irrigation)	Mr. Ahmad Abdullah	WRIC GDBAB Director
			Mr. Kamal Shahada	MC programmer
			Mr. Mazen Naama	Leader
			Mr. Abdel Ghanni Ajjan	GDBAB TS staff
	Mar. 6 - Mar. 9	Egypt (Visit to Ministry of Water Resources and Irrigation)	Dr. Bachar Faiad	WRIC director
			Mr. Ziad Wahab	MC TS staff
			Mr. Andre Toumeh	GDBAB TS Leader
			Ms. Hanadi Yousef	GDCB/Tartous AS staff

Provided Machinery and Equipment
(after October 2004)

Name of Equipment	Manufacturer	Model (Type)	Set(s)	Place installed	Date of Delivery	Total Amount
Handheld GPS	Cobra	GPS500	1	MC	2004/10/17	107,800
Handheld GPS	Cobra	GPS500	2	CB	2004/10/17	107,800
Handheld GPS	Cobra	GPS500	2	BAB	2004/10/17	53,900
Copier Finisher	XEROX	440DC	1	MC	2005/2/9	138,000
A3 Color Printer	HP	HP Deskjet 1280	1	MC	2005/12/1	32,200
Pocket humidity & Temp meter	VAISALA	HM34	1	CB	2006/1/19	161,000
Pocket humidity & Temp meter	VAISALA	HM34	1	BAB	2006/1/19	161,000
TOTAL					Japanese Yen	761,700

Acronym

MC: Main Center

BAB : Barada-Awaj Basin Center (although it has been renamed to DRD since Jan. 2006, to avoid any complication, the previous center name, BAB, is used here.)

CB: Coastal Basin Center (although it was split into two centers, the Lattakia and the Tartous centers in Jan. 2006, to avoid any complication, the previous center name, CB, is used here for both centers.)

Operational Expenses (Japan)

Experts

Items	Expenditure			Sub Total
	FY2004	FY2005	FY2006*	
Business trip expenses	5,713.40	3,657.37	828.82	10,199.60
Transportation	2,318.75	7,429.10	3,754.90	13,502.75
Others	5,778.17	696.47	987.25	7,461.90
Equipment	3,603.85	1,200.00	0.00	4,803.85
Stationary	8,161.52	3,104.41	1,113.92	12,379.85
Documentation	3,115.64	7,481.18	2,210.78	12,807.60
Correspondence	1,233.92	261.08	14.02	1,509.02
Translator etc.	0.00	1,715.69	490.20	2,205.88
Maintenance	0.00	0.00	225.49	225.49
Meeting expenses	1,605.54	5,392.16	2,382.25	9,379.95
Construction	0.00	0.00	0.00	0.00
Training (In Egypt)	0.00	7,340.00	0.00	7,340.00
Total	31,530.79	30,937.45	12,007.65	74,475.89

(in USD)

Experts (Consultants)

Items	Expenditure			Sub Total
	FY2004	FY2005	FY2006*	
Labor Costs	4,365.22	26,782.61	13,121.74	44,269.57
Data Compilation Fee	304.35	826.09	1,121.74	2,252.17
Car Hire	1,513.04	10,643.48	7,208.70	19,365.22
Training/Seminar	739.13	747.83	147.83	1,634.78
Maintenance of Equipments	1,217.39	-	-	1,217.39
Purchase Other Equipments	6,434.78	4,573.91		11,008.70
Transportation Fee for above	226.09	1,573.91	-	1,800.00
Report Printing Costs	5,600.00	1,660.87		7,260.87
Report Making Costs	3,713.04	130.43		3,843.48
Total	24,113.04	46,939.13	21,600.00	92,652.17

(in USD)

* The Japanese fiscal year is from October to next year March.

FY 2004 is for the expenditure from July to December, 2004

FY 2006 is for the expenditure from April to September, 2006

Operational Cost (Syria)

	2005			
Organization	Q1	Q2	Q3	Q4
MC				
Saraly	750,000	750,000	750,000	750,000
Preparation Work	225,000	150,000	120,000	165,000
Fuel	210,000	210,000	210,000	160,000
Total	1,185,000	1,110,000	1,080,000	1,075,000
GDBAB				
Saraly	650,000	650,000	650,000	650,000
Preparation Work	510,000	210,000	200,000	70,000
Fuel	230,000	200,000	200,000	200,000
Total	1,390,000	1,060,000	1,050,000	920,000
GDCB				
Saraly	1,125,000	1,125,000	1,125,000	1,125,000
Preparation Work	870,000	870,000	870,000	870,000
Fuel	122,400	122,400	122,400	122,400
Total	2,117,400	2,117,400	2,117,400	2,117,400
Grand Total	4,692,400	4,287,400	4,247,400	4,112,400

	2006		
MC	Q1	Q2	Q3
Saraly	810,000	790,000	750,000
Preparation Work	90,000	170,000	100,000
Fuel	60,000	90,000	180,000
Total	960,000	1,050,000	1,030,000
DRD			
Saraly	650,000	650,000	650,000
Preparation Work	70,000	90,000	70,000
Fuel	210,000	200,000	200,000
Total	930,000	940,000	920,000
Lattakia			
Saraly	1,125,000	1,125,000	1,125,000
Preparation Work	870,000	870,000	870,000
Fuel	122,400	122,400	122,400
Total	2,117,400	2,117,400	2,117,400
Tartous			
Saraly	661,500	661,500	661,500
Preparation Work	250,000	250,000	250,000
Fuel	81,000	81,000	81,000
Total	992,500	992,500	992,500
Grand Total	4,999,900	5,099,900	5,059,900

* Unit = Syrian Pounds

Workshops and Training Organized
(October 2004 - November 2006)

Annex 3-1

Year	Date	Duration (day)	Field	Place	Lecturer	No. of Participants	Title and Contents
2004	10/18/04	3	Hydrology	BAB	JPN		Lecture : Installation of Observational Equipments (by Grant Aid Engineers)
2004	10/26/04	3	Hydrology	CB	JPN	22	Lecture : Installation of Observational Equipments (by Grant Aid Engineers)
2004	11/02/04	1	Hydrology	BAB	JPN	4	OJT (Installation of Grant Aid Equipments for Observation)
2004	11/04/04	1	Hydrology	BAB	JPN	3	OJT (Installation of Grant Aid Equipments for Observation)
2004	11/10/04	2	Hydrology	CB	JPN	5	OJT (Installation of Grant Aid Equipments for Observation)
2004	11/28/04	8	Hydrology	BAB	JPN		Commissioning Test (by Grant Aid Engineers)
2004	12/02/04	1	Hydrology	CB	JPN		Commissioning Test (by Grant Aid Engineers)
2004	12/14/04	1	Hydrology	CB	JPN		C/C Staffs Meeting
2004	12/20/04	1	Hydrology	BAB	JPN		C/C Staffs Meeting
2004	12/21/04	2	Hydrology	CB	JPN		C/C Staffs Meeting
2004	12/26/04	1	Hydrology	BAB	JPN	3	C/C Staffs Meeting
2005	01/09/05	1	Hydrology	MC	JPN		C/C Staffs Meeting
2005	01/10/05	1	Hydrology	BAB	J+S	6	OJT (Operation of the Well Logging Equipment)
2005	01/12/05	2	Hydrology	CB	JPN	13	C/C Staffs Meeting and Site Check
2005	01/17/05	1	Hydrology	BAB	JPN	5	C/C Staffs Meeting
2005	01/18/05	1	Hydrology	MC	JPN	10	C/C Staffs Meeting
2005	01/25/05	1	Hydrology	MC	JPN	8	C/C Staffs Meeting
2005	02/06/05	1	Hydrology	MC	JPN	7	C/C Staffs Meeting
2005	02/07/05	1	Hydrology	BAB	JPN	4	C/C Staffs Meeting
2005	02/13/05	1	Hydrology	MC	JPN	7	C/C Staffs Meeting
2005	02/17/05	1	Hydrology	MC	JPN	12	Lecture:Fundamental Subjects for Meteorological Observation (in WS for
2005	02/20/05	1	Hydrology	MC	JPN	6	C/C Staffs Meeting
2005	02/21/05	1	Hydrology	BAB	J+S	12	Lecture;General Information on the Specifications of GA Equipments (by
2005	02/23/05	2	Hydrology	CB	JPN	9	C/C Staffs Meeting
2005	02/27/05	1	Hydrology	MC	JPN	6	C/C Staffs Meeting
2005	02/28/05	1	Hydrology	BAB	JPN	4	Site Check
2005	03/02/05	1	Hydrology	MC	JPN	9	Lecture : Accuracy Requirements for the Meteorological Measurements (in WS for Database)
2005	03/13/05	1	Hydrology	MC	JPN	9	C/C Staffs Meeting
2005	03/14/05	1	Hydrology	BAB	JPN	1	Site Check
2005	03/16/05	2	Hydrology	CB	JPN	5	C/C Staffs Meeting
2005	03/22/05	1	Hydrology	MC	JPN	8	C/C Staffs Meeting
2005	03/30/05	2	Hydrology	CB	JPN	8	C/C and TS Staffs Meeting
2005	04/04/05	1	Hydrology	BAB	JPN	5	TS Staffs Meeting
2005	04/18/05	2	Hydrology	CB	JPN	5	C/C Staffs Meeting
2005	04/25/05	1	Hydrology	BAB	JPN	6	Meeting for Water Resources Report
2005	04/26/05	1	Hydrology	MC	JPN	9	C/C Staffs Meeting
2005	05/04/05	1	Hydrology	CB	JPN	20	Lecture : Observation of Evapolation
2005	05/04/05	1	Hydrology	CB	J+S	15	OJT (Observation of Surface Water Discherge)
2005	05/11/05	1	IT	MC	J+S	8	OJT (Post PUTGET for C/C Staffs)
2005	05/18/05	2	Hydrology	CB	JPN	4	C/C Staffs Meeting
2005	05/31/05	2	Hydrology	CB	JPN	9	C/C Staffs Meeting
2005	06/05/05	4	Hydrology	others	JPN	8	Lecture : Water Quality Observation (by Environmental Monitoring Project)
2005	06/06/05	1	Hydrology ,IT,Analys	BAB	JPN	41	WS: Kick Off Meeting
2005	06/12/05	1	Hydrology	BAB	JPN	4	C/C and TS Staffs Meeting
2005	06/12/05	4	Hydrology	others	JPN	4	Lecture : Water Quality Observation (by Environmental Monitoring Project)
2005	06/13/05	12	Hydrology	others	JPN	8	OJT: GPS observation
2005	06/14/05	1	Hydrology	CB	JPN	4	C/C Staffs Meeting
2005	06/20/05	1	Analysis	MC	JPN	8	WS: Simulation(1)
2005	06/21/05	1	IT	MC	J+S	5	GIS Training (extension tool of ArcHydro)
2005	06/27/05	1	IT	MC	ARS	12	ExcelVBA Workshop (Let's Begin with Recording Macros)
2005	06/27/05	30	IT	others	J+S	6	DB Training (Oracle9i SQL, DBA)
2005	06/30/05	1	Hydrology	MC	ARS	10	WS: SysAD and DBA Meeting (1)
2005	07/03/05	1	Hydrology	BAB	ARS		Session of Maintenance of GA Equipment
2005	07/04/05	1	IT	MC	ARS	12	ExcelVBA Workshop (Using MsgBox & InputBox)
2005	07/04/05	1	Analysis	MC	JPN	9	WS: Simulation(2)
2005	07/05/05	1	Hydrology	MC	J+S	14	WS: SysAD and DBA Meeting (2)
2005	07/06/05	1	IT	CB	ARS	12	ExcelVBA Workshop (Let's Begin with Recording Macros)
2005	07/07/05	1	IT	CB	ARS	11	ExcelVBA Workshop (Using MsgBox & InputBox)
2005	07/11/05	1	IT	MC	ARS	10	ExcelVBA Workshop (Reference to Range, Cells, SpecialCells)
2005	07/14/05	1	Hydrology	BAB	JPN		Lecture : Fundamental Subjects concerning the Interface Program for Data Base (in SysAD Meeting)
2005	07/14/05	1	Hydrology	MC	J+S	14	WS: SysAD and DBA Meeting (3)
2005	07/18/05	1	IT	MC	ARS	7	ExcelVBA Workshop (Sort Method)
2005	07/18/05	1	Analysis	MC	JPN	12	WS: Simulation(3)
2005	07/24/05	1	Hydrology	BAB	JPN	2	Site Check
2005	07/25/05	1	IT	MC	ARS	5	ExcelVBA Workshop (AutoFilter Method)
2005	07/25/05	1	Analysis	others	JPN	6	WS: Simulation at DAWSSA
2005	07/27/05	1	IT	CB	ARS	10	ExcelVBA Workshop (Reference to Range, Cells, SpecialCells)

Workshops and Training Organized
(October 2004 - November 2006)

Annex 3-1

Year	Date	Duration (day)	Field	Place	Lecturer	No. of Participants	Title and Contents
2005	07/28/05	1	IT	CB	ARS	10	ExcelVBA Workshop (Sort Method)
2005	07/30/05	1	Hydrology	MC	J+S	16	WS: SysAD and DBA Meeting (1)
2005	08/01/05	1	IT	MC	ARS	6	ExcelVBA Workshop (AdvancedFilter Method)
2005	08/02/05	1	Hydrology	BAB	JPN	2	Site Check
2005	08/02/05	1	Analysis	BAB	JPN	18	WS: Simulation(4)
2005	08/03/05	1	Hydrology ,IT,Analys	BAB	ARS	40	WS: Self-Counterparts WS (C2C)
2005	08/04/05	1	IT	MC	ARS	6	WS: Self-Counterparts WS (C3C)
2005	08/07/05	1	Hydrology	MC	JPN		C/C Staffs Meeting
2005	08/08/05	1	IT	MC	ARS	3	ExcelVBA Workshop (Find Loop)
2005	08/10/05	1	IT	CB	ARS	10	ExcelVBA Workshop (AutoFilter Method)
2005	08/11/05	1	IT	CB	ARS	8	ExcelVBA Workshop (AdvancedFilter Method)
2005	08/14/05	15	IT	MC	J+S	7	GIS-Extension Training (spatial, 3D, Geo-stastical analyst)
2005	08/15/05	1	Hydrology	MC	JPN	3	C/C Staffs Meeting
2005	08/15/05	1	IT	MC	ARS	5	ExcelVBA Workshop (Review Exam-1)
2005	08/15/05	1	Analysis	MC	JPN	3	WS: Simulation(4'+5') for GDCB
2005	08/16/05	1	Analysis	BAB	JPN	12	WS: Simulation(5)
2005	08/17/05	1	Hydrology	BAB	JPN	6	C/C Staffs Meeting
2005	08/17/05	1	IT	CB	ARS	6	ExcelVBA Workshop (Find Loop)
2005	08/18/05	1	IT	CB	ARS	5	ExcelVBA Workshop (Review Exam-1)
2005	08/22/05	1	IT	BAB	ARS	7	ExcelVBA Workshop (Exam Result; Replace Method)
2005	08/24/05	1	Hydrology	BAB	JPN	2	Site Check
2005	08/28/05	1	Hydrology	MC	ARS	4	WS: GIS(1)
2005	08/29/05	1	IT	BAB	ARS	4	ExcelVBA Workshop (<Date To Date> Functions)
2005	08/29/05	1	Analysis	BAB	JPN	1	WS: Simulation(6') for GDCB
2005	08/30/05	1	Hydrology	CB	JPN	10	Lec: Data Quality Check
2005	08/30/05	1	Analysis	BAB	JPN	14	WS: Simulation(6)
2005	08/31/05	1	IT	CB	ARS	9	ExcelVBA Workshop (Exam Result; Replace Method)
2005	09/01/05	1	IT	CB	ARS	9	ExcelVBA Workshop (<Date To Date> Functions)
2005	09/04/05	1	Hydrology	MC	JPN	6	Lec: Data Quality Check
2005	09/08/05	1	IT	MC	ARS	6	ExcelVBA Workshop (Chart - RainDeviation & DischargeCoefficient)
2005	09/11/05	1	Hydrology	MC	JPN	6	C/C Staffs Meeting
2005	09/12/05	1	IT	MC	ARS	4	ExcelVBA Workshop (Smart Input; Events)
2005	09/14/05	1	Hydrology	BAB	JPN	3	C/C Staffs Meeting
2005	09/14/05	1	IT	CB	ARS	13	ExcelVBA Workshop (Chart - RainDeviation & DischargeCoefficient)
2005	09/15/05	1	IT	CB	ARS	14	ExcelVBA Workshop (Smart Input; Events)
2005	09/18/05	1	Analysis	MC	ARS	5	WS: GIS(2)
2005	09/19/05	1	IT	MC	ARS	6	ExcelVBA Workshop (Open Csv Data File)
2005	09/20/05	1	Hydrology	BAB	JPN	8	Lec: Data Quality Check
2005	09/21/05	1	Hydrology	CB	JPN	6	C/C and TS Staffs Meeting
2005	09/22/05	1	Hydrology	CB	JPN	2	Site Check
2005	09/26/05	1	IT	MC	ARS	4	ExcelVBA Workshop (Review Examination 2)
2005	09/28/05	1	IT	CB	ARS	12	ExcelVBA Workshop (Open Csv Data File)
2005	09/28/05	30	IT	others	J+S	6	DB Training (Oracle9i SQL, DBA)
2005	09/29/05	1	IT	CB	ARS	9	ExcelVBA Workshop (Review Examination 2)
2005	10/03/05	1	IT	MC	ARS	4	ExcelVBA Workshop (Exam Result; Summarize)
2005	10/06/05	1	IT	CB	ARS	10	ExcelVBA Workshop (Exam Result; Summarize)
2005	11/06/05	1	Hydrology	MC	JPN	4	C/C Staffs Meeting
2005	11/13/05	1	Hydrology	MC	JPN	7	C/C Staffs Meeting
2005	11/16/05	10	IT	others	J+S	4	Additional Oracle Training for Official certificate
2005	11/20/05	1	Hydrology	MC	JPN	5	C/C Staffs Meeting
2005	11/23/05	1	Hydrology	MC	JPN	8	C/C and AS Staffs Meeting
2005	11/28/05	1	IT	MC	J+S	5	GIS Training (extension tool of ArcHydro)
2005	11/29/05	1	Hydrology	MC	ARS	6	WS: Data Flow of Water Quality Data in WRIC
2005	12/08/05	1	Hydrology	MC	JPN	12	Hydrological Observation (Datacheck Mannual)
2005	12/11/05	1	Analysis	others	JPN	15	Introduction of Hydrological Modeling (Included in C2C Workshop in Ragga)
2005	12/12/05	1	Analysis	MC	JPN	10	WS: Simulation(7)
2005	12/15/05	1	IT	MC	JPN	10	Explanation and discussion on GIS Thematic Maps
2006	01/15/06	1	Hydrology	MC	JPN	6	C/C Staffs Meeting
2006	01/23/06	1	Hydrology	MC	JPN	8	C/C Staffs Meeting
2006	01/29/06	1	Hydrology	MC	JPN	6	C/C Staffs Meeting
2006	02/07/06	1	Hydrology	MC	JPN	6	C/C Staffs Meeting
2006	02/14/06	1	Hydrology	MC	JPN	6	C/C Staffs Meeting
2006	02/20/06	1	Hydrology	MC	JPN	6	C/C Staffs Meeting
2006	03/16/06	1	Hydrology	MC	JPN	8	C/C and AS Staffs Meeting
2006	03/20/06	2	Others	CB	ARS	35	Water Symposium in Tartus Center
2006	03/22/06	1	Hydrology	MC	JPN	9	C/C and AS Staffs Meeting
2006	03/27/06	1	Hydrology	BAB	JPN	4	C/C and TS Staffs Meeting
2006	04/02/06	1	Hydrology	CB	JPN	5	C/C Staffs Meeting

Workshops and Training Organized
(October 2004 - November 2006)

Annex 3-1

Year	Date	Duration (day)	Field	Place	Lecturer	No. of Participants	Title and Contents
2006	04/02/06	1	Hydrology	CB	JPN	5	C/C Staffs Meeting
2006	04/19/06	1	Hydrology	MC	JPN	7	C/C and AS Staffs Meeting
2006	04/25/06	1	Hydrology	BAB	JPN	7	C/C Staffs Meeting
2006	04/30/06	1	Hydrology	MC	JPN	7	C/C Staffs Meeting
2006	05/08/06	1	Hydrology	BAB	JPN	7	C/C Staffs Meeting
2006	05/10/06	1	Hydrology	MC	JPN	7	C/C and AS Staffs Meeting
2006	05/18/06	1	Hydrology	CB	JPN	9	C/C Staffs Meeting
2006	06/04/06	1	Hydrology	MC	JPN	4	C/C Staffs Meeting
2006	06/05/06	1	Hydrology	BAB	JPN	8	SysAD (System & Administrator) Meeting
2006	07/03/06	1	Others	MC	JPN	20	Dataflow Workshop
2006	07/19/06	1	Others	BAB	ARS	45	Kick-Off Workshop and PCM Workshop
2006	08/03/06	1	Analysis	MC	JPN	7	Modeling Workshop
2006	08/05/06	15	IT	others	J+S	5	Oracle Training OCA Course (YahiaTujar/Andre Tomeh/Ali Assad/ Hanadi Yusef/ Mahnad Deib
2006	08/06/06	1	Others	others	ARS	150	4th Syrian-Japanese Water Symposium
2006	08/07/06	12	IT	others	J+S	5	Oracle Training Beginner Course (Yasin Tomeh/Mohamad Refai/Kassem Sharedah/Hiam/Tagrid
2006	08/15/06	2	Analysis	MC	JPN	6	Hydro Examination for Modeling works
2006	08/16/06	2	Analysis	BAB	JPN	3	Hydro Examination for Modeling works
2006	08/20/06	10	Analysis	MC	JPN	4	Hydrological Model Workshop (Tank Model for Zabadani Basin)
2006	08/27/06	1	Others	BAB	ARS	9	PCM Workshop (Problme Analysis and Cause-Effect Analysis)
2006	08/30/06	1	Hydrology	BAB	JPN	7	C/C and TS Staffs Meeting
2006	09/14/06	1	Hydrology	BAB	JPN	6	C/C Staffs Meeting
2006	09/18/06	1	Hydrology	CB	JPN	4	C/C and TS Staffs Meeting
2006	09/26/06	1	Analysis	others	JPN	6	Exchange View on the Modeling Works at ACSAD
2006	10/18/06	1	Hydrology	MC	JPN	15	Workshop for DB Table of S.W. observation data
2006	10/19/06	1	IT	MC	JPN	5	Network Administrator Meeting
2006	10/19/06	1	IT	MC	JPN	15	Database Manager Meeting for Dataflow and Oracle Training
2006	11/02/06	1	Hydrology	MC	JPN	15	Workshop for DB Table of S.W. & G.W. observation data

Workshops and Trainings
(Subjects by nationalities of trainers and Venue)

	Nationalities of Trainers	ARS	J+S	JPN	Total
Venue and Subjects	**Main Center**				
	Analysis	1		8	9
	Hydrology	3	3	35	41
	IT	14	4	3	21
	Others			1	1
	Total	18	7	47	72
	Barada-Awaj Center				
	Analysis			5	5
	Hydrology	1	2	26	29
	Hydrology,IT,Analysis	1		1	2
	IT	2			2
	Others	2			2
	Total	6	2	32	40
	Coastal Center				
	Hydrology		1	20	21
	IT	15			15
	Others	1			1
	Total	16	1	20	37
	Others				
	Analysis			3	3
	Hydrology			3	3
	IT		5		5
	Others	1			1
	Total	1	5	6	37
	Grand Total	41	15	105	161

Acronym

ARS: Syrian Arab Republic

JPN: Japan

J+S: Japanese and Syrian

MC: Main Center

BAB : Barada-Awaj Basin Center (although it has been renamed to DRD since Jan. 2006, to avoid any complication, the previous center name, BAB, is used here.)

CB: Coastal Basin Center (although it was split into two centers, the Lattakia and the Tartous centers in Jan. 2006, to avoid any complication, the previous center name, CB, is used here for both centers even for the training organized after Jan. 2006.)

