

Summary

I. Outline of the Project	
Country : Arab Republic of Egypt	Project title : Regional Environmental Management Improvement Project
Issue/Sector : Environment	Cooperation scheme: Technical Cooperation Projects
Division in charge : Environmental Management Division II Dept. Division: Environmental Management Group, Global Environment Dept.	Total cost : <u>610 million yen</u> Cost per participant: _____yen Share of Japan' s Contribution: ___%
Period of Cooperation	(R/D) : Nov. 2005–Oct. 2008 (Extension) : Period for Output 7 only: till Mar. 2009 (F/U) :
	Partner Country' s Implementing Organization : Egyptian Environmental Affairs Agency (EEAA) Supporting Organization in Japan : Nippon Koei Co., Ltd
Related Cooperation :	Environmental Monitoring Training Center Project (EMTP) 1997–2004 Provision of equipments by Grant Aid (FY1996, FY1998, FY2003)
<p>1 Background of the Project</p> <p>The environmental pollution is increasingly serious in Egypt as its industrialization has been advanced. As for air pollution, the atmospheric pollution in Cairo metropolitan area was deteriorated to the level of outbreak of black cloud due to the open rice straw burning. Also water pollution is becoming serious issue because of the damage to health and industry. Especially, Suez Canal and Red Sea coast area are affected by the oil pollution caused from petroleum refineries and petrochemical industries. To tackle this situation, the Egyptian Environmental Affairs Agency (EEAA) has set up the priority according to the Five-Year Action Plan of Environment (2002–2007), and has been making efforts to prepare the countermeasures against pollution.</p> <p>While EEAA presently has possessed the basic environmental analytical and monitoring technologies through the previous cooperation projects, EEAA has not yet completely acquired the sufficient level of technologies for proposing countermeasures against the existing regional environmental issues. Under these circumstances, the Government of Egypt (GOE) requested the new project with the purpose of the capacity development in environmental management based on the technical achievements obtained through the Environmental Monitoring Training Center Project (EMTP) and its follow-up project (EMTP-FU).</p>	

According to the request above, the JICA dispatched the 1st and the 2nd preliminary study missions to Egypt in December 2004 and March 2005 respectively. Based on the result of the preliminary studies, the both sides agreed on the contents of the Regional Environmental Management Improvement Project (the Project) and signed on the Record of Discussions (R/D) on October 31, 2005, which stipulated the framework of the Project. The Project has been implemented since November 2005.

2 Project Overview

The capacity of EEAA (Headquarters and RBOs (Regional Branch Offices)) in policy making and preparation of countermeasures against pollution are aimed to be strengthened.

(1) Overall Goal

EEAA and its RBOs together with other competent stakeholders become capable of evaluating environmental situations, identifying the problems, defining the causes of such problems, acknowledging possible solutions, and implementing countermeasures through raising the environmental awareness of EMUs (Environmental Management Units), enterprises, NGOs, and citizens.

(2) Project Purpose

EEAA and its RBOs are enhanced on the capability of managing environmental data and information, suggesting countermeasures through On-the-Job Training

(3) Outputs

Output 1: Environmental Quality Sector (EQS) of EEAA and Environmental Quality Departments (EQDs) of RBOs become capable of proposing countermeasures against air pollutions (site-evaluation, technical and administrative measures) based on the data and information collected and interpreted. (Working Group (WG)1)

Output 2: Suez RBO becomes capable of proposing countermeasures against oil pollutions (site-evaluation, technical and administrative measures) based on the data and information collected and interpreted. (WG2)

Output 3: EQS and Environmental Management Sector (EMS) of EEAA, and EQDs and Environmental Management Departments (EMDs) of RBOs become capable of identifying hazardous substances, compiling the data and information, and identifying their risks. (Coordination Committee (CC)1)

