

# Project Completion Reports

**Environmental Information and Monitoring Programme (EIMP)  
2001-2004**

**Arabic Republic of Egypt**

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Information and is for official use only.**

Prepared: Oct., 2004 by EEAA

Danish Ministry of Foreign Affairs – Danida  
Egyptian Environmental Affairs Agency – EEAA

Environmental Information and  
Monitoring Programme – EIMP

Project Completion Report  
Phasing Out Phase  
(July 2001 – June 2004)

## PROJECT COMPLETION REPORT<sup>1</sup>

**Author:** Eng. Ahmed Abou Elseoud  
**File No.:** 104.Egypt.1/26  
**Date:** Oct. 2004

### KEY DATA:

Title of Project/component	<b>Environmental Information Monitoring Programme (EIMP)</b>	
Country/Project Area	<b>Egypt</b>	
Sector	Environmental Quality Sector	DAC-code: 104.Egypt.1/26
Sub-Sectors		
Finance Act Number		
UM Finance Number		
Responsible authority on partner side	<b>Dr. Mouhamed Sayed Khalil</b>	
Responsible Regional Department/Representation	<b>Dr. Mawaheb A.bou El_Azm</b>	
Funding Currency: DKK	Danida Budget Disbursements	Other Budget Disbursements
	<b>6.24 Million</b>	
Total undisturbed DKK	Danida	Others
Technical advisers	<b>Mr. Jorgen F. Simonsen, Mr. Anders Bjornshave</b>	
Date of agreement	<b>10 Dec. 1995</b>	
Project Period / Component duration	Planned	Actual
	<b>5.5</b>	<b>8.5</b>

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<sup>1</sup> Project Completion Reports are prepared for components and projects exceeding DKK 5 million and below DKK 30 million.

OBJECTIVES:

Achievement of objectives<sup>2</sup>

	Very satisfactory	Satisfactory	Less satisfactory	Quite Unsatisfactory
<i>Commissioned and operated equipment for data collection on ambient air quality, coastal water and reference laboratories work, as well as for EEAA data management</i>	*			
<i>Monitoring institutions capable of producing validated and consistent data on conditions of the ambient environment.</i>	*			
<i>Monitoring institutions' staff capable of interpretation of their respective analytical data.</i>		*		
<i>Reference laboratories capable of providing reference laboratory and QA/QC services to monitoring institutions.</i>	*			
<i>EEAA capable of data storage and data management for air and coastal water quality data. EEAA capable of producing environment monitoring data reports, e.g. as required for the production of EEAA's State of the environment Reports.</i>	*			

<sup>2</sup> Very satisfactory: Objectives fully achieved, very few or no shortcomings; Satisfactory: Objectives largely achieved, despite a few shortcomings; Less satisfactory: Objectives partially achieved; Quite unsatisfactory: very limited achievement, extensive shortcomings.

OVERALL AID OBJECTIVES	Poverty-orientation and attention paid to cross-cutting issues			
	Very satisfactory	Satisfactory	Less satisfactory	Quite unsatisfactory
	Poverty-orientation	*		
	Gender equality	*		
	Environmental concerns	*		
	Democracy and human rights issues	*		

#### SUMMARY:

Summary	<p>Concerning the main outputs, Project Management and coordination has proven successful in terms of sustainability. Review Contracts with monitoring institutions is well functioning. The integration in the EEAA Information centre has been implemented. Preparing Reports, Presentations and newsletters in regular bases to represent the status of Air and coastal water all over Egypt. Implementing GIS applications with some cooperation with EEIS to generate some maps in different scales. Upgrading all EIMP hardware and purchasing a new Server, Printer, Network devices and some computer peripherals. Purchasing all spare parts needed to Maintain the Air Monitoring Network in regular bases.</p>
Outstanding issues	<p>As the phasing-out phase reaching its end, I would like to express the importance of extending the technical assistance from COWI for both Air and Reference laboratory components to finalize specific tasks that is essential for the sustainability of the project. The attached is the technical proposal for these two activities. Also I would like to attach with this letter a memo from the Data Management Task Manager concerning the upgrade of the System Manager for Air Quality Network.</p> <p>Also, I attach a proposal for upgrading the Air Quality Monitoring Network after more than 7 years of continuous monitoring. This proposal will cover the replacement of some equipment that reached its lifetime and need to be replaced and moving some sites to new places based on the experience gained and collected data for the past 7 years.</p>

