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COUNTRY REPORT  
ON THE INDUSTRIAL AND TECHNOLOGICAL  
INFORMATION SYSTEMS IN EGYPT\*

Prepared by

M. El-Toukhy\*\*

and

A. Yudin\*\*\*

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\*\* Academy of Scientific Research and Technology, Cairo, Egypt.

\*\*\* USSR State Committee for Science and Technology, Moscow, USSR.

TABLE OF CONTENTS

	<u>Page</u>
Preface	ii
Abstract	iii
I. Conclusions and recommendations	1
II. Introduction	5
III. Objectives of the mission	6
IV. Outputs of the mission	7
V. Activities of the mission	9
VI. Action programme (Follow-up)	15
<u>Annex</u>	
I. Documents used during the mission	17
II. Questionnaire	18
III. List of specialists consulted	21
IV. Abbreviations and addresses	22
V. Schedule of meetings	23

PREFACE

According to the UN General Assembly Resolution 3507, the Industrial and Technological Information Bank (INTIB) was established in 1980 to facilitate and accelerate industrial and technological information flow to developing countries for the selection of alternative technologies and equipments and to reduce the preparation duties of feasibility studies.

At present INTIB helps to the creation of national industrial and technological information systems and network in Egypt, which has been selected as a part of the IDDA programme and was provided with technical assistance to strengthen its national information system.

The report is implemented by the questionnaire (see Annex II) prepared by INTIB Unit, UNIDO Industrial Information Section with the summary information of the various information systems visited.

The persons contacted (see Annex III) included officials responsible for development in the field of industrial and technological information existing and potential users of information, as well as specialists like engineers, documentalists and programmers.

The mission is grateful to the UNDP office in Cairo for their kind co-operation and assistance which facilitated the success of the mission.

The mission is also thankful to Ms. Omnia Gomaa, UNIDO representative in Cairo.

ABSTRACT

The report is the result of a mission to information systems and services in Egypt organizations from 18 to 23 November 1985.

The mission was intended to assess the existing and potential information systems and services, to assess national focal points of INTIB, to assess existing and potential users of industrial and technological information based on their specific needs and priorities and also to assess the nature of information services required by the INTIB in detail and communication with INTIB headquarters.

However, the identification of national focal point of INTIB in Egypt was the most important task of the mission.

The following national focal point of INTIB is proposed by mission in Egypt. The Egyptian National Scientific and Technical Information Network (ENSTINT).

The first part of the report presents conclusions and recommendations of the mission and the second part presents recommendations dealing with INTIE follow-up activities.

The report is supplemented by the questionnaire prepared by UNIDO Secretariat with summary information of the various information systems and services visited.

## I. CONCLUSIONS AND RECOMMENDATIONS

1. The recommendations with regard to the national information systems stem immediately from their basic tasks and functions. Generally, the main tasks of the national information systems consists in providing necessary industrial and technological information for specialists occupied in the spheres of management, R and D, production and operation, services and trade, i.e. practically in all branches of economy. On the basis of this main task before the national information systems, the latter's functions can amount to the following main orientations:

- Preparing and assigning primary industrial information;
- Stock-taking and registration of industrial and technological information via formal and non-formal channels;
- Selection, systematization, storage and retrieval of primary documents (creation of information retrieval system);
- Primary documents processing;
- Communication of industrial and technological information to users;
- Organization and functioning of the information systems;
- Management of these information systems.

2. The function of preparing and assigning primary industrial information should ensure in putting the entire information into the system and selecting the most effective and economical channels for information transmission.

3. The industrial information stock-taking and registration should meet the recommendations which provide for a strict distribution of recording registration functions between information bodies which are part of the respective systems and also carrying out the measures guaranteeing the complete accession of the recorded industrial information sources. The function of stock-taking and registration should provide for monitoring and a maximally complete recording and co-ordination of the registration

of the industrial and technological information created both within the framework of the national information systems and beyond it and transmitted via both formal and non-formal channels.