IT: Information Technology

C2C Workshops
(August 2005 - October 2006)

	Year	Date	Duration(day)	Field	Place	Trainer (Lecturer)	Organization of Trainer	No. of Trainees				Contents
								Total	WRIC	MOI	Other	
1	2005	3-Aug-05	1	Others	BAB	DG	BAB	39	32	7	0	Speech < DG, BAB >
2	2005	3-Aug-05	1	Others	BAB	Ahmad Abdul'ah, Director	BAB	39	32	7	0	Introduction of Decision Support System
3	2005	3-Aug-05	1	Others	BAB	Bahar Falad, Director	MC	39	32	7	0	Annual (self-)training Program
4	2005	3-Aug-05	1	IT	BAB	Yahia Tojar	MC	39	32	7	0	Implementation of Operation/Maintenance WRIC System
5	2005	3-Aug-05	1	Hydrology	BAB	Bashir Sawan	BAB	39	32	7	0	Operation and Maintenance of Observation Network
6	2005	3-Aug-05	1	Hydrology	BAB	Basem Al-Jammaz	BAB	39	32	7	0	Hydrological Data Collecting and Processing (Meteorological/Surfacewater Data)
7	2005	3-Aug-05	1	Hydrology	BAB	Yasin Toameh	BAB	39	32	7	0	Groundwater Data Processing (Collection and Classification)
8	2005	3-Aug-05	1	IT	BAB	Kassem Naltouf	BAB	39	32	7	0	Data Processing Tools (GW Contouring /Geological Log)
9	2005	3-Aug-05	1	IT	BAB	Bahar Falad, Director	MC	39	32	7	0	Training DB (DB Basic)
10	2005	3-Aug-05	1	IT	BAB	Ali Assad	MC	39	32	7	0	Training DB (DB query Language: SQL II)
11	2005	3-Aug-05	1	IT	BAB	Hiam Al-Shkar	MC	39	32	7	0	Training GIS (ArcGIS Basic I)
12	2005	3-Aug-05	1	IT	BAB	High Tech House	HTH	39	32	7	0	Training GIS (Extra Lecture for GIS application)
13	2005	4-Aug-05	II	Hydrology	Others BAB	Bashir Sawan/Basem Al-Jammaz/Yasin Toameh	BAB	10	2	8	0	Study Tour for BAB Observation Networks and on-site training for Automatic Stations (Metrological, Surface water, Groundwater)
14	2005	4-Aug-05	1	IT	MC	Mamdouh Sakr/Hiam Al-Shkar	MC	7	4	3	0	Training for ArcGIS (Basic I) using with WRIC Main Center DB-GIS System
15	2005	28-Aug-05	1	IT	MC	Mamdouh Sakr/Hiam Al-Shkar	MC	4	3	1	0	Training for ArcGIS (Basic 1,2,3) using with WRIC Main Center DB-GIS System
16	2005	18-Sep-05	1	IT	MC	Mamdouh Sakr/Hiam Al-Shkar	MC	5	3	1	1	Training for ArcGIS (Basic 1,2,3) using with WRIC Main Center DB-GIS System
17	2005	25-Sep-05	1	IT	MC	Mamdouh Sakr/Hiam Al-Shkar/Taghrid Saleh	MC	10	3	5	2	Training for ArcGIS (Basic 1,2,3) using with WRIC Main Center DB-GIS System
18	2005	3-Oct-05	1	IT	MC	Ali Assad	MC	4	0	4	0	SQL1,2
19	2005	3-Oct-05	1	IT	MC	Mamdouh Sakr	MC	10	4	6	0	GIS(Arc GIS Basic), Geodatabase)
20	2005	3-Oct-05	1	Others	BAB	Ziad Wahab	BAB	27	13	14	0	Common (Access)
21	2005	3-Oct-05	1	Others	BAB	Bashar Qabbani	GDCB	27	13	14	0	Common (Power Point)
22	2005	3-Oct-05	1	Hydrology	BAB	Mohammad Sal	GDCB	27	13	14	0	Installation of Observation Network
23	2005	3-Oct-05	1	Hydrology	BAB	Yasin Toameh	BAB	27	13	14	0	Groundwater Data Processing (Collection and Classification)
24	2005	3-Oct-05	1	Hydrology	BAB	Basem Al-Jammaz	BAB	27	13	14	0	Hydrological Data Collecting and Processing (Meteorological/Surfacewater Data)
25	2005	3-Oct-05	1	Others	BAB	Kassem Naltouf	BAB	27	13	14	0	Digital Geological Log
26	2005	29-Nov-05	2	IT	Others Raqqa	Nazeer Bourish	GDCB	8	1	7	0	Basic of Computer Utilization and WinXP
27	2005	4-Dec-05	4	IT	Others Raqqa	Ali Assad	GDCB	8	0	8	0	SQL Basic and Oracle SQL 1,2
28	2005	11-Dec-05	3	IT	Others Raqqa	Kassem Naltouf (+Mr.Kato)	BAB	8	0	8	0	Surfer and Hydrological Modeling
29	2005	18-Dec-05	3	IT	Others Raqqa	Shaher Abdullah (+Mr.Suzuki)	MC	8	0	8	0	Hydrological Data Processing
30	2005	26-Dec-05	4	IT	MC	Mohanad Dieb, Kamal Al-Shahada	MC	2	0	2	0	Database Management (structure of DB, tables creation, conditions and privileges, SQL, PostView/PostPut, Examination etc.)
31	2006	16-Jan-06	2	IT	MC	Taghrid Saleh	MC	4	0	4	0	Basic of GIS operation (Raster, Geo Referencing Toolbar, Shape File, Digitization, Editor, File conversion, Layout Map, Class etc.)
32	2006	24-Jan-06	3	IT	Others Hama	Mohanad Dieb, Kamal Al-Shahada	MC	2	0	2	0	Database Management (OJT for data input, Error correction etc.)
33	2006	24-Jan-06	3	IT	Others Hama	Mamdouh Sakr	MC	3	0	3	0	Basic of GIS operation (Geo Database, Geo Referencing, Symbology Lables, Layout Toolbar, Print Maps etc.)
34	2006	19-Feb-06	1	IT	MC	Kassem Naltouf	BAB	3	3	0	0	Database Application
35	2006	22-Feb-06	2	Hydrology	BAB	Kassem Naltouf	BAB	3	3	0	0	Utilization of Surfer Software
36	2006	19-Feb-06	3	IT	Others Hama	Mamdouh Sakr	MC	3	0	3	0	GIS Utilizatin (Geo-Referencing Tool bar, Create Tables (database, shape file, coverage), Convert tables to features (dataset, shape file, coverage) types of join, join tables or features together, types of relations, Create templates, print maps)
37	2006	1-Mar-06	2	IT	Others Hama	Mamdouh Sakr	MC	3	0	3	0	GIS Utilizatin (Geo-Referencing Tool bar, Create Tables (database, shape file, coverage), Convert tables to features (dataset, shape file, coverage) types of join, join tables or features together, types of relations, Create templates, print maps)
38	2006	14-Mar-06	3	IT	CD	Mamdouh Sakr	MC	8	8	0	0	GIS Utilization (Arc-Catalog, Arc-Map, Menu Selection, Art Toolbox, Drawing Arc Map, Geo Reference etc.)

付属資料 1

Annex 3-2

C2C Workshops
(August 2005 - October 2006)

	Year	Date	Duration(day)	Field	Place	Trainer (Lecturer)	Organization of Trainer	No. of Trainees				Contents
								Total	WRC	MOI	Other	
40	2005	22-Apr-06	2	IT	CB	Mamdouh Saker	MC	8	8	0	0	GIS Utilization (Arc-Catalog, Arc-Map, Menu Selection, Arc Toolbox, Drawing Arc Map, Geo Reference etc.)
41	2005	27-Mar-06	2	IT	CB	Mohamad Dieb	MC	8	8	0	0	SQL Utilization
42	2005	29-Mar-06	3	IT	CB	Mamdouh Saker	MC	8	8	0	0	GIS Utilization (Arc-Catalog, Arc-Map, Menu Selection, Arc Toolbox, Drawing Arc Map, Geo Reference etc.)
43	2006	5-Apr-06	3	Hydrology	MC	Kassem Natout	BAB	12	0	12	0	Surfer Utilization
44	2005	26-Apr-06	2	IT	CB	Mohamad Dieb	MC	12	12	0	0	DB Management
45	2006	2-May-06	2	IT	CB	Mamdouh Saker	MC	8	8	0	0	GIS Utilization (Arc-Catalog, Arc-Map, Menu Selection, Arc Toolbox, Drawing Arc Map, Geo Reference etc.)
46	2006	10 May-06	2	IT	Others Homs	Kamal Shahada	MC	7	0	7	0	DB Management (PostGreSQL, PostgoSql)
47	2006	22-May-06	3	Hydrology	BAB	Kassem Natout/Yashin Tome (+Mr.Suzuki)	BAB	7	0	7	0	Hydrological Observation / Data Processing
48	2006	11-Jun-06	3	Hydrology	Others Raqqa	Kassem Natout/Yashin Tome	BAB	10	0	10	0	Hydrological Observation / Data Processing
49	2006	27-Aug-06	2	IT	Others Homs	Yahia Tujjar/Ziad Wahab	MC	5	0	5	0	Linux Installation&Operation 1,2
50	2006	27-Aug-06	5	IT	Others Homs	Mandouf Sakr	MC	6	0	6	0	GIS Operation 1,2
51	2006	12-Sep-06	2	IT	Others Homs	Yahia Tujjar	MC	2	0	2	0	Network Basics & Construction 1,2,3
52	2006	12-Sep-06	2	IT	Others Homs	Ziad Wahab	MC	2	0	2	0	Windows 2000 Server 1
53	2006	2-Oct-06	4	IT	Others Homs	Mohannad Dieb	MC	5	0	5	0	Database Applications 1
54	2006	2-Oct-06	4	IT	Others Homs	Mandouf Sakr	MC	6	0	6	0	GIS Operation 3,4
55	2006	2-Oct-06	3	IT	BAB	Kassem Natout	MC	13	0	13	0	3D Graphics Tools (Surfer) 1
56	2006	1-Oct-06	2	Hydrology	BAB	Yashin Tome	BAB	13	0	13	0	Groundwater Data Processing 1
57	2006	16-Oct-06	3	IT	BAB	Nahida Fellouh	BAB	10	0	10	0	GIS Operation 5
TOTAL								883	548	342	3	

C2C Workshops
(Subjects by organizations of trainers and Venue)

Venue and Subjects	Organization of Trainers	MC	BAB	CB	HTH	Total
	Main Center					
	Hydrology		1			1
	IT	8	1			9
	Total	8	2			10
	BAB Center					
	Hydrology		8	1		9
	IT	5	2		1	8
	Others	1	3	1		5
	Total	6	13	2	1	22
	CB Center					
	IT	6				6
	Total	6				6
	Others*					
	Hydrology		2			2
	IT	12	1	2		15
	Total	12	3	2		17
	Grand Total	32	18	4	1	57

Acronym
MC: Main Center
BAB : Barada-Awaj Basin Center (Although it has been renamed to DRD since Jan. 2006, to avoid any complication, the previous center name, BAB, is used here.)
CB: Coastal Basin Center (although it was split into two centers, the Lattakia and the Tartous centers in Jan. 2006, to avoid any complication, the previous center name, CB, is used here for both centers even for the
HTH: High Tech House
IT: Information Technology

Annex 3-3

Condition of Grant Aid Equipment (as of December 1, 2006)

DRD Center

	Number of Equipments Provided	Equipment in Operation	Remarks
Groundwater	110 (incl. 33 equipments[a] for water quality)	90 (incl. 31 equipments for water quality)	• Reserved for spare parts: 13 (incl. 2 equipments for water quality) • Not functioning: 7 (out of order: 3, stolen: 3, : 1:)
Surface Water	34	33	• Out of Order: 1
Meteorological[b]	14	14	
Precipitation	14	14	
Total	172	151	

Coastal Basin Centers (Lattakia / Tartous)

	Centers	Number of Equipments Provided	Equipment in Operation	Remarks
Groundwater	Lattakia	17 (incl. 5 equipments[a] for water quality)	14 (incl. 5 equipments[a] for water quality)	Never installed: 1 (due to the shorter cable than necessary) Out of Order: 2
	Tartous	17 (incl. 8 equipments[a] for water quality)	17 (incl. 8 equipments[a] for water quality)	
Surface Water	Lattakia	12	10	Reserved for spare parts: 1 Out of Order: 1
	Tartous	7	7	
Meteorological	Lattakia	4	4	
	Tartous	3	3	
Precipitation	Lattakia	5	5	
	Tartous	5	5	
Evaporation	Lattakia	4	4	
	Tartous	2	2	
	Total	76	71	

(a) water quality equipments for pH, EC and temperature

(b) meteorological equipments for temperature, humidity, wind direction, wind speed,

Prepared Translated Manuals
(October 2004 - October 2006)

No.	Field	Prepared Manuals and Guidelines	English	Arabic	Japanese
1	Hydrology	Hydrological Observation	Dec-03	Mar-06	
2	Hydrology	Data Quality Check Manual	Dec-05		
3	Hydrology	Hydrological Observation Handbook	Dec-05		
4	Hydrology	Site Check Report of Surface Water Stations in Coastal Basin	Dec-05		
5	Hydrology	Site Check Report of Surface Water Stations in Barada-Awaji Basin	Sep-05		
6	IT	dBX_Tool Manual	Oct-05	Oct-05	Oct-05
7	Analysis	Training Report on Water Balance Analysis (Operation Manual of SSM Simulation Program)	Dec-05	Dec-05	Dec-05

Results of Activities Planed for the Extension Period

Activities	Detail Actions	Activities Conducted	Status
1)-1 To design equipment for Meteorological and hydrological stations	No activity planned		
1)-2 To install the observation equipment at the stations	To check and correct the installation work of 9 JICA training stations	The defunct two equipment (G.W. level sensors for Joybat and Mantar station in the Coastal Basin) were not repaired but G.W. level sensor in Joybat was replaced with the GA equipment due to the very high cost of repair in November 2004. Further, the Surface water sensor at the Alkoah station in the Barada-Awaj Basin was replaced with the one of the GA equipment in February 2006.	Completed
	To conduct the topo-survey for determination of elevation of observation stations	Topo-survey for G.W stations' elevation was finished by Aug.2005.	Completed
1)-3 To conduct a basic design for computer system and install hardware and software such as OS at Main Center and two Basin Centers	To obtain the detail schedule of moving into new MOI HQ building in Harasta,	No detail schedule has been informed by MOI to the Project.	N/A
	To design the new DB hardware at new MOI HQ building (ex. Server, PC)	Under implementation. It is planned to be completed by January 2007.	on-going
	To install the DB hardware to the new MOI HQ building	N/A (The new building is still under construction as of December 2006.)	N/A
1)-4 To design database and establish at Main Center and two Basin Centers	To determine the DB format for automatic observation stations, considering the data from Grant Aid observation stations	With the installation of the GA equipment, new database and software application (dBX_tool) were developed and installed in DRD and Lattakia Centers for the automatic processing of raw data collected. Since the start of the operation in October 2005 the said-application has been continuously upgraded in the data storage capacity, the data processing speed, the data processing procedures, etc. As of Dec. 2006, dBx_tool is the 3.6.m version.	Completed
	To modify the database according to the determined DB format		
1)-5 To connect GIS with database systems at Main Center and two Basin Centers	To fix the file server to share the produced GIS files	In October 2005 the GIS file servers were installed in the Main Center and two Basin Centers, which made it possible to connect GIS and DB at three centers respectively.	Completed
1)-6 To establish network at Main Center and two basin Centers	To design the Network in the new MOI HQ building	Under implementation. It is planned to be completed by January 2007.	on-going
	To install the Network in the new MOI HQ building	N/A (The new building is still under construction as of December 2006.)	N/A
2)-1 To prepare a monitoring program of meteorological, hydrological, groundwater, water quality data in the Barada-Awaj Basin and the Coastal Basin	To revise the monitoring program including the Grant Aid observation stations	The monitoring plans (number of staff, frequency of data collection, etc.) were prepared at two Basin Centers, and were reviewed and revised by the end of Dec. 2004, incorporating the Grant Aid equipment.	Completed

Activities	Detail Actions	Activities Conducted	Status
2)-2 To rehabilitate the hydrological and meteorological observation stations of the Barada-Awaj Basin and the Coastal Basin	To revise the register book of observation stations including the Grant Aid observation stations and the other added stations	The register book was updated in December 2005, incorporating the GA equipment. Subsequently, its information was uploaded into DB in December 2005. The register book and the uploaded information have been continuously amended whenever necessary.	Completed
2)-3 To get technique for observation and processing of observed data, etc. at two Basin Centers	To conduct the training for data checking	The training was conducted as planned from Aug. 2005 to Dec. 2005. In total, 6 times of workshops were held and 52 C/Ps participated in them.Further, the manual for data checking was also prepared.	Completed
2)-4 To collect and process meteorological and hydrological data	To make the data check system which includes visual check and signature of person in charge	Application system for visual check was prepared in the dBX_Tool on 25 July 2006 (ver.3.0). Further, another application was developed and incorporated into the dBX_tool in order to automatically detect and alert errors on 20 Nov. 2006(Ver3.5.u).	Completed
	To detect the error patterns of MDI observation data	The data checking manual was prepared and distributed to all WRIC centers in Nov. 2005, taking into consideration the error patterns identified. It also includes the appropriate actions and countermeasures to be taken in case the error is detected.	Completed
	To consider the countermeasures to reduce errors of MDI observation data		
	To put the countermeasures into practice	The data checking is being carried out utilizing the above-mentioned measures. It is conducted mainly by C&C section of each WRIC center (about 3-5 people in each WRIC center) since Dec. 2005.	Completed
	To detect the error patterns of the other ministry's observation data	The data checking manual was prepared and distributed to all WRIC centers in Nov. 2005, taking into consideration the error patterns identified and it also includes the appropriate actions and countermeasures to be taken in case the error is detected.	Completed
	To consider the feedback system of detected errors of other ministry's observation data		
	To put the feedback system into practice	The meetings were held with the representatives from MOD and MOAAR in Aug. 2006. In addition, the Annual Records of Hydrology, which includes the data from these agencies, are distributed to them.	Completed
	To make the application software for data processing from automatic observation stations to DB	Application software named 'dBX_Tool' was developed on 25 July 2005 (ver1.0.0). It was further improved in the DB capacity and the data processing speed, etc. and then installed at each Basin center in October 2006.	Completed

付属資料 1

Activities	Detail Actions	Activities Conducted	Status
2)-5 To input data to Database	To input historical meteorological observation data (Daily precipitation data)	All of the available precipitation data for the last 25 years (1980 - 2005) provided by the Ministry of Defense has uploaded into the main DB.	Completed
	To input historical meteorological observation data (Data of other parameters such as temperature, wind, evaporation, snow etc.)	All of the available meteorological paper (1975-2003) and digital (1959-2004) data provided by the Ministry of Defense has uploaded into the main DB.	Completed
2)-6 To storage and maintenance plan for collected data	No activity planned		
2)-7 To prepare periodical report such as monthly report, annual records of Hydrology	To revise the contents of Monthly Report	With the installation of GA equipment, the contents and the format of the Monthly Report was revised in order to accommodate the data collected from the Grant Aid equipment.	Completed
	To revise the data format of monthly report which include the Grant Aid stations		
	To make the application software to automate the production process of Monthly Report	Application software to generate graphs and charts for Monthly Report was developed in September 2005 and has been improved by October 2006 as an optional function of dBX_tools (ver.3.4.e).	Completed
	To prepare the annual records of Hydrology for 2002-2003 by using the database	The Annual Records of Hydrology for 2002-2003 was published in 2005 spring, using the database. In total, 200 copies were prepared and distributed to MOI, MOD, MOAAR, MOHC etc.	Completed
	To prepare the annual records of Hydrology for 2003-2004 by using the database	The interim Annual Records of Hydrology for 2003-2004 was published in December 2005. In August 2006 the precipitation and ground water sections were completed and published. The remaining part (surface water and water quality) is now under preparation and planned to be published by March 2007.	on-going
	To prepare the annual records of Hydrology for 2004-2005 by using the database	The Annual Records of Hydrology for 2004-2005 is planned to be published before the termination of the Project in June 2007. At present, the data upload into DB (except for the surface water and water quality) is carried out and planned to be completed by the end of November 2006, followed by the publication of the interim report.	on-going
2)-8 To prepare periodical Water resources Report	To determine the full items which should be included in the Water Resources Reports	The workshop was organized in February 2005 to discuss and decided about the contents of the Water Resources Report.	Completed
	To select the items which can be included in the first edition of Water Resources Report		
	To prepare the first edition of Water Resources Report	The first edition of the Water Resources Report was issued in June 2005. It was revised and completed by November 2005 incorporating the comments from the Syrian users and the Japanese experts. In total, 50 copies were prepared and distributed to MOI, MOD, MOAAR, MOHC etc.	Completed
	To conduct the training for analysis of water balance	The working group was formed in WRIC in 2005. A series of training was conducted to the group in which the staff from other concerned agencies such as the Ministry of Housing Construction, the MOAAR, etc. joined as well. In total, 13 times of workshops were held and about 200 people participated in them from July 2005 to Dec. 2006.	Completed
	To make the water balance model in 2 basins	The set-up of the SSM model was completed for the Barada-Awaj Basin in Nov. 2005 and the Coastal Basin in Nov. 2006.	Completed

Activities	Detail Actions	Activities Conducted	Status
	To estimate the water balance in 2 basins	The water balance of two Basins was estimated, utilizing the SSM prepared, by October 2006.	Completed
	To prepare the second edition of Water Resources Report	The interim Water Resources Report (second edition) was completed in September 2006, incorporating the most recent meteorological and hydrological data as well as the results of the water balance analysis. At present, the contents of the Report is under review.	on-going
	To conduct the training for groundwater modeling such as SSM and MODFLOW	As regards SSM a series of training on the analysis methodology, the data processing procedure for the uploaded data and the operation of the application were conducted and the basic technology was transferred. For MODFLOW the set-up of local model is on-going, in which the technology transfer is carried out. In total, 13 times of workshops were held and 207 man-day peoples participated in them from 14 July 2005 to 29 October 2006.	on-going
	To make the groundwater model in 2 basins	The set-up of local model is on-going with MODFLOW.	on-going
	To estimate the water balance more specifically in 2 basins	To improve the accuracy, the calibration and the improvement of SSM is on-going.	on-going
	To prepare the third edition of Water Resources Report	The third edition of report is under preparation to incorporate the estimate of the water balance in two Basins. It will be prepared by May 2007.	on-going
3)-1 To prepare guidelines for guidance of establishment of new basin center, capacity building plan, observation techniques, processing, processing technique of observed data, and information technology (IT), preparing several kinds of report, including annual hydrological report and monthly report.	To prepare the bookshelf for manuals	The bookshelves were prepared in all centers in Dec. 2004.	Completed
	To select the manuals which should be translated to Arabic	The manuals to be translated into Arabic were identified.	Completed
	To make the Arabic version of existing manuals	The translation of 3 manuals was completed.	Completed
3)-2 To conduct training regularly for observation technique, information technology, and preparation of several kinds of report, by Syrian side	To identify the requirement for training	The annual training plan was prepared and the training contents were identified, composing the skills and the knowledge transferred to the WRIC staff in the Project.	Completed
	To consider the contents of training		
	To prepare the training program (schedule)		
	To conduct the training by Syrian Side	The training has been organized since August 2005 by CPs, targeting WRIC staff and other staff in MOI, aiming to assure the sustainability of the Project as well as to support MOI technically for the expansion of the WRIC to other basins. In total, 61 times of workshops were held and 893 people participated in them until Dec. 2006.	Completed

付属資料 1

Activities	Detail Actions	Activities Conducted	Status
4)-1 To conduct continuous operation and maintenance of Database and GIS	To make the check list for operation and maintenance of the database and GIS system	Prepared in December 2004.	Completed
	To monitor operation and maintenance of Database and GIS	As regards the daily operation and maintenance (O&M) of software, the CPs have acquired necessary skills and have been able to carry it out without any difficulty. Also, the staff in the Technical Support Section are now able to take an appropriate action against any minor problem encountered. The CPs also carry out the O&M of IT hardware. Due to the difficulties to get budget disbursed by MOI on time, it usually takes long time for the repair to be done.	Completed
	To conclude the outsourcing contract for system maintenance	The necessary documents have been already prepared. It will be concluded by the coming budget year of 2007 by MOI.	on-going
4)-2 To conduct continuous operation and maintenance of network	To make the check-list for operation and maintenance of network	Check list was originally prepared in August 2002 and has been revising along with new installations and re-configurations of the System up to date.	Completed
	To monitor operation and maintenance of network	The O&M of network system has been properly undertaken by CPs, to whom necessary skills had been transferred.	Completed
4)-3 To conduct continuous operation and maintenance of observation equipment	To make the check-list for the operation and maintenance of observation equipment	The O&M check list for the maintenance of Grant Aid equipment was prepared. Further, the procedure manual was compiled to detect the problems of the equipment in case data was not properly recorded.	Completed
	To conduct the training for operation and maintenance of automatic observation equipment	Before and after the installation of GA equipment, the O&M training was conducted by GA Engineers from October to December, 2004. In total, 15 days of lectures were held and about 150 people-day participated in them.	Completed
	To monitor operation and maintenance of observation equipment	The daily O&M of observation equipment including the GA equipment has been properly undertaken by the CP.	Completed
5)-1 To provide decision-makers with Water Resources Information	To make the distribution list of reports and annual records of hydrology	The distribution list was prepared and now the report is distributed to not only MOI but also related agencies (Ministry of Defense, Ministry of Agriculture, Ministry of Housing Construction).	Completed
	To prepare the extension system (LAN) to executive officers of MOI in the new building	N/A (The construction of the new building is still on-going.)	N/A