## Lessons learned

- The development objective of the EIMP is to establish detailed knowledge of the ambient air and coastal water quality in Egypt for relevant authorities to act to improve the ambient environmental quality in Egypt. The knowledge of the ambient air and coastal water quality in Egypt has been established and in high operational level. The current step is to make use of the knowledge in the decision-making.
- One of the most important lessons from implementing EIMP project is the financial mechanism for the O&M of the project components where EEAA share in this budget increased gradually throughout the project implementation till it reached 100% at the end of the first phase of the project. EEAA now is allocating the required budget for O&M which amounts 2.2 million L.E. per year.
- The transfer of management responsibility of the project was also one of the issues that led to the sustainability of the project, where the EEAA staff gradually carried out this responsibility under the support of the Danish expatriates. The whole project components are now running successfully by the Egyptian staff.
- Cooperation with other projects leads to a more sustainable outputs. EIMP collaborated with different projects in EEAA related to Air and Coastal water Quality. EIMP succeeded with EEIS project to incorporate EIMP outputs in the ECIS system that EEIS prepared for the EEAA Executives. Within this framework of cooperation, EIMP staff received several training courses in GIS and DB administration. In addition, EIMP received from EEIS some equipments (2 computers+Network Hub) to raise the performance of the data exchange between the two projects. The cooperation with CAIP project, EEPP, and the Natural protectorates Department was also successful and led to mutual benefits for these projects and EIMP.

## INTRODUCTION:

Contributors to the Present report	This PCR has been prepared by Ahmed Abou Elseoud, EIMP Project Manager, With input from notes prepared by the EIMP task managers, The EIMP Project Director, Morten Andersen, and the Monthly progress reports.
Documentation	During the Phasing out phase a large number of documents have been prepared, and a complete list of documents is presented in Appendix 2.1. The document comprise: The EIMP Phasing out phase document, Bimonthly Progress reports, Annual work plans for EIMP, Conference articles and Financial status reports.

## FULFILMENT OF OBJECTIVES:

Relevance	The program established two national databases for Air and Coastal Water quality that are updated periodically to help EEAA in producing the State of the Environment report and in planning and evaluation of the Environmental policies and strategies to reduce pollution load on air and coastal water
Achievements	The development objective of the EIMP is to establish detailed knowledge of the ambient air and coastal water quality in Egypt for relevant authorities to act to improve the ambient environmental quality in Egypt. The knowledge of the ambient air and coastal water quality in Egypt has been established and in high operational level. The current step is to make use of the knowledge in the decision-making to improve the ambient environmental quality in Egypt. One of the important achievements of the EIMP project is the use of the air quality database as main input for the preparation of the National Air Quality Strategy Framework that was prepared by EEPP Program. EIMP data was also used to produce the State of the Environment Report that is prepared with support of UNDP. EIMP data is also used to produce a Daily Air Quality Index for Greater Cairo and Early Warning System for Air pollution Episodes
Indicators	The Objectives of EIMP have been: Commissioned and operated equipment for data collection on ambient air quality, coastal water and reference laboratories work, as well as for EEAA data management. Monitoring institutions capable of producing validated and consistent data on conditions of the ambient environment. Monitoring institutions' staff capable of interpretation of their respective analytical data. Reference laboratories capable of providing reference laboratory and QA/QC services to monitoring institutions. EEAA capable of data storage and data management for air and coastal water quality data. EEAA capable of producing environment monitoring data reports, e.g. as required for the