4. Selection, systematization, storage and retrieval of primary documents should meet the recommendations ensuring the creation of information retrieval systems and reference retrieval facilities for them. This function should provide for the possibility of their accurate, complete, rapid, convenient and economical retrieval for a further utilization of the respective information by users.

5. The primary documents processing should be in accord with the recommendations providing for non-recurring analytico-synthetical processing of industrial information in terms of the latter's content. This function should provide for bibliographic processing, annotating, abstracting, indexing and extraction of factual evidence from documents with the view to the organization of data banks in various subject areas and also industrial information synthesizing.

6. In communicating the industrial and technological information to users, provision should be made for a multiple and multi-goal utilization of the results of the non-recurring information processing. This function should provide for communication, retrieval and communication in any mode of the system's work, and namely in the "enquiry-answer" mode, in the mode of selective dissemination of information and in the information publications mode. And in case of each mode one should observe the requirement of communicating information in the form of primary documents, (abstracts, annotations, bibliographic descriptions), evidence extracted from primary documents, and also in the form of synthesized industrial and technological information (analytical and comparative reviews, references, etc.).

7. The organizational pattern and functioning of the industrial information system should ensure the improvement of the organizational principles and methodological basis of information work with a view to

creating a clear-cut and impressive information system. This function should be implemented on the basis of the existing theoretical, economic and juridical fundamentals, and also methodological, organizational and procedural principles involved in the functioning of the system.

8. The management of the national industrial information systems should ensure the co-ordination of information work in various areas of activity, planning of R and D on the industrial data problems, raising the qualifications, and training of workers for information bodies.

9. The national industrial information systems should ensure information transmission both via formal and non-formal channels. The formal channels include the organizationally formalized and constantly operating communication channels and the main kinds of documents, such as books, articles, patent descriptions, reporting and standard-type technical documentation and also documentation about industrial goods. The non-formal channels of communication include those in which the main role is played by scientists, specialists and engineers themselves, and which do not possess organizationally formalized and constantly operating interaction mechanisms: oral interventions at conferences, meetings, symposia, talks, correspondence, exchange of preprints and impressions, and also documents, such as protocols of tests, acts about reception of equipment, etc.

10. One of the recommendations with regard to the national information systems consists in putting the flows of information transmitted via formal and non-formal channels into a better order. For this purpose it is necessary to unify and standardize the forms in which information is presented with a view to its subsequent recording by machine-systems; to develop a normalized series of information carriers (including machine-carriers on punched tapes, magnetic tapes and discs, microfilms and microfiches); and also to develop a normalized series of industrial and technological information transmission methods, including the standardization of interfaces between computers and communication channels. This should make it possible to achieve a necessary speed,



completeness and effectiveness of transmission of the entire industrial and technological information and also to achieve the inter-systems exchange of information at the computer level.

11. One of the major recommendations with regard to the national industrial information systems consists in ensuring the compatibility between all the links which are part thereof. Compatibility is achieved by the commonness of their organizational structures, the uniformity of information retrieval language, the interface of the technical facilities, the uniformity of mathematical support, the single procedure for industrial and technological information collection and processing and the unification of documentation and information coding.

12. The complex of technical facilities as used in the national information systems should ensure the processing of information flows on standard carries and solve the following basic tasks:

- automated input of information into computers;
- information processing with the aid of computers and calculating and punched-card equipment;
- information storage and automated retrieval;
- automated output of information from computers;
- transmission of computer information to the system's subscribers;
- information copying and duplication.

13. Taking into consideration the above-mentioned INTIB's mission could recommend using hardware of kind "IBM PC" and software of kind CDS/ISIS. In that case UNIDO in further will provide for supporting in installation of hardware suggested and dissemination CDC/ISIS among INTIB focal points of developing countries.

14. The national industrial information system in Egypt should be based on the principle of the national combination of the centralized and decentralized approaches to the process of collection, storage,

generalization, processing, retrieval, issuing and dissemination of the industrial and technological information. The impact of the negative features of each approach can be minimized only if the advantages of both approaches are utilized in the system to a maximal extent.

