

file 263-0026

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AGENCY FOR INTERNATIONAL DEVELOPMENT  
PROJECT PAPER FACESHEET

1. TRANSACTION CODE  
A ADD  
C CHANGE  
D DELETE  
 A

2. DOCUMENT CODE  
3

3. COUNTRY/ENTITY  
Arab Republic of Egypt

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 digits)

6. BUREAU/OFFICE  
A. SYMBOL: NE B. CODE:

7. PROJECT TITLE (Maximum 40 characters)  
Technology Transfer-Manpower/ Dev. III

8. ESTIMATED FY OF PROJECT COMPLETION  
FY

9. ESTIMATED DATE OF OBLIGATION  
A. INITIAL FY  B. QUARTER   
C. FINAL FY  (Enter 1, 2, 3, or 4)

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$) -

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FA	C. L/C	D. TOTAL	E. FA	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	4,500		4,500	9,500		9,500
(GRANT)	(4,500)		(4,500)	(9,500)		(9,500)
(LOAN)						
OTHER U.S.						
1.						
2.						
HOST COUNTRY		1,000	1,000		3,000	3,000
OTHER DONOR(S)						
TOTALS	4,500	1,000	5,500	9,500	3,000	12,500

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY 77		H. 2ND FY 78		K. 3RD FY 79	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) SA	759 B	720		4,500		3,000		2,000	
(2)									
(3)									
(4)									
TOTALS				4,500		3,000		2,000	

A. APPROPRIATION	N. 4TH FY		Q. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULED
	D. GRANT	P. LOAN	H. GRANT	S. LOAN	T. GRANT	U. LOAN	
(1)					9,500		MM YY <input type="text" value="04"/> <input type="text" value="78"/>
(2)							
(3)							
(4)							
TOTALS						9,500	

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

1 1=NO 2=YES No PID or PRP

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE: *[Signature]*

TITLE: Director USAID/Egypt

DATE SIGNED: MM DD YY

15. DATE DOCUMENT RECEIVED IN AID/W. OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION

MM DD YY

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PROJECT PAPER

TECHNOLOGY TRANSFER AND MANPOWER DEVELOPMENT III

A. SUMMARY AND RECOMMENDATIONS

1. Grantee: Arab Republic of Egypt

Implementing Agency: Ministry of Economy and Economic  
Cooperation

2. Amount: \$9.5 million (\$4.5 million in FY 1977, \$3.0 million in  
FY 1978 and \$2.0 million in FY 1979)

3. Terms: Grant funding from Security Supporting Assistance  
appropriations

4. Summary Description of Project:

This project will finance the cost of advisory services<sup>1/</sup> commodities, technical exchanges and training, and other items which are required by the Egyptian Government to solve technical or planning/managerial problems in its programs and, at its request, in those of the private sector. Such problems are related to making both improvements and innovations. The anticipated results of the project include not only the achievement of these development-type changes, but also the establishment of an appreciation on the part of the Egyptians for the improvements effected and a willingness to make further changes based on recommendations by outside experts and on their own knowledge of how things work in the U.S.

By making technical assistance available, including equipment, to solve specific problems, and by creating positive attitudes on the part of key technicians and administrators towards the possibilities for change, this project will lay the groundwork for Egyptians themselves to improve the implementation of their development programs. It is not generally involved in the building of new institutions, but rather largely in the improvement of existing institutions and programs.

As appropriate for specific sub-activities, the U.S. private sector, U.S. institutions, or U.S. Government organizations and agencies will be called upon to provide the required services.

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<sup>1/</sup> These will normally be short term in duration (one year or less).

5. Summary of Background and Relevance:

In June of 1974, President Sadat and President Nixon agreed to a program of cooperation under which U.S. technology would be brought to bear on a wide spectrum of Egyptian activities and problems. This project was conceived to help implement this agreement by facilitating a timely U.S. response to Egypt's immediate needs for short-term assistance to improve the administration of government programs, and is consistent with the overall Supporting Assistance objectives of obtaining maximum impact and visibility of assistance within the minimum time.

6. Issues:

As a follow-on to two previous grants, the majority of this project, which continues along the same lines as in the past, contains no feasibility issues for this project. Evaluations of the past grants show that there are no unresolved financial or implementation problems and that the sub-activities are achieving the project purpose. However there is a new equipment element introduced for the first time in the project which needs consideration.

The project design includes a significant commodity element that goes beyond teaching and demonstration equipment and supplies used in conjunction with technical advisory services. The new commodity element is designed to support the implementation of:

(a) U.S.-assisted adaptive research and other technology transfer activities of priority to A.I.D. and being coordinated by the several Joint Working Groups; and

(b) U.S. economic assistance activities aimed at strategic target populations (including politically strategic target populations).

The issue has been debated within the Mission with the following results:

1. JWG activities, because they are in the forefront, should be supported when they are consistent with general A.I.D. priorities. Some commodity support seems warranted, but requests should be reviewed on a case-by-case basis and coordinated by the Mission rather than other USG agencies.