	production of EEAA's State of the environment Reports.
Other Facts	In several situations EIMP has provided reports to Minister of the Environment as background for reporting to the cabinet of Ministers and for the Peoples assembly. EIMP air quality database was used as input for the preparation of the National Air Quality Strategy Framework that was prepared by EEPP Program. EIMP data was also used to produce a Daily Air Quality Index for Greater Cairo and Early Warning System for Air pollution Episodes. EIMP staff has contributed with scientific papers in several National and international conferences. EIMP has established a home page on the internet: <a href="http://www.ecaa.gov.eg/eimp">www.ecaa.gov.eg/eimp</a> and updated in regular bases with some cooperation with Information Centre.
Attribution	The development objective of the EIMP is to establish detailed knowledge of the ambient air and coastal water quality in Egypt for relevant authorities to act to improve the ambient environmental quality in Egypt. The knowledge of the ambient air and coastal water quality in Egypt has been established. The current step is to make use of the knowledge in the decision-making to improve the ambient environmental quality in Egypt.
Sustainability	The EIMP monitoring Program has been an integral part of the Environmental Quality sector. The program is now running fully by well-trained Egyptian staff. GEO has been taking the responsibility for providing the operational costs for the program components (2.2 million L.E./year).



# PROJECT/COMPONENT BACKGROUND:

<p>Description of Project/component</p>	<p>The pollution of soil, water and air in the densely populated areas of Egypt is evident, and so are the effects upon nature and human health. Compared to needs only little has been done to reduce the pollution from human activities. The National Environmental Action Plan issued by the Government of Egypt in May 1992 calls for comprehensive, long term and demanding programme to reduce the pollution level to improve human health and protect the natural resources. Therefore the EIMP was initiated to establish a systematic monitoring of pollution sources and environmental effects. With Law 4/1994 concerning Environmental of protection issued in Feb. 1994 the role of EEAA as an overall coordinating authority has been set out. The responsibilities of EEAA are to set environmental standards, implementing pilot projects, as well as compiling and dissemination of environmental information. It has been decided to establish Environmental Sector strategies in close cooperation between EEAA and the relevant line ministries. These strategies should assess the specific technical, financial and institutional status, potentials and needs. Thus EIMP appears to fit well into the policy of the Environmental Sector of the Government of Egypt.</p>
<p>Internal Logic</p>	<p>The EIMP was initiated in 1996 based on a set of project documents which formed part of an agreement between the Government of Egypt and the Danish International Development Assistance. During the EIMP, Environmental monitoring and reference laboratories are contracted to introduce quality assured monitoring data for coastal waters, ambient air quality, and point sources emissions. Originally EIMP comprised five components as Institutional support to EEAA, Coastal Water Monitoring, Air Pollution Monitoring, Database on pollution Sources and Reference Laboratories for Standardisation and Quality Assurance of Data.</p>

#### BUDGET/DISBURSEMENTS:

Main budget lines and accounts

The Phasing Out of three years (July 2001 – June 2004) with limited support from expatriate input and no Danida contribution for operational or equipment costs. EEAA is formally responsible for all contractual arrangements with other Egyptian institutions involved in the project, and EEAA chairs the Steering Committee.

#### INPUTS:

Project/component inputs

The input for the revised EIMP has been shared between the GEO and Danida with the following overall contribution: GEO (6.6 million LE in cash) and Danida (6.24 million DKK in cash and in kind). The GEO contribution has covered full costs of monitoring contract during the phasing out phase, full costs of counterpart staff, office staff, drivers and other support staff, fully equipped offices and utilities (incl. Electricity costs for air monitoring shelters), local telephone costs (incl. Establishment and operation of internet/intranet facilities and operational costs for telephone lines for air monitoring stations). The Danida input contribution has covered limited support from expatriate input, share of purchasing stock of spare parts, upgrading the calibration system of the air quality monitoring network, upgrading the project computers and the Danida share in the operational cost of CW phase II in 2001.