Output 4: Central Department for Communication and Environmental Awareness (CDCEA) (General Department for Training (GDT)) of EEAA becomes capable of planning, designing, and implementing trainings within EEAA based on the information provided by all other relevant departments/organizations. (WG3)

Output 5: EQD and EMD of Alex RBO become capable of proposing Production Process Improvement as well as the Pollution Abatement for industries/factories based on the data and information collected and interpreted. (WG4)

Output 6: General Directorate of Media and Environmental Education (GDME&E) of EEAA

and concerned RBOs become capable of raising public awareness to EMUs, enterprises, NGOs, and citizens. (WG5)

Output 7: Air Quality Department (AQD) and GDME&E of EEAA become capable of disseminating the environmental information to the public by effectively utilizing the Real-Time Air Monitoring Station with Display. (WG6)

Output 8: Sector for Regional Branches Affairs (SRBA) of EEAA and concerned RBOs become capable of enhancing their capacities by mutual interaction through CC2 mechanism. (CC2)

(4) Inputs

Japanese side :

Short-term Expert	<u>16</u>	Local cost	<u>75,249,000</u> Yen
Trainees received	<u>17</u>	Provision of equipment	5,961,316 Egyptian Pound (Procurement in Egypt), 1,779,600 Yen (Procurement in Japan)

Egyptian 's Side :

Counterpart	<u>106</u>	Facilities
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II. Evaluation Team

Members of Evaluation Team	Mr. Kiyoshi Masumoto	Team Leader
	Deputy Director General and Group Director for Environmental Management Group, Global Environment Dept., JICA	
	Ms. Eriko Tamura	Cooperation Planning
	Environmental Management Division II, Environmental Management Group, Global Environment Dept., JICA	
	Ms. Noriko Furutani	Evaluation Analysis
	Senior Researcher, Global Link Management Inc.	
Period of Evaluation	14/June/2008~ 4/ July/ 2008	Type of Evaluation : Terminal Evaluation

III. Results of Evaluation

1. Project Performance

-Inputs and Outputs

The Project has mostly fulfilled the input along with the plan stated in the R/D and PDM. Some delays have been observed for equipment provision.

Output 1 has been in progress and is in challenge towards the targeted indicators. The capturing ratio is considered as 65-70% in tons of equivalent oil (Indicator 1-1) and the mid-term progress report of emission inventory has already been prepared and the final one will be completed in the first half of JFY 2008 (Indicator 1-2). The data of all air pollutants on SOX (Sulfur Oxides), NOX (Nitrogen Oxides), and PM (Particulate Matter) have been collected and measured in WG1 activities. It is under

compilation followed by the completion of the internal report (Indicator 1-3). The model calculation for broad area is under the first phase and the second phase is going to be prepared. Three scenarios will be developed by the integrated workshop in August 2008. The other two scenarios are expected to be developed by counterparts (C/Ps) themselves after the workshop, since C/Ps acquired the knowledge on simple simulation already (Indicator 1-4). About 10 staffs from EEAA, Greater Cairo (GC) RBO, Tanta RBO and Mansura RBO mastered four activities required for countermeasure preparation. Other two staff is learning the model calculation which is one of the planned activities (Indicator 1-5).

Output 2 has been almost achieved at the time of the terminal evaluation based on the following facts that firstly, the countermeasure plan has already been drafted and is expected to be authorized before the end of the Project (Indicator 2-1), secondly, as of July in 2008, the database for fingerprint data on crude oil and derivatives has almost been completed and will be furnished completely by the end of the Project. (Indicator 2-2)

Output 3 has been mostly achieved based on the following indicators. PCB report has already been completed and its results were shared by the international conference (Indicator 3-1). The report will be prepared in September 2008 after finishing all activities on target chemical substances, PCBs (Polychlorinated Biphenyls) , PAHs (Poly-cyclic Aromatic Hydrocarbons) and HMs (Heavy Metals) (Indicator 3-2). The number of staff, who acquired knowledge and skills to manage the process of identifying possible pollution sources, evaluation of analyzed data, identification of hazardous chemical substances risks, and proposing countermeasures, has been increased (Indicator 3-3). The framework of the hazardous substance database was prepared and now data input has been steadily in progress (Indicator 3-4). The guidelines will be completed in August 2008 (Indicator 3-5).