2. The diffusion of technology, clearly within the intent of this project, should not necessarily be limited to technical consulting

services and related demonstration and training equipment. There is a need to support technology transfer through commodity assistance beyond that available in our CIP program and regular projects. Therefore, some mechanism should be established.

The Applied Science and Technology Research project (263-00) is not an apt funding vehicle because it is directed to research institutions only. The needs extend to many other Egyptian institutions. The logical funding vehicle is the Technology Transfer project.

We intend to use commodities funded under this project to address important constraints to the ability of the GOE to carry out development programs. Critical screening of requests will ensure that this is done.

7. Extended Cost:

Nine and one-half million dollars will be made available from Security Supporting Assistance funds over three years. Local currency expenses normally will be funded from an allotment of U.S.-owned excess Egyptian pounds.

8. Mission Views:

The U.S. Mission in Cairo strongly supports this project.

9. Recommendation:

Authorization of this project with a grant of \$9.5 million for the purposes stated herein.

B. THE PROJECT

1. Background and Relevance:

The Egyptian Government's desire for advanced technical information and know-how from the United States was made clear in the earliest discussions regarding the renewal of economic cooperation. As a framework to define and help answer this need, President Nixon and President Sadat established a Joint Cooperation Commission in June 1974. This Commission is supported by a number of Joint Working Groups which, in effect, provide the mechanism through which can be discussed proposals for a broad range of activities to address specific Egyptian problems and needs as they are perceived. They are also a forum for discussing the ability of AID and other USG agencies to supply needed financing and support for such activities.

The utility of a technical assistance grant which would support a wide variety of AID initiatives and at the same time facilitate the work of the Joint Commission was recognized early in discussions with the Ministry of Economy and Economic Cooperation. The FY 1975 and FY 1976 Technology Transfer and Manpower Development grants (263-0002 and 263-0011, respectively), which preceded the proposed grant, demonstrated the effectiveness of this type of assistance instrument in addressing the particular technical/administrative needs of Egyptian development programs.

Egypt is not without established institutions in areas of social/economic development, and there are large numbers of highly educated persons in the country. While each case is different, for the most part the constraints to better development programs seem to be a lack of planning and management skills; frustrations over being out of touch with up-to-date technical knowledge in the West; and a lack of motivation to make the changes required in the administration and content of development programs. Thus the immediate need in this project generally is not to undertake long-term technical assistance and training to build institutions, but to provide the short-term technical and planning/managerial expertise, plus training and commodities, to solve specific problems and to expose key technical and administrative staff to new ideas, to develop their appreciation of the need to make those changes that will improve their programs, and to expand their knowledge of what changes are possible.

Both of the preceding grants have been formally evaluated, with results showing that their overall management and the performance of the individual sub-projects have been very satisfactory.

The Government of Egypt has indicated its satisfaction with the prior grants, and has requested a follow-on project for FY 1977-79. In view of the performance of the project to date, and particularly, due to its continuing importance projected for the future, the project is being funded for a three-year period.

## 2. Project Description and Analyses

### a. Project Purpose

In general, the purpose of the project is to create the conditions for the Egyptians themselves to carry forward with improvements in the planning and implementation of their development programs. Specifically, this requires (a) solving immediate technical and planning/managerial problems and (b) creating an appreciation of the need for change and

the means of accomplishing this. The first purpose is the application of improved or more suitable technology or management practices, or both. These changes would be seen in new or improved plans, management systems, or technical processes. (The latter can cover a wide range of activities from, for example, research methods or curriculum changes to technical skills or production methods.) The problem areas expected to be addressed by the sub-activities include: the need to increase effectiveness or efficiency of a particular activity; the need to eliminate production or administrative bottlenecks; the need to augment planning capabilities by identifying areas which could profit by further outside assistance, and recommending plans for this; and the need to augment individuals' skills. Also, we would expect to see political benefits resulting from the expanded relationships between the U.S. and Egyptian professional communities.

The second (and equal) purpose of this project is to demonstrate to key Egyptian technicians and administrators the need for continued improvements/innovations and the ability of U.S. assistance to provide the means to effect such changes. This would be indicated by: the willingness to carry through the changes recommended by advisors under this project; positive attitudes expressed towards U.S. assistance activities and contacts - past and future; requests for additional assistance in other areas; acceptance of follow-on assistance and willingness to make the program and administrative changes required to make effective use of such assistance.

The dual purposes of the project are interdependent. If the development activities are not carried out in an effective and responsible manner, then these efforts will not have the effect of establishing confidence on the part of Egyptians in our development efforts and establishing a willingness to take initiative in making further changes, particularly on their own. Conversely, without this acceptance on the part of the Egyptians, the potential contribution of further U.S. assistance will be limited.