## ACTIVITIES:

Major activities	<p>Regarding <u>Institutional Support</u>, Project Management and Co-operation has included financial management, accounting, progress reporting, work plan preparation, organisation and participation in meetings as well as quality assurance in accordance with the EIMP quality plan. This model has proven successful in terms of sustainability. Review Contracts with Monitoring Institutions and Ref. Lab. Has been reviewed by the end of each year following an assessment of the past years work. This Activity is well functioning and EEAA has a full responsibility. Establish data management Systems including QA/QC has been developed. However, problems with an American software provider, insufficient skills at the local Egyptian agent cause troubles with part of the software. Computer software and hardware upgrade has been implemented and the training of counterparts' staff in data management has been held in Shooter Training centre depend on the Expatriate advisers. The staff also received several training courses in GIS and DB administration through the cooperation with EEIS project.</p> <p>Regarding <u>Coastal Water Monitoring</u>, Design physic-chemical and biological monitoring programmes has been implemented and the first sampling campaigns was conducted in March 1998. The programme has been running since then. The program for inorganic parameters was according to plan revised in the winter 2000 and the revised programme is put in effect from 2001. Procurement and installation of equipment is completed and the monitoring institutions have taken the responsibilities for maintaining and repair the equipment. A new release of costal water database system has been developed for EIMP. Data transfer facilities and formats for exchange of data and information between monitoring institutions and the EEAA have been established. The application of GIS has been implemented along with some cooperation with EEIS where the two CW counterparts received training courses in GIS. NIOF and IGSR staff has been trained in field data collection, analysis and data interpretation by the consultant's expatriate staff. The staff of IGSR and NIOF under supervision of the consultant's expatriate staff has been established QA/QC procedures. Field campaigns are performed every second month in the Mediterranean and Red Sea coastal waters. The programme for water is running according to the plan where the last campaign on year 2004 was executed on time and the analysis of samples started.</p> <p>Regarding <u>Air Quality Monitoring</u>, Design of the monitoring network is covering 43 sites instead of 42 sites. The project is now coordinating with the EMG component in Beni Suef to establish additional 4 monitoring stations in Beni Suef. These stations will be added to the national network where EMG will provide the capital cost required for establishing these stations and EEAA will cover the O&amp;M costs on annual basis. A new release of Air Quality database system has been</p>
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	<p>developed for EIMP. Data transfer facilities and formats for exchange of data and information between monitoring institutions and the EEAA have been established. The application of GIS has been implemented with full cooperation with EEIS where the two AQ counterparts received training courses on GIS. The training is completed to the extent that the institutions' staff and the counterparts are capable of running and maintaining the network and providing reports concerning interpretation of data. An Early Warning System for Air pollution episodes over Cairo has been implemented with cooperation with CAIP project and an Air Quality Index is now produced on daily basis and distributed to the EEAA Executives. A QA/QC is documented and implemented. A stock of spare parts of one million L.E. was purchased where Danida and EEAA shared this cost equally. The annual consumption of spare parts and consumables are evaluated at the end of each year and new purchase order is prepared with an amount of 300-350 thousands L.E./year allocated annually by EEAA for that purpose. The reference laboratories regularly monitor the monitoring institutions as well as the monitoring stations. Regarding <u>Reference Laboratories</u>, The training programme in QA/QC for staff of Ain Shams University and NIS is performed. A similar training for the monitoring institutions has also been carried out. This training also has been carried out for the RBO's laboratories staff as part of the capacity building. The Ref. Lab is supervising the Quality Managers in the RBO's to establish the quality system documentation. Training in verification of calibration and proficiency testing have been performed. A technical Training on Organic Analysis was preformed for NIOF, IGSR and Suez branch staff by a Danish Expert. Audits started in the first have of 1999, and the responsibility for audits has been taken over by the Ref. Labs.</p>
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#### OUTPUTS:

Planned/produced	<p>Regarding <u>Institutional Support</u>, Monitoring contracts renewed. Computer hardware and software upgrade procured and commissioned a long with some sort of training for data management staff offered by Danida. Database and data transfer systems established and fully operated. A new release of Database has been implemented. A new design for EIMP web site has been implemented and updating it in regular bases. Data management team continued performing the routine maintenance for EIMP computers. Managing the computer network, supporting the users and troubleshooting were continued. The trust relationship between EEIS and EIMP servers has been established. All GIS modules for representing the Air and Costal Water Database have been implemented in cooperation with EEIS Team. Regarding</p>
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Coastal Water Monitoring, Marine biology network established and Monitoring programme covering 80 stations in operation. Staff at monitoring institutions fully trained in sampling, analysis and data interpretation. A technical Training on Organic Analysis was preformed for NIOF, IGSR and Suez branch staff by a Danish Expert. QA/QC procedure implemented and Monitoring institutions producing validated data on coastal waters. Regarding Air Pollution Monitoring, Air pollution network established and Monitoring programme covering 43 instead of 40 stations in operation. The project is now coordinating with the EMG component in Beni Suef to establish additional 4 monitoring stations in Beni Suef. These stations will be added to the national network where EMG will provide the capital cost required for establishing these stations and EEAA will cover the O&M costs. Staff at monitoring institutions fully trained in sampling, analysis and data interpretation. QA/QC procedure implemented and Monitoring institutions producing validated data on air pollution. Regarding Reference Laboratories, Staff fully trained in QA/QC procedures, proficiency test and intercalibration. QA/QC training, Supplementary measurement training for monitoring institutions' staff completed. Sampling round in, and analysis of, coastal water for microbiology parameters completed. Review and internal audit at reference laboratories performed. Review at monitoring stations performed. Regular participation in international Proficiency Test Scheme. Regular calibration of monitoring equipment.

## ANALYSIS:

Activities compared to expenditures	The annual work plans have been prepared by the Programme management and included in the renewal of the contracts with the monitoring institutes. These plans were followed up regularly by the central office staff and adjusted according to the results obtained during the preceding periods. There have been minor delays. The progress compared to the plans has been assessed by the end of each month and has been reflected in the progress reports that are submitted regularly to the Head of the Sector.
Project/component efficiency	<i>Concerning the financial delivery rates it is assessed that the efficiency has been reasonably high.</i>
Assessment of annual working plans	<i>By the end of the Phasing out Phase the outputs specified in the PD have been achieved. A fully working air monitoring network has been established, and the coastal water monitoring is in a good routine. Thus GEO (EEAA) has an adequate monitoring system that provides data necessary for decision making. Furthermore, EEAA is technically able to keep the system running.</i>
Risks and assumptions	<p><i>By the start of the project the following major assumptions were identified: Timely allocation of GEO contribution in terms of staff, facilities and cash. GEO commitment to use EIMP data for necessary strategic and legislative action to improve the ambient environment. Renewal of contracts with monitoring institutions and reference laboratories can be negotiated on acceptable terms. Cooperative and professional working relationships can be established among the monitoring institutions, the reference laboratories and the EEAA to ensure a free and smooth exchange of data, knowledge and experience. The EEAA and the EIMP steering committee assume an active role in solving administrative problems. By the end of the Phasing out Phase most of these assumptions disappeared and the rest of them not relevant.</i></p> <p>Some of the Air Quality monitoring network equipment reached its life time and there are difficulties to obtain spare parts for them. This may represent a risk for the sustainability of the operation of this monitoring network. A plan for Renovation of the network has been prepared and attached with this report. It is recommended that Danida could finance the implementation of this plan provided that EEAA will have a future plan for the renovation of the network.</p>

#### IDENTIFICATION OF ALTERNATIVES:

Alternatives	<i>At the start of EIMP the organisation EEAA did not exist and it is difficult to point out an alternative project approach that was possible during the constructing phase of the organisation. At the moment, however, as the central environmental organisation of GEO has been formed, thus it would be relevant to involve EEAA much more in future project formulations.</i>
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#### FURTHER ANALYSIS:

Further studies	<i>There is no need for further analysis.</i>
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#### NEED FOR CONTINUATION/ FURTHER ASSISTANCE:

Further assistance	<i>As the phasing-out phase reaching its end, I would like to express the importance of extending the technical assistance from COWI for both Air and Reference laboratory components to finalize specific tasks that is essential for the sustainability of the project. The attached is the technical proposal for these two activities. Also I would like to attach with this letter a memo from the Data Management Task Manager concerning the upgrade of the System Manager for Air Quality Network. Also, I attach a proposal for upgrading the Air Quality Monitoring Network after more than 7 years of continuous monitoring. This proposal will cover the replacement of some equipment that reached its lifetime and need to be replaced and moving some sites to new places based on the experience gained and collected data for the past 7 years.</i>
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COMMENTS BY THE PARTIES INVOLVED:	Main conclusions of PCR	
	Concurrence	Disagreement
Partner	*	
Comments (if disagreement)		
Date, Name, and Sign.		
	Concurrence	Disagreement
Danish Representation		
Comments (if disagreement)		
Date, Name, and Sign.		
	Concurrence	Disagreement
Regional Department <sup>3</sup>		
Comments (if disagreement)		
Date, Name, and Sign.		
	Concurrence	Disagreement
Technical Advisory Service <sup>4</sup>		
Comments (if disagreement)		
Date, Name, and Sign.		