15. The centralization in constructing the national industrial information systems makes it possible to pursue a single general state policy with regard to the main questions when the tasks of the developing and improving information systems are being solved; and it ensures the necessary co-ordination between the individual links of the systems and their organizational, technological (methodological), mathematical (programmatic) and technical compatibility.

16. The decentralization in disseminating makes it possible to organize information provision for any categories of users in accordance with their demands and needs and to implement the principle of the direct communication between any user and any information body which is part of the national industrial and technological information system.

17. As far as a national information policy is concerned we can be said that the national authorities need to consider the establishment of national industrial and technological information system based on a network of information centres as a keystone of economic development. Since the establishment of the national information system is a long-term, complex and expensive enterprise, it has to be designed and implemented under the auspices of the Government.

## II. INTRODUCTION

18. The supply of information at the country level in particular for the priority sectors identified by the Lagos Plan of Action is crucial for the success of the Industrial Development Decade for Africa.

19. The position in this regard at present needs considerable improvement. Several African countries do not have an industrial information system themselves and in many cases where they have such facilities they are mostly in the nature of documentation services. They also suffer from lack of adequate resources to obtain on a systematic basis information from external sources. INTIB provides an international infrastructure on which they could draw upon to strengthen themselves by establishing links with INTIB selected personnel in the information systems and services could also be made familiar with the methods of collecting processes and disseminating problem-oriented information to industry. This process will also result in other advantages. The flow of information among the strengthened national systems and services can be promoted and links also established with possible regional mechanisms such as ARCT. The preparation of industrial profiles and information packages by INTIB could also be oriented towards the needs identified in Africa. UNIDO has in the past given technical assistance to national information systems or services in several countries, such as Algeria, Angola, Ivory Coast, Sudan, Kenya, Libya, Mauritania, Mozambique, Nigeria, Senegal, Togo, Tunisia, Rwanda, Burkina Faso and Zaire.

20. Since the projects in these countries have been completed there is a base that exist but nevertheless needs continuing support not so much by the provision of expert services on a medium or long-term basis but through advisory services and the establishment of adequate links with those selected primarily from the foregoing list to implement activities envisaged under this project.

### III. OBJECTIVES OF THE MISSION

21. The main objective of the expert mission under the contract RP/RAF/85/621/11-59, was to assist selected countries of Africa in the establishment of INTIB national focal points as well as in strengthening national information systems and services and carry out in these countries the following duties:

- (a) assess the existing and potential information systems, services and network;
- (b) assess national focal points of INTIB on their specialized field of industrial and technological information activities;
- (c) assess existing and potential users of industrial and technological information based on their specific needs and priorities;
- (d) assess the nature of information services required by the INTIB in detail as well as modalities of linkage and communication with INTIB headquarters;
- (e) ad-hoc advise on redesigning or expansion of the existing industrial and technological information service system including selection of software and hardware as well as assessment of manpower requirements and training needs for the information systems.

#### IV. OUTPUTS OF THE MISSION

22. The end-users of the industrial and technological information in Egypt in question can be classified as follows: engineers, economists, programmers, project managers, whereas institutional users are: development banks, development corporations, colleges, institutes, university researchers, information and documentation centres, R and D organizations, etc.

23. The main sources of information requested are: information of alternative technologies, project materials, marketing data, factographical and bibliographical data, characteristics of new materials and up-date equipment, technical reports, market development trends, etc. The basic industrial and technological information expressed by users are concerned with: design of new products, manufacturing the product, development manufacturing equipment, establishment of flowsheets, selling and servicing the products, collection and processing of technological information of innovations and improvements, standard specification, and expert requirements.

24. Many of the industrial and technical users are vitally interested in receiving primary technical documentation, on-line access to data bases, the creation of both selective information dissemination and current awareness service and also in the establishment of data bases in their fields of activities.