Three benefits are anticipated in addition to the objectives described above. Experience with the previous grants substantiates this. First, as a result of contacts made through the project, interest in Egypt and its development is generated on the part of U.S. institutions and individuals. They, like the Egyptians, tend to seek further contacts. Second, as a result of support of the JWG through this project, closer links have been established between the professional and scientific communities of the two countries. Third, as a result of early involvement with counterparts through these grants, which allows AID to gain an

appreciation of their institutional needs and capabilities, AID is both able to identify area for follow-on assistance and get insights on how better to design and implement any future involvement with those agencies.

While the project has been involved almost exclusively with technical exchanges to date (supplies and equipment being limited to those needed for demonstration and training directly related to these technical exchanges), we have concluded that the purposes of this grant can be served more broadly by inclusion of equipment and supplies related to important technology transfer needs but which go beyond specific training and demonstration materials. For example, the ability of some professionals trained under this project to demonstrate improved instructional techniques is limited by the dilapidated teaching laboratory equipment in certain universities. The effectiveness of this total activity could, therefore, be reinforced by the selective financing of equipment and supplies which reinforce the basic purposes of the grant. Criteria for financing such equipment and supplies are given under "inputs" below.

b. Goal

The goal to which the project contributes, along with other, more comprehensive assistance projects, is the improved administration of Egyptian development programs -- both public and private sector activities.

We would consider the goal to have been achieved when: major administrative problems identified in important development programs have been resolved; when these programs have been revised for substance as appropriate; when programs demonstrate they can respond to problems and the need for changes in both management and program; and when new programs are being established where (and only where) required to meet development needs not otherwise covered. The project will work towards achievement of these indicators insofar as problems are addressed by assistance activities.

In addition to these direct relationships, we are projecting a spin-off benefit which would contribute to the primary goals of the project, namely, that exposure on the part of U.S. institutions and individuals to Egypt, both through their work and the presence of Egyptian trainees and visitors in the U.S.; will create a positive atmosphere on the home front for development, investment, and good relations with Egypt. Also, such exposure improves our information on the problems to be addressed, and the environment within which future activities must

be carried out. Experience with the first two Technology Transfer and Manpower Development grants supports this expectation, as does experience with the AID program as a whole.

Ultimately, this project will contribute to the ability of Egyptian development programs to resolve successfully the country's social and economic development problems.

c. Outputs

Six classes of outputs will be generated under this project:

(1) First and foremost, there will be on-the-spot solution of technical and managerial problems due to the provision of technical assistance and commodity inputs;

(2) A second class of output will be the recommendations made by U.S. consultants for changes aimed at solving other high priority technical and managerial problems;

(3) GOE officials will be exposed to U.S. concepts and methods due to involvement with U.S. consultants, or using training and observation travel opportunities;

(4) Potential long-term institutional and personal relationships will be established as a result of this project;

(5) Joint Working Group initiatives will be implemented through the project; and

(6) Accelerated implementation of AID development assistance to Egypt.

An additional generalized output embodied in all of the above would be a broad dissemination of technology. This will be expanded with the additional feature of selective provision of equipment and supplies to Egyptian institutions which have the capacity to duplicate within Egypt some of the technological advances being sought by the personnel exchange elements of project.

No objectively quantifiable output indicators are included in this paper. Specific outputs will be included in sub-obligating documents such as PIO/Ts and PIO/Ps.

d. Inputs

(1) Advisory services as required to introduce new technological processes or improved management practices, or to solve specific

technical or managerial problems which constitute developmental bottle necks. The underlying rationale is that technical and managerial skill can most effectively be transmitted through close person collaboration between U.S. and Egyptian specialists who focus on very specific problems over a relatively short period of time. For this reason, while longer term technical advice is not excluded, advisory services under this project will normally not exceed six months in duration.

(2) Demonstration and didactic materials required by the GOE to make full use of technical assistance made available under this grant, through the Joint Commission framework, or through other channels.

(3) Other supplies and equipment, as the Mission and the Government may agree, that are needed to:

(a) relieve critical constraints to the solution of technical and planning/managerial problems;

(b) support GOE efforts to make more effective use of foreign assistance and, in particular, to speed up the implementation of assistance programs;

(c) support U.S.-assisted adaptive research and other technology transfer activities identified as having high priority by the Joint Working Groups; and

(d) support or implement U.S. economic assistance activities aimed at strategic target populations.

(4) Participant training, Long- and short-term training in the U.S., including academic and job-related training.

(5) Participant exchanges. Short-term visits for observation, to attend conferences and to establish contacts in public and private sectors.

(6) Such Other Cost items as may be needed. Based partially on expenditure trends observed in the FY 1975 and FY 1976 grants, we anticipate that approximately \$3.0 million of the \$9.5 million grant will go for advisory services (with a small amount included for required commodities), and approximately \$3.5 million of the grant will go for training and exchange visits to the U.S. The balance has been programmed for supplies and equipment.

