3 .Protecting the Environment, USAID,February 1998

USAID and Egypt:

Protecting the Environment

February 1998

PROTECTING THE ENVIRONMENT

WATER AND WASTEWATER

Since 1975, USAID has invested over $2.6 billion in urban water and wastewater infrastructure benefitting about one in three (22 million) Egyptians. By the late 1970s, population density, together with long-postponed infrastructure investments, had severely overwhelmed the water and wastewater services of urban areas throughout Egypt, creating numerous environmental health hazards and a severe constraint on Egypt's economic development.. By 1997, several of the more recent investments were completed with the following results: 2 million residents in several poor Cairo neighborhoods are connected to sewage collection lines, and the overall system is benefitting from numerous new or rehabilitated wastewater pumping stations and treatment plants; wastewater conveyance and treatment for over 3 million people in Alexandria is now provided by two new treatment plants; more than 1 million residents of Suez, Ismailia and Port Said are connected to new wastewater treatment plants; three water treatment plants for the communities of Fayoum, Beni Suef and Minya improved water supplies and pressure to more than 700,000 residents; and, in Cairo, three major potable water reservoirs were put into service, reaching 3 million people in the heart of the city.

Institutional reforms have focused on strengthening the capacity of local water/wastewater utilities to deliver services. Presidential decrees granting institutional autonomy and decentralized decision-making power have been refined for Cairo and Alexandria. New decrees allow seven governorates to operate as economic entities on a cost-recovery basis. Revenue collection rates have improved substantially in Alexandria and Aswan through improved billings and accounts operations, and in Fayoum, Beni Suef and Minya through a commercial account metering program. These improved techniques are now encouraged through each of USAID's ongoing activities with utility organizations. Appropriate tariffs and tariff model continue to be important vehicles for increasing revenues toward cost recovery and sustainability of services.

USAID's water/wastewater program is now supporting the introduction of a commercial approach to water/wastewater management through private sector participation to meet Egypt's growing demand for these services. The total water/wastewater investment budget for Egypt over the next decade is estimated to be LE 16-23 billion ($5-7 billion), well above available national resources.

To have sustainable water and wastewater services, an enabling legal, institutional and policy environment must be established. To this end, USAID will support new initiatives that clarify the regulatory roles in the sector, reducing regulation related risks to investors, while, at the same time, assuring that customers will be charged tariffs based on reasonable rates of return, that competition in service delivery will be promoted to keep costs low, and that service quality, performance and environmental standards will be maintained and enforced.

Title: **Secondary Cities Development**
Number: 263-0236
Amount: $82 Million ($215 Million planned)
Initiated: FY 1994

USAID is expanding water and wastewater infrastructure investments to reach the communities of Mansoura, Nuweiba, Luxor, and the Aswan group of Nasr City, Kom Ombo and Darawo City. Water and wastewater treatment works will include collection/distribution pipeline networks, pump stations and storage tanks. The release of funds for these capital improvements will follow the implementation of reforms at central and local government levels critical to the operation of autonomous local utilities, including tariff increases needed to cover operation and maintenance costs and full revenue retention. Action Plans have been developed and agreed to in advance by all parties covering reorganization, targets and timing of reforms.

Background/progress:

USAID assistance covers:

- Institutional support: Technical assistance and training to assist in the design and implementation of reforms has been provided. Action Plans have been established and approved by the Government of Egypt, including reforms necessary for local water/wastewater authorities to achieve institutional autonomy and financial viability.

- Preparation of final design packages, including construction drawings and specifications as well as preparation of environmental assessments, have commenced for each site.

- Associated construction/rehabilitation will include water leak detection programs and wastewater system operations plans for each of the communities.

Title: **Cairo Water Supply II**
Number: 263-0193
Amount: $145 Million
Initiated: FY 1988

This project builds on the rehabilitation and expansion of the southern portion of the water treatment plant at Rod El Farag ($97.4 million - Cairo I). The second phase Cairo II involves the installation of 53 kilometers of distribution and transmission pipe in central Cairo, the construction of four ground level concrete reservoirs, construction of two pumping stations, the rehabilitation of four pumping stations, and the establishment of a central water quality laboratory. Technical assistance to strengthen the institutional capacity of the General Organization of Greater Cairo Water Supply (GOGCWS) to operate and maintain the entire water supply system is included.

Background/progress:

- Central water quality laboratory constructed, equipped and laboratory staff trained.
- 30 kilometers of distribution pipeline completed.
- 23 kilometers of ductile iron transmission pipelines, 4 prestressed concrete water reservoirs with a total capacity of 120,000 cubic meters, construction of 2 pumping stations, and rehabilitation of four pumping stations completed.
- Four million Cairo residents now benefit from a more reliable and safer water supply service.
- Institutional development has been carried out in five areas with GOGCWS: (1) financial viability, (2) managerial development, (3) technical support for operations and maintenance, (4) materials management and procurement, and (5) project management and administration. Both quantitative performance indicators and managerial policies are serving as guides for GOGCWS actions and decisions as its management moves the organization forward toward financial viability and autonomy.

Title: **Canal Cities Water and Wastewater II**
Number: **263-0174**
Amount: **$380 Million**
Initiated: **FY 1987**

Canal Cities II provides for the design, construction, operation and maintenance of wastewater treatment facilities for the three canal cities of Suez, Ismailia and Port Said. It also provides for the construction of a raw water pump station at Qantara to increase the water supply to the Port Said water treatment plant, along with related institutional development and training. The program also funds limited rehabilitation of three sewer collection systems to reduce infiltration. This will result in decreasing the operation and maintenance costs and extending the life of the three facilities .

Background/progress:

The following investments are supporting sustainable water and wastewater services in the three cities bordering the Suez Canal:

- Construction of new wastewater treatment facilities:

  The Suez treatment plant is completed and the initial two-year operation and maintenance program were completed in August 1997.

  The Ismailia treatment plant is completed and the initial two-year operation and maintenance activities were completed in January 1998.

  Work on the Port Said treatment plant was completed in 1997. The two year operation and maintenance program will continue through February 1999.

- Construction of a raw water pump station at Qantara to upgrade the city of Port Said's raw water supply source from its capacity of 150,000 cubic meters per day to 320,000 cubic meters per day has been completed.

- Institutional Development and Training Activities:

  A formal institutional development program in the three cities has been completed.

  The Suez Canal Authority (SCA) is operating the three wastewater treatment plants in Suez, Ismailia, Port Said, the Ataka pump station in Suez, and the Mazrah pump station in Port Said. SCA will continue to operate and maintain the facilities under a present agreement until June 2002, during which time the Egyptian government is seeking to develop and implement a program involving private sector participation as a permanent solution to sustainability.

Title: **Cairo Sewerage II**
Number: **263-0173**
Amount: **$771 Million ($784 Million planned)**
Initiated: **FY 1984**

Sustainable wastewater collection, treatment and disposal facilities are being financed by USAID for the West Bank of Cairo along with institutional and operations and maintenance (O&M) technical assistance. USAID is also providing institutional support to the Cairo General Organization for Sanitary Drainage (CGOSD) to enable it to better operate and maintain its physical facilities and to become a financially viable, autonomous organization.