25. Estimates of information staff, technical and financial resources are as follows:

Information staff:

Professional: 30

Supporting personnel: 35

Hardware

ATT x 4

Software

BASIC

26. The following INTIB contributions are expected:

- to train the information staff;
- to organize the exchange of data bases on magnetic tapes;
- to help improve the acting information system.

## V. ACTIVITIES OF THE MISSION

27. In fact a country like Egypt has come to recognize that industrial and technological information is an important element for national socio-economic and political development, planning and programming.

28. In spite of the economic problems facing it, Egypt has not lost faith in the importance of industrial and technological information and research as a vehicle of progress, to the contrary, Egypt has allocated for each of the next five years about 1.2 per cent of its annual gross national product to research and development with the information explosion occurring today, so were quickly building up at a fast rate information centres, systems and networks in both government and private sectors.

29. UNIDO Field Expert Mission arrived Egypt on 18-23 November 1985, which is considered the fifth country in the selected countries of Africa in the establishment of INTIB national focal points due to the limited duration, only three days, the mission has tried to coverage the more of institutions/organizations in order to obtain during this duration of the assignment on acknowledgements about their present situations, despite the many obstacles which had been faced the mission particularly the local bureaucratic delays and shortage of helpers, additional to the security constraints especially around the items of questionnaires which it should be taken advanced the approval from the security authorization, so the mission could not be obtained on the information by questionnaires from all organizations, however, the results of this assignment from the briefing which had been interviewed with the responsibilities in these organizations were as the following:

(i) The Egyptian National Scientific and Technical Information Network (ENSTINET):

Address:

Academy of Scientific Research and Technology  
101, Kaser El Ainy Street, Cairo, Egypt

Telephone: 55 72 53  
Telex: 93069 ASRT UN

Nature of Institution: Public

Name of Director: Mr. Ahmed Abdel Bassit

Year of Establishment: 1980

Functions of Institution:

- To raise public awareness of the utility of information.
- To organize Egypt-produced scientific and technology literatures.
- To facilitate access to available information resources in Egypt and abroad.
- To train Egyptian manpower in information work and technology.
- To co-ordinate international programs in the information field.

Industrial Inquiry Service: ENSTINET is a network of information services not resources, it is based on the sectoral principle as the following five nodes: agriculture, energy, industry, medicine and health care, and science and technology. The information needs of these five nodes are considered most crucial to the country's socio-economic development.

Selective information dissemination/current awareness service: The basic public services supported by all ENSTINET nodes are:

- Database building:

The database effort is now underway with respect to both bibliographic and non-bibliographic databases.
- Retrospective Database Searching:

On-line searching of both domestic and foreign-located databases is supported by all ENSTINET nodes.
- Current Awareness Service:

ENSTINET is bringing to Egypt updates of a small numbers of several large international databases.

- Document Delivery

Information Technology:

A thorough study of the state-of-art of information technology and its future trends was begun during the system design phase and has continued throughout the project, some of the principles annunciated as regards the application of this technology in ENSTINET include the following:

- ENSTINET does not support hardware standarization, instead, it standardizes at the level of the operating system software.
- From a technology standpoint, ENSTINET is an open-ended network capable of expansion in terms of number of nodes, volumes of data and traffic, and types of devices.
- Hardware capacities allow for prudent expansion but anticipates the introduction of new technologies.
- Network communication support international (CCITT) standards and utilize both unconditioned (local-dial-up) and packet-switched lines.
- Software used by end-users must support the generation and querying of databases in Arabic and Latin.
- A single bilingual query language supports all natural-language database both Egyptian and leased.
- ENSTINET is a sectorally distributed, communications based databases network with no plans for a single central databases vendor or site.