### 3. Project Implementation and Financial Plan:

The implementation of this grant will follow the same general procedures as those employed for the FY 1976 grant. In FY 1976, in order

to streamline project implementation approval steps, USAID and the GOE agreed that the Ministry of Economy and Economic Cooperation would replace the Ministry of Foreign Affairs as the government's point of coordination and approval for sub-obligations against the grant. This decision was based upon the recognition that activities often require both dollars and Egyptian pounds. Since the Ministry of Economy and Economic Cooperation is responsible for the local currency grant (Project 263-0005, Local Cost Project Support) which provides local cost support to the Technology Transfer and Manpower Development activity, its responsibility for the dollar grant centers Egyptian Government approvals in one Ministry.

Requests for assistance to be financed under this project normally will originate with the organization desiring such assistance and will be forwarded to A.I.D. after approval by the Ministry of Economy and Economic Cooperation. (Many times, the concept has already been discussed in Joint Working Group meetings.) Following A.I.D.'s agreement in principle to provide financing, the Ministry initiating the request will prepare detailed cost estimates for review and approval by A.I.D. A.I.D. will arrange for private suppliers or U.S. Government agencies to provide approved assistance.

The action document to be used will vary depending on the particular transaction involved; standard action documents will be employed. Funds will be obligated by Grant Project Agreement. We expect the Grant Agreement will provide a procedure for emergency sub-obligation similar to that contained in the Grant Agreements for Project 263-0013, Technical and Feasibility Studies and Project 263-0005, Local Cost Project Support.

It is expected that contracts will be entered into directly by A.I.D., rather than the GOE, because the services usually requested under the project are both short-term in duration and highly specialized in nature. The Mission Director has signed a determination that allows direct contracts to be used as the normal mode of implementation of sub-activities under this grant (see Annex D).

#### 4. Project Evaluation:

The FY 1975 grant (263-0002) was evaluated by the Mission. The report was submitted in CAIRO 3482 dated 17 March 1976. A copy is attached as Annex A. For the FY 1976 grant (263-0011), the Mission has also completed an evaluation (Annex B). Both of the preceding evaluations examined each of the sub-activities in the area of technical and planning/management services, looking both at their implementation and whether or not they were consistent with achieving the project purpose. As part of the FY 1976

evaluation, and the preparation of this Project Paper for the FY 1977 grant, the objectives of the project and its relevance have been stated in more explicit terms, and the criteria used in the evaluation were expanded slightly to include the full range of considerations.

Evaluation of the FY 1977 grant will follow the same lines as for the FY 1976 grant. The technical officer in charge of each particular sub-activity will, in conjunction with the advisors and the GOE, determine: (a) whether the technical or planning/managerial change was in fact achieved; (b) what follow-on appears required (and whether this need is appreciated by the GOE); (c) GOE willingness to make changes recommended by the advisors and, if not, its willingness to state why the implementation of such recommendations would be inadvisable; and (d) GOE attitudes toward U.S. assistance and contacts, and its view of the climate for further change in the area addressed by the sub-activity. The technical officer's assessment will be based on his observations and experience with the activity, and will generally not require any special data gathering or assistance. The technical officer will put his observations in writing and submit them to the project manager. In writing up the overall evaluation, the project manager will add a general assessment of the activity along the same lines used by the technical officer.

The impact of participant training and exchanges will be more difficult to evaluate than the impact of advisory-services and commodities because of the physical problems of follow-up on a large number of geographically dispersed individuals and because, in some cases, it will be difficult to establish that changes have resulted specifically from training.

The Mission feels that evaluation of participant training and exchanges under this project should be an integral part of the Mission's overall evaluation of its participant program, as is the monitoring of participants under the project. This makes sense from a management standpoint since training activities are administered by the Mission's Training division and have common programmatic objectives in Egypt. Project personnel will cooperate with the Mission's training staff to assure that, as the Mission develops a program for evaluating participant exchanges, it will cover the concerns of this project to the extent possible and practical.

We do not propose to evaluate the goal-level objective of this project as part of the project evaluation. Our development efforts are still at an early stage in Egypt. Thus, for the Technology Transfer and Manpower Development project, it makes more sense to look at the effects

of assistance after there has been time to make an impact, and to look at this in a larger context than that of a single project or series of projects. It would also be difficult to trace the impact of the project at the goal level at this stage. The Mission has started an evaluation of its participant training program.

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5. Beneficiaries/Impact on Women:

The direct beneficiaries of this project are the individuals and organizations which receive the services, commodities and training/exchange visits under the project. The intermediate beneficiaries of the project will be those people directly served by the organizations receiving assistance under the grant. These beneficiaries will perforce include those important to the economic, social and political development of Egypt. Indirectly, benefits will accrue to the nation as a whole, as development programs become more effective through being better conceived and administered.

With respect to the impact on women, there are already a significant number of educated women in Egypt, and they are accepted as professionals. A significant portion (8%) of the participants under the previous grants have been women, and Mission officers in charge of implementing project activities are expected to further encourage their involvement in both technical assistance and training under the project. There are professional women working in the Egyptian Government and private sector, and to the extent that they occupy positions in organizations to which project inputs are directed, they will not be discriminated against but will benefit on an equal basis with men.