Output 4 will be achieved fully by the end of the Project if further efforts are made to advance the activities because training list was prepared by GDT for preparation of the annual training plan including training courses implemented the donors such as Danish International Development Assistance (DANIDA) (Indicator 4-1), and the pilot course will be planned in July-August 2008 after the completion of on-going Training Needs Analysis (TNA) analysis training (Indicator 4-2, 4-3). The training materials prepared under the Project have not been collected yet, thus not being kept in GDT at the time of terminal evaluation. However, all the training materials will be collected in GDT during the rest of the implementation period (Indicator 4-4). 6 staffs are currently participating in TNA analysis training (Indicator 4-5).

Output 5 has been mostly achieved and will be achieved completely by the time of the termination of the Project based on the following indicators. The final draft of inspection manuals for petroleum refining industry and petrochemical industry were already prepared (Indicator 5-1). Two seminars and a workshop were held in total to successfully introduce cleaner production process including good practices of other organizations/enterprises (Indicator 5-2). Possibility of reuse of the certain type of waste as raw material of fuel for the cement industry could be one of the proposal (Indicator 5-3). Assessment of the inspection reports are planned to be conducted in July 2008 (Indicator 5-4). The report to introduce best practices and recommendations is under preparation. It will be completed in August 2008 (Indicator 5-5).

Output 6 will be achieved, if continuous efforts are made to advance the activities planned for the rest of the implementation period, because the report of the first public awareness baseline survey was completed (Indicator 6-1), five awareness raising activities were designed and implemented (Indicator 6-2), the second survey will be conducted in July 2008 (Indicator 6-3), also the activity completion report that includes the evaluation and lessons learned were completed and its feedback effort will go further (Indicator 6-4).

Output 7 is steadily in progress and will be achieved by the end of the Project, if further efforts are made to advance the planned activities for the rest of implementation period, based on the following indicators. The air monitoring station has been installed at Tahrir Square and is being operated. And the display, which is in the process of procurement, will be installed at the beginning of September, 2008 (Indicator 7-1). The preparation of display contents has already been initiated (Indicator 7-2). The major newspaper reported about the Real-time Air Monitoring Station with Display and the campaign on it is scheduled upon its installation of the display (Indicator 7-3). Consequently, it would be well-recognized by the people in Cairo city serving as "a symbol of environmental watchdog."

Output 8 has been almost achieved because various OJT seminars on each technical topic have been conducted to share the experiences and information (Indicator 8-1), and monthly report shows the number of seminars held (Indicator 8-2).

-Project Purpose

It can be judged that the project purpose will mostly be achieved by the time of the

complete termination of the Project. Namely, EEAA and its RBOs are enhanced on the capability of managing environmental data and information, suggesting countermeasures through the Project implementation.

Indicator 1: Some effective countermeasures for environmental pollution, hazardous substances have almost been prepared. For example, the strategy and action plans against oil pollution have already been prepared by Suez RBO. Also, the guideline for the PCB disposal will be completed during the final stage of the project activities.

Indicator 2: The data/information and activity achievement have been integrated and will soon be open to the public. The activity progress and achievement of the Project including RBO activities such as information sharing on the good practice of cleaner production process were all presented to even outside organizations and citizens at the workshops, conducted by WG/CC of the Project. The report including the result of inventory survey as well as monitoring on PCB was already prepared and this will be a part of the coming year's Environmental White Paper/State of Environment (SOE) in process of publishing.