Background/progress:

The enormous pressures of a burgeoning population coupled with the lack of proper maintenance contributed greatly to the deterioration of Cairo's wastewater system. Backed-up sewers and overflowing sewerage vaults were frequent occurrences in Cairo's poorer (and not so poor) neighborhoods as well as some outbreaks of cholera attributable to sewerage contamination of the water supply. Beginning in 1979, British, U.S. and GOE financing was dedicated to upgrade and expand the wastewater system. While the British effort is confined to improving the system on the East Bank of the Nile, the USAID-financed program has involved major projects on both sides of the Nile but is now concentrated on the West Bank. Since the completion of the first phase in 1986, Cairo has not experienced a major sewerage flooding incident due to system failure.

- A massive sewerage connection program is well underway on the West Bank providing service connections to about two million people previously unserved by piped service. Work in Zenein, the Pyramids area and adjacent villages has been completed, however, work is continuing in Embaba.

- The rehabilitation of the Zenein Wastewater Treatment Plant ($73 million), just south of Embaba, now is able to remove 95% of the pollution that would have been discharged into the Nile through the Nahya Drain. The expansion of the West Bank collection system has provided more than 300 miles of additional sewers ($115 million), eight new pumping stations ($79 million), and has constructed the Abu Rawash Primary Treatment Plant ($114 million) and its innovative sludge handling facility ($42 million) in the desert outside Cairo. Well over $100 million has been invested to construct additional facilities to increase the overall reliability and capacity of the system.

- An operation and maintenance (O&M) technical assistance component is providing system start-up services and training to GOE employees responsible for the newly constructed facilities.

- A permanent GOE training center was established at the Zenein wastewater treatment plant, and a large-scale program of staff training is on-going to make certain that the wastewater system will be well operated and maintained in the future.

Title: **Alexandria Wastewater System Expansion II**
Number: **263-0241**
Amount: **$90 Million**
Initiated: **FY 1997**

Working with the General Organization for Sanitary Drainage of Alexandria (AGOSD), USAID has financed the design, construction and operation of a sewerage collection and primary treatment system for approximately 75 percent of the city.

Background/progress:

Since 1978, USAID has been the main donor supporting improvements in wastewater collection, pumping, treatment and disposal in Alexandria, investing $425 million through Alexandria Wastewater System Expansion I. USAID-financed infrastructure has eliminated sewage flooding from the streets and diverted most of the discharges of untreated sewage which formerly contaminated the Mediterranean Sea and its beaches. Waterborne disease rates and infant mortality have been significantly reduced. With USAID assistance, AGOSD has installed 211 kilometers of sewers, six major pumping stations, two state-of-the-art primary treatment plants east and west of the city and a sludge dewatering and disposal facility. USAID assisted AGOSD with organizational development, financial control systems and operation and maintenance systems.

- The current grant agreement will double the capacity of the two treatment plants, upgrade the pumping stations and improve the sludge disposal systems to accommodate projected population expansion through 2010. The expanded west treatment plant will be capable of accepting the flow from the new central zone tunnel, allowing closure of the only remaining outfall discharging untreated wastewater into the sea.

- A concerted institutional development effort now under way will "corporatize" the utility structure to make AGOSD independent, autonomous, financially self-sustaining and functional as a modern utility organization.

- USAID has successfully encouraged other donors (French Cooperation, KfW, European Investment Bank) to participate in funding the infrastructure requirements of AGOSD, which will hasten AGOSD's progress.

Title: **Egypt Utilities Management (EUM)**
Number: **263-0270.01**
Amount: **$215 Million**
Initiated: **FY 1997**

The three newly formed Economic General Authorities for Water Supply and Sanitary Drainage in the governorates of Fayoum, Beni Suef and Minya have entered into an agreement with USAID for a new program to provide adequate and sustainable water and wastewater services for their 7.5 million inhabitants. The program is expected to (1) increase revenues to recover operation and maintenance costs; (2) greater autonomy in managing utility assets; and (3) a significant improvement in the capacity of the sector to deliver services to residents. The EUM program builds upon previous USAID support in Middle Egypt (under the Provincial Cities Development Project) for master plans, construction of water treatment plants, and installation of water meters.

Background/progress:

The three governorates will collaborate with other Egyptian government institutions to enhance the autonomy of the water/wastewater authorities. The Economic General Authorities in Fayoum, Beni Suef and Minya will be responsible for undertaking necessary institutional reforms as well as executing host country contracts for construction. USAID will be responsible for executing and managing USAID direct contracts for developing master plans, institutional development services and supervision of design and construction. Key program activities include:

- Master Plan: A 20-year strategic plan will be developed to guide future investment in water supply and wastewater facilities in the three governorates, including identification of high-priority projects to be funded under the USAID and GOE co-financed construction program.

- Institutional Development: The first phase of assistance will focus on overcoming the most critical constraints to cost recovery, such as improving billing and collection systems and reducing water losses. The second phase will provide comprehensive assistance, covering such issues as reorganization, financial management and customer relations.

- Design and Construction: Based on the master plan and progress in institutional development, construction activities are likely to include rehabilitation of existing wastewater treatment facilities, improvements to the reliability of water production, construction of headquarters building and district-level operation and maintenance centers.

- Village Assistance: To improve health conditions in low-income village households, USAID will also support expanded access to clean water and adequate sanitation facilities. as well as hygiene education and community participation.

AIR POLLUTION

Urban air pollution is another major environmental problem which jeopardizes Egypt's economic development and its citizens' health. Urban air quality is seriously degraded as a result of industrial emissions, vehicles, construction, and open burning of garbage. Levels of suspended particulate and lead pollution in Cairo are among the highest of the world's megacities. Children reared in Cairo are particularly vulnerable to the higher than average lead pollution which lowers IQ by four to five points.

USAID industrial energy and environment activities are helping reduce the discharge of industrial pollutants and promote energy conservation and use of cleaner fuels. In 1997 alone, energy efficiency activities eliminated the following pollutants from urban air expressed in metric tons (M/T): 44,400 M/T of sulfur oxide; 36,600 M/T of nitrogen oxide; and 44,500 M/T of carbon monoxide. In addition, with the widespread introduction of unleaded gasoline, lead levels in Cairo and elsewhere have begun to drop.

A new Cairo air quality activity initiated in 1997 is working with the Government of Egypt in a number of areas: reducing lead emissions from local smelters and vehicles; instituting a vehicle emissions testing and certification program; and introducing natural gas-fueled buses to reduce diesel emission particulate pollution, using support from the U. S. private sector. Working with a wide spectrum of Egyptian partners, USAID is now designing a new environmental policy program intended to address the major constraints to improved environmental management in Egypt.

Title: **Cairo Air Improvement Project (CAIP)**
Number: 263-0250
Amount: $35 Million ($60 Million planned)
Initiated: FY 1995

Among the world's largest cities, Cairo has the worst air pollution in terms of suspended particulates and lead. The Government of Egypt (GOE) made a significant commitment to address air pollution in its Environmental Action Plan which was adopted in 1992 and the promulgation of a new environmental law (Law 4 of 1994). USAID has joined forces with the Egyptian Environmental Affairs Agency (EEAA), the Ministry of Petroleum's Office of Energy Conservation and Planning, other donors, and the private sector seeking solutions to institutional and technical constraints in an attempt to improve air quality through a reduction of emissions that have proven to be the greatest health risks.