Annex 4-2

Implementation Process

Evaluation Questions		Findings	Grade
Questions	Specific Questions		
Extension Period	Have activities been implemented as planned?	The planned activities have been duly implemented during the extension period.	A
	Was there any factors affecting the project implementation?	The improving technical capability and the supports from the higher authority motivated CP, which has facilitated the project implementation. However, the high turn-over rate of CP and the delayed budget disbursement of the Syrian side had a negative impact on the progress of the Project.	B
Technical Transfer	Was the technical transfer from the experts to CP appropriate (contents, methodology, etc.)?	The technical transfer has been duly conducted. In addition to the technical transfer through OJT or daily activities, 161 workshops and training were organized between October 2004 and November 2006, mostly by the experts and some by the CP, which significantly contributed to the enhancement of the technical capability of the CP.	A
Project Monitoring Mechanism	Is the Monitoring mechanism appropriate?	The progress and the problems of the daily activities are shared and discussed at the Management Committee.	A
	Is monitoring conducted regularly?	The Management Committee is held every two weeks, participated by the representatives from four WRIC centers.	A
	Did the Project properly modify the activities reflecting the results of monitoring?	The activities were modified reflecting the outcomes of the committee.	B
Relationship between CP and Japanese Experts	Was the communication btw. CP & experts smooth?	Both CP and experts agreed that the communication between them was good and smooth. In the Tartous Center, which was operated under the Lattakia center as a sub-center before January 2005, some CP expressed their views that their communication with the experts were not as frequent and good as CP in the other centers.	A
	Did CP & experts work together to address any emerging problem?	Any emerging problem has been shared and discussed between CP and experts through the management committee held every two weeks among the representatives from four centers and experts. In addition, the Joint Coordination Committee was held semi-annualy to discuss the issues which required the decision from the higher authority.	A
Ownership of Syrian Side	Have CP been actively involved in the Project implementation?	More than 80% of CP stated in the questionnaire that they had been involved in the Project actively although some experts expressed their views that more active involvment of CP would have contributed to the smoother implementation of the Project activities.	A
	Have CP taken an initiative in the Project implementation?	The core staff have been gradually taking their initiative in the Project implementation as the enhancement of their technical capability.	A
Relationship with Concerned Agencies	Was the communication between the Project and the JICA HQ & JICA Syria smooth?	All experts agreed that the communication with the JICA offices, in particular with JICA Syria, has been frequent and smooth. The Project regularly reports the progress of the Project to the JICA Syria.	A
	How was MOI involved in the Project?	Both experts and CP stated that more logistical and financial supports should have been provided by MOI for the Project. Especially, the delayed disbursement of the budget and the complicated internal regulations have been hampering the smooth implementation of the Project.	B
	How were other concerned agecies involved in the Project?	The observation data has been provided regularly by the concerned agencies (MOD and MOAAR.) as stipulated in the Agreement. The MOAAR and the Damascus City Water Supply and Sewerage Authority participated in the working group on the water balance modeling orgaized within the WRIC.	A

付属資料 1

	How has the Project cooperated with other donors?	The Water Symposium has been organized annually since 2003 to present the WRIC activities and to share the information among the donors and concerned agencies. With the German and the Dutch agencies, two main donors in the water sector in Syria, the contacts have been established. The Germany is proposing to work in close cooperation with WRIC in a project which they are planning to start in Aleppo in 2007 for the effective management of water related data and information. The WRIC staff conducted the training in the Hama Center in the Orontes Basin to which the Dutch government donated the computers.	A
Others	Has there been any factors impeding the smooth project implementation?	The high turn-over rate of CP and the delayed budget disbursement of the Syrian side had a negative impact on the progress of the Project. Further, the ISDN line connected between MC and the Lattakia Center is often disrupted and has caused some difficulties to the Project in the data transmission.	B
Overall Evaluation	During the extension period, the Project has been implemented smoothly rather than the initial three years. The activities planned for the extension period have been either completed or is expected to be completed before the termination of the Project although the moving into the new Ministry building is unlikely to take place since the construction of the building has been delayed considerably. The Project has been actively communicating with various stakeholders in the water section in Syria. The Water Symposium is organized annually from 2003 to present the activities and the achievements of the Project, participated by more than 600 stakeholders in total from both governments and donors. The Project consultation team dispatched in October, 2003 modified PDM jointly with the Project reflecting the achievements made by then. The number of activities was reduced and some of the indicators to assess the outputs and the achievements were revised. However, some indicators are found still neither quantifiable nor objective. This caused some difficulties to the stakeholders on how to monitor and evaluate the Project achievements.		A

Achievement of Outputs

Expected Outputs	Indicators	Results / Achievement	Grades
OUTPUT 1 - A water resources information system is established at Main center and two Basin centers of WRIC. - 9 pilot stations and equipments provided through Grant Aid Assistance	1-1Observation Activity is conducted continuously and accurately at stations in two Basins and the rate of operating station is over 95%	Nine pilot stations were equipped with the equipments provided by the Project. As of December 2006 six equipments are in operation. Two out of three defunct equipments were replaced with the Grant Aid equipments and the observation activities have kept on going at those two pilot stations. As regards the 248 GA equipments, 14 were removed from the stations where they were originally installed since no automatic measurement deem necessary in such stations. Instead, they are reserved to be used as spare parts in future. Out of 234 equipments excluding those removed, 222 are in good condition and functioning. Out of the remaining 12 equipments, 8 need to be repaired, three were stolen and one ground water sensor has never been installed due to the problem with the length of the cable (please refer to Annex 3-3 for detail). In other words, 94.8% of total number of pilot stations and GA equipments are in good condition.	A
	1-2 In three centers, the materials (outputs) such as tables, graphs, and maps are produced through database.	With the installation of the GA equipments, DB and application software were developed and installed at DRD and Lattakia Centers. The graphs and the charts to be inserted in the Monthly Report and the Annual Records of Hydrology are produced through DB. The improvement of application has been continuously carried out.	A
	1-3 In three centers, exact information is transmitted periodically.	The Main Center and the Basin Centers have been connected with the ISDN lines, through which the data transmission are carried out now every two weeks. Since the communication between MC and the Lattakia Center is unstable and often disrupted, the Project is planning to establish a communication center attached to the Lattakia Center for the stabilization of the communication lines.	A
	Overall Production of Output 1	The targeted indicators are attained. Approximately 95% of the equipments provided to the Project during the cooperation period are in operation at the time of the final evaluation study. New database and application software were fully developed to accommodate the data collected at the equipments provided through the Grant Aid Assistance (GA equipment). The application has been continuously improved as any shortcoming arises. Further, three centers have been connected with the ISDN lines for the transmission of the collected and processed data.	A
OUTPUT 2 - The WRIC staff acquire the necessary techniques for hydrological and meteorological observation, data collection and data processing. - Pilot stations, observatories under MOI and related agencies and equipment provided through grant aid assistance. (However, as regard the indicator 2-1, the observatories under related agencies shall not be included.)	2-1Accurate measurement data is collected from more than 80% of stations and processed in accordance with the data processing procedure established by the Project.	As stated in 1-1 above, 14 GA equipments out of 248 have been removed from the stations where they were originally installed. 222 out of the remaining 234 equipments are in good condition, from which the data has been collected regularly. Thus, 94.8% of the GA equipment, which have not been removed, and 89% of the pilot stations (eight out of nine) are in operation. Further, as regards the 292 stations under MOI, the data is collected from 97.5% of the stations. The collected data is processed in accordance with the established data processing procedure and its accuracy is also checked in the process with the visual checking system and/or against the threshold value. It has been suggested to the CP to observe the procedure strictly.	A
	2-2Observation data is accumulated periodically	The collected data including that provided by the concerned agencies and recorded at the GA equipments have been uploaded continuously into DB. The upload of precipitation data for the last 25 years provided by the Ministry of Defense has also mostly completed. However, the installation of GA equipments has led to the substantial increase of data to be processed and to the considerable change in the data processing procedure at the Basin Centers. As a result, only 60% of data to be uploaded has been actually uploaded into the main DB as of December 2006. It has been decided that after September 2006 the processed data be uploaded within three months after the raw data is collected. Moreover, the monitoring form and application tool to check the status of MC database has been developed and utilized.	B

Grade of output production: A 100-75%, B 74-50%, C 49-25%, D 24-0%

	2-3The material for the periodical reports are prepared by utilizing the database.	The database has been utilized for the preparation of the periodical reports. With regard to the Annual Record of Hydrology, the issues of 2002-2003 and 2003-2004 were produced utilizing the database. On the other hand, the Monthly Report has been published since March 2006, also utilizing the database.	A
	Overall Production of Output 2	The technology transfer for observation, data collection and data processing has been duly completed, and accordingly, the targeted indicators are mostly attained. In addition to the pilot and the GA equipment stations, the observation data is collected from 97.5% of the 292 stations run by MOI as of October 2006. Further, the WRIC has been receiving the historical and the current data from MOD and MOAA although the delivery of the data is usually delayed by almost a year. The collected data is processed in accordance with the established data processing procedure and its accuracy is confirmed in the process. The processed data is uploaded into the database, from which the graphs and charts are generated. The CP is advised to observe strictly the data processing procedures in order to enhance the accuracy of data and to follow the rule that the processed data should be uploaded to the MC database within three months after the raw data is collected.	B
OUTPUT 3 - A section is established within WRIC for capacity building and continuous human resources development is conducted.	3—1To prepare guidelines for guidance	18 manuals prepared by the Project have been translated into Arabic.	A
	3—2To conduct training by Syrian side	The CPs have conducted the Counterpart-to-Counterpart training (C2C training) since August 2005 for the other staffs of WRIC as well as of MOI. As of Oct. 2006 57 training programs were organized and 893 in total (WRIC: 548, MOI: 342 and Others 3) participated. Two evaluative questionnaires were collected from 62 participants in total. One questionnaire was distributed by the evaluator and the other was distributed and collected at the end of the training programs. The questionnaire distributed by the evaluator included 10 questions rated on 1-5 scale and the average rate of a whole questions was 3.67 while the other questionnaire included 5 questions rated on 1-4 scale and the average rate was 3.38. In other words, satisfaction levels of the participants are high. However, some also pointed out that there was a room for further improvement in the coordination and the management of the training programs to maximize the effects of the program.	A
	Overall Production of Output 3	CP have been engaged in the C2C training, which started in August 2005 aiming to secure the Project sustainability and to support MOI technically for the expansion of WRIC to other parts of the country. As of October 2006 57 training programs were organized and 893 in total participated. In general, the participants contented with the training.	A

Grade of output production: A 100-75%, B 74-50%, C 49-25%, D 24-0%

付属資料 1

OUTPUT 4 - A section is established within WRIC to maintain the water resources information system and the continuous maintenance is conducted.	4－1Appropriate operation do and system down time is less than 10% of total working hours.	The daily O&M have been carried out by CPs and no system down has ever taken place recently. The repair of hardware is also conducted by CPs although it is not always done in a timely manner.	A
	4－2More than 80% of the equipment is in good condition to obtain the observed data.	As stated above, the data has been collected from 88.9% of the pilot stations, 94.6% of the GA stations and 97.5% of the MOI stations. The daily O&M have been carried out by CPs. The O&M checklist and the procedure manual to detect the problems were prepared.	A
	Overall Production of Output 4	The technology transfer for the proper maintenance of WRIC equipments has been completed. The maintenance of the computer system, the IT hardware and the observation equipments have been properly conducted by CP in accordance with the manuals and the check lists prepared by the Project. So far, no major problem has been encountered. However, in order for the major maintenance tasks to be properly conducted, necessary budget should be allocated by MOI to WRIC.	A
OUTPUT 5 -A system is established to enable the staff of WRIC to provide necessary information on water resources management to decision-makers, planners and researchers by utilizing the water resources information system.	5－1Monthly reports of water resources information are submitted to decision-makers periodically.	The format and the contents of the Monthly Report have been revised to accommodate the data recorded at the GA equipment. The Monthly Reports have been issued monthly and distributed to MOI (Minister, Vice Minister, each directorate office), MOD, MAAR and MOHC since March 2006. The data from the other ministries is not incorporated in the Report because the data is not provided to WRIC timely.	A
	Overall Production of Output 5	The targeted indicator has been achieved. The Monthly Report has been distributed to MOI (Minister, Vice Minister, and each directorate office), MOD, MAAR and Ministry of Housing and Construction (MOHC) since March 2006.	A

Grade of output production: A 100-75%, B 74-50%, C 49-25%, D 24-0%

付属資料 1

Achievement of Project Purpose

Project purpose	Indicators	Results / Achievement	Grades
A center enabling appropriate management of water resources information is established	1. Annual records of Hydrology are published by the year 2005.	The Annual records of Hydrology has been published already. Although the 2001-2002 issue was prepared with EXCEL., the issues of 2002-2003 and afterwards were produced utilizing the database. The 2002-2003 issue was published in the 2005 spring. The interim version of 2003-2004 was produced in December 2005. Part of 2003-2004 issue (precipitation and groundwater) was published in August 2005 and the remaining part (surface water and water quality) will be published by March 2007 after the format is reviewed and the data quality is confirmed. The interim version of 2004-2005 will be come out after the upload of data (except for surface water and water quality) is completed by the end of November 2006. The complete version of 2004-2005 issue is planned to be published before the termination of the Project in June 2007.	A
	2. Water Resources Report for Barada-Awaj Basin and Coastal Basin is published by the year 2005.	The first edition of the Water Resources Report was issued in June 2005. Later on it was revised and reissued in November 2005, incorporating the comments given by the users and the Japanese experts. The interim version of the second edition was completed in September 2006 incorporating the most recent hydrological and the meteorological data and the outcome of the water balance analysis.	A
Overall Achievement	The Project Purpose has been achieved. The Annual Records of Hydrology and the Water Resources Report have been already published, utilizing the database developed and maintained by the Project. Although the quality of the Reports is a subject to further improvement, their contents and formats are continuously under revision, incorporating the comments from users.		A

Grade of Achievement : A 100-75%, B 74-50%, C 49-25%, D 24-0%

Achievement of Overall Goal and Super Goal

Overall Goal	Indicators	Results / Achievement
Integrated and sustainable water resources management in the Barada-Awaj Basin and the Coastal Basin was achieved.	1. Appropriate project designs are made in the Barada-Awaj Basin and the Coastal Basin.	Because of the serious water shortage faced by the capital, Damascus, there is a plan to bring the water to Damascus from the coastal area where the water is rather abundant. The government expresses the high expectation towards WRIC for the accumulation of accurate data which will be indispensable to the plan to be satisfactory executed.
	2. Master plans for water resources are made in the Barada-Awaji Basin and the Coastal Basin.	No information is obtained with regard to the formulation of any master plan for water resources in the country.
	3. Reports for water balance in the Barada-Awaji Basin and the Coastal Basin are made.	The 10th Development Plan, the budget is allocated to the study on the water balance modeling in the Coastal Basin area where the Lattakia and the Tartous Centers are located. The WRIC data have been utilized in the study and some of WRIC staff may participate in a committee organized by related agencies to supervise the study.
Achievement of Overall Goal	The prospects for the achievement of the Overall Goal is fairly high with the condition that the enhancement of the technical capacity of the WRIC staff and the improvement of the management system in WRIC are carried out continuously.	

Super Goal	Indicators	Results / Achievement
Integrated and sustainable water resources management in the whole basins of the Syrian Arab Republic is achieved.	1. National Integrated Water Resources Management Plan is formulated.	No information has been obtained.
	2 Water Use Charter is enacted.	

Grade of Achievement : A 100-75%, B 74-50%, C 49-25%, D 24-0%

付属資料 1

Evaluation by Five Criteria

Relevance

Evaluation Questions		Findings	Grade
Questions	Specific Questions		
Priority	Relevance with the development policy of Syria	The 10th Development Policy issued in May 2005 by the State Planning Commission makes the establishment of an information network, linked to the respective information center at the basin level, one of the objectives to be achieved in the sector of water resources development and management. Therefore, the project is still consistent with the development policy of Syria.	A
	Relevance with Japanese ODA policy / JICA program	The JICA's Country Strategy Plan revised in August 2006 clearly states the JICA's strong commitment to the area of water resources management and efficient water use in Syria, which is one of the four pillars of the said Country Strategy Plan. In particular, JICA regards the establishment of the water resources information system as one of the most important areas of cooperation. Further, in the Water and Sanitation Broad Partnership Initiative adopted in March 2006 the Japanese government expresses the strong support to the promotion of the integrated water resources management in her recipient countries.	A
Needs	Relevance with the needs of Syria	As stipulated in the 10th Development Policy the formulation and enactment of an effective water resources management policy has become more essential than ever to mitigate the further depletion of water resources. The Project conforms the needs of Syria since it aims to provide the policy-planners and the decision-makers with the reliable water resources information, indispensable for the formulation of the effective water management policies.	A
Appropriateness	Relevance with the selection of a target group	The information would not be submitted to the policy-planners and the decision-makers unless the collection, processing and analysis of meteorological and hydrological data is properly conducted. The WRIC is positioned in the government framework to deal with such water resources data and information in the country. Thus, the Project appropriately selected the right target group to be capacitated. But some duplication of mandate and tasks with another directorate in the MOI have been observed.	A
	Superiority in Japanese technology	Japan, including the Ministry of Land, Infrastructure and Transport possesses long and sufficient experiences in the meteorological and hydrological observation, collection, processing and analysis of data as well as the computer engineering. These experiences have effectively contributed to the implementation of the Project.	A
	Effectiveness of the Project approach against the needs of Syria	The formulation and enactment of the water resources management policy requires the well analyzed various information and data on the water resources. Since the pillar of the Project is the capacity building of the government staff in the collection, processing and analysis of the water resources information, the Project is an effective approach against the needs of Syria.	A

Grade: A 100-75%, B 74-50%, C 49-25%, D 24-0%

Overall Relevance	The 10th Development Policy issued in May 2006 emphasizes the importance to formulate and enact the sound and sustainable water resources management policy to effectively mitigate the serious water shortage faced by the country. The data and information collected and accumulated by the WRIC through the Project implementation greatly supports the government in this aspect. The Project also conforms the JICA's Country Strategy Plan which expresses its strong commitment to the area of water resources management and efficient water use in Syria.	A

Effectiveness

Evaluation Questions		Findings	Grades
Questions	Specific Questions		
Achievement of Project Purpose	Achievement of Project Purpose	The Project Purpose has been achieved. The Annual Records of Hydrology and the Water Resources Report have been already published, utilizing the database developed and maintained by the Project. Although the quality of the Reports is a subject to further improvement, their contents and formats are continuously under revision, incorporating the comments from users. The publication of comprehensive water information reports such as the Annual Records of Hydrology and the Water Resources Report was the first attempt in Syria and regarded as a great achievement. The reports should be continuously published in order to effectively contribute to the policy-making and decision-making in the water resources management.	A
Causal Relationship	Contribution of the produced outputs to the achievement of Project Purpose	The outputs have effectively contributed to the achievement of the Project Purpose.	A
	Are activities, outputs and Project Purpose logically linked?	The activities, outputs and Project Purpose are logically linked.	A
Important Assumption	Have important assumption (Trained technical staff stays in WRIC) been fulfilled?	The retention rate of staff is rather low. Only 70% of staff who were in WRIC at the time of the previous evaluation study in October 2004 remain in the WRIC now. As a result, the number of qualified staff who are able to carry out their assignment independently is minimum, around 15% of staff.	B
Promoting Factors	Promoting factors	(Promoting factors) The core staff are fully aware of the importance of data in the effective water resources management and they are eager to improve their technical capacity. In addition, the Local Centers (DRD, Lattakia and Tartous) have become well integrated into the respective Directorate and their works are gradually acknowledged in the Directorates. For instance, they are sometimes requested to provide some of the data for the other sections of the Directorate or the local administration. This situation further motivates the staff in the Local Centers. (Impeding factors) Not a few of staff in MC and others express their views that more financial and logistical supports from MOI would have further enhanced the effectiveness of the Project. Moreover, the unclear demarcation of tasks between WRIC MC and the Directorate of Integrated Management of Water Resources in the Ministry might have had a negative influence on the staff motivation.	B
GA equipment	How has the introduction of GA equipment contributed to the achievement of the Project Purpose?	The installation of GA equipment has significantly increased the volume of available data, which is expected to positively contribute to the quality of analyzed data in future. However, the Japanese experts pointed out that the drastic increase of the collected data stagnated the data processing, resulting in the substantial delay in data entry. In addition, the Project has found it difficult to procure the spare parts of the GA equipment in Syria. Although at this moment the Project makes a contact directly to the agency in Japan in case any problem arises, it is expected difficult for the WRIC to do so after the termination of the Project. In view of this, the Project is now removing some of the equipment installed at the observation stations where no automated measurement deems necessary and reserves them to be used as spare parts in future.	B

Grade: A 100-75%, B 74-50%, C 49-25%, D 24-0%

Extension Period	Has the activities planned for the extension period been implemented?	Most activities have been implemented as planned. However, due to the delay in the construction of the new Ministry building, the date to move into the new building has been undecided.	A
	Has the activities implemented during the extension period been contributing to the achievement of outputs and project purpose of the Project?	The extension period has been well utilized to enhance the technical capacity of the staff as well as to train the staff on the operation and maintenance of the GA equipment.	A
Overall Effectiveness	The Project Purpose has been already achieved. The Annual Records of Hydrology and the Water Resources Report have been already published. Although the quality of the Reports is a subject to further improvement, their contents and formats are continuously under revision, incorporating the comments from users. The extension period was well utilized for the Project to produce the expected outputs and, subsequently, to achieve the Project Purpose.		A

Efficiency

Evaluation Questions		Findings	Grades
Questions	Specific Questions		
Appropriateness of Inputs	Japanese inputs	In general, the Japanese inputs were appropriate in quality, quantity and timeliness.	A
	Syrian inputs	Most of the Syrian inputs were made in accordance with the original plan. However, it was pointed out that the delayed budget disbursement had negatively affected the Project implementation. The number of assigned staff was increased towards the latter half of the Project but many of newly assigned staff were little qualified to the assigned positions. Since the turn-over rate of the trained staff remained high, the Project was required to train new staff throughout the Project period, which affected the progress of the Project adversely.	B
Utilization of Inputs	How have the inputs been effectively utilized?	Most inputs have been effectively utilized to achieve the Project Purpose.	A
Project Management	Have the Project been properly managed?	The Project has been properly managed with no major problem. The Management Committee are held every other week, participated by the representatives from all centers, to share the information and to discuss any problem arisen in the implementation of the daily activities. The regular meeting with the concerned agencies could have been of great help to facilitate closer collaboration not only between WRIC and respective agency but also among all concerned agencies.	A
Achievement of Outputs	Have outputs been produced?	The expected outputs have been mostly produced. Any remaining activities should be duly implemented before the termination of the Project to achieve all outputs in PDM.	A
	Is there any factor hampering the achievement of outputs?	No significant problem has arisen to prevent the expected outputs from being achieved.	A

Grade: A 100-75%, B 74-50%, C 49-25%, D 24-0%

Conversion of Inputs to Outputs	Adequacy of activities to produce outputs	The implemented activities were sufficient to produce the expected outputs. The technical capacity of the staff have been substantially enhanced, resulting in the production of the expected outputs.	A
	Adequacy of inputs to produce outputs	The inputs were adequate to produce the expected outputs.	A
	Have important assumptions (MOI will keep the staff at WRIC and the data provided by the related-ministries is accurate and reliable) been fulfilled?	The data from MOD and MOAAR have been regularly provided since the agreement was concluded between MOI and the concern agency. However it usually takes a considerable time for the data to be provided for WRIC and the accuracy of data is not as good as WRIC expects. Further, the number of staff assigned to WRIC has been increased, however, few are sufficiently qualified to undertake the assignments. Thus, the Project has been required to spend substantial time for the training of new staff throughout the Project period.	B
Overall Efficiency	Most of the inputs were appropriate in terms of number/volume, quality and timeliness of provision. The inputs were utilized well and contributed to the realization of expected outputs. By introducing the C2C training, without additional inputs from the Japanese experts, much more staff acquired knowledge and skills than originally expected. However, the turn-over rate of trained CP remains high and the Project was required continuously to train new staff throughout the Project period, which had an adverse influence on the progress of the Project.		A

Impact

Evaluation Questions		Findings	
Questions	Specific Questions		
Impacts of the Project on the achievement of Overall Goal	Prospect for the achievement of Overall Goal	The prospects for the achievement of the Overall Goal is fairly high with the condition that the enhancement of the technical capacity of the WRIC staff and the improvement of the management system in WRIC are carried out continuously.	A
	Potential contribution of the Project outcome to the achievement of Overall Goal	Through the implementation of the Project activities, various water resources information in the Baroda-Awaji and the Coastal Basins has been adequately compiled and, accordingly, reports have been published. Further, the water balance modelling has been carried out in both basins. Therefore, the Project directly contributes to the achievement of the Overall Goal.	A
	External conditions to promote/hamper the achievement of Overall Goal	The staff continuity is in doubt. Further, the duplication of mandates and tasks between WRIC and the Directorate of Integrated Management of Water Resources may prevent WRIC from effectively contributing to the policy-making and the decision-making process of the MOI. Although the 10th Development Policy earmarks 100 million SP to WRIC for the coming five years, no detail budget plan has been released by the government.	B
Has any unintended impact been observed?	Impact on policy	The 10th Development Policy confirms that one of the most important achievements in the irrigation sector made during the period of the 9th Development Policy was the establishment of WRIC in cooperation with JICA. Further, the one of the objectives to be attained for the effective water resources management and development during the period of the 10th Development Policy is the establishment of a complete information network linked to the information centers at the basin level. In other words, the Syrian government regards the Project an effective approach to mitigate the water shortage faced by the country. Thus, it can be concluded that the Project has had a significant impact on the Syrian policy.	A
	Unintended positive impacts	* Because of the activities and the achievements of the Project, the Germany is now proposing to work in close cooperation with WRIC in a project which they are planning to start in Aleppo in 2007 for the effective management of water related data and information. The Government is planning to make the system established through the implementation of the WRIC Project a platform on which other donors have based their contribution. * The mechanism has been officially created and functioning in which the concerned agencies are exchanging the information and data over the water resources. This kind of mechanism has never been in place in Syria. The cooperation among the agencies needs to be further strengthened to enhance the accuracy of data and to avoid any duplication of work.	A
	Unintended negative impacts	No particular negative impact	A