6. Environmental Analysis:

A negative determination has been recommended by the Mission on the project per se (see Annex C). Nevertheless, specific sub-activities to be financed under the project may be the subject of environmental studies should they be likely to have a significant deleterious effect on the environment.

C. Covenants and Conditions Precedent

1. Covenants

The Grant Project Agreement will contain all applicable standard covenants given in A.I.D. Handbook 3.

2. Conditions Precedent

The GOE will be required to fulfill satisfactorily the following conditions:

a. Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made,

(1) A statement of the name of the person or persons acting as GOE representatives, plus a specimen signature of each such person; and

(2) Such other information and documents as A.I.D. may reasonably request; and

b. Prior to any disbursement for a particular activity proposed for financing under the Grant, an identification of the activity, its purposes, the organization in charge of its implementation, and its estimated cost, including both the amounts proposed for A.I.D. financing and for financing from other sources.

EVALUATION - FY 1977

TECHNOLOGY TRANSFER & MANPOWER DEVELOPMENT (263-0011)

I. INTRODUCTION

This project finances the cost of advisory services,<sup>1</sup> commodities and technical exchanges and training which are required by the Egyptian Government to solve technical or planning/managerial problems in its programs and, at their request, in those of the private sector. Such problems are related to making both improvements and innovations. The anticipated results of the project include not only the achievement of these development-type changes, but also the establishment of an appreciation on the part of the Egyptians for the improvements effected and a willingness to make further changes based on recommendations by outside experts and on their own knowledge of how things work in the U.S.

By making technical assistance available to solve specific problems, and by creating positive attitudes on the part of key technicians and administrators towards the possibilities for change, this project lays the groundwork for Egyptians themselves to improve the implementation of their development programs. It is not directly involved in the building of new institutions, but rather in the improvement of existing institutions and programs.

Many areas are addressed by the project; each activity is funded by a separate implementing document. As appropriate for specific sub-activities, the U.S. private sector, U.S. institutions, or U.S. Government organizations and agencies are called upon to provide the required services.

As of March 31, 1977 the following subobligations have been made for technical services under the grant.

1/ These are normally short term (one year or less).

<u>PIO/T</u>	<u>Amount (\$000)</u>	<u>Title</u>	<u>Service Completed</u>
60002	\$27.0	Poultry Survey	Yes
60008	12.7	Local Government (University of Cairo)	Yes
✓60022	60.0	Egyptian Civil Aviation (FAA)	Yes
✓60055	82.5	JWG Health Technology (HEW)	No
✓60056	6.2	ORDEV Local Government	Yes
60059	16.5	Mineral Survey (USGS)	Yes
60077	22.0	Mgmt. of Lab. Instruments Workshop (NSF)	Yes
60084	3.4	Tax Administration Training (IRS)	Yes
✓60103	19.0	Investment Stimulation	No
✓60105	42.1	Wind Energy	No

The Mission has analyzed all of the above activities except 60105, Wind Energy, under which no activity has been initiated. Total subobligations for this project have been \$1,236,200 while reservations total \$485,000. To date \$291,400 have been subobligated for technical services and \$944,800 have been subobligated in support of the participant training program.

## II. EVALUATION OF THE OVERALL IMPACT

This project has been one of the most visible parts of the AID program in Egypt. Efforts to date to mount a major AID program have proceeded generally on schedule. This has meant that although programs and projects have been agreed to, obvious project results are not yet visible, and in most cases will not be for 2 to 3 years. The Technology Transfer and Manpower Development project

has had immediate outputs and represents a visible demonstration of U.S. concern in numerous Egyptian professional communities. President Sadat's request that U.S. aid be focused on the transfer of appropriate technology and know-how to Egypt is being addressed in the short-term by this project. As other projects come on stream they also will serve this purpose, but until that time, the Technology Transfer project will remain an important demonstration of American concern for transferring know-how. The project has been a useful way of probing the real needs and capabilities of GOE organizations before entering into projects with them.

An analysis of how the project has worked points out a number of important considerations which should be taken into account when planning and implementing future Technology Transfer activities.

#### A. Types of Technology

There is a definite gap in the technological exposure of the Egyptian professional community to Western, particularly U.S., technology. In the field of scientific technology, there is an across-the-board gap in the professional journals available in Egypt representing the years when the U.S. and Egypt did not have intimate professional contacts. The real gap goes beyond the journals -- there is no basic understanding of innovations developed in the U.S. which occurred during these years.

The Mission has become aware during two years of operation of this project that a shortfall in managerial technology has at least as big an impact on Egyptian development efforts as does the gap in technical know-how. As is evident from the analysis of the subproject activities, an increasing number of efforts under this project look at both planning/management practices and specific technological problems. This trend will no doubt continue, because the need to address technological and planning/managerial issues as a dual approach to the reality of technical problems in Egypt will remain.

B. Methodologies

1. Technical Services

The Mission has used two types of technical services to accomplish the general purpose of the technology transfer project.