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Date, Ambassador/Head of Representation

<sup>3</sup> The assessment by the Regional Department should be included only if relevant.

<sup>4</sup> The Assessment by the Technical Advisory Service should be included only if relevant.



## Annex A

### Project/component financial status

Project/component starting date: July 2001  
Reporting date: Oct. 2004

#### A) Danida Contribution

Component output	Original grant in DKK Million (a)	Total disbursements per reporting date DKK million (b)	Balance on grant DKK million (a-b)	Progress on work (planned, ongoing, completed, postponed)	Give reasons for major deviations between (a) budget and (b) Disbursements.
Output 1					
TA Consultancy	3100000	***		Completed	The actual disbursement should be reported by Danida
Reimbursable (Consultancy Contract)	1050000	***			The actual disbursement should be reported by Danida
Upgrading Personal Computers	50000	50000	0	completed	
Upgrading calibration system	375000	375000	0	completed	
25% of Operation of CW Phase II	475000	475000	0	completed	
Purchase of stock of spare parts	1140000	1140000	0	completed	
Local GIS expert	50000	0	50000	Canceled	Replaced by TA from EEAA GIS unit in the Information Centre
Upgrade Central office Communication Network	0	60000	(60000)	Completed	This task has been added to the budget based on the approval of the project SC
Total	6240000	2100000			The Actual disbursement does not include the budget paid by Danida for COWI TA consultancy contract

**Note:** The TA Consultancy from COWI has been implemented according to the contract planned activities except the following:

- Item 2.3.3 "Train the counterpart staff in preparation of arabitised reports" which represent 3 man.month of local consultant. We still in need for that training as EIMP staff is producing now arabitised reports but it require revision and enhancement by local experts: one in CW and one in AQ.
- Item 4.1.1 "Unspecified trouble-shooting" based on EEAA request. The attached proposal for additional input from both the AQ Task manger and the Ref Lab Task Manager can be implemented under that Item.

## **B) EEAA Contribution**

EEAA provided all necessary office space, counterpart staff and operational costs for the monitoring programme including all office running costs. EEAA allocated 2.2 Million L.E. per year for the renewal of the contracts with the monitoring institutes and Ref Lab. The total budget allocated during the 3-year phasing-out phase is amounted 6.6 million L.E. including the share of EEAA in purchasing the stock of spare parts for the AQ monitoring equipment.

## Annex B

### Inventory of assets

Assets	Remarks
The Monthly Air Quality Monitoring Reports	Produced on Monthly basis, the last report issued on August 2004 (available on EEAA website)
The Bi-Monthly CW Monitoring Reports	Produced at the end of each CW campaign, the last report issued for the 4 <sup>th</sup> Campaign in 2004 (July 2004)
The Annual Reports for Air Quality in Egypt	Produced on Annual basis, the last report issued for year 2003. (available on EEAA website)
The Annual Reports for CW Quality in Egypt	Produced on Annual basis, the last report issued for year 2003. (available on EEAA website)
CW Task Manager End of Mission Reports	4 Mission reports during the phasing-out Phase
AQ Task Manager End of Mission Reports	5 Mission reports during the phasing-out Phase
Ref Lab Task Manager End of Mission Reports	5 Mission reports during the phasing-out Phase
Report on "Results of the EIMP Coastal Water Monitoring Programme 1998-2003"	
Report on "A National Air Quality Monitoring Programme for EEAA"	
Report on "Environmental Impact of Implementing the New Terminal Building of Cairo International Airport on Air Quality"	
Report on "Environmental Impact of Implementing the New Terminal Building of Sharm El-Shikh International Airport on Air Quality"	
Report on "Environmental Impact of Implementing the New Borg El-Arab Airport on Air Quality"	