Grade: A 100-75%, B 74-50%, C 49-25%, D 24-0%

付属資料 1

Overall Impact	The 10th Development Policy confirms that one of the most important achievements in the irrigation sector made during the period of the 9th Development Policy was the establishment of WRIC in cooperation with JICA. Further, the one of the objectives to be attained for the effective water resources management and development during the period of the 10th Development Policy is the establishment of a complete information network linked to the information centers at the basin level. Further, the close contact established and maintained by the Project with the other donors involved in the water resources management sector, which has contributed to the facilitation of the donor cooperation and synergy to the great extent. As regards the Overall Goal, the prospects of its attainment is fairly high, taking into consideration a number of water-related projects in pipeline to mitigate the water shortage in the capital, Damascus, which place high demand on the accurate hydrological and meteorological data and information. On the other hand, there is some concern over the staff continuity and the organizational structure of MOI in which some duplication of mandates and tasks between WRIC and the Directorate of Integrated Management of Water Resources (DIMWR) have been observed. Further, no detail budget plan for 100 million SP earmarked to WRIC in the 10th Development Policy has been released by the government.	A

Sustainability

Evaluation Questions		Findings	Grades
Questions	Specific Questions		
Policy / Institutional Sustainability	Is the Gov't likely to establish a mechanism for WRIC to provide the data / information for the Higher Water Council?	The by-law of the Water Law No. 31 has been under preparation and is expected to be finalized by March 2007, in which the reorganization of the Higher Water Council, the highest authority in the country on the water-related issues, is likely to be announced. After the issuance of the said by-law, the Higher Water Council will be composed of the ministers of 14 line ministries chaired by the Prime Minister, to which the technical committee will be attached and WRIC will be a member of this technical committee.	A
	Is the Gov't likely to regard the water resources information management as one of the important policy agendas in the water sector?	In the big cities like Damascus and Aleppo and their surroundings, not only have the water resources been rapidly depleted but also the development of new water resources have become highly unlikely. The sound and sustainable water resource management should be in place to mitigate further depletion of water resources. Thus, the demand on the collected and analyzed hydrological and methodological data is notably high and the Syrian government puts the high priority on the water resource management in the 10th Development Policy.	A
	Is the Gov't likely to support the expansion of WRIC throughout the country?	The 10th Development Policy stresses the needs to establish an information network linked with the regional information center and some budget is earmarked for the WRIC. In fact, starting from 2007 Germany will launch her cooperation in Aleppo to assist the Syrian government on the water resources information management, for which Germany is proposing a close collaboration with WRIC. The move towards the establishment of a national information network is getting momentum.	A
	Is the collaboration with related agencies likely to be sustained?	The MOD and MOAAR have continuously provided WRIC with the data since the agreement was made among the concerned agencies. It is anticipated this collaboration to be continued and enhanced in future.	A
	Is the institutional capacity of WRIC sufficient enough to facilitate the expansion of WRIC throughout the country?	The managerial performance of WRIC has improved since the previous evaluation study in 2004. However, once the expansion of the WRIC to the other directorates starts, the WRIC MC will be required to enhance further its institutional capacity to coordinate effectively the local centers in the organization of in-service training, the data transmission and others. The greater commitment from the MOI and GCWR will be also essential to sustain the efforts of MC and other Local Centers.	B
Financial Sustainability	Is WRIC likely to secure the sufficient operational budget?	In the 10th Development Policy 100 million SP is earmarked for the Water Resources Information Center. Although at present no further information has been obtained in the breakdown of this earmarked budget, its allocation should be well strategized to assure its effective utilization.	B

Grade: A 100-75%, B 74-50%, C 49-25%, D 24-0%

Technical Sustainability	Can CP be able to undertake O&M of equipment properly?	The daily maintenance of the equipment is well performed by CP. However, it is recommendable that the contract agreement be made with an agency for the regular maintenance service to prevent any problem from hampering the implementation of daily activities. As regards the GA equipment, because no spare parts is available in the country at present, the Project has removed the equipments from the observation stations where the monthly measurement is considered sufficient and reserved them as spare parts for the future use in case any problem arises with the installed equipment. As of December 2006 17 equipments have been removed from the spot for this purpose. However, more sound measures should be in place before the termination of the Project to assure the GA equipment to be properly utilized for the years to come.	B
	Is the level of technical capacity of CP sufficient to sustain the present activities?	The technical capability of core staff have been notably enhanced and considered sufficient to carry out the daily activities of WRIC. However, since the number of the capable staff is very limited, their resignation is likely to stagnate the daily activities as well as to hamper the expansion of WRIC activities.	B
	Is the transferred technologies likely to be maintained?	The transferred technologies are likely to be disseminated and replicated in WRIC. However, the number of core staff with sufficient technical capability is minimum so that the technology dissemination and replication are likely to be stagnated in case of their resignation. To ensure the technical sustainability, WRIC should create a firm system in which the in-service training and OJT are effectively managed and the technology transfer is continuously carried out among CP.	B
	Is the mechanism of technology dissemination (e.g. C2C training) likely to be maintained?	By October 2006, 57 C2C training were conducted and about 900 WRIC and MOI staff in total participated. The C2C training program could be an effective means to extensively disseminate and replicate the technologies transferred to CP in the Project. While the number of respondents to two evaluative questionnaires on the C2C training is relatively small, most of them were generally positive in the effectiveness of the program. On the other hand, a number of shortcoming were also pointed out. The training programs have not been carried out in accordance with the annual plan and they could have been better managed and coordinated. MC should take a lead to strengthen the institutional capacity of WRIC to effectively and efficiently manage the training program in order to maximize the effects of the program given by the core staff who are also burdened with routine works and whose number is limited.	B
Promoting & hampering factors on sustainability	Promoting and hampering factors	The strong Government commitment towards the establishment of a national information network will be the driving force for the expansion of WRIC. Since the staff depletion appears likely after the termination of the Project, the sound and sustainable mechanism for staff training should be in place to mitigate any impact caused by the attrition of the staff.	B
Overall Sustainability	a) Policy / Institutional aspect The 10th Development Policy stresses the need to establish an information network linked with the regional information center and MOI has committed itself to the expansion of the WRIC covering all seven basins in the country. In view of the severe water shortage faced especially by the residents in the capital, Damascus, the government commitment towards the effective utilization of the available water resources is highly likely to be continued in future. The managerial performance of WRIC has improved since the previous evaluation study in 2004. However, there is a room for further improvement in order to effectively manage and coordinate the activities of not only the existing WRIC but also those new centers to be established in the coming years. b) Financial aspect As regards the financial sustainability, the 10th Development Policy earmarked 100 million SP for the WRIC. However, considering the discrepancy between the planned budget and the actual disbursement for the past years, it is not necessarily certain that the disbursement is effected as planned. c) Technical aspect The level of technical capability of the core staff is highly satisfactory. It is expected that they will be able to sustain and expand the present WRIC activities after the completion of the Project. However, the number of the core staff with sufficient technical capability is minimum so that any activity could be stagnated in case of their resignation. To ensure the technical sustainability, WRIC should create a firm system in which the in-service training and OJT are effectively managed and the technology transfer is continuously carried out among CP. In this aspect, the sufficient financial and logistical support from the government and the MOI is essential.		B

Grade: A 100-75%, B 74-50%, C 49-25%, D 24-0%

ANNEXII Project Design Matrix (PDM)

Project name: Establishment of Water Resources Information Center **Project Period :** June 15, 2002 to June 14, 2005

Project site : Damascus (Ministry of Irrigation) **Target group :** **Date:** Oct.23, 2003

Target area: The Barada-Awaj Basin and Coastal Basin Staff of Ministry of Irrigation, Water Resources Information Center, General Directorate of the Barada-Awaj Basin, General Directorate of the Coastal Basin

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Long Term Goal To achieve integrated and sustainable water resources management in the whole basins of the Syrian Arab Republic.			
Overall Goal To achieve integrated and sustainable water resources management in the Barada-Awaj Basin and the Coastal Basin.	1) Appropriate project designs are made in the Barada-Awaj Basin and the Coastal Basin. Master plans for Water resources are made in the 2) Barada- Awaj Basin and the Coastal Basin. Reports for water balance in the Barada-Awaj Basin and the Coastal Basin are made.	1) Report of MOI 2) Master plan of MOI 3) Report of MOI	
Project Purpose To establish a center enabling appropriate management of water resources information.	1) Annual records of Hydrology are published by the year 2005. 2) Water Resources Report for Barada-Awaj Basin and Coastal Basin is published by the year 2005.	1) Annual records of Hydrology 2) Water Resources Report of MOI.	・MOI does not change the policy concerning the Establishment of WRIC. ・Necessary budget is allocated to operate and maintain WRIC after established.
Outputs 1) A water resources information system (hydrological and meteorological observation stations, computer system, and computer network) is established at Main Center and two Basin Centers of WRIC.	1)-1 Observation equipment is installed and exact observation is carried out at these observatories. 1)-2 In three centers, inputs the available data to Database and outputs of available data, such as a table accumulated and needed for a database, graph, and a map, are attained. 1)-3 In three centers, exact information is transmitted periodically.	1)-1 Observation activity is conducted continuously and accurately at stations in the two Basins, and the rate of operating stations is over 95%. 1)-2 Data book and Monthly report for precipitation, discharge, groundwater, water quality are prepared by using database. 1)-3 The data is transferred in three centers accurately	・Trained technical staff stays in WRIC. ・The quantity and quality of staff is one as as of Sep. 30.
2) The staff of WRIC acquires the necessary techniques for hydrological and meteorological observation, data collection, and data processing.	2)-1 To collect and process meteorological and hydrological data periodically 2)-2 Observation Data in the database is accumulated periodically. 2)-3 To prepare periodical report	2)-1 Observation activity is conducted continuously and accurately at stations in the two Basins, and the rate of operating stations is over 80%. 2)-2 Data book 2)-3 Periodical report	
3) A section is established within WRIC for capacity building, and continuous human resources development is conducted	3)-1 To prepare guidelines for guidance 3)-2 To conduct training by Syrian side	3)-1 Guidelines for guidance 3)-2 Report on staff training	
4) A section is established within WRIC to maintain the water resources information system, and the continuous maintenance is conducted.	4)-1 Appropriate operation do and system down time is less than 10% of total working hours. 4)-2 Observation activities is conducted continuously and accurately at stations in the two Basins, and the rate of operating stations is over 80%.	4)-1 Operation and management record on system 4)-2 Operation and Management Report on observation equipment and observation stations	

付属資料 2

ANNEXII Project Design Matrix (PDM)

5) A system is established to enable the staff of WRIC to provide necessary information on water resources management to decision-makers, pla nners and researchers by utilizing the water resources information system.	5)-1 Monthly reports of water resources information are submitted to decision-makers periodically.	5) Stock of Monthly reports.	
Activities 1)-1 To design equipment for Meteorological and hydrological stations 1)-2 To install the observation equipment at the stations. 1)-3 To conduct a basic design for computer system and install hardware and software such as OS at Main Center and two Basin Centers. 1)-4 To design database and establish at Main Center and two Basin Centers. 1)-5 To connect GIS with database systems at Main Center and two Basin Centers. 1)-6 To establish network at Main Center and two basin Centers 2)-1 To prepare a monitoring program of meteorological, hydrological, groundwater, water quality data in the Barada-Awaj Basin and the Coastal Basin. 2)-2 To rehabilitate the hydrological and meteorological observation stations of the Barada-Awaj Basin and the Coastal Basin. 2)-3 To get technique for observation and processing of observed data, etc. at two Basin Centers. 2)-4 To collect and process meteorological and hydrological data 2)-5 To input data to Database 2)-6 To storage and maintenance plan for collected data 2)-7 To prepare periodical report such as monthly report, annual records of Hydrology 2)-8 To prepare periodical Water resources Report 3)-1 To prepare guidelines for guidance of establishment of new basin center, capacity building plan, observation techniques, processing, processing technique of observed data, and information technology (IT),preparing several kinds of report, including annual hydrological report and monthly report. 3)-2 To conduct training regularly for observation technique, information technology, and preparation of several kinds of report. by Syrian side 4)-1 To conduct continuous operation and maintenance of Database and GIS 4)-2 To conduct continuous operation and maintenance of network 4)-3 To conduct continuous operation and maintenance of observation equipment 5)-1 To provide decision-makers with Water Resources Information	**Inputs** Syrian Side 1. Personnel Assignment of Counterpart 2. Provision of facilities, equipment ・Headquarter of WRIC, including the office space for Japanese Experts. ・Existing monitoring facilities and equipment. 3. Project implementation cost ・Recurrent cost for project. Japanese Side 1. Dispatch of Japanese Experts 1) Long-term experts ・Chief Advisor ・Hydrologist ・Coordinator 2) Short-term experts (3 to 4 person per year) 2. Counterpart Training in Japan (at least 3 person per year) 3. Provision of equipment ・Computers including network system ・Computer software ・Hydrological monitoring equipment ・Vehicles	**Pre-conditions** 1) The Syrian Government does not significantly change its policy concer ning water resources. 2) Implementation of this Project is agreed upon by Syrian organizations that are concerned with water resources information management in Syria. **Pre-project Obligations** 1) The Syrian side will collect historical data according to the format designed by the Syrian and Japanese sides. MOI will collect necessary data on water 2) resources and water demand from related agencies for input into the database of WRIC before the start of the Project. 3) The number of water resources 4) monitoring points will not decrease. 5) Significant decreases in the number of existing hydrological / meteorological stations in the two basins will not be allowed to hinder the implementati on of the Project.

添付資料　:プロジェクト・デザイン・マトリックス（PDM)

プロジェクトタイトル:シリア水資源情報センター整備計画　　対象グループ: 灌漑省、WRIC、GDBAB、GDCB職員　　バージョン: 改訂版
期間:2002年6月15日～2005年6月14日　　対象地域:バラダ・アワジ流域と沿岸部流域　　日付: 2003年10月

プロジェクトの要約	指標	指標入手手段	制約条件・外部要因
【長期目標】 シリア全流域において総合的かつ持続可能な水資源管理ができるようになること	設定なし		
【上位目標】 バラダ・アワジ流域及び沿岸部流域において総合的かつ持続可能な水資源管理が行われること	1) バラダ・アワジ流域および沿岸部流域における適切なプロジェクトの設計がなされる。 2) バラダ・アワジ流域および沿岸部流域における水資源のためのマスタープランが作成される。 3) バラダ・アワジ流域および沿岸部流域における水収支に関する報告書が作成される。	1) 灌漑省の報告書 2) 灌漑省のマスタープラン 3) 灌漑省の報告書	灌漑省が水資源情報センター設立に関わる政策を変更しない。 水資源情報センター設立後、必要とされる運営・維持管理費用が配分される。
【プロジェクト目標】 水資源情報の適切な管理ができる体制を構築すること	1) 2005年までに水文年表が出版される。 2) 2005年までに灌漑省の水資源レポートが出版される。	1) 水文年表（降水量年表、流量年表、地下水年表、水質年表） 2) 灌漑省の水資源レポート	訓練された技術職員が、水資源情報センターに留まる
【成果】 1) 水資源情報センター本部及び2支部に、水資源情報システム(観測体制、情報処理体制)が構築される	1)-1 観測機器が設置され、これらの観測所において、正確な観測が実施される。 1)-2 3センターにおいて、入手可能なデータがデータベースに蓄積され、かつ必要とされる表、グラフ、地図等の出力が可能となる。 1)-3 3センターにおいて、正確な情報が定期的に転送される。	1)-1 95%以上の観測所において、正確な観測が継続される。 1)-2 データブックの作成及び月例報告書、水文年表（降水量年表、流量年表、地下水年表、水質年表）がデータベースを活用して出力される。 1)-3 データが正確に転送される。	
2) 水資源情報センター職員が気象・水文観測、データ収集、およびデータ処理等に必要な技術を習得する	2)-1 観測所において正確な観測、データ回収が実施される。 2)-2 正確な観測データが定期的にデータベースへ入力される。 2)-3 定期刊行物が作成される。	2)-1 80%以上（現時点で約700箇所）の観測所において正確な観測、データ回収が実施される。 2)-2 データブックの作成 2)-3 定期刊行物（月例報告書、水文年表、水資源レポート）の作成	
3) 水資源情報センターに人材育成を行う体制が構築され、継続的な人材育成が行なわれる	3)-1 各種マニュアルが整備される。 3)-2 シリア側C/Pにより研修が実施される。	3)-1 各種マニュアル 3)-2 研修報告書	
4) 水資源情報センターに水資源情報システムの維持管理を行う体制が構築され、継続的な維持管理が行なわれる	4)-1 システムの運営が、適切に行われ、システムのダウンの時間が、全勤務時間の1割以下となる。 4)-2 80%以上の観測点において、継続的に正確な観測が実施される。	4)-1 システム運営管理記録 4)-2 観測所、観測機材管理報告書	
5) 水資源情報システムを活用し、水資源管理に必要な情報を政策決定者、計画担当者、および研究者に提供できる体制が構築され、継続的に情報が提供される	5)-1 水資源に関する月例報告書が定期的に政策決定者に提出される。	5)-1 月例報告書	

プロジェクトの要約	指標	指標入手手段	制約条件・外部要因
【活動】 1)-1 気象・水文観測網整備のための機材の設計を行う 1)-2 観測機材を設置する 1)-3 3センターにおいて、システムの設計を行い、ハードウエアの整備、OS等の基本ソフトウエアのインストールを行う 1)-4 3センターにおいて、データベースの設計、構築を行う 1)-5 3センターにおいて、GISとの連結運用を行う 1)-6 3センターにおいて、ネットワークを構築する	【投入】 シリア側 1 カウンターパートの配置 2 施設および設備の提供 ・ 水資源情報センター本部、2流域センター （専門家執務室、機材設置場所等） ・ 既存の観測用機器、設備 3 プロジェクト実施費用 ・プロジェクトの運営費	日本側 1 専門家派遣 1) 長期専門家 ・ チーフアドバイザー ・ 水文専門家 ・調整員 2) 短期専門家 （約4名/年） 2 カウンターパート研修 （約3名/年） 3 機材供与 ・ コンピューター機材 ・ ソフトウェア ・ 水文観測機材 ・ 車輌等	【前提条件】 シリア政府が水資源に関わる政策を変更しないこと 水資源情報管理に関係するシリア側の諸機関がプロジェクトの実施に同意すること 【事前の義務】 想定されるデータベースの内容・フォーマットに合わせて、シリア側が過去のデータを収集すること 水文観測点の数が現状より減少しないこと
2)-1 バラダ・アワジ流域及び沿岸部流域の気象・水文観測計画を策定する 2)-2 バラダ・アワジ流域及び沿岸部流域の気象・水文観測所を整備する 2)-3 正確な観測技術を習得する 2)-4 気象・水文観測データを収集、整理する 2)-5 データベースへデータを入力する 2)-6 気象・水文観測データを維持・管理する 2)-7 定期刊行物（月例報告書、水文年表）を作成する 2)-8 定期刊行物（水資源レポート）を作成する			
3)-1 各種マニュアルを作成する 3)-2 シリア側C/Pによる研修を実施する			
4)-1 データベース、GISを運営・維持管理する 4)-2 ネットワークを運営・維持管理する 4)-3 観測機器を運営・維持管理する			
5)-1 水資源に関する情報を、定期的に政策決定者等に提出する			

付属資料２

Project Design Matrix (PDM)

Project name: Establishment of Water Resources Information Center
Project Period : June 15, 2002 to June 14, 2007
Project site : Damascus (Ministry of Irrigation)
Target group :
Date: December 11, 2006
Target area: The Barada-Awaj Basin and Coastal Basin
Staff of Ministry of Irrigation, Water Resources Information Center,
General Directorate of the Barada-Awaj Basin,
General Directorate of the Coastal Basin

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Super Goal Integrated and sustainable water resources management in the whole basins of the Syrian Arab Republic is achieved.			
Overall Goal Integrated and sustainable water resources management in the Barada-Awaj Basin and the Coastal Basin is achieved.	1) Appropriate project designs are made in the Barada-Awaj Basin and the Coastal Basin. 2) Master plans for Water resources are made in the Barada- Awaj Basin and the Coastal Basin. 3) Reports for water balance in the Barada-Awaj Basin and the Coastal Basin are made.	1) Report of MOI 2) Master plan of MOI 3) Report of MOI	
Project Purpose A center enabling appropriate management of water resources information is established.	1) Annual records of Hydrology are published by the year 2005. 2) Water Resources Report for Barada-Awaj Basin and Coastal Basin is published by the year 2005.	1) Annual records of Hydrology 2) Water Resources Report of MOI.	・MOI does not change the policy concerning the Establishment of WRIC. ・Necessary budget is allocated to operate and maintain WRIC after established.
Outputs 1) A water resources information system (hydrological and meteorological observation stations, computer system, and computer network) is established at Main Center and two Basin Centers of WRIC. – 9pilot stations and Equipments provided through the Grant Aid Assistance.	1)-1 Observation Activity is conducted continuously and accurately at stations in two Basins and the rate of operating station is over 95% 1)-2 In three centers, the materials (outputs) such as tables, graphs, and maps are produced through the database. 1)-3 In three centers, exact information is transmitted periodically.	1)-1 Project records 1)-2 Databook and Monthly Reports 1)-3 Project record	・Trained technical staff stays in WRIC.
2) The staff of WRIC acquires the necessary techniques for hydrological and meteorological observation, data collection, and data processing. – 9 pilot stations, Observation stations under MOI and related agencies, and equipment provided through the Grant Aid Assistance (as regards 2)-1 the observation stations under related agencies shall not be included)	2)-1 Accurate data is collected from more than 80% of stations and processed in accordance with the data processing procedure established by the Project. 2)-2 Observation Data in the database is accumulated periodically. 2)-3 The materials for the periodical reports such as Data book, Monthly Report, Annual Records of Hydrology and Water Resources Reports, are prepared by utilizing the database.	2)-1 Project records 2)-2 Data book 2)-3 Periodical report	
3) A section is established within WRIC for capacity building, and continuous human resources development is conducted	3)-1 To prepare guidelines for guidance 3)-2 To conduct training by Syrian side	3)-1 Guidelines for guidance 3)-2 Report on staff training	
4) A section is established within WRIC to maintain the water resources information system, and the continuous maintenance is conducted. – 9 stations, observation stations under MOI and the equipment provided through the grant aid assistance.	4)-1 Appropriate operation do and system down time is less than 10% of total working hours. 4)-2 More than 80% of the equipment is in good condition to obtain the observed data.	4)-1 Operation and management record on system 4)-2 Operation and Management Report on observation equipment and observation stations	

Project Design Matrix (PDM)

5) A system is established to enable the staff of WRIC to provide necessary information on water resources management to decision-makers, planners and researchers by utilizing the water resources information system.	5)-1 Monthly reports of water resources information are submitted to decision-makers periodically.	5) Stock of Monthly reports.	
Activities	**Inputs**		・MOI will keep the staff (quality and quantity) at WRIC. ・The data provided by the related-ministries is accurate and reliable. **Pre-conditions** 1) The Syrian Government does not significantly change its policy concerning water resources. 2) Implementation of this Project is agreed upon by Syrian organizations that are concerned with water resources information management in Syria. **Pre-project Obligations** 1) The Syrian side will collect historical data according to the format designed by the Syrian and Japanese sides. MOI will collect necessary data on water resources and water demand from related agencies for input into the database of WRIC before the start of the Project. 2) The number of water resources monitoring points will not decrease. Significant decreases in the number of existing hydrological/meteorological stations in the two basins will not be allowed to hinder the implementation of the Project.
[1)-1 To design equipment for Meteorological and hydrological stations]	Syrian Side 1. Personnel Assignment of Counterpart 78 (as of Dec. 2006) 2. Provision of facilities, equipment ・Headquarter of WRIC, including the office space for Japanese Experts. ・Existing monitoring facilities and equipment. 3. Project implementation cost ・Recurrent cost for project.: USD 632,282.10	Japanese Side 1. Dispatch of Japanese Experts 1) Long-term experts : 3 (96MM) ・Chief Advisor ・Hydrologist ・Coordinator 2) Short-term experts: 7 (57MM) 2. Counterpart Training in Japan: 6 Counterpart Training in Egypt: 4 3. Provision of equipment ・Computers including network system ・Computer software ・Hydrological monitoring equipment ・Vehicles 4. Operational Cost: USD 167,128.06	
1)-2 To install the observation equipment at the stations.			
1)-3 To conduct a basic design for computer system and install hardware and software such as OS at Main Center and two Basin Centers.			
1)-4 To design database and establish at Main Center and two Basin Centers.			
1)-5 To connect GIS with database systems at Main Center and two Basin Centers.			
1)-6 To establish network at Main Center and two basin Centers			
2)-1 To prepare a monitoring program of meteorological, hydrological, groundwater, water quality data in the Barada-Awaj Basin and the Coastal Basin.			
2)-2 To rehabilitate the hydrological and meteorological observation stations of the Barada-Awaj Basin and the Coastal Basin.			
2)-3 To get technique for observation and processing of observed data, etc. at two Basin Centers.			
2)-4 To collect and process meteorological and hydrological data			
2)-5 To input data to Database			
2)-6 To storage and maintenance plan for collected data			
2)-7 To prepare periodical report such as monthly report, annual records of Hydrology			
2)-8 To prepare periodical Water resources Report			
3)-1 To prepare guidelines for guidance of establishment of new basin center, capacity building plan, observation techniques, processing, processing technique of observed data, and information technology (IT),preparing several kinds of report, including annual hydrological report and monthly report.			
3)-2 To conduct training regularly for observation technique, information technology, and preparation of several kinds of report. by Syrian side			
4)-1 To conduct continuous operation and maintenance of Database and GIS			
4)-2 To conduct continuous operation and maintenance of network			
4)-3 To conduct continuous operation and maintenance of observation equipment			
5)-1 To provide decision-makers with Water Resources Information			

* Activity 1-1 is bracketed because a whole activity placed under them was completed in the original cooperation period of three years.