Background/progress:

CAIP is designed to include activities that have some immediate impacts on reducing vehicular emissions, total suspended particulates (TSP) and lead, while setting the stage for a long-term effort through demonstrations and pilot tests of alternative technologies, increased public awareness and training. The following CAIP interventions will deal with the most crucial air pollution problems amenable to USAID support:

Improve fuel efficiency and reduce exhaust emissions of gasoline motor vehicles by instituting a vehicle emissions testing, tune-up and certification program drawing on lessons learned from a successfully completed pilot effort;

Promote the conversion of diesel-fueled, public sector municipal bus fleets to compressed natural gas to reduce total suspended particulate emissions;

Reduce the concentration of airborne lead in and near lead smelters;

Institute air quality monitoring of CAIP-funded interventions that will complement the monitoring network being introduced by other donors for their interventions;

Initiate a public awareness and communications campaign.

The start-up phase places heavy emphasis on training. Over the past year, extensive short-term training through workshops and observations tours has been arranged for key Egyptian partners to familiarize them with technical issues related to the above interventions: vehicle emission regulations and enforcement, compressed natural gas, and lead smelters. In addition, the EEAA developed a Lead Smelter Action Plan which is now ready for implementation with CAIP assistance.

USAID has awarded a contract to Chemonics International for the management and implementation of CAIP. The 1998 Workplan has been approved by USAID an the Government of Egypt. This workplan lays out the strategies and approaches that will be employed to implement the project. By the end of the workplan, 1998: (1) construction and procurement of equipment for the VET technical center/model station will be completed; the GOE will have issued a tender document for the private sector to operate and manage the emission testing; (2) US designed demonstration CNG buses will be delivered and used for training; the two prototype CNG buses based on US/Egypt design will be in service; (3) construction of a new private sector lead smelter will be underway; (4) baseline data of lead emissions completed.

Title: **Energy Conservation and Environment (ECEP)**
Number: **263-0140.03**
Amount: **$67.5 Million**
Initiated: **FY 1988**

This USAID-supported demonstration, training and promotion activity is helping accelerate the use of technologies and practices aimed at improving energy efficiency and preventing pollution at participating Egyptian industrial and commercial facilities which simultaneously increase company profitability. The El Tabbin Institute for Metallurgical Studies (TIMS) of the Ministry of Industry, the Development Research and Technological Planning Center (DRTPC) of Cairo University, and the Federation of Egyptian Industries (FEI) are collaborators.

Background/progress:

- Technical assistance and some $19 million worth of equipment have been provided to over 150 industrial and commercial facilities. Some 30 demonstrations of different energy efficient technologies in public and private sector industries have been completed, resulting in annual energy cost reductions for participating companies of around $14 million.

- Demonstrations have touched all major industrial sectors as well as the institutional and commercial sectors, i.e., from tourism to health care; from the bread baking industry to promoting automobile vehicle tuning in the Greater Cairo area.

- To create greater understanding and knowledge of program objectives, routine contact is maintained with over 4,500 organizations and individuals through an outreach program. Over 5,000 practicing engineers and professionals countrywide have received related training in Egypt and about 100 received specialized training overseas.

- Cumulative energy savings are in excess of $30 million.

- Avoided emissions of "greenhouse" gases include:

  6,000 tons of Carbon Monoxide--48% reduction
  3,000 tons of Nitrogen--22% reduction
  17,000 tons of Sulphur Dioxide--28% reduction
  700,000 tons of Carbon Dioxide--7% reduction.

ECEP is in its final phase and is focusing increasingly on sustainability, setting the stage for the widespread replication of its approach. Initiatives include developing a cadre of energy management training specialists within 50 or more industrial companies and increasing outreach to policy decision makers in key entities. This includes the Ministries of Electricity, Petroleum and Natural Resources and the Egyptian Environmental Affairs Agency as well as the financial and banking community to encourage a supportive policy framework and continued funds availability.

NATURAL AND CULTURAL RESOURCE MANAGEMENT

Serious environmental degradation constrains Egypt's achievement of sustainable development and jeopardizes the health and livelihood of its citizens. Protecting the environment is also vital to sustaining Egypt's tourism industry, which is the country's second highest foreign exchange earner. A new program, which grew out of the U.S.-Egyptian Partnership for Economic Growth and Development, focuses on the managing the development of the Red Sea coral reef and coastal areas as well as the preservation of antiquities to ensure the continued health of the tourism sector.

Title: **Promotion of Environmentally Sustainable Tourism**
(Funded under Technical Cooperation and Feasibility Studies)
Number: 263-0225
Amount: $5.35 Million
Initiated: FY 1996

Under the U.S.-Egyptian Partnership for Economic Growth and Development, USAID has been helping the Government of Egypt introduce environmentally sustainable development policies and programs for the tourism industry. Tourism, one of the fastest growing sectors of the Egyptian economy, threatens the very attractions for which Egypt is famous. Uncontrolled development along the Red Sea Coast has resulted in coastal landfills, pollution from urban and industrial sources, resource allocation conflicts, and the improper disposal of solid wastes. The coral reefs are also being damaged by careless anchoring of boats and other irresponsible behavior. Egypt's antiquities have not fared any better and are suffering rapid degradation, unprecedented in their history. This project ended in December 1997, but some activities are now being continued under the Antiquities Development Project.

Background/progress:

This pilot activity was designed to foster sustainable growth in tourism while protecting the natural and cultural sites upon which tourism is based and to contribute to long-term economic growth and job creation in Egypt. Its approach encourages linkages among the public sector, private sector, and non-governmental organizations having interests in the sites. Major elements include (1) the creation of a Marine Park Sanctuary along the Red Sea coast to protect coral reefs (2) improvement of the culture tourism potential of St. Paul's and St. Anthony's Monasteries in the desert west of Hurghada; (3) restoration of the Islamic Fort of Quseir; (4) development of a suitable plan for the touristic presentation for the Tomb of Seti I in the Valley of the Kings; and (5) development of an Environmentally Sustainable Tourism Strategy for the Red Sea Coast.

Accomplishments:

- A new Marine Park Sanctuary was established which protects all of the islands and coral reefs off the Red Sea coast. Park rangers have been hired and trained; mooring buoys have been installed; and enforcement of new environmental laws by the rangers began.

- Wall painting conservation and museum development was carried out at St. Anthony's and studies to improve the sanitary drainage system at St. Paul were conducted.

Title: **Antiquities Development Project (ADP)**
(Funded under Technical Cooperation and Feasibility Studies)
Number: 263-0225
Amount: $2.6 Million
Initiated: FY 1996

Under the U.S.-Egyptian Partnership for Economic Growth and Development, USAID is working with Egyptian governorates, the Egyptian Environmental Affairs Agency (EEAA), and the Supreme Council of Antiquities (SCA) to promote the environmental sustainability of tourism through the preservation of Egypt's cultural heritage. Site development in the Red Sea area is intended to strengthen the region's cultural tourism, to complement the incredibly rapid growth of hotels along the coast. In Luxor, this project will create a model of proper analyses needed to prepare Pharoanic tombs for touristic presentation. Through the American Research Center in Egypt (ARCE), work is being carried out at four sites: the Tomb of Seti I in Luxor, the Islamic fort at Quseir, and the monasteries of St. Anthony and St. Paul near the Red Sea.

