

|                        |  |
|------------------------|--|
| Country Name           | <b>Project for Strengthening Water Management Transfer</b> |
| Arab Republic of Egypt |  |

**I. Project Outline**

|  |  |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
|--|--|--------------|---|---------------|---------------|--|--------------------------------|---|---------------------------------------|---|-------------------------|--|--|-------------------------|--|
| Background   | <p>The Government of Egypt (GOE) had enacted the “National Water Resources Plan (NWRP) 2017”, aiming to develop necessary water resource by improving efficiency of agricultural water use which dominated more than 80% of water use, through: rehabilitation of irrigation facilities, reuse of agricultural drainage water, improvement of water management and so on. In this context, the Ministry of Water Resources and Irrigation (MWRI) had implemented projects promoting Participatory Water Management (PWM) through establishing and strengthening Water Users’ Organizations (WUOs). At the same time, MWRI had policies to implement management transfer of irrigation facilities together with the modification of related laws. According to this, JICA had supported Water Management Improvement Project (WMIP) over two phases (WMIP 1: 2001 - 2007 and WMIP 2: 2008 - 2012). While the achievement of WMIP 1 and 2 was at a satisfactory level, the way to the goal of “NWRP 2017” was still far, since the number of capable WUOs was limited at the national level and the progress of necessary system and structure for management transfer was delayed.</p>  |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| Objectives of the Project  | <p>Through clarifying the methodology of water management transfer (WMT) to Branch Canal Water Users’ Associations (BCWUAs), establishing systems to implement practical training for administrators and WUOs sustainably and notifying a road map toward the implementation of WMT among stakeholders, the project aimed at establishing the implementation structure for WMT nationwide within MWRI, thereby transferring the management of the branch canal to BCWUAs nationwide.</p> <ol style="list-style-type: none"> <li>Overall Goal: Management of the branch canal is transferred to BCWUAs nationwide.</li> <li>Project Purpose: Implementation structure for the water management transfer (WMT) nationwide is established in MWRI.</li> </ol>   |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| Activities of the Project  | <ol style="list-style-type: none"> <li>Project Site: Cairo and three pilot sites, namely Shubra Baloola (Middle Delta), Bisintaway (West Delta), Ebheet (Fayoum)</li> <li>Main Activities: (1) MWRI conducts trials of WMT to BCWUAs at selected pilot sites and compiles the WMT manual, and local administrators and target BCWUAs jointly plan and implement repairs of irrigation facilities; (2) MWRI organizes training of trainers (TOT) for Training Sector for Water Resources and Irrigation (TSWRI) and Central Department of Irrigation Advisory Service (CDIAS), TSWRI organizes training for administrators in charge such as General Directorate of Irrigation Advisory Service (GDIAS) and Directorate of Irrigation Advisory Service (DIAS) to facilitate the capacity development of WUOs, TSWRI compiles the training manual, and local administrators and GDIAS and DIAS staff organize training for WUOs to develop their capacity for operation and management; and (3) MWRI formulates the general strategy including monitoring/evaluation methodology for WMT, drafts a road map for implementing WMT, and summarizes advantages and related information to facilitate legislation process on BCWUA/ District Water Boards (DWBs)’s status and WMT as parts of “NWRP 2017” etc.</li> <li>Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Egyptian Side</td> </tr> <tr> <td>1) Experts: 4 persons (long term) and 4 persons (short term)</td> <td>1. Staff Allocated: 59 persons</td> </tr> <tr> <td>2) Trainees Received in Japan: 41 persons</td> <td>2. Project offices and training rooms</td> </tr> <tr> <td>3) Trainees received in Third Country (Viet Nam): 5 persons</td> <td>3. Local operation cost</td> </tr> <tr> <td>4) Equipment: flow meters, tractors, trailers, and an excavator etc.</td> <td></td> </tr> <tr> <td>5) Local operation cost</td> <td></td> </tr> </table> </li> </ol> |              |   | Japanese Side | Egyptian Side | 1) Experts: 4 persons (long term) and 4 persons (short term) | 1. Staff Allocated: 59 persons | 2) Trainees Received in Japan: 41 persons | 2. Project offices and training rooms | 3) Trainees received in Third Country (Viet Nam): 5 persons | 3. Local operation cost | 4) Equipment: flow meters, tractors, trailers, and an excavator etc. |  | 5) Local operation cost |  |
| Japanese Side  | Egyptian Side  |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| 1) Experts: 4 persons (long term) and 4 persons (short term)         | 1. Staff Allocated: 59 persons   |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| 2) Trainees Received in Japan: 41 persons                            | 2. Project offices and training rooms  |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| 3) Trainees received in Third Country (Viet Nam): 5 persons          | 3. Local operation cost  |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| 4) Equipment: flow meters, tractors, trailers, and an excavator etc. |  |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| 5) Local operation cost  |  |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| Project Period   | November 2012 – March 2016<br>(Extension Period: November 2015 – March 2016)   | Project Cost | (ex-ante) 250 million yen, (actual) 216 million yen |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| Implementing Agency  | Ministry of Water Resources and Irrigation (MWRI)  |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |
| Cooperation Agency in Japan  | Ministry of Agriculture, Forestry and Fisheries (MAFF)   |              |   |               |               |  |                                |   |                                       |   |                         |  |  |                         |  |