プロジェクト・デザイン・マトリックス（PDM)

プロジェクトタイトル：シリア水資源情報センター整備計画
期間：2002年6月15日～2007年6月14日

対象グループ：灌漑省、WRIC、GDBAB、GDCB職員
対象地域：バラダ・アワジ流域と沿岸部流域

バージョン：改訂版
日付：2006年12月

プロジェクトの要約	指標	指標入手手段	制約条件・外部要因
【長期目標】 シリア全流域において総合的かつ持続可能な水資源管理ができるようになる	設定なし		
【上位目標】 バラダ・アワジ流域及び沿岸部流域において総合的かつ持続可能な水資源管理が行われる	1) バラダ・アワジ流域および沿岸部流域における適切なプロジェクトの設計がなされる。 2) バラダ・アワジ流域および沿岸部流域における水資源のためのマスタープランが作成される。 3) バラダ・アワジ流域および沿岸部流域における水収支に関する報告書が作成される。	1) 灌漑省の報告書 2) 灌漑省のマスタープラン 3) 灌漑省の報告書	灌漑省が水資源情報センター設立に関わる政策を変更しない。 水資源情報センター設立後、必要とされる運営・維持管理費用が配分される。
【プロジェクト目標】 水資源情報の適切な管理ができる体制を構築する	1) 2005年までに水文年表が出版される。 2) 2005年までに灌漑省の水資源レポートが出版される。	1) 水文年表（降水量年表、流量年表、地下水年表、水質年表） 2) 灌漑省の水資源レポート	訓練された技術職員が、水資源情報センターに留まる
【成果】 1) 水資源情報センター本部及び2支部に、水資源情報システム(観測体制、情報処理体制)が構築される（対象：パイロット観測所9ヶ所、無償供与機材設置観測所248ヶ所）	1)-1 95%以上の観測所において、正確な観測が継続される。 1)-2 3センターにおいて、入手可能なデータがデータベースに蓄積され、かつ必要とされる表、グラフ、地図等の出力が可能となる。 1)-3 3センターにおいて、正確な情報が定期的に転送される。	1)-1 プロジェクト活動記録 1)-2 データブック、月例報告書 1)-3 データ転送記録	
2) 水資源情報センター職員が気象・水文観測、データ収集、およびデータ処理等に必要な技術を習得する（対象：パイロット観測所、無償供与機材設置観測所及び灌漑省と他の関連省庁の観測所。ただし、2)－1については、他の関連省庁は除くものとする）	2)-1 80%以上（現時点で約700箇所）の観測所において正確な観測、データ回収が実施される。 2)-2 正確な観測データが定期的にデータベースへ入力される。 2)-3 定期刊行物が作成される。	2)-1 プロジェクト活動記録 2)-2 データブック 2)-3 定期刊行物（月例報告書、水文年表、水資源レポート）	
3) 水資源情報センターに人材育成を行う体制が構築され、継続的な人材育成が行なわれる	3)-1 各種マニュアルが整備される。 3)-2 シリア側C/Pにより研修が実施される。	3)-1 各種マニュアル 3)-2 研修報告書	
4) 水資源情報センターに水資源情報システムの維持管理を行う体制が構築され、継続的な維持管理が行なわれる	4)-1 システムの運営が、適切に行われ、システムのダウンの時間が、全勤務時間の1割以下となる。 4)-2 80%以上の観測点において、継続的に正確な観測が実施される。	4)-1 システム運営管理記録 4)-2 観測所、観測機材管理報告書	
5) 水資源情報システムを活用し、水資源管理に必要な情報を政策決定者、計画担当者、および研究者に提供できる体制が構築され、継続的に情報が提供される	5)-1 水資源に関する月例報告書が定期的に政策決定者に提出される。	5)-1 月例報告書	

プロジェクトの要約	指標	指標入手手段	制約条件・外部要因
【活動】 「1)-1 気象・水文観測網整備のための機材の設計を行う」 1)-2 観測機材を設置する 1)-3 3センターにおいて、システムの設計を行い、ハードウエアの整備、OS等の基本ソフトウエアのインストールを行う 1)-4 3センターにおいて、データベースの設計、構築を行う 1)-5 3センターにおいて、GISとの連結運用を行う 1)-6 3センターにおいて、ネットワークを構築する	【投入】 シリア側 1 カウンターパートの配置：78名（2006年12月現在） 2 施設および設備の提供 ・水資源情報センター本部、2流域センター （専門家執務室、機材設置場所等） ・既存の観測用機器、設備 3 プロジェクト実施費用 ・プロジェクトの運営費：USD 632,282.10	日本側 1 専門家派遣 1) 長期専門家：3名（96MM） ・チーフアドバイザー ・水文専門家 ・調整員 2) 短期専門家：7名(57MM) 2 カウンターパート研修 （本邦研修：6名、エジプト研修：4名） 3 機材供与 ・コンピューター機材 ・ソフトウェア ・水文観測機材 4 現地業務費 USD167,128.06	灌漑省が(質・量両面で)WRICに職員を配置する関連省庁から提供されるデータの信頼性に問題がない 【前提条件】 シリア政府が水資源に関わる政策を変更しないこと 水資源情報管理に関係するシリア側の諸機関がプロジェクトの実施に同意すること 【事前の義務】 想定されるデータベースの内容・フォーマットに合わせて、シリア側が過去のデータを収集すること 水文観測点の数が現状より減少しないこと
2)-1 バラダ・アワジ流域及び沿岸部流域の気象・水文観測計画を策定する 2)-2 バラダ・アワジ流域及び沿岸部流域の気象・水文観測所を整備する 2)-3 正確な観測技術を習得する 2)-4 気象・水文観測データを収集、整理する 2)-5 データベースへデータを入力する 2)-6 気象・水文観測データを維持・管理する 2)-7 定期刊行物（月例報告書、水文年表）を作成する 2)-8 定期刊行物（水資源レポート）を作成する			
3)-1 各種マニュアルを作成する 3)-2 シリア側C/Pによる研修を実施する			
4)-1 データベース、GISを運営・維持管理する 4)-2 ネットワークを運営・維持管理する 4)-3 観測機器を運営・維持管理する			
5)-1 水資源に関する情報を、定期的に政策決定者等に提出する			

活動1）-1に関する活動は、当初予定されていた3年間の協力期間中に全て完了しているため、ここでは括弧書きとした。

評価グリッド

調査項目	評価設問		必要な情報・データ	情報源	データ収集方法
	調査小項目	調査の視点/調査事項			
実績の検証	投入の実績	シリア側			
		CPの配置	当初計画との比較	プロジェクト報告書	文献調査
		資機材の提供	当初計画との比較	プロジェクト報告書	文献調査
		ローカルコスト	当初計画との比較	プロジェクト報告書	文献調査
		日本側			
		専門家派遣	当初計画との比較	プロジェクト報告書	文献調査
		資機材の供与	当初計画との比較	プロジェクト報告書	文献調査
		CP研修	当初計画との比較	プロジェクト報告書	文献調査
		ローカルコスト支援	当初計画との比較	プロジェクト報告書	文献調査
		無償機材供与	当初計画との比較	プロジェクト報告書	文献調査
	成果の達成	成果1 水資源情報センター本部及び2支部に水資源情報システム（観測体制、情報処理体制）が構築される－９パイロット観測所及び無償供与機材対象	1-1 95%以上の観測所において正確な観測が継続される	プロジェクト報告書、観測記録	文献調査
			1-2 センターにおいて、表、グラフ、地図などのデータベースからの出力が可能となる	データブック、月例報告書	文献調査
			1-3 センターにおいて、正確な情報が定期的に転送される	プロジェクト報告書、データブック	文献調査
		成果2 水資源情報センター職員が気象、水文観測、データ収集及びデータ処理等に必要な技術を習得する－パイロット観測所、MOI及び他機関の観測所、無償供与機材対象（ただし、2-1に関しては、他機関の観測所については除くものとする）	2-1 80%以上の観測所において正確な観測、データ回収が実施され、データ処理フローに則って処理される	プロジェクト報告書、観測計画、観測所台帳、観測記録、データ処理フローモニタリングシート、Mgt、CP、専門家	文献調査、観察、質問票＋インタビュー
			2-2 正確な観測データが定期的にデータベースに入力される	プロジェクト報告書、データブック	文献調査
			2-3 定期刊行物の作成に際し、データベースが活用される	プロジェクト報告書、定期刊行物	文献調査
		成果3 水資源情報センターに人材育成を行う体制が構築され、継続的な人材育成が行われる	3-1 各種マニュアルが整備される	プロジェクト報告書、マニュアル、CP、専門家	文献調査、観察
			3-2 シリア側CPにより研修が実施される	研修計画、研修報告書、C2C研修受講生に対するアンケート調査結果、Mgt、CP、専門家	文献調査、質問票＋インタビュー、質問票（C2C受講者）
		成果4 水資源情報センターに水資源情報システムの維持管理を行う体制が構築され、継続的な維持管理が行われる（パイロット観測所、MOI観測所、無償供与機材対象）	4-1 システムの運営が適切に行われ、システムダウンの時間が全勤務時間の1割以下となる	システム運営管理記録	文献調査
			4-2 80%以上の観測点において、観測機材が適切に稼動している	維持管理記録	文献調査
		成果5 水資源情報システムを活用し、水資源管理に必要な情報を政策決定者、計画担当者、及び研究者に提供できる体制が構築され、継続的に情報が提供される	5-1 水資源に関する月例報告書が定期的に政策決定者に提出される	月例報告書、配布リスト、政策決定者	文献調査、インタビュー
	プロジェクト目標の達成	水資源情報の適切な管理が出来る体制を構築する	1 2005年までに水文年表が出版される	水文年表、政策決定者、MOI、他の関係省庁、Mgt、CP、専門家	文献調査、インタビュー、質問票＋インタビュー
			2 2005年までに灌漑省の水資源レポートが出版される	水資源レポート、政策決定者、MOI、他の関係省庁、Mgt、CP、専門家	文献調査、インタビュー、質問票＋インタビュー
	上位目標達成の見込み	バラダ・アワジ流域及び沿岸部流域において総合的かつ持続可能な水資源管理が行われること	1 バラダ・アワジ流域及び沿岸部流域における適切なプロジェクト設計がなされる	Mgt、専門家、在外事務所	質問票＋インタビュー、協議
			2 バラダ・アワジ流域及び沿岸部流域における水資源のためのマスタープランが作成される	Mgt、専門家、在外事務所	質問票＋インタビュー、協議
			3 バラダ・アワジ流域及び沿岸部流域における水収支に関する報告書が作成される	Mgt、専門家、在外事務所	質問票＋インタビュー、協議

実施プロセスの検証	活動実施状況	活動は予定通り行われたか	各活動の進捗状況、詳細活動の修正状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		活動の進捗に影響を与えた要因は何か	各活動の進捗状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	技術移転	技術移転の方法に問題はないか	技術移転の方法と内容	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	モニタリング	モニタリングの仕組みは適切か	モニタリング方法	プロジェクト報告書、Mgt、専門家	文献調査、質問票＋インタビュー
		モニタリングは定期的に実施されたか	モニタリング実施状況	プロジェクト報告書、Mgt、専門家	文献調査、質問票＋インタビュー
		モニタリングの結果はプロジェクト運営に反映されたか	フィードバック体制	プロジェクト報告書、Mgt、専門家	文献調査、質問票＋インタビュー
	専門家とCPの関係	専門家とCPのコミュニケーションは円滑に行われたか	専門家とCPのコミュニケーション方法	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		問題が生じた際に適切な解決方法がとられたか	問題解決プロセス	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	オーナーシップ	CPのプロジェクトに対する認識は高いか	プロジェクトに対するCPの認識	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		CPのイニシアティブは高いか	CPの認識、能力向上の度合い	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	関係機関との関わり	プロジェクトとJICA本部・在外事務所とのコミュニケーションは円滑に行われたか	JICA本部・在外事務所のプロジェクトへの関わり	プロジェクト報告書、専門家、在外事務所、JICA本部	文献調査、インタビュー、質問票＋インタビュー
		灌漑省はプロジェクトに対してどのような関わり方をしたか	協力内容、関係者の認識	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		他の関連機関はプロジェクトに対してどのような関わり方をしたか	他機関との協議、協力した活動の内容・実施状況、関係者の認識	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		他のドナー、団体との関わり・協力はどのようになっているか	他のドナー、団体との協議、協力した活動の内容・実施状況、関係者の認識	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	その他	業務実施形態（JICA直営型と業務委託の混合）によって生じている問題はあるか	業務実施形態によって生じている問題	プロジェクト報告書、専門家、在外事務所、JICA本部	文献調査、インタビュー、質問票＋インタビュー
		その他、プロジェクトの実施過程で生じている問題があるか	活動の実施過程で生じている問題	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
妥当性	優先度	シリア国の開発計画との整合性はあるか	シリア国における水資源セクター政策	第10次開発計画、灌漑省開発計画	文献調査
		日本の援助政策・JICA国別事業実施計画との整合性はあるか	JICA国別事業実施計画	JICA資料	文献調査
		JICA協力プログラムとの整合性はあるか	JICAシリア協力プログラム	JICA資料、専門家、在外事務所	文献調査、インタビュー
	必要性	シリア国のニーズに合致しているか	水資源管理に関する文書・統計、水セクターにおける課題	水資源管理・政策に関する文書、Mgt	文献調査、インタビュー
	適切性	ターゲットグループのニーズに合致しているか	灌漑省、WRICの抱える問題	プロジェクト報告書、Mgt	文献調査、インタビュー
		日本の経験は充分活かせているか	水セクターのニーズと日本の提供技術	プロジェクト報告書、専門家	文献調査、質問票＋インタビュー
		プロジェクトは水セクターの開発課題に対し、効果的な戦略か	現地の状況に適した協力方法・形態か	プロジェクト報告書、専門家	文献調査、質問票＋インタビュー
有効性	プロジェクト目標達成度	プロジェクト目標の達成度	プロジェクト目標に対する実績	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	因果関係	プロジェクト目標の達成は、各アウトプット達成による結果か	プロジェクト目標とアウトプットの関連性 PDMとプロジェクト記録	プロジェクト報告書	文献調査
		活動・アウトプット・プロジェクト目標の関係の適切性・論理性	PDMとプロジェクト記録	プロジェクト報告書	文献調査
	外部条件	外部条件は満たされたか	外部条件の状況（CPの定着率、他省庁からのデータ転送状況等）	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	促進・阻害要因	プロジェクト目標達成を促進・阻害する要因はあるか	促進・阻害要因の事例	プロジェクト報告書、Mgt、専門家	文献調査、質問票＋インタビュー

有効性	無償資金援助との組み合わせによる効果	無償資金援助による機材導入はプロジェクト目標達成にどのように貢献しているか	プロジェクト目標に対する実績	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	期間延長による成果	延長期間に予定されていた活動は実施されたか	延長期間におけるプロジェクト目標に対する実績	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		延長期間に実施された活動はアウトプット及びプロジェクト目標達成に貢献したか	延長期間におけるプロジェクト目標に対する実績	プロジェクト報告書、Mgt、CP、専門家	文献調査、インタビュー
効率性	投入の適切性	日本側投入の適切性	専門家派遣実績（時期、専門分野,人数）	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			資機材の供与実績（供与時期、仕様、数量）	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			無償機材の供与実績（供与時期、仕様、数量）	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			CP研修実績（日本・エジプト、時期、専門性、人数）	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			ローカルコスト支援実績	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		シリア国側投入の適切性	CP配置実績（時期、専門性、人数）	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			プロジェクト運営費負担実績	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			資機材の提供実績（土地、施設、資機材）	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	投入の活用度	投入は効果的に活用されたか	人的投入(専門家、CP）の活用状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			施設、資機材の活用状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			予算の活用状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	運営管理体制	プロジェクトの運営管理は適切であったか	各種ミーティングの実施状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
			国内委員会支援状況	専門家	インタビュー
	アウトプットの達成度	アウトプットは達成されたか	アウトプットの達成状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		アウトプット達成を阻害している要因はあるか	アウトプットの達成状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
	投入とアウトプット達成の因果関係	アウトプットを産出するために充分な活動であったか	活動実績、アウトプットの達成状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		アウトプットを産出するために充分な投入であったか	投入実績、アウトプットの達成状況	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		外部条件は満たされたか	外部条件の状況（CPの定着率、他省庁からのデータ転送状況等）、プロジェクト進捗を妨げる事例	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
インパクト	上位目標達成の見込み	上位目標達成の見込み	上位目標の指標達成の見込み	Mgt、専門家、在外事務所	質問票＋インタビュー、協議
		上位目標の達成に対するプロジェクトの貢献度	プロジェクト目標と上位目標の関係、関係者の認識	Mgt、専門家、在外事務所	質問票＋インタビュー、協議
		上位目標の達成を阻害する要因はあるか	実績、外部条件の影響、貢献・阻害要因	Mgt、専門家、在外事務所	質問票＋インタビュー、協議
	波及効果	政策（制度、法律、運用等）へのインパクト	該当する事例の確認	開発計画、プロジェクト報告書、Mgt、専門家	文献調査、質問票＋インタビュー
		他の予期しない正のインパクト	プロジェクトによる間接的効果	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
		予期しない負のインパクト	プロジェクトによる間接的影響	プロジェクト報告書、Mgt、CP、専門家	文献調査、質問票＋インタビュー
自立発展性	政策/制度面	政府内部にWRICが国家水評議会に情報提供するような体制が作られるか	シリア国政策、灌漑省の方針	水資源管理政策に関する文書 プロジェクト報告書、Mgt、専門家、在外事務所	文献調査、質問票＋インタビュー、協議
		シリア政府は今後も水資源情報管理を水セクターの重要施策の一つとして位置づけるか	シリア国政策	水資源管理政策に関する文書 プロジェクト報告書、Mgt、専門家、在外事務所	文献調査、質問票＋インタビュー、協議
		シリア政府はWRICの全国展開を支援するか	シリア国政策	水資源管理政策に関する文書 プロジェクト報告書、Mgt、専門家、在外事務所	文献調査、質問票＋インタビュー、協議
		関係省庁との連携は継続するか	シリア国政策、各省庁の方針	水資源管理政策に関する文書、Mgt、専門家、在外事務所	文献調査、質問票＋インタビュー、協議

自立発展性		WRICの組織能力は充分か	活動実績、灌漑省の方針	灌漑省の政策、プロジェクト報告書、Mgt、専門家	文献調査、質問票+インタビュー
	財政面	予算は確保されるか	センターの財政状況と今後の政府の計画	灌漑省の政策・予算に関する文書、Mgt、専門家	文献調査、質問票+インタビュー
	技術面	資機材の維持管理はCP単独で可能か	技術移転の活用状況、普及の仕組み、機材の管理状況、CPの定着状況	プロジェクト報告書、Mgt、専門家	文献調査、質問票+インタビュー
		CPの技術レベルは充分か			
		移転技術は定着するか			
		技術普及のメカニズム（C2C研修）は定着するか			
	自立発展性に関する貢献・阻害要因	貢献・阻害要因	これまでの貢献・阻害要因の状況	水資源管理政策に関する文書 プロジェクト報告書、Mgt、専門家	文献調査、質問票+インタビュー

注１：表中のCPはカウンターパートを、Mgtは管理職レベル（Director、Section Leader）のカウンターパートをそれぞれさす
注２：データ収集方法で、「質問票＋インタビュー」は、質問票及び質問票の回答を基に行う聞き取り調査を、[インタビュー」は単独で行う聞き取り調査をそれぞれ指す。

調査対象者
日本人専門家：9名
管理職：　Director　3名、Section Leader/Head　11名　（MC:3名、DRD：2名、ラタキア：4名、タルトゥース：2名）
職員：59名（MC：14名、DRD：15名、ラタキア：16名、タルトゥース：14名）

活動実績

活動	活動詳細	実績	状況
1)-1　気象・水文観測網整備のための機材の設計を行う	活動予定なし		
1)-2　観測機材を設置する	9カ所の訓練観測所の設置状況を確認する	沿岸部流域におけるJoybatとMantar観測所の地下水位計が故障したが、修理費用が高額であると共に、業者の技術レベルおよび対応の誠実さも充分でないと判断されたため、2004年11月Joybatに関しては代わりに無償資金援助で供与されたセンサーを設置した。また、バラダ・アワジ流域におけるAltkeah観測所（表流水）についても、同様に2006年2月無償資金援助で供与されたセンサーを転用している。	完了
	観測所の高度確認のための調査を行う。	2005年8月までに完了。	完了
1)-3　３センターにおいて、システムの設計を行い、ハードウエアの整備、OS等の基本ソフトウエアのインストールを行う	新庁舎への移転計画を入手する	未入手。	N/A
	新庁舎におけるシステム設計を行う	現在実施中。2007年１月までに完了予定。	実施中
	新庁舎にハードウェアの設置を行う	未実施（新庁舎未完成のため）。	N/A
1)-4　３センターにおいて、データベースの設計、構築を行う	無償機材の導入に伴い、自動観測機に対応できるようDBの設計を行う	無償機材の導入に伴い、2005年上半期、データ処理自動化のため新たにデータベース（ローカルDB：HDDB)を生データの受け皿として各流域センターに構築した。2005年10月に運用が開始され、必要に応じてDBの改良が継続的に行われている。2006年12月現在、dBX_tool 3.6.mまでアップグレードされている。	完了
	設計に従い、DBを修正する		
1)-5　３センターにおいて、GISとの連結運用を行う	GISファイルの共有を図るため、ファイル･サーバーを設置する	2005年10月に、メインセンターにおいては未使用であったオラクルデータ・ベースサーバー等を活用し、また流域センター（GDBAB,GDCB）において新たにサーバ機を導入し、GISファイルサーバーを設置した。これらのシステム改良により3センターでGISとDBとの連結運用が可能となった。	完了
1)-6　３センターにおいて、ネットワークを構築する	新庁舎におけるネットワークの設計を行う	現在実施中。2007年１月までに完了予定。	実施中
	新庁舎にネットワークを構築する	未実施（新庁舎未完成のため）。	N/A

活動	活動詳細	実績	状況
2)-1　バラダ・アワジ流域及び沿岸部流域の気象・水文観測計画を策定する	無償機材の導入に伴い、観測計画を改訂する	2004年12月までに、流域センターの既存の観測計画（人員、体制、データ回収頻度等を含む）を整理すると共に、無償機材を含めての更新を行った。	完了
2)-2　バラダ・アワジ流域及び沿岸部流域の気象・水文観測所を整備する	無償機材の導入に伴い、観測所情報を更新する	2005年12月までには、無償機材を含む形で、観測所情報を更新し、DBに情報を入力した。ただし、必要に応じて、観測所台帳およびDB情報の更新は現在も継続的に行われている。	完了
2)-3　正確な観測技術を習得する	データ照査の研修を行う	2005年8月から12月にかけて、6回のデータ照査の研修が実施され、延べ52名のCPが参加した。また、照査のためのマニュアルの整備が行われた。	完了
2)-4　気象・水文観測データを収集、整理する	データ照査体制を確立する	図式化して異常値が発生しているかどうかをチェックできるシステムを、2006年7月アプリケーション（dBX_tool, Ver. 3.0）に取り込んだ。また、2006年11月には、異常値を自動的に検知し警告を発するシステムもアプリケーション（dBX_tool, Ver. 3.5.u）に組み込んだ。	完了
	灌漑省の観測データの異常値発生パターンを分析する	2005年11月にこれまでの異常値の発生パターンとその対処方法を入れ込んだマニュアルを完成した。	完了
	発生パターンに併せた対処方法を考案する		
	対処方法を実行に移す	上記成果を活用して、2005年12月より主として情報収集部の職員がデータ照査を行っている。	完了
	他省庁の観測データの異常値発生パターンを分析する	2005年11月にこれまでの異常値の発生パターンとその対処方法を入れ込んだマニュアルを完成した。	完了
	他省庁の異常値に対するフィードバック体制を考案する		
	フィードバック体制を実行に移す	2006年8月に行われた関係省庁担当者会議や、完成した水文年表の配布などを通じて、問題点のフィードバックを行っている	完了
	自動観測機器からのデータを処理し、DBに入力するためのアプリケーションを開発する	無償機材からのデータに対応するためのアプリケーション（dBX_tool）を2005年7月までに開発した。また容量の増加、処理能力の向上等の改善を行い、2006年10月に各流域センターへ配布した。	完了

活動	活動詳細	実績	状況
2)-5　データベースへデータを入力する	過去の降水量データを入力する	国防省から提供を受けた過去25年間（1980-2005年）の日降水量データ（紙データ）のデータ入力は全て完了した。	完了
	過去の気象データ（降水量以外）を入力する	国防省から提供された気象観測データについてのデータ入力は全て完了した。	完了
2)-6　気象・水文観測データを維持・管理する	活動予定なし		
2)-7　定期刊行物（月例報告書、水文年表）を作成する	月例報告書の内容を改訂する	無償機材導入に伴い、フォーマット、記載項目、掲載観測所等の改定を行った。	完了
	無償機材からのデータを取り込めるように月例報告書のフォーマットを改訂する		
	月例報告書の作成を自動化するためのアプリケーションを開発する	月例報告書の作成に際し、自動的に図表を出力できるアプリケーションは2005年9月までにその開発が完了し、さらに2006年10月までにdBX_tools（ver.3.4.e）までヴァージョン･アップされている。	完了
	DBを活用して、水文年表2002-2003年版を作成する	DBを活用して、2005年春に200部発行され、関係省庁に配布された。	完了
	DBを活用して、水文年表2003-2004年版を作成する	2005年12月に暫定版を発行した後、2006年8月に一部（降水量、地下水位）項目に関しては作成を完了、発行した。2003-2004年版（表流水、水質）に関しては、灌漑省内のユーザーからの意見を基に掲載方法や年表フォーマット（記載項目等）等の見直しおよびデータのチェックを行っており、2007年3月までの発行を予定している。	実施中
	DBを活用して、水文年表2004-2005年版を作成する	2004-2005年版については2006年11月末までに、ﾒｲﾝセンターのﾃﾞｰﾀﾍﾞｰｽへのﾃﾞｰﾀ入力を完了し、暫定版を作成する予定であり、2007年6月の本ﾌﾟﾛｼﾞｪｸﾄ終了時までには他の項目も含めて発行に漕ぎ付けるべく努力している。	実施中