This project will introduce technologies intended to enhance the cultural attractions that draw visitors, and to protect the sites themselves from degradation that could be a by-product of tourism. The technologies used at these four sites can be adapted as necessary to other sites in Egypt. All of these activities involve the communities surrounding the sites, which is vital to their sustainability as touristic sites and as part of Egypt's national heritage.

Background/progress:

- The Tomb of Seti I: This site in Luxor is the largest decorated tomb in the Valley of the Kings. ARCE and the SCA will undertake a comprehensive study of the structural, conservation and touristic presentation aspects of the tomb. As a result of this study, recommendations will be made for the tomb's preservation.

- Quseir Fort: ARCE and the SCA will document and consolidate this fort, which as built on the crest above Quseir by Sultan Selim to protect the town's port. The conservation activities also include the creation of a visitors' center to introduce the cultural history of the Red Sea region to tourists.

- Monasteries of St. Anthony and St. Paul: These ancient monasteries near the Red Sea, north of Hurghada, contain exquisite Coptic wall paintings from the 13th century. Work includes cleaning and conservation work on the paintings and the creation of display areas for cultural artifacts.

Title: **Preservation and Restoration of Egyptian Antiquities/ Egyptian Antiquity Fund**

(Funded under Technical Cooperation and Feasibility Studies)

Number: **263-0225**

Amount: **LE 50.4 Million ($15 Million)**

Initiated: **FY 1994**

This project aims to assist the Egyptian government protect its vast cultural heritage through the resoration and conservation of numerous antiquities which are threatened by ground water and a lack of sufficient technical and financial resources. The American Research Center in Egypt (ARCE), in close coordination with the Egyptian Supreme Council for Antiquities (SCA), is administering this project using Egyptian currency generated under USAID policy reform and commodity programs. The project will also assist SCA to strengthen its technical and management capabilities.

Background/progress:

Various U.S. and Egyptian specialized institutions including Chicago House, Friends of the Fulbright Commission, American University in Cairo, California Academy of Sciences, and University of Pennsylvania have received sub-grants. Their work touches on a number of periods including Neolithic, Pharaonic, Greco-Roman, Coptic, and Islamic. Sub-grants provide funds for restoration, documentation and at times institutional development. To date, 40 sub-grants have been allocated. Work is currently under way at most of these sites; seven have already been completed. It is estimated that all activities will be completed by 2005. Some examples of conservation activities include:

- Zawiya Ibn Barquq Mosque: Photographic, architectural and historical documentation is complete and conservation work is underway.
- Marine Conservation Laboratory: The Alexandria laboratory supports marine archaeology and conservation of artifacts retrieved from sunken ships or buried in ground water. The upgrading of laboratory buildings is now complete.
- Coptic area of Cairo: Site presentation plan and analysis of groundwater are underway
- Bayt ar Razzaz: An existing conditions report has been completed. Photographic documentation and conservation work is underway.
- Luxor Temple: A small laboratory and storage area was built to treat fragments of the temple that are waterlogged. Conservation of these fragments is underway.

In addition to conservation sub-grants, ARCE has provided SCA with technical training in critical areas such as excavation, documentation, conservation and museum management.

- Thirty-four SCA inspectors have been trained in architectural excavation techniques at the ARCE Field School.
- Sixteen SCA employees completed a six-week training course for museum management in the United States.

4. Project List

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ARAB REPUBLIC OF EGYPT

POLLUTION ABATEMENT PROJECT

STAFF APPRAISAL REPORT

Loan/Credit and Project Summary

Borrower	:	For IBRD Loan: The National Investment Bank (NIB) For IDA Credit: The Arab Republic of Egypt	
Guarantor	:	The Arab Republic of Egypt	
Implementing Agencies	:	The Egyptian Environment Affairs Agency (EEAA), Apex and participating banks	
Beneficiaries	:	EEAA, Environment Management Units in the Governorates, local NGOs and professional associations, private and public industrial enterprises, and participating banks	
Loan/Credit Amount	:	IBRD Loan:	US$20.0 million
		IDA Credit:	SDR 10.9 million (US$15.0 million equivalent)
Terms	:	IBRD Loan:	20 years including 5 years of grace, standard interest rate for LIBOR-based US dollar single currency loan
		IDA Credit:	Standard for 35 years including 10 years of grace
Commitment fee	:	For IBRD Loan:	0.75 percent on undisbursed loan balances, beginning 60 days after signing, less any waiver
		For IDA Credit:	0.50 percent on undisbursed credit balances, beginning 60 days after signing, less any waiver
On-lending Terms	:	(i) The total amount of the IBRD loan and IDA credit would be made available to NIB, the Borrower, on standard IBRD and IDA terms respectively, for on-lending and awarding grants through an Apex Bank and participating banks; a guarantee fee of 0.125 percent would be payable to the Government of the Arab Republic of Egypt (GOE); (ii) NIB would on-lend funds to an Apex Bank at	

the Bank's standard interest rate for LIBOR-based US dollar single currency loans plus 0.25 percent per annum to cover its costs for Apex banking functions; and (iii) Sub-loans to borrowers would be at prevailing market rates of interest. In case sub-loans are made in Egyptian Pounds, the Apex Bank and participating banks would bear the foreign exchange risk for their borrowers.

Project Objectives : The objectives of this pilot project are to strengthen the monitoring and enforcement capabilities of the environmental institutions and establish technical and financial mechanisms for pollution abatement investments in Greater Cairo, Alexandria, and the two Suez Canal cities of Suez and Ismailia.

Project Description : The Technical and Institutional Support Component (14.2 percent of project baseline cost), which is cofinanced by a grant from the Government of Finland (GOF), would provide for:

(a) Strengthening the capacity of three EEAA branches and four Governorates' EMUs;
(b) Development of Pollution Abatement Action Plans;
(c) Support for Environmental Audit Programs; and
(d) Promoting Awareness and Media Education Programs.

The Pollution Abatement Investment Component (80.1 percent of project baseline cost) would provide financing for pollution abatement sub-projects in private and public industrial enterprises. The sub-projects would include waste minimization, pollution prevention, resource recovery, adoption of clean technology, fuel substitution and only as a last resort, end-of-pipe environmental control where no other alternatives are available.

Benefits : The proposed project would: (i) introduce innovative and replicable market mechanisms for environmental management that simultaneously develop collaboration between the financial and regulatory/enforcement institutions and industrial enterprises; (ii) assist the GOE in improving its monitoring/enforcement capacity; (iii) introduce pollution prevention investments as a tool for environmental management in Egypt; and (iv) promote the participation of the NGOs and the media to create a public expectation for the governorate and the industrial enterprises to adopt good environmental and safety practices.