**II. Result of the Evaluation**

&lt;Special Perspectives Considered in the Ex-Post Evaluation&gt;

- [Target for the Overall Goal Indicator] The target figure for the Overall Goal indicator, namely, “Number of sites which MWRI starts the implementation of or completes management transfer (XX sites)”, is not available in existing documents. Thus, in this ex-post evaluation, instead of the number of sites, the numbers of BCWUAs (under the Category\* 2 and above) in five regions (Middle Delta, East Delta, West Delta, North Valley and South Valley) targeted for 2018 in the road map for WMT (2016) were used as target figures for the Overall Goal indicator. The reason for using the number of BCWUAs under the Category 2 and above is that, according to the road map, the definition of the Category 2 is “Start of Participatory

Activities on water management (WM)”, while the Overall Goal indicator is “Number of sites which **MWRI starts the implementation of or completes management transfer**”.

\*Definition of each Category: (a) Category 2: Start of institutional development such as regular meetings, understanding of the roles and responsibilities, some participation activities on WMT. (b) Category 3: More than 25% of activities of the Guideline\*\* have been transferred to BCWUA and necessary funds are collected from BCWUA members. (c) Category 4: More than 50% of activities of the Guideline have been transferred to BCWUA and necessary funds are collected from BCWUA members. (d) Category 5: More than 75% of activities of the Guideline have been transferred to BCWUA and necessary funds are collected from BCWUA members.

\*\*Guideline = “Guideline of Roles and Responsibilities of Stakeholders and BCWUAs in WMT”

## 1 Relevance

<Consistency with the Development Policy of Egypt at the Time of Ex-Ante Evaluation and Project Completion>

The project was consistent with Egypt’s development policy such as “transfer of water management authority from MWRI to DWBs, BCWUAs and mesqa (tertiary canal) WUAs” as set forth in “NWRP 2017” at the times of both ex-ante evaluation and project completion.

<Consistency with the Development Needs of Egypt at the Time of Ex-Ante Evaluation and Project Completion>

The project was consistent with Egypt’s development needs for establishing a practical road map on how to proceed with the transfer of responsibilities from MWRI to WUOs, increasing the number of capable WUOs nationwide and strengthening capacities of administrators, at the times of both ex-ante evaluation and project completion.

<Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with Japan’s ODA policy as stated in the “Country Assistance Program for Egypt” (2008), which included “agricultural and rural development” under “poverty reduction and improvement of the living standards of the people of the country”.

<Evaluation Result>

In light of the above, the relevance of the project is high.

## 2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose was partially achieved by the time of project completion. The road map for WMT, which was drafted under the project, was approved by MWRI (Indicator 1). The number of BCWUAs was increased by 88 from 2015 to 2016, and it is assumed that some WMT activities were conducted in sites other than three pilot sites. However, concrete data/information on whether WMT in sites other than three pilot sites was actually started before project completion was not available (Indicator 2).