活動	活動詳細	実績	状況
2)-8　定期刊行物（水資源レポート）を作成する	水資源レポートの内容について検討する	2005年2月に開催したワークショップで、水資源レポートに関し協議を行い、その結果を受けて、内容及び項目について決定した。	完了
	水資源レポートの内容について決定する		
	水資源レポート創刊号発行のための準備を行う	2005年6月に水資源レポート第1号が完成。その後、ユーザーや日本側からの修正意見を取り込み、2005年11月修正版を完成した。作成部数は50部で、灌漑省、国防省、農業農地改革省、住宅建設省等に配布された。	完了
	水収支分析に関する研修を実施する	WRIC内でモデリングワーキンググループを作り、2005年度下半期より現在まで継続されている。水利用分野では、住宅建設省水道局、農業省など水関連の他省庁の協力が必要であったことからこれら他組織からの関係者を取り込み一連の研修を実施した。2005年7月から2006年12月にかけて13回の研修が実施され、延べ200名が参加した。	完了
	2流域における水収支を構築する	統合貯留モデル（SSM）をﾊﾞﾗﾀﾞｱﾜｼﾞ流域では2005年11月、沿岸流域では2006年11月までに、それぞれ構築。	完了
	2流域の水収支を試算する	構築したSSMを用いて、２流域での水収支の試算を2006年11月までに実施した。	完了
	水資源レポート第2号の発行を準備する	最新の気象・水文データを反映させると共に、水文解析の成果を入れ込んで、2006年9月に第2号暫定版が完成。現在、内容のチェックおよび修正を行っている。	実施中
	SSMとMODFLOW等の地下水モデルの研修を行う	SSMに関しては、2006年10月までに、解析手法の概要、入力ﾃﾞｰﾀの整理収集方法、ｱﾌﾟﾘｹｰｼｮﾝの操作方法等の基礎的な技術移転を概ね完了した。MODFLOWに関しては、現在、ローカルモデル（小流域）の構築を実施しており、その過程において技術移転を実施中。2005年7月から2006年10月までに、このテーマに関連して13回の研修が実施されており、延べ207名が参加した。	実施中
	2流域の地下水モデルを構築する	MODFLOWによるローカルモデル（小流域）を構築中。	実施中
	2流域のより精度の高い水収支試算を行う	SSMのｷｬﾘﾌﾞﾚｰｼｮﾝおよび改良を実施中。	実施中
	水資源レポート第3号の発行を準備する	第３号に掲載すべく、両流域の水収支試算等の作業を実施中であり、2007年5月までに発行予定。	実施中

活動	活動詳細	実績	状況
3)-1　各種マニュアルを作成する	マニュアル用の棚を設置する	2004年12月までに各WRICｾﾝﾀｰ毎に設置済み。	完了
	アラビア語訳するマニュアルを抽出する	アラビア語に翻訳するマニュアルを抽出した。	完了
	アラビア語訳を行う	３編のマニュアルのアラビア語訳が完了した。	完了
3)-2　シリア側C/Pによる研修を実施する	研修ニーズを把握する	年間の研修内容と研修計画が決定された。研修内容は、本プロジェクトにおいて実施された技術移転の内容に沿ったものとなっている。	完了
	研修内容を検討する		
	研修計画を準備する		
	シリア側による研修を実施する	2005年8月より、年間計画に基づき、CPによる研修が「本プロジェクト終了後の自立発展性確保」と「他流域への展開への技術的な支援」を目的として、WRIC及び灌漑省職員を対象に実施中である。2006年10月までに57回の研修が実施され、延べ893名の職員が参加した。	完了
4)-1　データベース、ＧＩＳを運営・維持管理する	DB及びGISシステムの維持管理チェックリストを作成する	2004年12月までに作成が完了した。	完了
	DB及びGISの維持管理状況を確認する	ソフトウェアの日常的な維持管理については、CPがその技術を習得し、管理を行っている。また、小さなトラブルについても技術支援課により速やかな対応がなされている。 ハードウェアの維持管理については、故障などの問題発生時に迅速な対応が出来ていないものの、これまでの機器修理状況を見ると、時間がかかるが放置されることはなく復旧の努力はされている。	完了
	システム管理のための外部委託契約を締結する	外部委託契約のための仕様書等の準備は完了済み。実際の契約は2007年に行われる予定となっている。	実施中

活動	活動詳細	実績	状況
4)-2　ネットワークを運営・維持管理する	ネットワークの維持管理チェックリストを作成する	最初のチェックリストは2002年8月に作成済みで、その後、システムの改良に伴い随時改訂されてきている。	完了
	ネットワークの維持管理状況を確認する	システムの運営、維持管理は実践されており、そのために必要とされるスキルはCPへ移転された。	完了
4)-3　観測機器を運営・維持管理する	観測機材の維持管理チェックリストを作成する	無償機材の維持管理に関する維持管理チェックリスト、操作・維持管理ハンドブック、及びデータ欠測・異常値が記録されていた際の対応を目的として、故障箇所特定のための作業手順書の作成を行った。	完了
	自動観測機材の維持管理のための研修を実施する	無償機材設置前後の2004年10月～12月にかけて、機材設置業者が操作及び維持・管理に関する研修を計15日間実施し、延べ150人が参加している。	完了
	観測機材の維持管理状況を確認する	観測機器の日常的な維持管理は、無償機材も含めて、CPにより実施されており、必要な技術移転は完了した。	完了
5)-1　水資源に関する情報を、定期的に政策決定者等に提出する	月例報告書と水文年表の配布リストを作成する	配布リストは作成済み。現在は、灌漑省大臣、副大臣を始めとして関連各部局および関連流域総局と共に、関連機関（国防省気象局、農業省、住宅建設省（ダマスカス、ダマスカス郊外圏、ラタキア、タルツースの各上水道公社）に配布されている。	完了
	新庁舎において、政策決定者用のLANシステムを構築する	未実施（新庁舎未完成のため）。	N/A

実施プロセス

評価設問		評価結果／達成度	評価
活動実施状況	活動は予定通り行われたか	活動はほぼ予定通りに実施されたと判断される。	A
	活動の進捗に影響を与えた要因は何か	技術の向上や周囲の認知等が職員の意欲の向上につながり、ひいては活動の進捗に肯定的な影響を及ぼしている。しかし、職員の離職、シリア側の予算執行の遅延等が、活動の順調な進捗を阻害したと思われる。	B
技術移転	技術移転の方法に問題はないか	技術移転は順調に行われた。日常業務を通じてのOJTや技術移転に加え、2004年10月から2006年11月にかけて161のワークショップや研修が行われており、このことはCPの技術力向上に大きく貢献することとなった。	A
モニタリング	モニタリングの仕組みは適切か	運営委員会において、各センターでの活動状況の報告、問題点及びその対処方法についての討議が行われている。	A
	モニタリングは定期的に実施されたか	４センターからの関係者が参加して、2週間に一度運営委員会が開催されている。	A
	モニタリングの結果はプロジェクト運営に反映されたか	運営委員会の討議結果に基づいて、日常の業務の見直しが行われている。	B
専門家とCPの関係	専門家とCPのコミュニケーションは円滑に行われたか	専門家とCPのいずれもが、両者間のコミュニケーションについて円滑に行われたとしている。ただ、タルトゥースセンターにおいては、2006年1月になって、ラタキアセンターのサブセンターから格上げになったことなどから、充分な専門家の支援を受けていないと感じているものもいる。	A
	問題が生じた際に適切な解決方法がとられたか	業務上の問題については、2週間に一度開催される運営委員会の場において共有されると共に、その解決に向けての討議が行われている。また、半年に一度合同調整委員会が開催され、より高いレベルでの決定が必要な項目についての話し合いがもたれている。	A
オーナーシップ	CPのプロジェクトに対する認識は高いか	終了時評価時に配布･回収された質問票によれば、C/Pの80%が以前よりも積極的にプロジェクトに関わっていると回答している。ただし、専門家の中には、C/Pのより一層関与を求める声も聞かれた。	A
	CPのイニシアティブは高いか	中核職員については、技術力の向上に伴い、プロジェクト実施に係るイニシアチブは以前に比べると高まってきている。	A
関係機関との関わり	プロジェクトとJICA本部・在外事務所とのコミュニケーションは円滑に行われたか	専門家全員がJICA、特に在外事務所とのコミュニケーションが頻繁かつ円滑であったとしている。プロジェクト側からは、定期的に在外事務所に対してプロジェクトの進捗や問題点についての報告を行っている。	A
	灌漑省はプロジェクトに対してどのような関わり方をしたか	多くの専門家と職員が灌漑省からの支援は充分ではないと感じている。特に、省内部の内規や予算執行に際しての煩雑な手続きが職員のやる気をそぎ、その結果プロジェクトの進捗にも否定的な影響を及ぼしたと感じているものが多い。	B
	他の関連機関はプロジェクトに対してどのような関わり方をしたか	国防省、農業農地改革省から観測データの提供を定期的に受けている。また、水文モデル構築にあたっては、農業農地改革省、ダマスカス上下水道公社からワーキンググループへの参加を得た。	A

	他のドナー、団体との関わり・協力はどのようになっているか	2003年より毎年シリア－日本水シンポジウムを開催し、WRICの活動紹介や国内の水分野で活動する他のドナーや関係機関との情報交換を行っている。また、水セクターの主要ドナーであるオランダ、ドイツとは個別にも連絡・情報交換を行ってきている。ドイツは2007年より、アレッポにおいて、本プロジェクトと同様の水資源情報管理に関するプロジェクトを立ち上げる予定であり、そのプロジェクトでは、WRICとの緊密な連携を構築していくことを明確に打ち出している。また、オランダがコンピュータを供与したオロンテス流域のHamaセンターではWRIC職員による研修が実施された。	A
その他	業務実施形態（JICA直営型と業務委託の混合）によって生じている問題はあるか	本件に関しては、特段の問題は生じていない。ただ、二つの異なる業務形態の中で、プロジェクトを順調に進捗させていくためには、自分たちの業務範囲を越えた業務をも実施していく必要があるとの意見が聞かれた。	A
	その他、プロジェクトの実施過程で生じている問題があるか	C/Pの離職率が高いまま推移したこと、またシリア側の予算執行が遅れがちであったことがプロジェクトの進捗に影響を与えた。また、メインセンターとラタキアセンター間のISDNラインがたびたび不通となり、データの転送に支障をきたした。	B

成果達成状況

期待される成果	判断基準・方法	2004年終了時評価調査	評価結果／達成度	評価
成果１水資源情報センター本部及び2支部に水資源情報システム(観測体制、情報処理体制）が構築される－９パイロット観測所及び無償供与機材対象	1-1 95%以上の観測所において正確な観測が継続される	9カ所のパイロット観測所のうち、7ヶ所で稼動。観測は観測計画に則って実行されている。CPの観測技術の向上が課題。	9つの機器がパイロット観測所9ヶ所に設置され、2006年12月時点で6機器が稼動している。故障した3機器のうち2機器については、無償供与機材が代わりに設置され、観測が続けらている。また、無償供与機材248機器のうち自動観測機での観測が不要と判断された観測所に設置されていた14機器については、設置場所からはずされ、今後に備えて、スペアパーツとして保管されている。これらを除く234機器のうち、222機器については良好に稼動している（残り12機器のうち、８機は故障中、３機は盗難、地下水位計１機は、ケーブルの長さが足らず未設置）。よって、パイロット観測所と無償機材設置観測所の94.6%で観測が行われている。	A
	1-2 センターにおいて、表、グラフ、地図などのデータベースからの出力が可能となる	米国の経済制裁によりDBの構築は遅延したものの、完了。表等のDBからの出力が可能となった。ただ、パイロット観測所からのデータのDBへの入力はまだ行われていない。	無償機材の導入に伴い、データ処理自動化のためのローカルDBと付属アプリケーションの開発が行われ、DRDとラタキアの各センターに設置された。水文年表や月例報告書のグラフや図表の出力はこのDBを活用して行われている。アプリケーションについては、随時、改良・改善のための作業が行われている。	A
	1-3 センターにおいて、正確な情報が定期的に転送される	3センターがISDNで結ばれ、データ転送が可能となった。	メインセンターと流域センター間はISDNで結ばれ、隔週毎にデータの転送が行われている。ただ、メインセンターとラタキアセンターの回線が不通となることがたびたびあるため、ラタキアセンターにおいて通信分室を設け、回線の安定を図ることが検討されている。	A
	成果１達成状況		成果1については達成されている。本調査実施時において、無償供与機材を含め、プロジェクト実施期間に供与された機材のほぼ95%が稼動している。無償機材からのデータを取り込むためのDB及びアプリケーションの開発が完了し、活用中の不具合に対処するための改良も適宜実施されている。また、メイン、DRD、ラタキアの各センターはデータ転送のため、ISDNで結ばれた。	A
成果2水資源情報センター職員が気象、水文観測、データ収集及びデータ処理等に必要な技術を習得する－パイロット観測所、MOI及び他機関の観測所、無償供与機材対象（ただし、2-1に関しては、他機関の観測所については除くものとする）	2-1 80%以上の観測所において正確な観測、データ回収が実施され、データ処理フローに則って処理される	灌漑省所管の480ヶ所の観測所のうち97.1%からデータが回収されている。ただ、データの精度については改善が必要とされる。	上述1-1にある通り、248の無償供与機材のうち、14機器については、当初の設置場所より取り外されており、残り234機器のうち222機器は良好に稼動している。よって、設置されている無償機材のうちの94.6%からデータ回収が行われていることになる。パイロット観測所については９機器中8機が稼働中である。一方、MOIの観測所292ヶ所については、その97.5%で観測が実施されている。回収されたデータは、定義されたデータ処理工程に従って、処理されており、その過程でデータの照査も行われ、データの精度確保が図られている。ただ、処理工程がきちんと守られていない場合も散見される。	A
	2-2 正確な観測データが定期的にデータベースに入力される	DBへの入力は継続的に実施されている。灌漑省所管の観測所からのデータ及び国防省など関係省庁からの過去データについても入力が行われている。	無償機材、他省庁からのデータを含め、観測データのDBへの入力は着実に行われており、国防省から提供された過去25年分（1980-2005）の降水量データについてもほぼ入力が完了している。しかし、無償機材の導入に伴い、データ数が大幅に増加したこと、流域センターでのデータ処理工程が大幅に変わったこと等から、メインDBに入力されたデータ総数は2006年１２月現在、全体の60%程度にとどまっている。2006年9月以降は、観測から3ヶ月のデータ整理期間を設け、順次データがDBに入力されるよう、取り決めが行われた。また、メインセンターにおけるデータ入力の状況を確認するためのモニタリング・シートやアプリケーションの開発も行われ、活用されている。	B

期待される成果	判断基準・方法	2004年終了時評価調査	評価結果／達成度	評価
	2-3 定期刊行物の作成に際し、データベースが活用される	パイロット観測所からのデータを入れ込んで月例報告書が作成されている。水文年表（2001-02）については、エクセルで作成済。水資源レポートは2005年6月の刊行を目指して、2004年11月から準備作業を開始する予定。	定期刊行物の作成にあたっては、DBが活用されている。水文年表の2002－2003年版及び2003－2004年版はDBを活用して作成された。一方、月例報告書は2006年3月からDBを活用しての発行が行われている。	A
	成果2達成状況		観測、データ収集及びデータ処理に関する技術移転は完了しており、成果2に対する指標はほぼ達成された。2006年10月現在、パイロット観測所、無償機材設置観測所に加え、292の灌漑省管轄下の観測所の97.5%からもデータが収集されている。さらに、遅れは見られるものの、国防省と農業農地改革省から過去及び現在のデータについて継続的に提供を受けている。回収されたデータは、定義されたデータ処理工程に従って処理されており、その過程でデータの照査も行われ、データ精度の確保が図られている。また、処理されたデータはDBに順次入力され、DBからの図表の出力も可能となった。CPに対して、データ精度向上のために処理工程を遵守すること、また生データ入手後3ヶ月以内にメインセンターのDBへのデータ入力を完了することを指導している。	B
成果3水資源情報センターに人材育成を行う体制が構築され、継続的な人材育成が行われる	3-1 各種マニュアルが整備される	25編のマニュアルを作成。	マニュアル18篇のアラビア語訳が行われた。	A
	3-2 シリア側CPにより研修が実施される	日本人専門家による研修が200回以上実施されている。	2005年8月より、年間計画に基づき、CPによる研修がWRIC職員並びに灌漑省職員を対象に実施されている。2006年10月までに57回の研修が実施され、延べ893名（WRIC職員：548名、灌漑省職員：342名、その他3名）の職員が受講している。参加者の満足度を確認するために2種類のアンケート調査が実施され、合計62名の参加者より回答を得た。1つ目のアンケートは研修直後に実施され、2つ目のアンケートは本調査に併せて実施された。研修直後に実施されたアンケートは4段階評価で平均3.38、本調査に併せて実施されたアンケートでは5段階評価で平均3.67となり、いずれの場合においても、参加者の満足度は高くなっている。しかし、研修の効果を最大限に引き出すために、研修実施の際の運営・調整体制について更なる改善が望まれる。	A
	成果３達成状況		2005年8月より、プロジェクト終了後の自立発展性確保と灌漑省によるWRIC全国展開を技術的に支援するためのCPによる研修が実施されている。2006年10月までに57回の研修が実施され、延べ893名の職員が受講した。全体的に参加者の満足度は高いものとなっている。	A

期待される成果	判断基準・方法	2004年終了時評価調査	評価結果／達成度	評価
成果4水資源情報センターに水資源情報システムの維持管理を行う体制が構築され、継続的な維持管理が行われる（パイロット観測所、MOI観測所、無償供与機材対象）	4-1 システムの運営が適切に行われ、システムダウンの時間が全勤務時間の1割以下となる	日常的な維持管理は実施されている。システムダウンの時間は約11%	日常的な維持管理については、CPにより実施されており、システムダウンが起こるようなことはなくなった。また、機材の故障についても、迅速な対応は出来てはいないものの、放置されることなく、復旧の努力がなされている。	A
	4-2 80%以上の観測点において、観測機材が適切に稼動している	数値実績を見る限り良好である。維持管理マニュアルが作成されており、維持管理活動も実施されている。ただ、細かいミス、故障、誤操作による欠測が発生している。	パイロット観測所の89%、無償機材設置観測所の94.6%、またMOI観測所の97.5%で観測/データ回収が行われている。日常的な維持管理についてはCPにより実施されており、維持管理チェックリストや故障箇所特定のための作業手順書なども作成された。	A
	成果４達成状況		機材の保守管理に関するCPへの技術移転は完了している。プロジェクトで作成されたマニュアルやチェックリストに基づいて、コンピュータシステム、情報機器及び観測機材の保守管理がCPにより実施されている。現時点においては、特に大きな問題は発生していない。しかし、今後、適切な保守管理が行われていくためには、灌漑省がWRICに対して、充分な予算を確保していくことが肝要である。	A
成果5水資源情報システムを活用し、水資源管理に必要な情報を政策決定者、計画担当者、及び研究者に提供できる体制が構築され、継続的に情報が提供される	5-1 水資源に関する月例報告書が定期的に政策決定者に提出される	月例報告書は毎月発行され、灌漑大臣、副大臣、流域総局へ配布されている。ただし、パイロット観測所からのデータを対象にエクセルで作成するにとどまっている。	無償機材の導入に伴い、フォーマット及び内容の改訂が行われた。2006年3月からは毎月発行され、灌漑省（大臣、副大臣、各支局）、国防省（気象局）、農業省、住宅建設省に配布されている。なお、入手に時間がかかる他省庁からのデータは含まれていない。	A
	成果５達成状況		成果５に対する指標は達成されている。月例報告書は2006年3月からは毎月発行され、灌漑省（大臣、副大臣、各支局）、国防省（気象局）、農業省、住宅建設省に配布されている	A

プロジェクト目標達成状況・上位目標達成見込み状況

プロジェクト目標

プロジェクト目標	判断基準・方法	2004年終了時評価調査	2006年終了時評価調査結果／達成度	評価
水資源情報の適切な管理が出来る体制を構築する	１ 2005年までに水文年表が出版される	水文年表(2001-02）はエクセルで作成済。2002-03年版はDBを活用して、プロジェクト終了時までに発行される予定。	水文年表の発行は既に開始されている。水文年表2001-2002年版はエクセルを活用して出版されたが、2002-2003年版以降はデータベースを活用して出版されている。2002-2003年版は2005年春に、また2003-2004年版は2005年12月に亜暫定版を発行した。2006年8月に一部（降水量、地下水位）項目に関しては作成を完了、発行した。2003-2004年版（表流水、水質）に関しては、灌漑省内のユーザーからの意見を基に掲載方法や年表フォーマット（記載項目等）等の見直しおよびデータのチェックを行っており、2007年3月までの発行を予定している。2004-2005年版については2006年11月末までに、表流水と水質を除きﾒｲﾝセンターのﾃﾞｰﾀﾍﾞｰｽへのﾃﾞｰﾀ入力を完了し、暫定版を作成する予定であり、2007年6月の本ﾌﾟﾛｼﾞｪｸﾄ終了時までには他の項目も含めて発行に漕ぎ付けるべく努力している。	A
	２ 2005年までに灌漑省の水資源レポートが出版される	2005年6月の刊行を目指して、2004年11月から準備作業を開始する予定。	2005年6月に水資源レポート第1号が完成。その後、ユーザーや日本側からの修正意見を取り込み、2005年11月修正版を完成した。第2号については、最新の気象・水文データを反映させると共に、水文解析の成果を入れ込んで、2006年9月に暫定版が完成した。	A
	プロジェクト目標達成状況		プロジェクト目標は達成された。水文年表及び水資源レポートのいずれもがプロジェクトが開発したDBを活用して、既に発行されている。レポートの質については、更なる改善が必要と考えられるが、ユーザーからのコメントを取り入れ、内容やフォーマットは順次改善されてきている。	A

上位目標

プロジェクト目標	判断基準・方法	2004年終了時評価調査	2006年終了時評価調査結果／達成度
バラダ・アワジ流域及び沿岸部流域において総合的かつ持続可能な水資源管理が行われること	1 バラダ・アワジ流域及び沿岸部流域における適切なプロジェクト設計がなされる	現在の活動が継続・発展されていけば、上位目標は達成されると考えられる。今後、WRICの情報をどのように活用していくかについての道筋をつけていく必要があり、そのためには、水資源レポート第1号の評価をまず行う必要があると思われる。	首都ダマスカスで深刻化する水不足を受け、水資源の豊富な沿岸部からダマスカスまでの導水が計画されている。本計画の実施にあたっては、精度の高い水資源情報が不可欠であり、政府は、WRICに対して、高い期待をよせている。
	2 バラダ・アワジ流域及び沿岸部流域における水資源のためのマスタープランが作成される		マスタープラン作成についての情報は特に得られていない。
	3 バラダ・アワジ流域及び沿岸部流域における水収支に関する報告書が作成される		第10次開発計画では、ラタキア、タルトゥースセンターのある沿岸部における水収支バランス調査への予算割り当てが行われており、実際に今年から調査が開始している。この調査において、既にWRICデータの活用が行われていると共に、WRIC職員がこの調査の監理委員会への参加も検討されている。
	上位目標達成見込み		WRIC職員の技術力向上及びWRICの運営管理体制の強化が継続的に行われれば、上位目標達成の見込みは高いと思われる。

５項目評価

１）妥当性

評価設問		評価結果／達成度	評価
優先度	シリア国の開発計画との整合性はあるか	2006年5月に国家企画庁より公布された第10次開発計画には、水資源管理及び開発に関する主たる目標の一つとして、各地域局の情報センターを結ぶ情報ネットワークの確立が謳われている。よって、未だ本プロジェクトの成果、プロ目、上位目標とシリア側の開発政策との整合性は高いと考えられる。	A
	日本の援助政策・JICA国別事業実施計画（協力プログラム）との整合性はあるか	2006年8月に改訂されたJICAの国別事業実施計画では、水資源管理と効率的な利用を4つの主たる開発課題のうちの一つとして掲げており、その中でも特に情報収集・整備体制構築を重要協力分野としている。さらに、日本政府が2006年3月に表明した「水と衛生に関する拡大パートナーシップ・イニシアティブ」でも、被援助国における水資源管理分野への支援を打ち出すなど、本プロジェクトと日本の援助政策との整合性は高いと言える。	A
必要性	シリア国のニーズに合致しているか	第10次開発計画に記されている通り、適切な水資源管理政策の立案・制定は、水資源の枯渇に対処するためにますますその重要性を増してきている。本プロジェクトは水資源管理政策の立案・決定に必要不可欠な水資源情報の政策立案者・決定者に提供することを目標としており、シリア国側のニーズに合致している。	A
適切性	ターゲットグループのニーズに合致しているか	気象・水文データの収集・処理・分析といった一連の作業は、水資源政策立案・決定に際して必要とされる情報の提供に欠かすことの出来ないものであり、WRICはそれらのデータを取り扱う機関として、政府組織内に位置づけられている。よって、本プロジェクトは、適切なターゲットグループに対して実施されたと考えられる。ただ、灌漑省内の他の部局とその役割が重複している部分が見受けられる。	A
	日本の経験は充分活かせているか	日本は、気象・水文観測及びデータ収集・処理・分析並びにコンピュータ技術について、充分な経験を有しており、本プロジェクト実施に、それらの経験は効果的に役立てられている。	A
	プロジェクトは水セクターの開発課題に対し、効果的な戦略か	水資源管理政策の立案・決定には、様々な水資源情報の分析が必要とされるため、それらの水資源情報の収集・処理・分析能力向上を柱とする本プロジェクトの実施は、シリア側が抱える開発課題に対する効果的な戦略と思われる。	A
妥当性総合評価	2006年5月に公布された第10次開発計画では、深刻な水不足に対処するため効果的かつ持続可能な水資源管理政策を立案・制定していくことの重要性を打ち出している。WRICが収集・蓄積した情報及びデータはこの点において、政府の政策立案に大きく貢献するものと思われる。さらに、プロジェクトは水資源の有効活用支援を打ち出しているJICAの国別事業実施計画とも整合性を有している。		A