Risks : The project faces four significant risks: (i) If enforcement of the environmental laws is not sufficiently strengthened, the industries may not have a sufficient incentive to undertake abatement measures. The technical and institutional component is designed to support the strengthening of the institutions in charge of

enforcement; (ii) The on-lending terms and conditions may become uncompetitive in an environment of concessionary terms provided by the bilateral donors. This risk would be, however, minimized by conducting periodic consultations with the bilateral donors on the on-lending conditions and grant arrangements; (iii) The enforcement and the financial institutions have limited experience and in-house capabilities for environmental management and environmental lending. To minimize this risk, the technical and institutional component is mostly directed to building up those capabilities through technical assistance and training; and (iv) Egypt has a track record of inadequate implementation performance. This risk would be minimized by financing through the participating banks the priority sub-projects already appraised, and by delegating the procurement review and disbursement monitoring responsibilities to the Resident Mission in Egypt.

Estimated Costs[a/]

Component	Local	Foreign	Total
	(US$ Million)		
Technical and Institutional Support	1.8	5.1	6.9
Pollution Abatement investment	4.0	35.0	39.0
Incremental Operating Costs	1.9	-	1.9
Total Baseline Costs	7.7	40.1	47.8
Physical Contingencies	0.1	0.1	0.2
Price Contingencies	0.2	0.5	0.7
TOTAL	8.0	40.7	48.7

a/ The project cost is exclusive of taxes and duties.

Financing Plan

Source of Funds	Local	Foreign	Total
	(US$ Million)		
GOE	4.0	-	4.0
Enterprises	4.0	-	4.0
GOF	-	5.7	5.7
IBRD	-	20.0	20.0
IDA	-	15.0	15.0
TOTAL	8.0	40.7	48.7

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Canada's Current Support to EEAA
for Environmental Industrial Initiatives

EGYPTIAN ENVIRONMENTAL INITIATIVES FUND (EEIF)

Goal: to promote sound management and conservation of Egypt's natural resources by the private and voluntary sectors.

Purpose: to strengthen the capacity of the voluntary and private sector to realize sustainable environment improvements.

Budget: CDN $20.0 M (about US $14.5 M)over 7 years (1997-2004)

Description: The EEIF can be accessed by Egyptian private and voluntary organizations through 3 main channels:
a) Environmental Technology & Management Support whose purpose is to strengthen environmental management of Egyptian businesses, NGOs, and to a limited degree, the public sector;
b) Community Participation Support which provides financial support for community-based voluntary organizations to carry out locally generated environmental improvement initiatives;
c) Environmental Enterprise Support which will encourage Egyptian entrepreneurs to access and exploit the market for environmental goods and services by developing new "green" business enterprises.

Cdn Executing Agency: Beak, Cowater International, Amplus

Currently the project is in the inception phase, whereby the project design is being finalized. It is expected that, following a meeting of the Project Steering Committee in late April, the project will move into the implementation phase of pilot projects located in Ismailia Governorate. Although the project is national in scale, the pilots will serve as a trial run regarding procedures and policies. National coverage will be achieved by working in one region per year for the 4-year of the implementation phase, starting with the Canal Zone Region, Upper Egypt Region, Greater Cairo Region, and Delta Region.

Within each region, 3 priority sectors will be selected, based on number of facilities, level of pollution and level of organization.

Funding of sub-projects will include a combination of client contribution, loan and grant.

For green businesses, the target group are existing green businesses, existing enterprises (small and medium) that want to start an SME green business, entrepreneurs, and NGOs wanting to start a profit-generating green business. Priority sub-sectors include: solid waste management, waste water and potable water treatment, pollution control devices, environmental consulting services, water monitoring and testing, and renewable energy.

* Implementation of no-cost and low-cost pollution prevention techniques in most plants

* Medium cost technologies installed as demonstrations in three facilities (grant basis)

* Pilot city-wide "environmental management system" designed for 10th of Ramadan City

* Case studies published on industrial pollution on EP3's industrial pollution prevention of experiences in Egypt

Name: Egyptian Environmental Policy Program (EEPP)

Status: Signing of agreement with GOE shortly

Focus: Policy and institutional reform applicable to individual pollution

Results:

* Promote policies that increase the availability and affordability of equipment, spare parts and inputs for environmental control, and monitoring and pollution prevention.

* MOEA/EEAA and concerned GOE entities develop improved systems and capacity for monitoring, inspection, and testing to ensure compliance with industrial pollution policies.

* MOEA/EEAA, in cooperation with industrial stakeholders and relevant GOE entities, develops pollution reduction strategies through higher rate of compliance.

* Strengthen the capacity of public and private sector to provide consistent and reliable environmental assessment services which will support industrial compliance with environmental policies and regulations.

Name: Private Sector Commodity Import Program

Status: On-going

Focus: Importation by Egyptian private sector of U.S. technologies

Results:

* $ 200 million dollars of transactions made per year with wide variety of Egyptian private sector firms

* Interest-free grace period on repayment reduces Egyptian importers' overall costs

* Additional credit terms available for export-oriental firms and for firms located in Upper Egypt

* Option for extending additional credit terms to Egyptian firms wishing in import environmental protection technologies.

USAID

USAID's PAST AND PRESENT PROGRAMS ON INDUSTRIAL POLLUTION

Name: Energy Conservation and Environment Project (ECEP)

Status: Completed September 1998

Focus: Technology demonstration and training

Results:

* Energy efficiency assessments in more than one hundred industrial plants and commercial establishments

* Installation of energy efficiency technologies in 30 facilities (grant basis)

* Low-cost energy efficiency methodologies demonstrated in nearly 100 facilities

* Technical training provided to 4,000 industrial managers and technicians

* Pilot Demand-Side Management program conducted in Alexandria

* Institutional and policy barriers to energy efficiency analyzed (forms basis of new policy program)

* Private sector energy-service company association formed

* Over a score of detailed technical manuals and case studies published (many in Arabic and available on CD-ROM)

Name: Environmental Pollution Prevention Project (EP3)

Status: Completed September 1998

Focus: Technology demonstration and training

Results:

* Pollution prevention assessments conducted in over forty industrial plants

* Industry/government pollution prevention "partnership" committees cooperated with EP3 in Alexandria and 10th of Ramadan

オランダ

Netherlands activities to support industries with cleaner technology

1. The Netherlands has available a fund called ORET/MILIEV which can be used by industries to obtain a grant of 35% on delivery of equipment which contributes to improvement of environment.

2. Also a programme under which retired mangers can be sent to industry is in operation. Especially for Egypt this programme is gaining momentum. Though it is not specifically aiming at the environment, many requests of industries in this respect are being received.

3. The Netherlands is currently conducting a feasibility study to improve the industrial area of Sadat City. This project is the first phase of a large scale upgrading of the environment which includes an awareness programme in the surrounding villages.

4. The Embassy has a local environmental fund from which small projects in the environment can be financed. This fund is not specifically aiming at industry but can be used for this target group.

イギリス

SEAM PROJECT - CLEANER PRODUCTION COMPONENT
TCOE/EEAA and DFID/Entec UK

SEAM I - 1995-1999

The SEAM Cleaner Production component is part of the National Industrial Pollution Prevention Programme (NIPPP). NIPPP was developed to encourage the introduction and promotion of low-cost pollution prevention measures throughout industry. Elements of the SEAM project are outlined below.