30. The operating system selected for ENSTINET is UNIX (trademark of Bell Laboratories). The information management software that supports



the databases applications of ENSTINET is BRS/Search (Mini-Microversion) a multi-user, full text storage and retrieval system featuring fully automatic indexing. The hardware that supports these applications consists, at each sectoral node, of an ATT 3b5 minicomputer with 2Mb central memory (expandable to 8Mb) - 500Mb disc storage, a magnetic tape drive, 2 dual-speed printers, 10 bilingual terminals (expandable to 24), 3 posts dedicated to telecommunications, and an external power supply sources.

(ii) Egyptian Documentation and Information Centre of Agricultural - Ministry of Agriculture:

Address: El-Dokky, Giza, Egypt

Telephone: 70 15 21

Name of Director: Eng. Ibrahim Zaki

Nature of Institution: Public

Year of Establishment: 1975

The activities outside the National Information Networks:

- Documentation of the metal production in Egypt.
- The Egyptian agricultural bibliographic periodical.
- Research recovery service.
- Information differential distribution service.
- Documents delivery service.
- Establishing of non-bibliographic agricultural information rules.
- Technical studies.
- Training.
- Technical consultation and international conference.

The co-operation agreement of the National Information Network:

- Supplying of the Egyptian agricultural documentation and information centre with a computer and the accessories and operating systems programmers and the rules organizing.

- Submitting of technical answers concerning the process of arabization of computer applications in the information systems, contributing of the project in the arabization project concerning a definite sectoral centre if it is important nationally or sectorally.
- Contribution in the designing of link elements between the system of sectoral centre's computer and other information systems locally or abroad that are being treated with this is considered one of the main activities of the National Information Network.

(iii) Engineering and Industrial Design Development Centre (EIDDC):

Address: 203, El Abram Road, Giza, Egypt

Tel: 85 25 50/85 35 44

Telex: 92739 EIDDC UN

Nature of Institution: Public

Name of Director: Dr. Eng. Yousef Khalil Mazhar

Year of Establishment: 1968

Functions of Institution: Egyptian database building in the industrial field.

Information services for the whole industrial community.

Industrial Inquiry Service: Sectors:

- industrial sector
- engineering facilities
- high institutions

Inquiries:

- bibliographic, factual, non-bibliographic and consultation information

Source of answers:

- Local: D.B. (ENSTINENT)

- Foreign: D.B. (Dialog and BRs)

No. of inquiries:

- about 500/year

List of hardware/software:

Hardware:

- ATT, 3B5 system with two quality printer and 8 terminals, two mbyte main memory, 500 mbyte auxiliary memory Unix 0-5, BRs D.B. system
- ATT Computer
- 3B5 system
- 2 Bilingual quality printers
- 1 Console (110V)
- 7 Terminals (220V)
- 2 Harddisc, 140 mbyte, 360 mbyte
- Magnetic tapes
- On-line system using telephone line

Software:

Unix operating system

- Bibliographic retrieval system (database) BRs
- C language and basic language and shell language of Unix
- Compendex data base loaded on BRs

Main problems faced by the organization in information field:

- No budget
- High turnover of qualified staff due to small salaries
- Local data base building (shortage of staff, difficult to obtain the right data)

Linkage with other information institutions:

- Linkage is through ENSTINET with: EDIC, OEP, NIDOC, C&T, STS focal point.

- (iv) National Information and Documentation Centre (NIDOC)  
(ASRT - Ministry of Science and Research)
- (v) Organization for Energy Planning (OEP)  
Ministry of Petroleum.

#### VI. ACTION PROGRAMME (FOLLOW-UP)

31. The creation of INTIB national focal points network is co-operated with a problem of computerization of the INTIB focal points. Computerization could be started on a time when not of all focal points have their computers or utilize ones. It should be rather understood as a development strategy in which each member state focal points could take part increasing its involvement according to its needs and available funds.

32. The development strategy should be a general frame of co-operation aimed at final computerization of national focal points. Taking into consideration the cost effectiveness trend of computerized information systems the computerization of INTIB focal points in African countries seems inevitable. Nevertheless in the initial stage of the development strategy the basis for information exchange and search must be established.