２）有効性

評価設問		評価結果／達成度	評価
プロジェクト目標達成度	プロジェクト目標の達成度	プロジェクト目標は達成されたと判断される。水文年表、水資源レポート共にプロジェクトが開発したDBを活用して、作成されている。その質・内容については充分とは言えないものの、灌漑省内部のユーザーの意見を取り入れながら改善されてきている。水文年表、水資源レポート等の総合的な水関連報告書の発行はシリア国内では初めての試みであり、その刊行は関係者から大きな成果として受け止められている。今後、政策立案・決定に貢献していくためには、継続的な発行が肝要である。	A
因果関係	プロジェクト目標の達成は、各アウトプット達成による結果か	それぞれのアウトプットはプロジェクト目標達成に効果的に貢献した。	A
	活動・アウトプット・プロジェクト目標の関係の適切性・論理性	活動、アウトプット、プロジェクト目標はそれぞれ論理的に関連している。	A
外部条件	外部条件は満たされたか	職員の離職率は高い。2004年終了時評価調査の際在籍していた職員で、現在も在籍しているものは70%程度である。その結果、専門家からの指導なしに日常業務を遂行できる職員の数は、職員全体に対し未だ15%程度にとどまっている。	B
促進・阻害要因	プロジェクト目標達成を促進する要因はあるか	（貢献要因）中心となるCPは水資源管理におけるデータの重要性・必要性を十分に認識しており、技術習得のための意欲も充分にあると考えられる。また、地方センター（DRD、ラタキア、タルトゥース）は、各地方局に組み込まれてきており、他のセクションや地域の自治体からデータ提供の依頼を受けるなど、WRICの活動に対する地方局での認知も徐々に高まってきている。これらのことが地方センターの職員のやる気を引き出すことにつながっている。（阻害要因）メインセンターを中心に灌漑省本省からの認知が充分でないと感じている職員が少なからずいること、また灌漑省統合水資源局との役割が明確に分担されていないことなどが職員のやる気をそいだ可能性がある。	B
無償資金援助との組み合わせによる効果	無償資金援助による機材導入はプロジェクト目標達成にどのように貢献しているか	無償機材の導入により収集データ数が格段に増加した。このことは分析データの質を高めることに大きく貢献するものと思われる。しかし、収集データの急激な増加が、処理データ数の増加につながり、CPの処理能力を上回っているとの指摘が専門家から出ている。また、機材の故障の際は、シリア国内で対処することが出来ず、日本の業者に直接コンタクトを取ることを余儀なくされており、今後の保守管理に懸念がある。そのため、プロジェクトでは観測の必要性が低いと判断される観測点から機材を撤収し、プロジェクト終了後のスペアパーツ用に確保することで、対応しようとしている。	B
期間延長による成果	延長期間に予定されていた活動は実施されたか	ほぼ予定通り実施されている。ただ、灌漑省新庁舎への移転については、建設工事の遅延により、未だその時期は明確ではない。	A
	延長期間に実施された活動はアウトプット及びプロジェクト目標達成に貢献したか	無償機材活用、CPの技術力向上の点で、延長期間が果たした役割は非常に大きいと認められる。	A
有効性総合評価	プロジェクト目標は達成されたと判断される。水文年表、水資源レポート共にプロジェクトが開発したDBを活用して、作成されており、その質・内容についても充分とは言えないものの、灌漑省内部のユーザーの意見を取り入れながら改善されてきている。また、延長期間は、アウトプット及びプロジェクト目標達成のために効果的に活用されたと判断される。		A

３）効率性

評価設問		評価結果／達成度	評価
投入の適切性	日本側投入の適切性	日本側の投入については、ほぼ適切であったと判断される。	A
	シリア国側投入の適切性	シリア側の投入については、ほぼ当初計画に則ってなされたと判断される。しかし、予算の執行が遅れがちで、プロジェクトの進捗を阻害する要因となった。職員数はプロジェクトの後半になるにしたがって、増員されている。しかし、専門性や知識が充分でないCPが多く、また離職率が高いのと相まって、常に新しい職員に対し基礎的な研修から始めざるを得ない状況が続いた。	B
投入の活用度	投入は効果的に活用されたか	ほとんどの投入はほぼ適切に活用されてきたと認められる。	A
運営管理体制	プロジェクトの運営管理は適切であったか	プロジェクトはほぼ適切に運営されたと思われる。各センターからの代表を集めての運営委員会は、隔週で開催され、実務上の問題点等についての話し合いがもたれている。関連省庁との定期的な会合は行われなかったが、もし行われていれば、WRICと関連省庁間の連携がより一層緊密なものになったと思われる。	A
アウトプットの達成度	アウトプットは達成されたか	アウトプットはほぼ達成された。達成されていない部分については、PDMに則って、プロジェクト終了までに実施されることが望まれる。	A
	アウトプット達成を阻害している要因はあるか	アウトプットの達成を阻害したと思われる要因は、特段認められない。	A
投入とアウトプット達成の因果関係	アウトプットを産出するために充分な活動であったか	アウトプット産出に必要な活動は実施された。その結果、中心となる職員の技術力は格段に向上し、アウトプット産出へと結びついた。	A
	アウトプットを産出するために充分な投入であったか	アウトプット産出に必要な投入は行われた。	A
	外部条件は満たされたか	国防省、農業農地改革省からのデータ提供は定期的になされているが、遅れがちであると共に、その精度についても若干の問題が認められる。また、WRICへの職員配置は行われてきたが、新しく配置される職員の多くが充分な専門性を持っているとは言い難く、職員の研修に多くの時間を割かれることとなった。	B
効率性総合評価	ほとんどの投入が、量、質、タイミングともに適切であった。また、投入はアウトプット産出のために効果的に活用されている。C2C研修は、更なる日本人専門家の投入なしに、当初想定したよりも多くの職員への技術移転を行うことを可能としており、プロジェクトの効率を高めることにつながっている。しかし、職員の離職率は高く、常に新しい職員に対し基礎的な研修を行うことを余儀なくされたため、このことはプロジェクトの順調な進捗を阻害する要因となった。		A

４）インパクト

評価設問		評価結果／達成度	評価
上位目標達成の見込み	上位目標達成の見込み	今後も引き続き、WRIC職員の能力向上と運営体制の強化が行われれば、上位目標達成の見込みは高いと思われる。	A
	上位目標の達成に対するプロジェクトの貢献度	WRICの活動を通じて、シリア国内で初めてバラダ・アワジ流域及び沿岸部流域の水資源情報が適切に取りまとめられ、各種報告書が作成されると共に、最初の水収支に関するモデリングが行われた。よって、WRICの活動は直接的に上位目標の達成に貢献するものである。	A
	上位目標の達成を阻害する要因はあるか	中核職員が今後もWRICにとどまるかどうかについての懸念がある。また、WRICと灌漑省統合水資源局との間の役割や業務内容に重複が認められるため、WRICが今後、水資源政策の立案・決定に効果的に関わっていけるのかどうかに疑問がある。第10次開発計画では、WRICに対し、1億SPの予算割り当てが約束されているが、詳しい予算計画は政府から発表されていない。	B
波及効果	政策（制度、法律、運用等）へのインパクト	第10次開発計画には、第9次開発計画における灌漑セクターの成果の一つとして、JICAの協力でWRICが設立されたことが言及されている。さらに第10次開発計画の開発目標の一つとして、各流域の情報センターを結んだ情報ネットワークの確立を掲げており、シリア側が本プロジェクトの重要性を認め、その実施が同国の開発政策に大きなインパクトを与えたことがうかがえる。	A
	他の予期しない正のインパクト	＊プロジェクトの活動やその成果を受け、ドイツは、効果的な水資源情報管理を目指して2007年に開始されるアレッポでのプロジェクトにおいて、WRICと緊密な連携をとっていきたいとしている。また、シリア政府も、WRICが設立してきたシステムを、他のドナーが協力案件を行う際にもその基礎として位置づけたい意向を示している。*プロジェクトの実施を通じて、WRICと関連省庁との間で水資源データのやり取りを行う体制が確立された。このような体制の確立はシリアにおいて、初めてのものである。データの精度向上及び作業の重複を避けるために、両者の連携体制をより一層強化していく必要がある。	A
	予期しない負のインパクト	特に負のインパクトは認められない。	A
インパクト総合評価	第10次開発計画では、第9次開発計画における灌漑セクターの成果の一つとして、JICAの協力でWRICが設立されたことが、言及されると共に、第10次開発計画の開発目標の一つとして、各流域の情報センターを結んだ情報ネットワークの確立が掲げられている。また、プロジェクトは水資源管理セクターを支援する他ドナーとの連携体制を構築・推進しており、ドナー間の協力強化、相乗効果発現に貢献することになった。さらに、上位目標の達成の見込みも高いと判断される。首都ダマスカスの水不足解消を目指しての各種プロジェクトが現在計画段階にあり、信頼性の高い水資源情報に対する期待は高い。一方、WRICと灌漑省統合水資源局との間にその役割や業務内容に重複が認められること、1億SPとされる割り当て予算の詳細が明確ではない等の懸念材料がある。		A

５）自立発展性

評価設問		評価結果／達成度	評価
政策/制度面	政府内部にWRICが国家水評議会に情報提供するような体制が作られるか	2007年3月までに制定が予定されている水法第31条に付則する法令の中に、水関連政策の最高意思決定機関である国家水評議会の再編が盛り込まれることになっている。それによれば、国家水評議会は、首相を議長に、14省庁の大臣及びその代表により構成され、その諮問機関として技術委員会が付設されるとのことであり、WRICの代表も技術委員会に名を連ねる予定である。	A
	シリア政府は今後も水資源情報管理を水セクターの重要施策の一つとして位置づけるか	シリア国では、ダマスカスやアレッポと言った都市周辺での水資源の枯渇は深刻さを増しており、かつそれらの地域では新たな水資源の開発も望めない状況にある。そのため、水セクターの政策の中心をこれまでの水資源開発から水資源管理へと移行する必要性に迫られている。よって、水資源に関する情報の収集・分析に対するニーズは高く、シリア政府は第10次開発計画においても水資源情報管理を重要施策の一つとして取り上げている。	A
	シリア政府はWRICの全国展開を支援するか	第10次開発計画には水資源管理及び開発に関する主たる目標の一つとして、流域レベルでの情報センターを結ぶ情報ネットワークの確立が謳われており、1億SPの予算が計上されている。また、2007年からはドイツがアレッポ周辺で、同様の水資源情報管理に係るプロジェクトを実施するべく、既にシリア政府と最終調整に入っており、今後も各流域で同様の情報センター確立に向けての動きが続いていくことが予想される。	A
	関係省庁との連携は継続するか	合意文書が取り交わされて以来、国防省、農業農地改革省からの情報提供は継続的に実施されており、今後も同様に行われていくものと思われる。	A
	WRICの組織能力は充分か	WRICの運営管理能力については、前回の終了時評価時点に比べ、改善したものと思われる。しかし、今後、WRICの全国展開が開始されれば、新センターの職員に対する研修、収集情報の転送等で、センター間の更なる連携が求められるものと考えられ、メインセンターを中心に運営管理体制の更なる改善が望まれるところである。また、それと共に灌漑省・水資源公団からのより一層の支援が望まれる。	B
財政面	予算は確保されるか	第10次開発計画によれば、水資源情報センター関連の予算として5年間で1億SPが割り当てられることになっている。ただし、その詳細についてはまだ明らかにされていない。	B
技術面	資機材の維持管理はCP単独で可能か	日常的な維持管理はCPにより実施されている。ただ、機材の故障、システムの保守管理については、専門業者との保守管理契約を結び、何らかの問題が生じた際に、迅速に対処することが必要である。無償機材については、シリア国内の業者で対処することが困難なため、プロジェクトでは観測の必要性が低いと判断される観測点から機材を撤収し、プロジェクト終了後のスペアパーツ用に確保することで、対応しようとしているが、機材の数も多く、今後もより長期的な視点で対処方法を検討する必要がある。	B
	CPの技術レベルは充分か	職員の技術レベルについてはセクション長を初めとする中核職員については、センターの活動を担うに充分なレベルに達している。しかし、いずれのセンターにおいても、これらの職員の数は非常に限られており、彼(女）らが離職したような場合、WRICの活動が大きく停滞することもあり得る。	B

	移転技術は定着するか	移転技術は定着していくものと思われる。しかし、充分な技術レベルに達した中核職員の数は少なく、彼(女）らが離職したような場合移転技術の定着に問題が出てくる可能性がある。このような事態が起こることを避けるため、彼(女）らによるOJT、内部研修をより効果的に実施していく体制を確立していく必要がある。	B
	技術普及のメカニズム（C2C研修）は定着するか	2006年10月までに、57回のC2C研修が実施され、延べ900名近いWRIC及び灌漑省職員が参加した。これまでプロジェクトで移転されてきた技術をより広範に普及するための仕組みとして、C2C研修は有効な手段と考えられ、限られた数の職員からの回答ではあるが、参加した灌漑省やWRIC職員の評価も全般的に肯定的なものとなっている。しかし、一方で、立案された研修計画に則って研修が実施されていない場合が散見されると共に、参加者の専門性や研修後のフォローアップなどが適切でないとの指摘もあり、研修の効果が充分に発揮されているとは言いがたい状況でもある。講師を務めることのできる職員の数が限られていることもあり、メインセンターが中心となって、より効率的、かつ効果的な運営を行っていくための運営管理体制の強化が望まれる。	B
自立発展性に関する貢献・阻害要因	貢献・阻害要因	第10次開発計画にある通り、シリア政府が水資源情報センターの全国展開に向けた支援を打ち出したことは、今後のWRICの維持・発展を大きく後押しするものである。ただ、職員の定着率には懸念があるため、効果的かつ効率的な技術普及メカニズムを確立することで、職員の継続的な能力開発に努めていく必要がある。	B
自立発展性総合評価	（政策／制度面） 第10次開発計画に流域レベルでの情報センターを結ぶ情報ネットワークの確立が謳われており、これに併せて灌漑省もWRICの全国展開を推進していきたいとしている。首都ダマスカスにおいて深刻化している水状況を鑑みるに、今後もシリア政府が効果的な水資源活用をその重要政策課題として位置づけていく可能性は非常に高いと判断される。WRICの運営管理体制は改善されてきているものの、今後予定されているWRICの全国展開にあわせ、更なる改善が望まれるところである。 （財政面） 第10次開発計画によれば、今後5年間で1億SPがWRICに割り当てられることになっている。しかし、過去においては、予算額と執行額との間に乖離があるため、今回割り当てられている予算が確実に執行されるかどうかに懸念がある。 （技術面） 中核職員の技術力は、プロジェクト終了後もWRICの活動を支えていくに充分なものがあると判断される。しかし、充分な技術力を持つ職員の数は少なく、彼(女）らが離職したような場合、WRICの活動が大きく停滞することもあり得る。技術面での自立発展性を確保するためには、効果的かつ効率的な技術普及メカニズムを確立し、職員の継続的な能力開発に努めていく必要がある。また、それと共に灌漑省・水資源公団からのより一層の支援が望まれる。		B

質問票集計結果

質問票による調査結果

本終了時評価においては、関係者に事前に質問票を配布し、回収した。質問票は 2 種類あり、1 つ目の質問票は評価グリッドに基づいて作成したが、配布先によって、若干質問項目が異なっている。また、2 つ目の質問票は WRIC 内の C2C 研修受講者を対象としたものである。なお、C2C 研修受講者に対しては、プロジェクト側も研修時にアンケートを実施しており、その結果についても本付属資料の最後に参考のため添付する。なお、各質問表の配布・回収数は以下の通り。

評価グリッドに基づく質問票

配布先	配布数	回答数
日本人専門家	８	８
WRIC 管理職	１７	１７
WRIC 一般職員	６１	３３
合計	８６	５８

うち、4 段階による評価の集計を以下に簡単にまとめる。なお、集計結果には 4 段階による評価とその平均スコアをまとめた。平均は、無回答のものは除外した回答数で計算した。

C2C 研修受講者対象質問票

配布先	回答数
WRIC 職員	17
研修参加者（研修時実施）	35

EVALUATION QUESTIONNAIRE for Counterpart

Project Title : Establishment of Water Resources Information Center

Number of respondents: 33

0. Implementation Process

1: Not at all 2: Rarely 3: More or less 4: Very much

Questions	Sub-questions	1	2	3	4	Yes	No	平均
0.1 Implementation of Activities	0.1.1 Have the Project activities been carried out as planned since the 2004 Evaluation Mission?			9	1			3.1
	0.1.2 If it was not, what were the problems?							
	0.1.3 How did you cope with the problems?							
0.2 Technical Transfer	0.2.1 Do you think the Japanese experts have sufficiently supported you to enhance your technical capability?	1	3	17	11			3.2
0.4 Communication between Syrian CP and Japanese Experts	0.4.1 Do you think that you have had a good communication with the Japanese experts?		5	17	10			3.2
	0.4.2 If not, what were the problems and how did you cope with them?							
0.5 Ownership of Syrian Side	0.5.1 Do you think that the Syrian counterparts (CPs) have been involved in the Project more actively than before the 2004 Evaluation Mission?		1	11	9			3.4
0.6 Collaboration with Other Donor Agencies	0.6.1 Do you think that the Ministry of Irrigation (MOI) have provided appropriate and adequate assistance and advice for the smooth project implementation?	2	4	19	3			2.8
	0.6.2 Do you think that the Ministry of Defense has actively collaborated with WRIC in the project implementation? If there is any problem, what is it?		1	5	4			3.3
	0.6.3 Do you think that the Ministry of Agriculture and Agrarian Reform have actively collaborated with WRIC in the project implementation? If there is any problem, what is it?		1	3	8			3.6
	0.6.4 Do you think that WRIC has effectively collaborated with other donor agencies assisting the establishment of water resources information management system in Syria?			3	10			3.8
	0.6.5 If so, please state any example. If not, what were the problems?							
0.7 Others	0.7.1 Was there any other problem arisen in the process of the project implementation? If so, what is it and how did you deal with it?							

2.Effectiveness

Questions	Sub-Questions	1	2	3	4	Yes	No	平均
2.1 Achievement of Project Purpose	2.1.1 How do you evaluate the quality of the Annual records of Hydrology (most recent issue) against the expectation of the policy-planners and decision-makers?	1		10	1			2.9
	2.1.2 How do you evaluate the quality of the Water Resources Report (completed in Nov. 2005) against the expectation of the policy-planners and decision-makers?			8	2			3.2
	2.1.3 What do you think should be done to improve further the quality of the Annual Records of Hydrology and the Water Resources Report?							
2.2 Achievement of Outputs	2.2.1 Provided that the expected level of achievement is 100%, how much is the current level of the achievement of WRIC staffs to carry out the accurate measurement at the observation stations? If they have any problem, what is it?	1	3	17	1			2.8
	2.2.2 Provided that the expected level of achievement is 100%, how much is the current level of the achievement of WRIC staffs to appropriately process the collected data? If they have any problem, what is it?		2	26	3			3
	2.2.3 Provided that the expected level of achievement is 100%, how much is the current level of the achievement of WRIC staffs to detect any error in the collected data? If they have problems, what are they?		1	24	6			3.2
	2.2.4 Provided that the expected level of achievement is 100%, how much is the level of the overall achievement of WRIC staffs to undertake their assignments, including above three points?		2	24	3			3
	2.2.5 If you have ever participated in C2C training as a trainee, how do you evaluate the training you attended? If there were problems, what were they?	3	2	7	1			2.5
	2.2.6 If you have ever been a trainer in C2C training, please state the advantage and the disadvantage of being a trainer							
	2.2.7 Do you think that your technical capacity has been fully developed to undertake your assignment properly?		3	14	12			3.3
	2.2.8 If not, what are the problems? What do you think you could do to address the problems before the termination of the Project?							
2.3 Important Assumption	2.3.1 Do you think that there was any influence of important assumption (external conditions) taken place after October 2004 in achieving the Project Purpose and the Outputs? If yes, what was it?							
2.4 Grant Aid Assistance	2.4.1 How do you think the equipment provided through Grant Aid Assistance has contributed to the achievement of Project Purpose? If there has been any shortcomings, what is it?							
2.5 Extension Period (June 2005 - June 2007)	2.5.1 Do you think the project extension period has been well utilized to address the shortcomings raised in the 2004 final evaluation mission?		2	7	11			3.5
	2.5.2 If no, what are the remaining challenges and what could have done to address them?							

3.Efficiency

Questions	Sub-questions		1	2	3	4	Yes	No	平均
---> > These apply to the questions between 3.1.1and 3.3.1.			Not at all	Rarely	More or less	Very much			
3.1 Japanese Inputs after 2004 Evaluation Mission (Oct. 2004)	3.1.1 Japanese Long-term experts	a. The number of experts	2	8	12	1			2.5
		b. Timeliness of dispatching experts		4	16	2			2.9
		c. Fields of expertise		2	10	8			3.3
	3.1.2 Japanese Short-term experts	a. The number of experts		8	11	4			2.8
		b. Timeliness of dispatching experts		9	11	3			2.7
		c. Duration of assignments		10	10	3			2.7
		d. Fields of expertise		3	10	8			3.2
	3.1.3 Training / Workshops conducted by the Japanese experts	a. relevance of training to needs of CPs		4	9	6			3.1
		b. practicality of training		4	10	4			3
		c. frequency of training	1	9	6	2			2.5
	3.1.4 CP training in Japan (This question is for those participated in the CP training.)	a. The number of trainees	1	2	2	2			2.7
		b. Timeliness		1	4	2			3.1
		c. Fields of training		2	3	1			2.8
	3.1.5 CP training in Egypt (This question is for those participated in the CP training.)	a. The number of trainees		1	3	1			3
		b. Timeliness		1	3	2			3.2
		c. Fields of training		1	3	1			3
	3.1.6 Provision of facility and equipment (excluding equipment provided through Grant Aid Assistance)	a. Quantity		2	9	4			3.1
		b. Quality	1	2	8	1			2.8
		c. Timeliness of provision	2	1	8	2			2.8
		d. Type / kinds of equipment	1	2	8	5			3.1
	3.1.7 Provision of equipment through Grant Aid Assistance	a. Quantity		1	12	6			3.3
		b. Quality			10	12			3.5
		c. Timeliness of provision			12	6			3.3
		d. Type / kinds of equipment			11	7			3.4
	3.1.8 Local cost support	a. Timeliness		4	5	4			3
		b. Amount of support		5	4	4			2.9
3.2 Syrian inputs after 2004 Evaluation Mission (Oct. 2004)	3.2.1 Assignment of Syrian CPs	a. The number of CPs	1	5	11	6			2.5
		b. Timeliness of assignment	2	6	12	1			2.6
		c. Expertise of CPs	2	6	13	2			2.7
	3.2.2 Provision of Facilities / Equipment	a. Facilities (Project office)	3	6	8	2			2.5
		b. Equipment and supplies	2	7	8	2			2.5
	3.2.3 Operational Costs	a. Amount	1	12	7	1			2.4
		b. Timeliness of disbursement	1	11	6	1			2.4

3.3 Utilization of Inputs after 2004 Evaluation Mission (Oct. 2004)	3.3.1 Utilization of Inputs	a. Personnel		4	12	3			2.9
		b. Facilities/equipment/supplies		4	10	3			2.9
		c. Operational Costs		3	5	4			3.1
3.4 Inputs in General	3.4.1 Please write your comments on the overall appropriateness of inputs of both Japanese and Syria and their usage.								
3.5 Project Management	3.5.1 Please list the meetings (e.g. Management Committee, Weekly Meeting, etc.) which you regularly attend and state their frequency and objectives.								
	3.5.2 Do you think that the Project has been effectively managed? If no, what were the problems?					1	1	15	

4. Impact

Questions	Sub-questions	1	2	3	4			
4.2 Positive Impact	4.2.3 Is there any positive impact produced by the Project?							
4.3 Negative Impact	4.3.1 Is there any negative impact produced by the Project?							