Cleaner Production Audits were undertaken in 32 factories within the textiles, food, edible oil & soap sectors. Over 200 different CP interventions were identified, ranging from simple "housekeeping" improvements to process modifications and upgrading management systems. Audits were carried out in the following factories:

Textile Sector

- Misr Spinning & Weaving, Mahalla.
- Giza Garments Co., Giza.
- Misr Beida Dyers, Kafr El-Dawar.
- El Nasr Co. for Spinning, Weaving & Dyeing, Mahalla.
- Dakahleya Co. for Textiles, Dakahleya.
- Amintex Dyeing & Finishing, Sadat City.
- Wooltex, Cairo.
- Cairo Dyeing & Finishing, Cairo.
- General Co. for Jute Products, Belbeis.
- El Seyouf Spinning & Weaving, Alexandria.

Food Sector

- Misr Dairy Co., Mansoura.
- Edfina Preserved Foods Co., Alexandria.
- Kaha for Preserved Foods, Kaha.
- Misr Dairy, Cairo.
- Edfina Preserved Foods Co., Damietta.
- El Nasr Co. for Bottling, Mansoura.
- Alexandria Chocolate & Confectionery, Alexandria.
- El Ahram Beverages, Zagazig.

Edible Oil and Soap Sector

- Sila Edible Oil Co., Fayoum.
- Tanta Oil & Soap Co., Tanta.
- Alexandria Oil & Soap Co., Kafr El-Sheikh.
- Nile Co. for Oil & Detergents, Sohag.
- Misr Oil & Soap, Zagazig.
- Dolce Co. for Food, 06 October City.
- Alexandria Oil & Soap Co., Kafr El-Zayatt.
- Savola Oil & Soap, 10 Ramadan City.
- Salt & Soda Co., Alexandria.
- Nile Oil & Soap, Asyut.
- Misr El-Khalig for Oil, Suez.
- Cairo Oil & Soap Co., Giza.

To assist with the auditing process, a set of Audit Guidelines were developed specifically for Egypt. These described the methodology that was to be adopted, a suggested format for the audit report and a description of current environmental legislation and regulations. A training session was held to discuss and explain these to the selected audit teams.

Cleaner Production Demonstration Projects - based on the findings of the audits, 75 CP measures were implemented by SEAM in 21 demonstration projects at an approximate cost of £UK1.5m. Co-financing was required from each beneficiary. Demonstration projects included:

Textile Sector Demonstration Projects

- Achieving "Ecofriendly" Processing for Export Markets (2 factories).
- Water and Energy Conservation (2 factories).
- Combined Scour-Bleach Process. (2 factories).
- Reduction of Sulphide in Effluents from Sulphur Black Dyeing (3 factories).
- Use of Enzyme Catalyst for Bleach Clean-up in Cotton Textile Processing (2 factories).

Food Sector Demonstration Projects

- Installation of Milk Tank Level Controls and Valves.(1 factory).
- Water Conservation in Food Factories (1 factory).
- Energy Conservation in Food Factories (2 factories).
- Reducing Waste by Improved Quality Control. (2 factories).
- Recovery of Whey as Animal Feed (1 factory).

Edible Oil and Soap Sector Demonstration Projects

- Integrated Water Management System (1 factory).
- Oils and Fats Recovery implemented in a Large-Scale Operation (1 factory).
- Oils and Fats Recovery implemented in a Small-Scale Operation. (1 factory)

Cleaner Production Guidance Manuals - Guidance Manuals, written as step-by-step guides, illustrated with data and results from the demonstration projects, were prepared for the

- Guidance Manual: Achieving "Ecofriendly" Processing for Export Markets in the Textile Sector.
- Guidance Manual: Identifying, Prioritising and Implementing Water and Energy Conservation Opportunities in the Textile Sector.
- Guidance Manual: Combining the Bleaching and Scouring Processes in the Textile Sector.
- Guidance Manual: Improving the Sulphur Dyeing Process in the Textile Sector.
- Guidance Manual: The Identification, Prioritisation and Implementation of Water and Energy Conservation Opportunities in the Food Sector.
- Guidance Manual: Introducing the HACCP Process into Food Factories.
- Guidance Manual: The Use and Introduction of Whey as an Animal Feed.

Cleaner Production Case Studies - that summarise the CP implementation and cost benefits were prepared for the following:

- Eco-friendly Processing and Obtaining Ecolabels at Misr Spinning & Weaving, Mahalla, Egypt and Giza Garments Co., Giza, Egypt.
- Water and Energy Conservation at El Nasr Co. for Spinning, Weaving & Dyeing, Mahalla, Egypt.
- Improving Fabric Quality and Reducing the Use of Toxic Chemicals in the Sulphur Dyeing Process in three Egyptian Textile Factories.
- Reducing Processing Time and Wastage by Combining the Scouring and Bleaching Process - Giza Garments Co., Giza, Egypt and Misr Beida Dyers, Kafr El-Dawar, Egypt.
- Using Enzymes in the Cotton Bleaching Clean-Up Process, Amirtex Dyeing & Finishing, Sadat City, Egypt and Dakahleya Co. for Textiles, Dakahleya, Egypt.

- Reduction of Milk Losses at Misr Dairy, Mansoura, Egypt.
- The Use of Whey as an Animal Feed - Waste into Profits: Misr Dairy, Damietta, Egypt.
- Introduction of HACCP into Food Factories to Minimise wastage and Improve Quality: Edfina Preserved Foods Co., Alexandria, Egypt and Misr Dairy, Mansoura, Egypt.
- Water and Energy Conservation at Edfina Preserved Foods Co. and Kaha for Preserved Foods, Kaha, Egypt., Alexandria, Egypt.

- Waste Minimisation at Sila Edible Oil Company, Fayoum, Egypt.
- Cleaner Production Opportunities implemented at Tanta Oil & Soap Co., Tanta.
- Improving Raw Water Quality to Reduce Wastage, Alexandria Oil & Soap Co., Kafr El-Sheikh, Egypt.

Cleaner Production Training - Throughout the Project, training has been carried out to support the implementation of CP. This has included training of factory personnel - at both the managerial and technical levels, consultants, research institutions and suppliers.

Cleaner Production Strategic Sector Reports - have been prepared for the following:

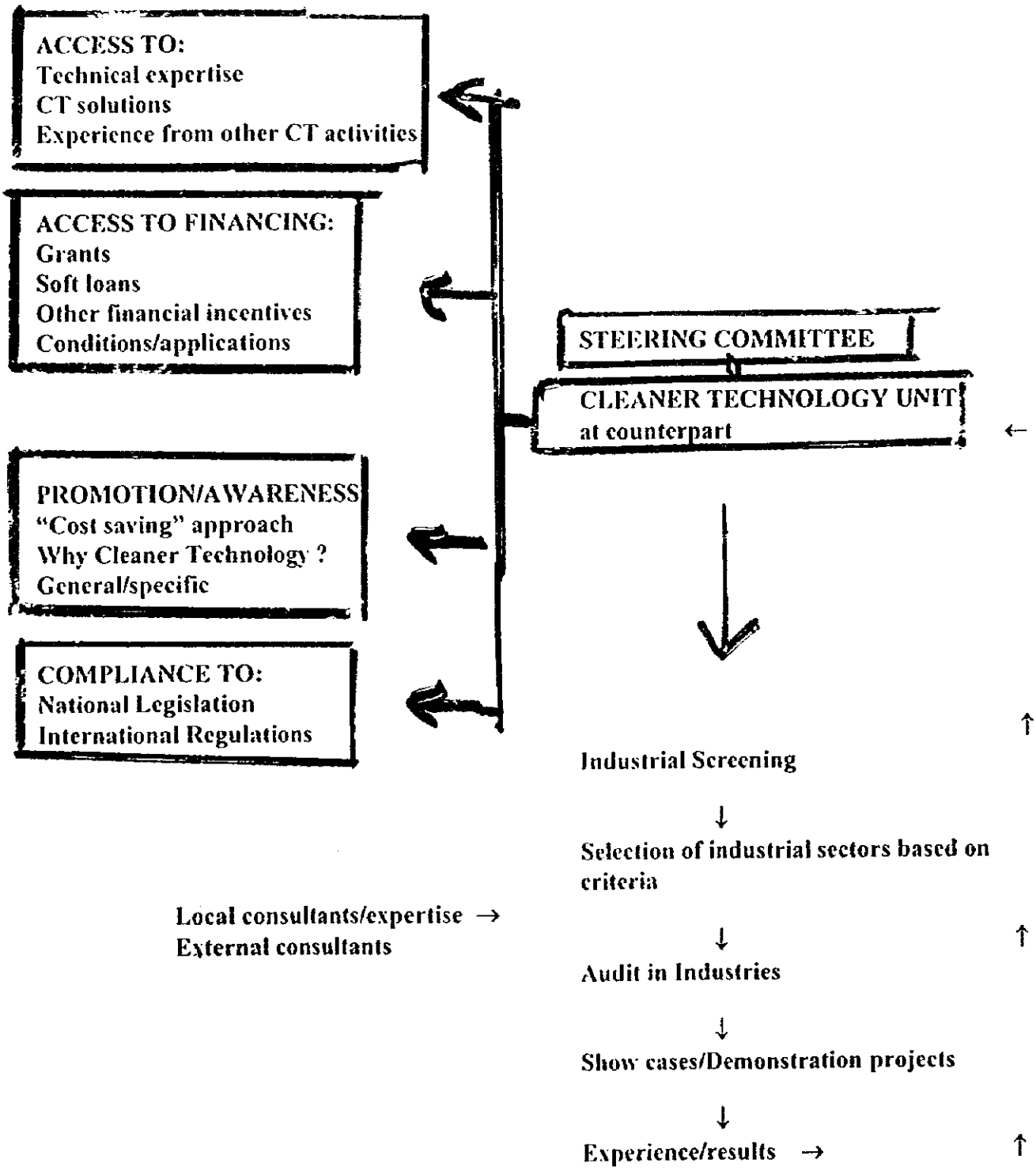
- A Strategic Assessment and The Way Forward for the Egyptian Textile Sector.
- A Strategic Assessment and The Way Forward for the Egyptian Food Sector.
- A Strategic Assessment and The Way Forward for the Egyptian Edible Oil and Soap Sector.

SEAM II - 1999-2003

Focus of the Cleaner Production component will be:

- Small to medium enterprises
- In the Governorates of Qena, Sohag, Dakahleya and one other Governorate in the delta.
- Likely sectors within the above Governorates: textiles, food, metal finishing, brickworks
- Ongoing monitoring and dissemination the SEAM I demonstration projects.
- Strengthening Governorate institutional capacity

Proposal for a "Cleaner Technology Program" in Egypt



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1) GR. H. Pöllo u.
2) KHS, Br Glück z.K.

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Embassy of the Federal Republic of Germany
Development Cooperation Section

Cairo, February 1999
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Tel.: 3410015
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WZ 440.97

Egyptian-German Development Cooperation Programme

Protection of

ENVIRONMENT AND NATURAL RESOURCES

1. Environment: Cooperation Priority

The "Medium-Term Concept for Development Cooperation between the Federal Republic of Germany and the Arab Republic of Egypt", agreed between the two governments in June 1994, declares the "**Protection of the Environment and Sustainable Resource Mangement**" as one of four priority areas of co-operation. Emphasis shall be put on

- **Industrial Waste Water Treatment and Reduction of Air Pollution**
- **Increasing Energy Efficiency, Energy Saving and Promotion of Renewable Energies**
- **Communal Water Supply and Waste Water Treatment**
- **Sustainable Use and Conservation of Agricultural Resources**

2. Project List

A list of 22 environment related projects funded under the Development Cooperation Programme is attached, out of which 6 are supported under the Technical Cooperation Programme while the balance is financed within the Egyptian-German Financial Cooperation Programme.

3. Terms

The loan terms under Financial Cooperation for Egypt are in principle:
Interest 0,75 %; grace period 10 years; repayment period 40 years.

Projects which aim primarly at the protection of the environment can be supported by means of a grant if they fulfill the required conditions, provided that sufficient grant funds are available. Technical Cooperation is always given in grant form.

4. Implementing agencies

Financial Cooperation:	**Kreditanstalt für Wiederaufbau (KfW)** **Frankfurt**
Technical Cooperation:	**Gesellschaft für Technische Zusammenarbeit (GTZ)** **Eschborn**

Both agencies operate on behalf of and under special agreement with the **Federal Ministry of Economic Cooperation and Development (BMZ)**, which is the competent ministry for German Development Policy and the funding institution.

5. For further information please contact:

- **German Embassy**, Counsellor for Development Cooperation
  Cairo
  Tel.: 3399600/647

- Gesellschaft für Technische Zusammenarbeit (GTZ)
  Project Administration Office
  Cairo
  Tel.: 340 9750/342 0714; Fax: 341 2445

- Kreditanstalt für Wiederaufbau (KfW)
  Cairo
  Tel.: 3417496/3413702; Fax: 341 3702/3412445

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Appendix 1

Short List of Projects

A. Financial Cooperation

1. Reduction of Dust Emissions in the Egyptian Cement Industry
2. Rehabilitation of Misr Chemical Industries (MCI)
3. National Drainage Project
4. Sector Programme to Enhance Environmental Awareness of Private Sector Industry
5. Nag Hammadi Barrage
6. Ductile Iron Pipes Plant (ENC)
7. Sewerage Project Kafr El Sheikh
8. Improvement of Cotton Pest Management
9. Alexandria Battery Plant and Decontamination Project
10. Promotion of Renewable Energy - Wind Park Safarana
11. Irrigation Improvement Project
12. River Nile Protection Programme (SFD)
13. Participatory Urban Development Manshiet Nasr
14. Rehabilitation of Thermic Power Stations
15. Reduction of Pollution in Electricity Generation
16. Waste Water Treatment Amriya-Alexandria

B. Technical Cooperation

17. Integrated Pest Management
18. Protection and Development of Agricultural Resources in the El Qasr Region
19. Solid Waste Water Management in Aswan
20. Drinking Water Supply, Alexandria

21. Hygiene Advisory Services, Kafr El Sheikh

C. Other Projects

22. Promotion of Environmental Awareness and Institutional Strengthening (EEAA/FES)

Long List of Projects

A. Financial Cooperation (KfW)

1. Reduction of Dust Emissions in the Egyptian Cement Industry

Objective: Reducing dust emissions of cement factories in Helwan.
Project Components:
a) Problem analysis and evaluation of ways and means to reducing dust emissions (ASEC-Asland-Study)
b) Preparation, Implementation Assistance and Follow-up (PIAF) Programme for immediate actions to reduce emissions and improve organisation and management

Status/Duration:
a) completed (late 1990)
b) completed (late 1996)

Funding:
a) 2.0 million DM grant
b) 5.5 million DM grant
2.0 million DM loan (spare parts)

2. Rehabilitation of Misr Chemical Industries (MCI)

Objective: Increasing production of chlorine and derivated products using advanced technologies, meeting international environmental standards.