Where Egyptians or U.S. experts have identified a bottleneck in either a planning/management or technical system, and where AID has been requested to provide assistance to solve the particular problem caused by the bottleneck, we have provided short-term advisory assistance. These have been, by and large, one-shot consultancies aimed at addressing a specific problem. The mechanism of the Technology Transfer project allows AID to provide a quick response. This has proven to be an effective and visible sign to the GOE of U.S. assistance intentions.

There is a general problem, however, when dealing with such consultancies. They must be targeted at a readily solvable problem. As often is the case, a problem will be identified in technical terms, when in fact it is only an aspect of a larger management problem. Often these problems are not susceptible to short-term solutions, and particularly to technical solutions by technical personnel. The analysis of the problem is, therefore, one of the most important aspects of this project. There is often a lack of Mission staff technically qualified to make adequate judgments concerning the appropriateness of the problem identified. As Mission staff grows by the addition of specific technical personnel, it will be more able to appropriately pass judgment on the problem identification process.

The second type of technical service relationship which has evolved under this project has been developed generally between two institutions (one Egyptian and one American) which have a mutuality of professional interests and functions within their respective societies. In encouraging these types of relationships, the Mission has often agreed to finance a first stage consultancy for the purposes of (1)

analyzing the operation of the Egyptian organization and identifying technical and managerial problems and (2) proposing solutions to these problems. The result of fostering this type of contact has been a series of recommendations for additional contacts between the two organizations, most of which aim at the transfer of appropriate technology. These contacts are executed either through additional phased consultancies and training programs under the Technology Transfer program, under separate projects funded by AID, or general contacts funded by the Egyptian and U.S. institution involved. The value of this type relationship is that it goes a long way toward institutionalizing the contacts between the two organizations, with the respective benefits that this entails.

## 2. Participant Training and Exchanges

The participant training program has contributed to the objectives of this project by exposing a wide range of Egyptians to U.S. technological and managerial know-how. It has opened channels of communication and been used in conjunction with technical advisory services to establish comprehensive contacts between Egyptians and U.S. individuals and organizations.

We have not, however, included the participant activity as part of this evaluation because the Mission is in the process of evaluating the overall participant training program. This will be completed by August 1977 when we will have a statistically significant number of returned participants back at their jobs for a period of six months or more. This evaluation will be submitted to AID/W when completed.

## C. Implementation

### 1. Activity Identification

When activities are proposed by the Joint Working Groups for financing under this project, a number of problems have developed. These problems are described in the section of this memo which deals with PIO/Ts 60055 and 60077. See below.

## 2. Follow-on Activities

As mentioned above, a number of the activities financed under this project have been designed as phased activities. The Mission has consistently maintained that financing an initial activity does not in and of itself constitute a commitment on the part of AID to finance further stages of the activity. Downstream financing depends on the nature of the recommendations which flow from the initial activity, its technical merit, the funds required and the suitability and availability of AID funding. However, no matter how many reclaimers are made, funding of an initial contact leads to a rising expectation on the part of both the U.S. and the Egyptian institutions that further AID assistance will be available. The Mission has dealt with this situation on an ad hoc basis and has tried to keep expectations within reason for all concerned; the situation, however, requires continued attention.

## 3. Project Evaluation

A lack of technical personnel and an evolving system of project management has led to a situation where follow-up on a number of the activities financed under this project has been minimal or non-existent. In these cases evaluation at a later date has proven to be difficult. To correct this situation, a responsible technical officer will be designated for each technical service activity. This officer will comment on the identified problem, monitor the implementation of service and provide the Project Manager with an evaluation memo at a suitable time after completion of the service. The collected memos will become the basis for future evaluations of the Technology Transfer activity.

### III. EVALUATION OF SUBACTIVITIES

The following assessments of the consultancy services financed under this project are all structured along the following format:

1) Background: discusses the origin of the request and relates it to the problem or need which was identified;

2) Assistance: identifies who performed the service, how long it took, what was accomplished, e.g., a report or set of recommendations; the general quality of the work and a statement concerning the general utility of the results of the consultancy;

3) Follow-up Activity: comments on the longer run impact of the service rendered and its relationship to follow-on programs or activities; and

4) Special Problems: discusses any special problems encountered in relationship to the service rendered.

A. PIO/T #263-011-3-60002, Poultry

In January of 1976 the Prime Minister's office requested that a number of foreign business ventures take a look at the poultry sector in Egypt, and recommend to the GOE what steps were needed to significantly increase the production of poultry in Egypt. A number of firms responded, and a U.S. firm (Holly Farms) presented a proposal to the GOE which recommended a specific assistance program to the public sector Poultry Company.

The Ministry of Agriculture asked AID to comment on and consider financing of the U.S. firm's suggestion. AID responded by suggesting that the time might be appropriate to look at the poultry subsector in a comprehensive way. The Mission felt that a survey by technically qualified experts was necessary as a basis for properly assessing the GOE request. It would also provide necessary planning information for the GOE to use in ordering priorities in the poultry subsector. A scope of work was prepared emphasizing the development of a plan containing current recommendations related to the poultry subsector.