EVALUATION QUESTIONNAIRE for Director/Section Leader

Project Title : Establishment of Water Resources Information Center

Number of respondents: 17

0. Implementation Process

1: Not at all 2: Rarely 3: More or less 4: Very much or 1: Yes 2: No

Questions	Sub-questions	1	2	3	4	No Answer	Yes	No	平均
0.1 Implementation of Activities	0.1.1 Have the Project activities been carried out as planned since the 2004 Evaluation Mission?		1	9	7				3.4
	0.1.2 If it was not, what were the problems?								
	0.1.3 How did you cope with the problems?								
0.2 Technical Transfer	0.2.1 Do you think the Japanese experts have sufficiently supported the WRIC staffs to enhance their technical capability?			5	11	1			3.7
0.3 Monitoring	0.3.1 Did the Project modify the monitoring system (methodologies, frequencies, etc.) after the 2004 Evaluation Mission? If so, how?					2	13	2	
	0.3.2 Do you think that the PDM/PO are the effective monitoring tools? If so, please explain how it is effective. If not, also please explain how it is not effective.		2	3	4	8			3.2
0.4 Communication between Syrian CP and Japanese Experts	0.4.1 Do you think that you have had a good communication with the Japanese experts?		2	1	14				3.9
	0.4.2 If not, what were the problems and how did you cope with them?								
0.5 Ownership of Syrian Side	0.5.1 Do you think that the Syrian counterparts (CPs) have been involved in the Project more actively than before the 2004 Evaluation Mission?		1	12	4				3.2
0.6 Collaboration with Other Agencies	0.6.1 Do you think that the Ministry of Irrigation (MOI) have provided appropriate and adequate assistance and advice for the smooth project implementation?		3	9		5			2.8
	0.6.2 Do you think that the Ministry of Defense has actively collaborated with WRIC in the project implementation? If there is any problem, what is it?			9	3	5			3.3
	0.6.3 Do you think that the Ministry of Agriculture and Agrarian Reform have actively collaborated with WRIC in the project implementation? If there is any problem, what is it?		1	9	6	1			3.3
	0.6.4 Do you think that WRIC has effectively collaborated with other donor agencies assisting the establishment of water resources information management system in Syria?	2	1	7	1	6			2.6
	0.6.5 If so, please state any example. If not, what were the problems?								
0.7 Others	0.7.1 Was there any other problem arisen in the process of the project implementation? If so, what is it and how did you deal with it?					1	9	7	

2.Effectiveness

Questions	Sub-Questions	1	2	3	4				
2.1 Achievement of Project Purpose	2.1.1 How do you evaluate the quality of the Annual records of Hydrology (most recent issue) against the expectation of the policy-planners and decision-makers?		7	8		2			2.5
	2.1.2 How do you evaluate the quality of the Water Resources Report (completed in Nov. 2005) against the expectation of the policy-planners and decision-makers?		7	6		4			2.5
	2.1.3 What do you think should be done to improve further the quality of the Annual Records of Hydrology and the Water Resources Report?								
2.2 Achievement of Outputs	2.2.1 Provided that the expected level of achievement is 100%, how much is the current level of the achievement of WRIC staffs to carry out the accurate measurement at the observation stations? If they have any problem, what is it?		1	15	1				3
	2.2.2 Provided that the expected level of achievement is 100%, how much is the current level of the achievement of WRIC staffs to appropriately process the collected data? If they have any problem, what is it?		2	14	1				2.9
	2.2.3 Provided that the expected level of achievement is 100%, how much is the current level of the achievement of WRIC staffs to detect any error in the collected data? If they have problems, what are they?		3	13	1				2.9
	2.2.4 Provided that the expected level of achievement is 100%, how much is the level of the overall achievement of WRIC staffs to undertake their assignments, including above three points?		1	14		90% (1) / 80% (1)			3
	2.2.5 Do you think that the C2C training is effective in building the human resources in WRIC? If no, what are the problems?		2	4	10	1			3.5
	2.2.6 Do you think that the C2C training will be effective in building the human resources in MOI for the expansion of WRIC to other Directorates in Syria? If no, what are the problems?		1	9	6	1			3.3
	2.2.7 If you have ever been a trainer in C2C training, please state the advantage and the disadvantage of being a trainer								
	2.2.8 What do you think is promoting the capacity development of WRIC staffs?								
	2.2.9 What do you think is hampering the capacity development of WRIC staffs?								
2.3 Important Assumption	2.3.1 Do you think that there was any influence of important assumption (external conditions) taken place after October 2004 in achieving the Project Purpose and the Outputs? If yes, what was it?					4		13	
2.4 Grant Aid Assistance	2.4.1 How do you think the equipment provided through Grant Aid Assistance has contributed to the achievement of Project Purpose? If there has been any shortcomings, what is it?								
2.5 Extension Period (June 2005 - June 2007)	2.5.1 Do you think the project extension period has been well utilized to address the shortcomings raised in the 2004 final evaluation mission?		1	8	7	1			3.4
	2.5.2 If no, what are the remaining challenges and what could have done to address them?								

3.Efficiency

Questions	Sub-questions		1	2	3	4				
	---> > These apply to the questions between 3.1.1and 3.3.1.		Not at all	Rarely	More or less	Very much				
3.1 Japanese Inputs after 2004 Evaluation Mission (Oct. 2004)	3.1.1 Japanese Long-term experts	a. The number of experts	1		16					2.9
		b. Timeliness of dispatching experts		1	11	3	2			3.1
		c. Fields of expertise	1	1	8	5	2			3.1
	3.1.2 Japanese Short-term experts	a. The number of experts		1	5	10	1			3.6
		b. Timeliness of dispatching experts	1		13	2	1			3
		c. Duration of assignments	1	2	13		1			2.8
		d. Fields of expertise		1	6	9	1			3.5
	3.1.3 Training / Workshops conducted by the Japanese experts	a. relevance of training to needs of CPs		1	6	9	1			3.5
		b. practicality of training	1		6	9	1			3.4
		c. frequency of training		1	9	5	2			3.3
	3.1.4 CP training in Japan	a. The number of trainees	1	3	10	1	2			2.7
		b. Timeliness		1	13	1	2			3
		c. Fields of training		1	7	5	4			3.3
	3.1.5 CP training in Egypt	a. The number of trainees	1	6	4	1	5			2.4
		b. Timeliness	1		8	2	6			3.3
		c. Fields of training		2	7	3	5			3.1
	3.1.6 Provision of facility and equipment (excluding equipment provided through grant aid assistance)	a. Quantity		3	5	8	1			3.3
		b. Quality	1		10	5	1			3.2
		c. Timeliness of provision		2	3	9	3			3.5
		d. Type / kinds of equipment		1	4	10	2			3.6
	3.1.7 Provision of equipment through grant aid assistance	a. Quantity		2	4	10	1			3.5
		b. Quality		2	8	6	1			3.3
		c. Timeliness of provision		1	4	9	3			3.6
		d. Type / kinds of equipment		2	3	10	2			3.5
	3.1.8 Local cost support	a. Timeliness	1	3	2	1	10			2.4
		b. Amount of support		5	1	1	10			2.4
3.2 Syrian inputs after 2004 Evaluation Mission (Oct. 2004)	3.2.1 Assignment of Syrian CPs	a. The number of CPs	1	2	12		2			2.7
		b. Timeliness of assignment		4	10		3			2.7
		c. Expertise of CPs	1	2	11		3			2.7
	3.2.2 Provision of Facilities / Equipment	a. Facilities (Project office)		5	7	3	2			2.9
		b. Equipment and supplies		8	7		2			2.5
	3.2.3 Operational Costs	a. Amount	1	8	1	4	3			2.6
		b. Timeliness of disbursement	1	9		4	3			2.5
3.3 Utilization of Inputs after 2004 Evaluation Mission (Oct. 2004)	3.3.1 Utilization of Inputs	a. Personnel		2	8	4	3			3.1
		b. Facilities/equipment/supplies		3	7	5	2			3.1
		c. Operational Costs		4	5	5	3			3.1
3.4 Inputs in General	3.4.1 Please write your comments on the overall appropriateness of inputs of both Japanese and Syria and their usage.									
3.5 Project Management	3.5.1 Please list the meetings (e.g. Management Committee, Weekly Meeting, etc.) which you regularly attend and state their frequency and objectives.									
	3.5.2 Do you think that the Project has been effectively managed? If no, what were the problems?			2	6	3	6			3.1

4. Impact

Questions	Sub-questions	1	2	3	4				
4.1 Impact on overall goal	**Overall Goal-To achieve integrated and sustainable water resources management in the Barada-Awaj Basin and the Coastal Basin**								
	4.1.1 Do you think that the Overall Goal is likely to be achieved? If yes, why do you think so? If no, what will be a problem?		1	10	3	3			3.1
	4.1.2 What could hamper the achievement of the Overall Goal?								
4.2 Positive Impact	4.2.1 Is there any positive impact produced by the Project?								
4.3 Negative Impact	4.3.1 Is there any negative impact produced by the Project?								

5.Sustainability

Questions	Sub-questions	1	2	3	4				
5.1 Institutional Sustainability	5.1.1 Do you think that WRIC has sufficient institutional capacity (human resources, organizational structure, etc.) to take a lead in the establishment of the water resources information system of the country?	1	1	14		1			2.8
	5.1.2 Is WRIC likely to continuously collaborate with concerned agencies such as the Ministry of Defense, the Ministry of Agriculture and Agrarian Reform, etc. on the water resource information management?			9	3	5			3.3
5.2 Financial Sustainability	5.2.1 Is the Syrian government likely to continue allocating sufficient operational budget to WRIC to sustain/upgrade the present activities including the budget for the maintenance of equipment?		3	8	1	5			2.8
5.3 Technical Sustainability	5.3.1 Do you think the level of technical capacity of the staff is sufficient to sustain the present activities of WRIC?		1	14		2			2.9
	5.3.2 Do you think WRIC will continuously carry out the training program (e.g. C2C training) to disseminate to the others the knowledge/skills transferred in the Project?		4	11		2			2.7
	5.3.3 Do you think that the facilities and equipment will be properly maintained by the Syrian side after the Project termination?		4	10		3			2.7
5.4 Important factors for sustainability	5.4.1 What will be the promoting factors to sustain the project impact after the termination of the Project?								
	5.4.2 What will be the inhibiting factors against the project impact to be sustained after the termination of the Project?								

シリア国水資源情報センター整備計画プロジェクト終了時評価

質問票

回答者数：8名

0. 実施プロセス　　1：全くそう思わない　2：あまりそう思わない　3：ほぼそう思う　4：大変そう思う　(N/A:無回答)

大質問	小質問	1	2	3	4	その他	はい	いいえ	平均
0.1　活動実施状況	0.1.1　活動は計画通りに進捗しましたか。			4		3+2 (3)　　/ NA (1)			2.8
	0.1.2　進捗しなかった場合、計画と乖離した理由をお答えください。								
	0.1.3　それらの問題にどのように対処されましたか。								
0.2　技術移転	0.2.1　技術移転の方法に関して、どんな問題があり、それに対してどんな工夫をされていますか。								
0.3　モニタリング	0.3.1　2004年の終了時評価調査以後、モニタリングの方法や頻度等を変更しましたか。変更された場合、どのような点を変更しましたか。					NA (3)	1	4	
	0.3.2　PDM/POはモニタリング・ツールとして有効だと思いますか？有効だと思われる(思われない）理由をお答えください。		1	5		NA (2)			2.8
0.4　シリア人CPと日本人専門家との関係	0.4.1　CPとのコミュニケーションは適切に行われたと思いますか。			6	2				3.3
	0.4.2　もし、適切でなかった場合、何が問題であり、どのように対処されましたか。								
0.5　シリア側のオーナーシップ	0.5.1　2004年の終了時評価調査以降、CPのプロジェクトに対するオーナーシップは向上したと思いますか。		3	2	2				2.8
0.6　関係機関との関係	0.6.1　JICA本部やJICAシリア事務所とのコミュニケーションは適切に行われたと思いますか。改善した方が良い点があれば、お書きください。			8					3
	0.6.2　プロジェクトは、その円滑な実施のために、灌漑省から必要な支援や助言を得られたと思いますか。問題点があればお書きください。		5	2					2.3
	0.6.3　プロジェクトは国防省気象局から充分な協力が得られたと思いますか。問題点があればお書きください。		4	2	1				2.6
	0.6.4　プロジェクトは、農業・農地改革省から充分な協力が得られたと思いますか。問題点があればお書きください。		2	3	1	NA (2)			2.8
	0.6.5　プロジェクトは、水資源情報管理体制構築を支援する他のドナー機関との連携を効果的に行ってきたとお考えですか。			4	3	NA (1)			3.4
	0.6.6　効果的な連携ができたとお考えの場合、それを示す事例をご説明ください。また、もし、出来なかったとお考えの場合、どのような点に問題があったと思われますか。								
0.7　その他	0.7.1　業務実施形態（JICA直営型と業務委託の混合）によって生じた問題がありましたか？もし、あった場合、どのように対処されましたか。								
	0.7.2　その他、プロジェクト実施過程で生じた問題がありましたか？もし、あった場合、どのように対処されましたか。								

1.妥当性

大質問	小質問	1	2	3	4	その他	はい	いいえ	平均
1.1　手段の適切性	1.1.1　本プロジェクトの実施は、シリア国の効率的な水資源管理政策確立への支援戦略として適切だと思いますか。		1	2	4	NA (1)			3.4
	1.1.2　日本の技術の優位性が充分に活かされていると思いますか。もし、活かされていないとお考えの場合、どのような点が問題ですか。			3	4	NA (1)			3.6

2.有効性

大質問	小質問	1	2	3	4	その他	はい	いいえ	平均
2.1　プロジェクト目標達成度	2.1.1　水文年表最新刊の内容は水資源管理に関する政策立案・決定の際の活用に堪えうる品質を確保していると思われますか。	1	3	2		3+2 (1)　　/ NA (1)			2.2
	2.1.2　水資源レポート第1号修正版（2005年11月完成）の内容は水資源管理に関する政策立案・決定の際の活用に堪えうる品質を確保していると思われますか。		6		1	NA (1)			2.3
	2.1.3　水文年表と水資源レポートの内容や質の一層の向上のためには、何が必要だとお考えですか。								
2.2　アウトプットの達成度	2.2.1　達成目標を100%とした場合、CPはどの程度正確に観測を行うことが出来ますか。もし100%に満たない場合、今後の課題は何ですか。		1	4		3+4 (1) / 95% (1) / NA (1)			3.1
	2.2.2　達成目標を100%とした場合、CPは収集データをどの程度適切に処理することが出来ますか。もし100%に満たない場合、今後の課題は何ですか。		1	4		3+4 (1) / MC:75%, LC:95% (1) / NA (1)			3
	2.2.3　達成目標を100%とした場合、CPは他の省庁からのデータを含め、データ照査をどの程度適切に行うことが出来ますか。もし100%に満たない場合、今後の課題は何ですか。	1	2	2		3+4 (1) / MC:75%, LC:95% (1) / NA (1)			2.6
	2.2.4　達成目標を100%とした場合、上記3点を含め、CPは担当している業務をどの程度適切に遂行できますか。もし100%に満たない場合、今後の課題は何ですか。		4	1		3+4 (1) / MC:75%, LC:95% (1) / NA (1)			2.6
	2.2.5　C2C研修は、WRICにおける継続的な人材育成という視点から見て効果的だと思われますか。また、今後の課題があればお書きください。			1	6	NA (1)			3.9
	2.2.6　C2C研修は、WRICの全国展開という視点から見て効果的だと思われますか。また、今後の課題があればお書きください。			1	6	NA (1)			3.9
	2.2.7　WRIC職員のキャパシティ開発を促進していることは何ですか。								
	2.2.8　WRIC職員のキャパシティ開発を阻害していることは何ですか。								
	2.2.9　ご自身が担当されている業務分野で、アウトプットの達成を促進していることは何ですか。								
	2.2.10　ご自身が担当されている業務分野で、アウトプットの達成を阻害していることは何ですか。								

2.3　外部条件	2.3.1　外部条件の影響によりプロジェクトの進捗が阻害されたことがありますか。もし、あればそれは何ですか。						5	3	
2.4　無償資金援助	2.4.1　無償資金援助により導入された機材は、プロジェクト目標達成にどのように貢献しましたか。また、改善したほうが良い点があれば、それは何ですか。								
2.5　延長期間	2.5.1　延長期間は、2004年の終了時評価の際に、指摘された問題点やなされた提言に対処するため有効に活用されたと思われますか。			5	2	NA (1)			3.3
	2.5.2　現時点で、対処できていない問題点や提言があれば、それは何ですか。また、プロジェクト終了時までにどのように対処されるべきだとお考えですか。								

3.効率性

大質問	小質問		1	2	3	4	その他	はい	いいえ	平均
---> > 3.1.1から3.3.1に関しては、こちらの選択肢に沿ってお答えください。							無回答			
3.1　2004年10月終了時評価調査以降における日本側投入の適切性	3.1.1　長期専門家の派遣	a. 派遣専門家数			4	1	3			3.2
		b. 派遣のタイミング			3	2	3			3.4
		c. 派遣分野			4	1	3			3.2
	3.1.2　短期専門家の派遣	a. 派遣専門家数			2	3	3			3.6
		b. 派遣のタイミング			2	3	3			3.6
		c. 派遣期間			1	4	3			3.8
		d. 派遣分野			2	3	3			3.6
	3.1.3　日本人専門家によって実施された研修・ワークショップ	a. シリア側のニーズとの整合性			4	3	1			3.4
		b. 内容の実用性			3	4	1			3.6
		c. 頻度			1	6	1			3.9
	3.1.4　日本でのカウンターパート研修	a. 参加したCP数		1	4	1	2			3
		b. タイミング		1	4	1	2			3
		c. 研修分野		1	4	1	2			3
	3.1.5　エジプトでのカウンターパート研修	a. 参加したCP数			4	2	2			3.3
		b. タイミング			4	2	2			3.3
		c. 研修分野			5	1	2			3.2
	3.1.6　供与機材（無償供与機材を除く）	a. 数量			5	2	1			3.3
		b. 品質		1	6		1			2.9
		c. 供与のタイミング			5	2	1			3.3
		d. 種類・仕様			6	1	1			3.1
	3.1.7　無償供与機材	a. 数量	2	4	1		1			2.1
		b. 品質		1	6		1			2.9
		c. 供与のタイミング		3	4		1			2.6
		d. 種類・仕様		2	4		2			2.7
	3.1.8　ローカルコスト	a. 支給のタイミング			1	3	4			3.8
		b. 支給額			2	2	4			3.5

3.2　2004年10月終了時評価調査以降におけるシリア側投入の適切性	3.2.1　CPの配置	a. CP数		4	1	2	1			2.7
		b. タイミング	1	3	1	1	2			2.3
		c. 専門分野	1	5		1	1			2.1
	3.2.2　提供施設・機材	a. 施設	2	2		2	2			2.3
		b. 機材	3	1		2	2			2.2
	3.2.3　プロジェクト運営費	a. 負担額	3	1		2	2			2.2
		b. 執行のタイミング	3	1		1	3			1.8
3.3　2004年10月終了時評価調査以降における投入の効果的活用	3.3.1　投入の活用	a. 人材			4	1	3			3.2
		b. 施設・機材		1	2	2	3			3.2
		c. 運営費			3	1	4			3.2
3.4　投入全般	3.4.1　日本側・シリア側の投入の適切性や活用方法などについて、ご意見があれば、お書きください。		専門家会議(毎週）／運営委員会（隔週）							
3.5　運営管理体制	3.5.1　プロジェクトでは各種会議が実施されていますが、定期的に参加されている会議の名称（例：運営会議、メインセンター会議等）について、お書きの上、それぞれの頻度、及び目的（協議内容）をお答えください。									
	3.5.2　プロジェクトの運営管理体制は適切であったと思われますか。改善したほうが良いとお考えの点があればお書きください。				7		NA (1)			3

4. インパクト

大質問	小質問	1	2	3	4	その他	はい	いいえ	平均
4.1　上位目標達成の見込み	4.1.1　上位目標達成の見込みはあると思われますか。そう思われる（思われない）理由をお答えください。		4	3		NA (1)			2.4
	4.1.2　上位目標の達成を阻害するような要因があれば、それは何ですか。								
4.2　プラスのインパクト	4.2.1　プロジェクト実施によるプラスのインパクトはありますか。								
4.3　マイナスのインパクト	4.3.1　プロジェクト実施によるマイナスのインパクトはありますか。								

5.自立発展性

大質問	小質問	1	2	3	4	その他	はい	いいえ	平均
5.1　制度/政策・組織能力面	5.1.1　シリア政府は、効果的な水資源情報管理を重要な政策課題の一つとして、今後も取り組んでいくと思いますか。		2	2	3	NA (1)			3.1
	5.1.2　シリア政府は、WRICをシリア国の水資源情報管理における基幹組織として位置づけ、その全国展開を支援していくと思いますか。		1	6		NA (1)			2.9
	5.1.3　WRICは水資源情報管理の基幹組織としての活動を実施するに足る組織能力（人材、組織体制）が充分にあると思いますか。	1	5	1		NA (1)			2
	5.1.4　WRICはプロジェクト終了後も、国防省や農業・農地改革省といった関係機関との協力体制を維持・発展できると思いますか。		4	1	1	2+3 (1)			2.5
5.2　財政面	5.2.1　WRICは、プロジェクト終了後も機材の維持管理費を含むその活動に必要な予算を充分に確保できると思いますか。	3	3	1		2+3 (1)			1.8
5.3　技術面	5.3.1　CPの現在の技術レベルは、WRICの活動を維持発展させていくために充分であると思いますか。		2	5	1				2.9
	5.3.2　移転された技術は、プロジェクト終了後もWRIC内に継続・定着していくと思いますか。		3	5					2.6
	5.3.2　WRICは、C2C研修等の技術普及メカニズムを、プロジェクト終了後も維持発展させていくことが出来ると思いますか。		3	3		2+3 (1) / NA (1)			2.5
	5.3.3　資機材の維持管理はCPが単独で実施できると思いますか。		3	4		2+3 (1)			2.6
5.4　貢献・阻害要因	5.4.1　WRICの自立発展性を促進すると考えられる要因がありましたら、お書きください。								
	5.4.2　WRICの自立発展性を阻害すると考えられる要因がありましたら、お書きください。								

Establishment of Water Resources Information Center Project

Counterpart to Counterpart Training

Evaluation Form

Respondents: 17 WRIC Staff

Subject: GIS – 7 / DB – 8 / NA - 2

1. Please circle to what extent you agree or disagree with the following statements.

5 – Strongly agree 4 – Agree 3 – Neither 2 – Disagree 1 – Strongly disagree

		5	4	3	2	1	評価
a	Subject matter was adequately covered.	3	7	7	1	1	3.5
b	The content was suitable for my background and experience.	3	10	5	0	1	3.7
c	Programme was well paced.	3	10	5	1	0	3.8
d	The instructor was well prepared.	3	11	5	0	0	3.9
e	The teaching materials were effective.	6	7	4	2	0	3.9
f	The handouts have been of help to me to do my job.	2	8	7	2	0	3.5
g	There was a good balance between theory and practical training.	1	11	5	2	0	3.6
h	The course was relevant to my job.	1	8	10	0	0	3.5
g	My technical ability on the subject was enhanced.	2	8	9	0	0	3.6
h	The training has helped me to do my job better.	4	6	9	0	0	3.7

2. Have you applied what you learned in the training to your job?

(10) Yes

(8) No

(1) No Answer

If yes, what did you apply?

3. Did you recommend the WRIC training to your colleagues?

(16) Yes

(3) No

4. What is your overall rating of the training course you attended?

(2) Excellent

(7) Good

(8) Fare

(2) Poor

5. Please write your overall comments and any suggestion to improve further the training

Thank you for your cooperation

C2C Training Evaluation Results

Course: Logplot (3/10/2005) – 1 subjects					
Number of respondents: 6					
	Excellent	Good	Fair	Poor	評価
Overall Evaluation	2	4	0	0	3.3
Contents	3	3	0	0	3.5
Handouts	2	3	1	0	3.2
Topics	2	3	1	0	3.2
Tutor	3	3	0	0	3.5

Course: Computer for Beginners (29-30/11/2005) – 6 subjects					
Number of respondents: 8					
	Excellent	Good	Fair	Poor	評価
Overall Evaluation	28	20	0	0	3.6
Contents	39	9	0	0	3.8
Handouts	24	24	0	0	3.5
Topics	34	14	0	0	3.7
Tutor	43	5	0	0	3.9

Course: Database (27/3/2006) – 8 subjects					
Number of respondents: 7					
	Excellent	Good	Fair	Poor	評価
Overall Evaluation	9	15	0	0	3.4
Contents	15	9	0	0	3.6
Handouts	6	13	5	0	3.0
Topics	1	23	0	0	3.0
Tutor	24	0	0	0	4.0

Course: GIS (27/3/2006) – 8 subjects					
Number of respondents: 7					
	Excellent	Good	Fair	Poor	評価
Overall Evaluation	28	28	0	0	3.5
Contents	37	17	2	0	3.6
Handouts	20	33	3	0	3.3
Topics	15	37	4	0	3.2
Tutor	50	6	0	0	3.9

Course: Surfer and Hydrological Control (1-4/10/2006) – 1 subject					
Number of respondents: 8					
	Excellent	Good	Fair	Poor	評価
Overall Evaluation	4	4	0	0	3.5
Contents	2	6	0	0	3.3
Handouts	0	5	3	0	2.6
Topics	0	5	3	0	2.6
Tutor	7	1	0	0	3.9

Course: Arctool Box (16-18/10/2006) – 3 subjects					
Number of respondents: 7					
	Excellent	Good	Fair	Poor	評価
Overall Evaluation	3	15	3	0	3.0
Contents	5	16	0	0	3.2
Handouts	3	10	7	1	2.7
Topics	4	12	5	0	3.0
Tutor	18	3	0	0	3.9

注：アンケートは科目ごとに実施しているため、1 つのコースに複数の科目がある場合は、回答数は、回答者数を上回る。