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have continued to the time of ex-post evaluation. The road map for WMT has been actively utilized by MWRI to promote WMT since project completion (Indicator 1). WMT has been proceeded based on the road map, and actual numbers of BCWUAs in each category have well achieved targets except for a few cases, i.e. Category 2 in North Valley and Category 3 in Middle Delta and North Valley. According to MWRI and GDIAS, achieving or not achieving targets is mainly due to differences in performance levels and/or maturity of BCWUAs (Indicator 2).

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been achieved by the time of ex-post evaluation. As explained above, in general, actual numbers of BCWUAs in each category have well achieved targets, and management transfer of branch canals to BCWUAs has progressed nationwide.

<Other Impacts at the time of Ex-post Evaluation>

In some BCWUAs (such as Ebheet BCWUA in Fayoum and Shoubar BCWUA in Delta), female members actively performed to raise the awareness of people within their command area to prevent dumping garbage into canals, as part of maintenance of branch canals by BCWUAs.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

### Achievement of Project Purpose and Overall Goal

| Aim   | Indicators  | Results  |               |              |                 |               |              |              |       |            |               |               |               |             |                 |               |            |           |   |              |             |   |             |
|---|---|--|---------------|--------------|-----------------|---------------|--------------|--------------|-------|------------|---------------|---------------|---------------|-------------|-----------------|---------------|------------|-----------|---|--------------|-------------|---|-------------|
| (Project Purpose) Implementation structure for the water management transfer (WMT) nationwide is established in MWRI. | (1) A road map for management transfer including organizational structure, stakeholders’ responsibility and the training plan is approved by MWRI.        | Status of the Achievement: achieved (continued)<br>(Project Completion) The completed road map was approved in the workshop with decision makers of MWRI in December 2015 and also approved in Joint Steering Committee (JSC).<br>(Ex-post Evaluation) The road map has been actively utilized by MWRI to promote WMT since project completion.  |               |              |                 |               |              |              |       |            |               |               |               |             |                 |               |            |           |   |              |             |   |             |
|   | (2) Water management transfer in other sites starts based on the method clarified in the project with appropriate staff assignment and budget allocation. | Status of the Achievement: partially achieved (continued)<br>(Project Completion) The number of BCWUAs was increased by 88 from 2015 to 2016. However, data/information on whether WMT in sites other than three pilot sites was started by the time of project completion was not available.<br>(Ex-post Evaluation) WMT has been proceeded based on the road map, and as shown in tables below, in general, actual numbers of BCWUAs in each category have well achieved targets.<br>[Actual Number of BCWUAs in Category 2 or above at the end of 2018] |               |              |                 |               |              |              |       |            |               |               |               |             |                 |               |            |           |   |              |             |   |             |
|   |   | <table border="1"> <thead> <tr> <th></th> <th>Middle Delta</th> <th>East Delta</th> <th>West Delta</th> <th>North Valley</th> <th>South Valley</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Category 2</td> <td>336<br/>(136%)</td> <td>260<br/>(394%)</td> <td>110<br/>(110%)</td> <td>61<br/>(31%)</td> <td>150<br/>(1,071%)</td> <td>917<br/>(147%)</td> </tr> <tr> <td>Category 3</td> <td>2<br/>(3%)</td> <td>0</td> <td>69<br/>(300%)</td> <td>19<br/>(70%)</td> <td>8</td> <td>98<br/>(76%)</td> </tr> </tbody> </table>                     |               | Middle Delta | East Delta      | West Delta    | North Valley | South Valley | Total | Category 2 | 336<br>(136%) | 260<br>(394%) | 110<br>(110%) | 61<br>(31%) | 150<br>(1,071%) | 917<br>(147%) | Category 3 | 2<br>(3%) | 0 | 69<br>(300%) | 19<br>(70%) | 8 | 98<br>(76%) |
|   | Middle Delta  | East Delta   | West Delta    | North Valley | South Valley    | Total         |              |              |       |            |               |               |               |             |                 |               |            |           |   |              |             |   |             |
| Category 2  | 336<br>(136%)   | 260<br>(394%)  | 110<br>(110%) | 61<br>(31%)  | 150<br>(1,071%) | 917<br>(147%) |              |              |       |            |               |               |               |             |                 |               |            |           |   |              |             |   |             |
| Category 3  | 2<br>(3%)   | 0  | 69<br>(300%)  | 19<br>(70%)  | 8               | 98<br>(76%)   |              |              |       |            |               |               |               |             |                 |               |            |           |   |              |             |   |             |