The PIO/T was issued, resulting in a contract with Experience Inc., which provided the services of three experts to conduct the investigation and to make recommendations. During their four-week stay in Egypt they had extensive discussions with the relevant members of the poultry sector, and went on a number

of field visits which allowed them to view the village production aspect of poultry production, as well as government poultry operations. Their plan set forth a series of recommendations aimed at improving poultry production in Egypt, although most were for follow-on studies.

The Mission feels the report does a good job of describing the present situation and evaluating the on-going effort in Egypt. However, it did not clearly set forth the causal relationships between the observations of the ongoing effort in Egypt and the recommendations. The team leader reworked portions of the report making the final report somewhat more clear in this respect than was the earlier version. Under existing conditions in Egypt, characterized by a lack of statistical data relating to agricultural production and marketing, the Mission found the report to be as well researched as could be expected.

When the final form of the report had been discussed with the GOE Ministry of Agriculture, it was decided to focus project development efforts on certain recommendations in the report which seemed to address key constraints to increasing poultry production in Egypt, and which were responsive to the Ministry of Agriculture's desire to go forward with a direct program aimed at breaking the most critical bottlenecks to development of poultry production. These were incorporated, with other project elements, into a PID for a Poultry Production project with financing planned during FY 1977.

During this consultancy it became obvious that the time programmed for conducting this type of investigation in Egypt was not sufficient. It has been a valuable lesson to be applied to subsequent consultancies, particularly when these consultancies are concerned with on-the-ground investigation and data analysis as the basis for planning assistance and making recommendations to the GOE.

PIO/T #263-011-1-60059, Geological Services

The Egyptian Geological Survey and Mining Authority (EGSMA) re-established contact with the United States Geological Survey (USGS) shortly after the

restoration of government-to-government relations between the U.S. and Egypt. Professional discussions were held in 1975 concerning geological and mineral survey techniques. In early 1976 a representative of USGS visited Cairo and a draft assistance proposal was developed. This proposal was targeted at introducing techniques and organizing the functions required for a comprehensive mineral resources assessment program and incorporating the preparation of metallogenic maps and a data evaluation system.

The proposal clearly sought to institutionalize a relationship to facilitate the transfer of technology from USGS to its counterpart Egyptian agency. PIO/T 60059 funded the first tranche of assistance under this program. It provided the services of two technicians from USGS for a period of two months to evaluate the capability of the EGSMa to carry out a national assessment of Egypt's mineral resources potential and to evaluate other ancillary functions which would be required at EGSMa to carry out this survey adequately.

The team was in Egypt during September, October and November and produced an assessment of EGSMa needs which would have to be addressed before EGSMa could: (a) prepare a preliminary assessment of Egypt's mineral resources, and develop a mineral data system and procedures for periodic up-dating of this assessment; (b) prepare a metallogenic map and guidelines for exploration; and (c) develop the capacity for those operations that are essential for better mapping, exploration and assessment of resources.

The report presented a comprehensive plan for the next phase of assistance needed to accomplish the above tasks. In many respects this activity represents one of the best examples or models for a Technology Transfer situation between Egypt and the U.S. Where counterpart organizations exist, where there is a mutuality of professional interests and where there is a desire for modern technology not available in Egypt, AID can assist by funding these contacts. By doing so, long-term relationships leading to the institutionalization of technology transfer

will develop. We have authorized a second PIO/T to continue this relationship and accomplish the tasks identified as a result of the first PASA.

The Mission did encounter a special problem in developing the first phase of this activity. The proposal agreed to by USGS and EGSMA looked at the entire range of activities needed to develop this survey. This was a 2 to 3 year program which AID could not fund under this project, as this project is designed for short-term activities. After examining the proposal the Mission suggested that there were logical phases of assistance such that USGS/EGSMA could break the proposal into smaller packages of assistance which could be evaluated at the end of each phase before decisions were made regarding the financing of subsequent stages. As a result of the first phase, a reordering in subsequent phases was clearly indicated. This has been done.

PIO/T, #263-11-3-60008, University of Cairo/  
Local Government

The original contacts between the University of Cairo and Indiana University in the field of Public Administration were initiated under the Joint Working Group on Education and Culture, with CUNEA funding an exploratory visit by EPI institutions. Out of these contacts a proposal was put forth by Indiana University and the University of Cairo, which requested AID financing for a team from Indiana University to advise the University of Cairo on its program for a "Diploma in Local Government Management." The Ministry of Local Government, through the University of Cairo, asked Indiana University to field a team of people who could a) prepare and administer a questionnaire which could be utilized to identify faculty resources to improve the local government development program; b) suggest changes in that program to make it more responsive to recent changes in the law concerning decentralization; and c) identify applied research topics for a summer intern program.