Indicator 3: There exist some step-by-step actions that already have been taken. For example, in PCB case, each RBO is currently preparing the action plan for their survey. Some facts such as the followings show the possibility of new activities by EEAA/RBOs; 1) under the initiative of Alex. RBO, the drafted inspection manual for petroleum as well as petrochemical will soon be finalized by reflecting experiences through OJT, followed by the information/experience sharing workshop for all RBOs, 2) the measurement technology with utilization of passive sampler has already been started to distribute to other RBOs by Tanta RBO.

-Implementation Process

The Project has been conducted properly based on the PDM and the implementation process was generally appropriate. The followings are the major positive points to be observed;

- Regular monitoring on the inputs from both Egyptian and Japanese sides enabled well planned budget allocation.
- Communication between managerial level of the Project and Chief Advisor of Japanese Expert Team is notably good.
- Documentation in duty in the course of project implementation was appropriate.
- Dispatch of project consultation mission and mid-term evaluation mission contributed to recovery of the delay of the first stage of the Project.

There is room to be improved for future on the following points; 1) Serious outflow of C/Ps of some WGs from EEAA, 2) Relatively insufficient focus on project purpose than on the outputs in project monitoring, 3) Certain gap, causing delays of certain

activities, between the framework formulated by the preliminary study missions and the actual project implementation, 4) No availability of Japanese Experts due to their limited stays in Egypt and some difficulties in regular monitoring.

2 Summary of Evaluation Results

(1) Relevance

The relevance of the Project is considerably high. The project purpose and overall goal are consistent with the policy of GOE such as the National Environmental Action Plan 2002-2017 (NEAP), the Five-Year Action Plan of Environment (2002-2007) based on the Environmental Law. Also they are consistent with the needs of target group that is EEAA/RBOs which is required to strengthen its capability in preparation of countermeasures. Moreover, they are consistent with the policy of Official Development Assistance of Japan that puts high priority on environmental protection. Besides, the content of this technical cooperation employs such technologies that Japan has strong points based on its experiences in history of combating the environmental pollutions.

(2) Effectiveness

The effectiveness of the Project is high. Because, it can be judged that the project purpose will mostly be achieved by the time of the complete termination of the Project. All the outputs have been contributing to achievement of the project purpose. Especially Output 2, 3, 5, and 8 contributed to significant extent towards the project purpose. There left some room to be considered for future strategy from the fact that the achievement level of each output varies.

(4) Efficiency

The efficiency of the Project is high. It could be described that significant outcome has been appearing from relatively limited inputs to wide areas dealt by the Project.

(5) Impact

Impact of the Project is large due to the successful international conference but not high enough because it might require longer than 3-5 years to achieve the overall goal.

The spread effect of the Project is large. Not only the counterpart organization but also other related organization including enterprises/citizens have been influenced by the implementation of the Project, as shown in the unintended impacts such as the reports on the Project/environmental issues by major mass media, collaboration among regional enterprises for industrial waste reduction, cooperation with other organization based on higher awareness on pollution in society, and involvement of Suez Canal Authority and Suez Port Authority towards better oil pollution control, etc. No negative impacts are observed.

(6) Sustainability

The sustainability of the Project can be secured if certain conditions are met. Because firstly, the organizational sustainability of EEAA as an executing agency for implementation of environmental policies is very high based on the high priority by GOE. However, financial sustainability of EEAA/RBOs will be confirmed only if they continue to make efforts not only in allocation of the budget but also in actual and timely disbursement of it. Thirdly, technical sustainability is high unless serious outflow of the trained and experienced staff occur in future because both environmental technologies and those in a broad sense such as planning technology were absorbed by C/Ps.