Project components:
a) Rehabilitation and extension of production facilities and management assistance
b) Elimination of existing mercury contamination

Status/Duration:
a) active (since 1994) operational since 01/97; ongoing technical assistance
b) completed 05/98

Funding:
a) 127.4 million DM loan
8.9 million DM grant
b) 20.0 million DM grant

3. National Drainage Project

Objective: Safeguarding the quality and productivity of soil in areas where water logging and salinity prevail and are hampering agricultural production.

German funds will be made available to finance part of the first six-year time slice of the "National Drainage Program".

Status: active (since 1993-1999)

Funding: 47.0 million DM loan
3.0 million DM grant

Cooperation with:
- World Bank "National drainage Project" (co-financing)
- Netherlands (NDCIC)

4. Programme Support to Private Sector Industry and Environmental Protection through Commercial Banks

Phase I

Objectives: Providing medium and long term financing for modernisation and/or extension of private sector industry with special emphasis on environments, reduction of pollution and improvement of industrial safety.

Programme Components:

a) Private sector industry will be provided with favourable financial packages to cover (i) imported equipment for modernisation/extension investment (medium to longer term credits with conditions at the lower end market) and (ii) cost of environmental measures (grants up to 50 % of cost; *Phase II up to 30 %*)

b) Financing of services of environmental consultants (environmental assessments).

Eligible Clients: Private sector enterprises having undergone satisfactory environmental assessment.

Agents: Financing is extended through three participating joint-venture commercial banks.

Status: active (starting Oct. 1994)

Funding:

a) 49.0 million DM loan
1.0 million DM grant

b) 14.0 million DM grant

Phase II:
under appraisal (starting 2nd quarter 99)

a) 33.0 million DM loan
27.0 million DM grant

5. Naga Hammadi Barrage

Objective: Contributing to river Nile regulation and stabilisation; safeguarding irrigation; generating electricity by using a renewable source of energy.

Project Components:
a) Elaboration of a feasibility study
b) Implementation of the project

Status/Duration: a) active
b) active

Funding: a) 12.1 million DM grant
b) 242.0 million DM loan
8.0 million DM grant

To mitigate possible negative impacts of the project, the German side has provided also
- *20 million DM (grant) for the improvement of agricultural drainage in the Naga Hammadi area and*
- *13 million DM (grant) for the rehabilitation of sewerage systems and the protection of buildings in the project area*

Both projects will start parallel to the main project.

6. Ductile Iron Pipes Plant (El Nasr Castings)

Objective: Reducing air and water pollution arising from casting operations.

Status: pending

Funding: 9.0 million DM (grant)

7. Sewerage Project Kafr El Sheikh

Objective: Collection and adequate treatment of waste water in about 50 villages of the Governorate and thus improving the living conditions of the population and reducing health hazards.

Status: active

Funding: 80.0 million DM grant

8. Environmental Protection Fund (Public Sector Industry)

Objective: Financing of investment to improve environmental protection in Public sector Companies, concentrating on waste water treatment.

Project components:

a) Financing of studies for preparation of projects envisaged for financing under the facility (in collaboration with EEAA/TCOE)

b) Extending funds to public sector companies as grant to cover up to 50 % of cost of eligible investments, subject to the availability of secured financing proven by the participating banks for the remaining investment needs (33 % of total investment costs) and own funds of the end users.

Eligible Clients: Public Sector companies having already gone through substantiated steps towards

- restructuring their plants, and
- privatising parts of their assets.

Agents: Financing will be channelled through selected commercial banks.

Status: active

Funding: a) 6.0 million DM grant
b) 50.0 million DM grant

9. Alexandria Battery Plant and Decontamination Project (Egyptian Plastic and Electrical Industries Co.)

Objective: Supporting the rehabilitation, restructuring and privatisation of the company.

Project components:

a) Prefeasibility study of the transfer of the plant from Alexandria to Borg El-Arab
b) Elaboration of a concept for the restructuring and privatisation of the company
c) transfer and rehabilitation of the plant including measures to meet international environmental standards
d) Decontamination of the present plant premises in Alexandria

Status/Duration: a) Study submitted in 1993 by VARTA/ICON
b) Study under preparation under the Study and Expert Fund for Privatisation (SEFP) in co-operation with PEO
c) pending
d) pending

Funding: b) 1.2 million DM
c) 45.0 million DM loan
d) 10.0 million DM grant

13. Participatory Urban Development Manshiet Nasr

Objective: Improvement of water supply and sanitation for the poor inhabitants in Ezbeth Bekhit

Status: Under preparation (start 1st quarter 1999)

Funding: 8.0 million DM grant

14. Rehabilitation of thermic power stations

Objective: contribution to safe and efficient electricity supply in Egypt and reduction of pollution

Status: active

Funding: a) 41.93 million DM financial credit (market)
b) 175.5 million DM loan
c) 9.5 million DM grant

15. Reduction of Pollution in Electricity Generation

Objective: Reduction of environmental pollution in the operation of power plants

Status: under preparation

Funding: 30 million DM loan

16. Waste Water Management Amriya-Alexandria

Objective: reduce health risks through hygiene and sustainable waste water management in Amriya

Status: under preparation

Funding: 65 million DM grant

B. Technical Cooperation (GTZ)

17. Integrated Pest Management

Objective: Elaborating and implementing concepts for integrated plant protection.

Status/Duration: active (1992-2001)

Funding: 14.8 million DM

18. Protection and Development of Agricultural Resources in the El Qasr Region

Objective: Demonstrating sustainable resource management in order to preserve water, land and vegetation in the semi-arid North-West Coast by introducing ecologically appropriate land-use planning, water conservation techniques and adapted dry-land farming.

Status/Duration: active (1988-2000)

Funding: 19.0 million DM

Co-operation with: World Bank (Matrouh Resource Management Project)

19. Solid Waste Management in Aswan

Objective: Improving the solid waste disposal management system in the city of Aswan

Status/Duration: active (1995-2001)

Funding: 10.6 million DM

20. Drinking Water Supply, Alexandria

Objective: Improving the efficiency of Alexandria Water General Authority (AWGA) by reducing water losses and increasing revenue from sale of water.

Status/Duration: active (1991-2000)

Funding: 25.0 million DM

21. Hygiene Advisory Services, Kafr El Sheikh

Objective: To use appropriate hygiene advice to motivate the population to use drinking water and sewerage systems in an economic, hygienic and environment-friendly manner.

Status/Duration: active (1998-2000)

Funding: 2.0 million DM

C. Other Projects

22. Promotion of Environmental Awareness and Institutional Strengthening

This project is carried out in cooperation between the Egyptian Environmental Affairs Agency and the German Friedrich-Ebert-Foundation, subsidized by the German Federal Ministry for Economic Cooperation and Development (BMZ).

JICA