Indiana University sent a 3-man team to Cairo during 1976. The results of their trip and the recommendations based on their observations are contained in their trip report.

Although briefly stated, the objectives of the technical services appear to be clear in the PIO/T. The team, however, was not able to accomplish everything which was listed in the scope of work in the PIO/T. The reason for this can be attributed in part to not scheduling enough time for the study of the problem and in part to the excessive protocol demands which were placed on the team by the Ministry. The major portion of the work was completed and the GOE has asked AID to finance a second trip for Indiana personnel. Since this activity is an important element in the proposed project on Local Government, we look forward to aiding the Diploma Program. (See also the discussion of PIO/T 600056.)

PIO/T #263-011-02-60022, Federal Aviation  
Administration (FAA) Egyptian Civil Aviation  
Organization (ECAO)

The origin of this activity stems from a visit by the Administrator of the FAA to Cairo in September 1974. This visit led to a series of contacts which culminated in a request in March of 1976 from ECAO for FAA assistance in assessing the processes, equipment and management practices related to air traffic control in Egypt. ECAO also requested recommendations regarding what further technical assistance they would need to address any inadequacies which were found in their system. FAA provided a team of 5 senior technical and administrative people during June, July and August of 1976.

During the period of FAA consultancy the team acted both as advisors to ECAO and as analysts of the air traffic control system in Egypt. The team produced a comprehensive report which the Mission and ECAO recently reviewed. The director of ECAO has asked for multiple copies of the report for use within ECAO and other sections of the Ministry of Civil Aviation.

The Mission feels that there exists a potential for an important technology transfer system to evolve between ECAO and FAA. The consultancy financed under this activity has reopened channels of communication between FAA and ECAO. Because of the nature of the air traffic control system there is a definite

professional advantage to both organizations to remain in contact and to share information which would be mutually beneficial. If a future activity in air traffic control or other ECAO responsibilities is financed by AID its aim will be to establish a system which formalizes the transfer of the types of technology that FAA has to offer to ECAO. The potential for a long-range process of technology transfer, however, appears to be better because of the activity financed. Nevertheless, ECAO has serious problems in stemming the flow of qualified staff to better-paying jobs in other countries; this will have to be considered in determining what levels of future assistance will be appropriate.

PIO/T #263-011-3-60056, Organization for  
Reconstruction and Development of Egyptian  
Villages (ORDEV)

This PIO/T financed the consultancy of Dr. James Mayfield, a recognized authority on Local Government in Egypt. AID has had contacts with ORDEV since 1975 and Dr. Mayfield's consultancy has been one of a series by which we have been discussing local government planning, management, and administration policies with ORDEV.

This activity was generated by a request from ORDEV in early 1976, which asked for short-term assistance to look at various options open for local government development projects. AID/W identified Dr. Mayfield as an ideal candidate to assist ORDEV. Dr. Mayfield came to Egypt during September 1976. He visited a series of villages and developed a profile of the newly elected village officials. He also held lengthy discussions with various members of the GOE concerning the implications of local government related legislative and policy changes which had recently been enacted; the types of training needed by the new local leaders; and various other topics related to village development. The resulting report is an excellent analysis of local government and has proven to be a valuable indicator for potential areas of project development.

It has not, however, been a vehicle for direct technology transfer. The Mission believes, though, that it has been an important part in a process of dialogue between AID and the GOE concerning village development in an attempt to design a project to address local government problems. The technology to be used would be developed as a result of a series of consultancies like Dr. Mayfield's. The immediate return of this consultancy per se may not be apparent if considered as an individual activity, but when considered as part of the process, it is a vital link in developing a project activity aimed at the transfer of administration oriented technology.

It is also important to note that in this analysis, when speaking of technology, we are referring to planning, management and administration innovations and not to a physical scientific process. Both the GOE and the Mission have accepted these parameters as legitimate functions of the Technology Transfer project.

Follow-up activity has resulted in the planning of additional consultancies and a preliminary project idea which incorporates some of the recommendations contained in the Mayfield report.

PIO/Ts 263-011-2-60055, JWG Health (HEW)  
263-002-2-60077, Management of  
Laboratory Instruments Workshop (NSF)

In this evaluation we are dealing with these two PIO/Ts at the same time because of the related problem of funding JWG activity under the Technology Transfer project. Both PIO/Ts financed technical consultancies, and in the case of 60055 a limited amount of demonstration commodities was provided for.

The problem in evaluating this type of an activity is that they were not developed by an AID/GOE contact under the JWG. AID has tried to be particularly forthcoming to proposed activities developed by the JWGs, particularly in light of the political reasons for their establishment. In that the JWGs also constitute a grouping of highly professional Egyptians and Americans and represent a particularly impressive community of professional knowledge, the Mission has agreed to fund these activities on an ad hoc basis without making its own detailed technical analysis

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and without making technical evaluations of the local institution which is a party to the cooperative arrangement.

Because of this arrangement we have not been involved in the actual provision of the service or in follow-on activity which would later allow us to evaluate these efforts.