|  |   |   |                 |               |               |                 |                 |              |
|--|---|---|-----------------|---------------|---------------|-----------------|-----------------|--------------|
|  |   | Category 4  | 0               | 0             | 2             | 8<br>(133%)     | 0               | 10<br>(167%) |
|  |   | Category 5  | 0               | 0             | 0             | 0               | 0               | 0            |
|  |   | Total   | 338             | 260           | 181           | 88              | 158             | 1,025        |
|  |   | [Target Number of BCWUAs in 2018]   |                 |               |               |                 |                 |              |
|  |   |   | Middle<br>Delta | East<br>Delta | West<br>Delta | North<br>Valley | South<br>Valley | Total        |
|  |   | Category 2  | 247             | 66            | 100           | 195             | 14              | 622          |
|  |   | Category 3  | 79              | 0             | 23            | 27              | 0               | 129          |
|  |   | Category 4  | 0               | 0             | 0             | 6               | 0               | 6            |
|  |   | Category 5  | 0               | 0             | 0             | 0               | 0               | 0            |
|  |   | Total   | 326             | 66            | 123           | 228             | 14              | 757          |
|  |   | Note: Percentages in brackets show the achievement rate against the target. |                 |               |               |                 |                 |              |
| (Overall Goal)<br>Management of the<br>branch canal is<br>transferred to BCWUAs<br>nationwide. | Number of sites which MWRI starts the<br>implementation of or completes<br>management transfer (XX sites)<br>(Supplemental Information: the numbers<br>of BCWUAs (under the Category 2 and<br>above) in five regions targeted for 2018 in<br>the road map for WMT (2016)) | (Ex-post Evaluation) achieved<br>See Indicator 2 of Project Purpose.        |                 |               |               |                 |                 |              |

Source : Expert Completion Report, questionnaire survey and interview with MWRI, GDIAS and DIAS

### 3 Efficiency

Both the project cost and the project period were within the plan (ratio against plan: 86%, 100%, respectively). While the project period was extended for approximately four months, this was because of Japanese experts' evacuation from Egypt due to security reasons, and thus the extension period is not counted as the project period. The outputs of the project were produced as planned. Therefore, the efficiency of the project is high.

### 4 Sustainability

#### <Policy Aspect>

The needs for improving water management (including WMT) are stated in "NWRP 2037".

#### <Institutional Aspect>

MWRI has the appropriate organizational structure to promote WMT through CDIAS and its seven affiliated departments (GDIASs) nationwide. Major roles and responsibilities of CDIAS are to plan activities of GDIASs for formulating/reformulating WUOs, to assess WUOs' needs, and to conduct capacity building/training for GDIASs and raise awareness on WMT. Major roles and responsibilities of GDIASs are to formulate/reformulate WUOs and to conduct capacity building/training for WUOs. The number of permanent staff is 23 in CDIAS, 16 in GDIAS Zagazig (East Delta), 49 in GDIAS Tanta (Middle Delta), 59 in GDIAS Damanshour (West Delta), 56 in GDIAS Fayoum (North Valley), 16 in GDIAS Beni Suef (North Valley), 48 in GDIAS Minia (South Valley) and 93 in GDIAS Esna (South Valley). According to MWRI, the number of permanent staff is limited, however, it applies a temporary staffing system such as obtaining support from the Irrigation Department (irrigation engineers and administrative staff) to overcome the limited number of staff. As MWRI (CDIAS and GDIASs) has managed to promote WMT through achieving the targeted numbers of BCWUAs as explained above, it is considered that there is no particular problem regarding the number of staff. According to BCWUAs, in general, they have sufficient numbers of members to promote WMT.