3. Factors promoting sustainability and impact

(1) Factors concerning to Planning

- High needs of the beneficiaries/ C/Ps and organization
- Absorption of technology both in environment and planning
- Involvement of outside organizations
- Modification of the outputs according to the actual working groups at the mid-term evaluation

(2) Factors concerning to the Implementation Process

- Regular monitoring on the inputs from both sides of Egypt and Japan
- Good communication between Japanese chief advisor and the Egyptian project managers
- Documentation of the process (e.g. meeting proceedings) in the course of project implementation
- Timely review and modification through the consultation mission and the mid-term evaluation mission

4. Factors inhibiting sustainability and impact

(1) Factors concerning to Planning

- The gap between the content of the plan set by the ex-ante evaluation and actual implementation (activity line and procurement of the equipment)

(2) Factors concerning to the Implementation Process

- Serious outflow of the counterpart personnel (the trained and experienced staff) from EEAA
- Less focus on the project purpose than on outputs in the project management
- Short period of dispatch of Japanese Experts and consequence insufficient local monitoring

5. Conclusion

The project purpose will mostly be achieved by the time of complete termination of the Project, judging from firstly, effective countermeasures for environmental

pollution, hazardous substances are almost prepared (indicator 1), secondly, more concrete data, information and achievements obtained from RBO activities will be published/open to the public soon (indicator 2), and thirdly, EEAA/RBOs are ready to start their new activities based on sharing information and implementation of trainings (indicator 3). Moreover, capacity development is observed at all level of individual, organizational and society/institution level. The relevance of the Project is considerably high due to the consistency with both the policies and needs of target group. The effectiveness of the Project is also judged as high because of the high achievement level of the project purpose. The efficiency can also be said as high from the viewpoint of outcome magnitude compared to the input. Impact is large but it cannot be described as strong enough, because the overall goal seems to have challenges ahead and the complete realization of it might require longer than 3-5 years. However, the Project is on track towards the overall goal if the consistent commitment of EEAA continues. It will be eventually achieved over longer term. The sustainability of the Project can be secured if certain conditions are met. Firstly, the organizational sustainability of EEAA as an executing agency for implementation of environmental policies is very high because environmental sector is given high priority by GOE. However, financial sustainability of EEAA/RBOs will be confirmed only if they continue to make efforts not only in allocation of the budget but also in actual and timely disbursement of it. Thirdly, technical sustainability is high unless serious outflow of the trained and experienced staff occur in future because both environmental technologies and those in a broad sense such as planning technology were absorbed by C/Ps.

6. Recommendations

Measures to be implemented before the termination of the Project

- 1) Since the number of visits of Japanese Expert Team are quite limited before the end of the Project in November 2008 (March 2009 as for Output 7), the Project Managers and Japanese Expert Team confirm the schedules and activities to be done in order to achieve each output. Especially, WG1 and WG3, which are behind the schedule, accelerate the planned activities.
- 2) WG1 makes further efforts to share the obtained knowledge/technology among its members in order for the activities for the air pollution control management improvement to be sustained.
- 3) EEAA starts budget planning for FY 2008/2009 for continuing and diversifying activities of the Project.
- 4) EEAA and Japanese Expert Team make continuous efforts on the preparation for the OM (Operation&Maintenance) and effective utilization of Real-time Air Monitoring Station with Display upon its installation.

Measures to be taken for the post Project

- 1) Some activities were already planned to be conducted by C/Ps themselves by utilizing the outcomes of the Project. In order to conduct these activities smoothly, EEAA allocates the necessary budget for them and disburse it timely.
- 2) To ensure the technical sustainability, EEAA considers human resource management system in order to avoid the outflow of the trained and experienced staff as well as to recover the loss of human resources.
- 3) EEAA authorizes the outcome of the Project such as some effective countermeasures, and coordination mechanism with internal and external bodies in order to integrate the outcome of the Project into the national / regional environmental management and policies.

7. Lessons Learned

When the project framework is relatively wide and complicated like this project, the project framework should be reviewed and revised at early stage of project implementation to reflect the real situation of the project, because the information which can be obtained at preliminary study stage is rather limited. This revision makes the project more effective and efficient.

8. Follow-up Situation

The period of the Project (Output 7 only) is extended to March 2009.