33. The target of the initial stage of the development strategy should solve three problems:

- What kind of classification system of industrial information must be in accordance with INTIB activities?
- What minimum set of data must be in accordance with INTIB activities?
- What will be computer format of the data according to the computer in INTIB unit in UNIDO Secretariat?

34. It is necessary to solve these three strategic problems at the international level. It should be prepared as the result of official

expert group recommendations (concerning the first and the second problems). The second expert group recommendations (computer specialist group) should propose the solution for the third problem taking into consideration ISO standards in the field of exchange data by magnetic tapes, discs and on-line access.

35. Stage one could start with one operating central computer in INTIB headquarters answering the national focal points requests and disseminating information according to the established profiles. In this case INTIB has to assist African countries in the information service manpower building.

36. Stage two begins when besides the INTIB computer there are other computers in national focal points but without on-line links between them. It is necessary to note that all other national focal point without computers, implement activities as in stage one.

37. In stage three all national focal points have computers connected on-line to the INTIB computers. As a result for the national focal point in stage three no mailing is needed and files of INTIB and focal point computer could be reached and exchanged. It should be noted that other national focal point could work at the same time in stage two or one.

38. It is necessary to note that computerization of national focal points is last step in the process of ordering the flow of information, because before purchasing of a computer system, a detailed study should be undertaken to determine its configuration and software requirements.

ANNEX I

Documents Used During the Mission

I. General Documents

1. A Programme for the Industrial Development Decade for Africa, prepared jointly by the Economic Commission for Africa, the Organization of African Unity and the United Nations Industrial Development Organization, New York, 1982.
2. Lagos Plan of Action for the Economic Development of Africa 1980-2000, International Institute for Labour Studies, Geneva, 1981.
3. Role of INTIB, (ID/WG.450/13), 20 September 1985, UNIDO Secretariat. Round Table Discussion of an Advisory Group of INTIB Users, Vienna, Austria, 23 - 27 September 1985.
4. Sung Jin Choi, Guidelines for the Formulation of National Industrial and Technological Information Policy, INTIB Secretariat.
5. Ching-Chih Chen, Microcomputer Use in Libraries in the U.S.: Current and Future Trends, UNSECO - Upils Asian Regional Seminar/Workshop on the Application of Microcomputers to Library and in Information Management, Dillman, Quezon City, 29 October - 2 November 1984.
6. Bankowski J., Wysocki A., Guidelines for the Establishment or Redesign of Industrial and Technological Information Service System, Including Selection of Software and Hardware, Warsaw, September 1985, INTIB Secretariat.
7. Industrial and Technological Information Bank - Questionnaire, IDDA Project RP/RAF/85/621.

II. Egypt

The Egyptian National Scientific and Technical Information Network (ENSTINET), The Academy of Scientific Research and Technology, Monthly Current Awareness, Cairo.

ANNEX II

Industrial and Technological Information Bank

IDA Project (RP/RAF/85/621)

Questionnaire

Objective: Assess existing/potential information service  
institutions/organizations and their activities

Name of Institute/Organization:

Country:

Address of Institution/Organization:

Telex/Cable:

Telephone/Telefax:

Nature of Institution/Organization: Public/Private/Semi-private

Name of Director/Interviewee:

Year of Establishment:

Objectives/Functions of Institution/Organization:

Number of Information staff:

Professional:

Supporting personnel:

**Information Service Activities:**

**List of Publications:**

**Quarterly/Yearly Publications:**

**Industrial Inquiry Service (Sectors/Inquirers/Source of Answers/  
Number of Inquiries/Character):**

**Extension Services:**

**Selective Information Dissemination/Current Awareness Service:**

**Ad-hoc Advisory Services:**

**Source of Fund: Government/Private**

**Budget for Information  
Activities:**

**List of Hardware/Software:**

**Main Problems Faced by the Organization on Information Field:**

**Contents of Advice Given by UNIDO Experts:**

**Comments to be as INTIB Nodes by Institution/Organization:**

**Linkage with Other Information Institutions/Organizations:**



**List of Demand/Needs of Information Users:**

**Linkage with INTIB:**

**Industrial Inquiry Service**

**Possible Areas:**

**Ways and Means:**

**Trainings/Seminars/Workshops Conducted by the  
Institution/Organization**

**Expectation from INTIB:**

**Ad-hoc Service Request and Project Document:**

**Industrial Information Policy:**

**Non-Focal Points for Co-ordination Request:**

**Recommendations to Government:**

ANNEX III

List of Specialists Consulted

Prof. Dr. Mohammed M. Kamel	President Academy of Scientific Research and Technology
Prof. Dr. Mohammed B. Fayez	Director National Research Centre
Prof. Dr. Ali Ali Hebeish	Director ASRT President Office
Prof. Dr. Yousef Khalil Mazhar	Director Engineering and Industrial Design Development Centre
Mr. Ahmed Abdel Bassit	Director The Egyptian National Scientific and Technical Information Network
Eng. Maissah El Mahdy	Director Engineering and Industrial Design Development Node
Eng. Ibrahim Zaki	Director Agricultural Documentation and Information Centre
Ms. Hodda Sharawy	Director Information Section National Information and Documentation Centre
Dr. Hussein Abdelah	President Organization for Energy Planning

ANNEX IV

Abbreviations and Addresses

ASRT	Academy of Scientific Research and Technology, 101, Kaser El Ainy Street, Cairo, Egypt.
ENSTINET	The Egyptian National Scientific and Technical Information Network, 101, Kaser El Ainy Street, Cairo, Egypt.
EDICA	Egyptian Documentation and Information Centre of Agricultural, Ministry of Agriculture, El Dokky, Cairo, Egypt.
OEP	Organization for Energy Planning, 1, Eashah El Taymoriah Street, Garden City, Cairo, Egypt.
EIDDC	Engineering and Industrial Design and Development Centre, 213, The Pyramids Road, Giza, Egypt.
NIDOC	National Information and Documentation Centre, El Tahrir Street, El Dokky, Cairo, Egypt.

ANNEX V

Schedule for UNIDO INTIB Field Mission Visit to Egypt  
18 - 23 November 1985

Monday, 18 November 1985

Arrival at 11.00 a.m.

Tuesday, 19 November 1985

8.30 - 9.30 a.m.

Ms. Omnia Gomaa  
UNDP Office, Cairo

10.00 - 10.30 a.m.

Prof. Dr. Mohamed Kamel  
President, Academy of Scientific  
Research and Technology, Cairo

10.30 - 11.00 a.m.

Prof. Dr. Ali Ali Hebeish  
Head, Office President of the Academy

11.15 - 13.30 p.m.

Mr. Ahmed Abdel El Bassit  
Director, Egyptian National  
Scientific and Technical Information  
Network

Wednesday, 20 November 1985

8.30 - 10.30 a.m.

Eng. Dr. Yousef Khalil Mazhar  
Director, Engineering and Industrial  
Design Development Centre (EIDDC),  
Cairo

10.30 - 12.30 p.m.

Eng. Maissah El Mahdy  
Director, Industry Node in EIDDC, Cairo

13.00 - 14.00 p.m.

Eng. Ibrahim Zaki Ibrahim  
Director, Egyptian Documentaton and  
Information Centre for Agriculture,  
Ministry of Agriculture, Cairo

Thursday, 21 November 1985

8.30 - 9.00 a.m.

Prof. Dr. Mohamed B. Fayez  
Director, National Research Centre,  
Cairo

9.15 - 9.30 a.m.

Prof. Dr. Ahmed Naiem  
Director, National Information and  
Documentation Centre (NIDOC)

9.30 - 11.00 a.m.

Ms. Hodda El Sharawy  
Chief, Information Section in NIDOC

11.30 - 13.30 p.m.

Prof. Dr. Hussien Abedalah  
President, Organization for Energy  
Planning, Cairo

Friday, 22 November 1985

Holiday