#### <Technical Aspect>

Most staff who were trained under the project still work at MWRI, and they have a sufficient level of skills to promote WMT nationwide, as seen in actual numbers of BCWUAs achieving targets above. TOT has not been conducted since project completion, as there has not been newly recruited staff in CDIAS. However, on-the-job training (OJT) has been conducted for temporary staff in CDIAS and GDIASs on a need basis. As for BCWUAs, training has been regularly provided for them by GDIASs, and in general, BCWUA members have sufficient skills to promote WMT. The manuals produced under the project are still utilized by CDIAS and GDIASs. As for the equipment procured under the project, i.e. flow meters, an excavator, tractors and trailers, are still operated, maintained and utilized well. However, due to the complicated registration procedures of vehicles with the Egyptian Traffic Authority, the registration of one tractor and one trailer has not been completed at the time of ex-post evaluation and thus they are not operated due to non-registration.

#### <Financial Aspect>

Financial data such as the amount of governmental budget for WMT activities is not available. According to MWRI, the national budget is not sufficient to cover all the necessary activities, however, financial support from international donors has been available to supplement the limited budget. For example, the European Union (EU) has contributed a grant of EUR 450 million to implement projects in the water sector, including potable water and irrigation, during the last ten years. As for BCWUAs, the legal status of BCWUAs is stipulated by the "New Law for Water Resources and Irrigation", the draft of which was approved by the Egyptian Cabinet in September 2017, but is still under consideration of the parliament at the time of ex-post evaluation. Without legal status, BCWUAs cannot open/keep official bank accounts. At the time of ex-post evaluation, BCWUAs collect money from members based on the needs to perform maintenance or repair works, and the works cannot exceed the collected amount. Once the legal status is obtained, BCWUAs will be able to conduct large-scale repair works or procurement of equipment.

#### <Evaluation Result>

Therefore, the sustainability of the effects through the project is fair.

### 5 Summary of the Evaluation

The project had partially achieved the Project Purpose at project completion, and it achieved the Overall Goal at ex-post evaluation: the road map for WMT was approved by MWRI, however, concrete data/information on whether WMT in sites other than three pilot sites was

actually started before project completion was not available. Nonetheless, WMT has been proceeded based on the road map, and actual numbers of BCWUAs have well achieved targets in general at the time of ex-post evaluation. Regarding the sustainability, some problems were observed such as uncompleted registration of procured vehicles, insufficient government budget and a prolonged process for establishing legal status of BCWUAs, while no particular problem was observed on the policy and institutional aspects.

Considering all of the above points, this project is evaluated to be highly satisfactory.

### III. Recommendations & Lessons Learned

#### Recommendations for Implementing Agency:

- As explained above, establishment of legal status of BCWUAs is still under consideration in the parliament. In order to materialize the establishment of the legal status as soon as possible, MWRI is recommended to keep explaining to the parliament the importance of scaling-up WMT to BCWUAs nationwide.
- As explained above, registration of a tractor and a trailer procured under the project has not been completed. MWRI is recommended to discuss with the Ministry of Interior (Traffic Authority) how to accelerate and complete the registration process of these vehicles smoothly.

#### Lessons Learned for JICA:

- As stated above, female members of some BCWUAs actively performed to raise the awareness of people within their command area to prevent dumping garbage into canals. As women tend to be able to convince their neighbors (housewives) especially in rural areas, women's participation would be taken into consideration when designing similar technical cooperation projects in the future to derive positive impacts.
- Considering the registration of a tractor and a trailer stated above, when procuring equipment under a project, JICA needs to confirm necessary procedures of handover and registration in a partner country in advance, and to enforce more strict responsibility of the counterpart side for registration.
- As presented above, the indicator of the Overall Goal is almost the same as the indicator 2 of the Project Purpose, and quantitative targets were not set for these indicators before and during the project implementation. Appropriate indicators with quantitative targets should be set for both the Overall Goal and the Project Purpose based on the logic model.
- Establishing the legal status of BCWUAs/DWBs is important for continuation of project effects. Thus, when implementing similar projects in future, establishing the legal status of water users' organizations would better be set as one of Outputs that the project should achieve and follow up, rather than setting it as an external condition, which was done under this project.



Excavator procured by the project is used for regular cleaning of canals in Bisintaway, under the observation of the Chairman of the BCWUA.



Joint repair works performed by Ebheet BCWUA, in Fayoum, in cooperation with MWRI