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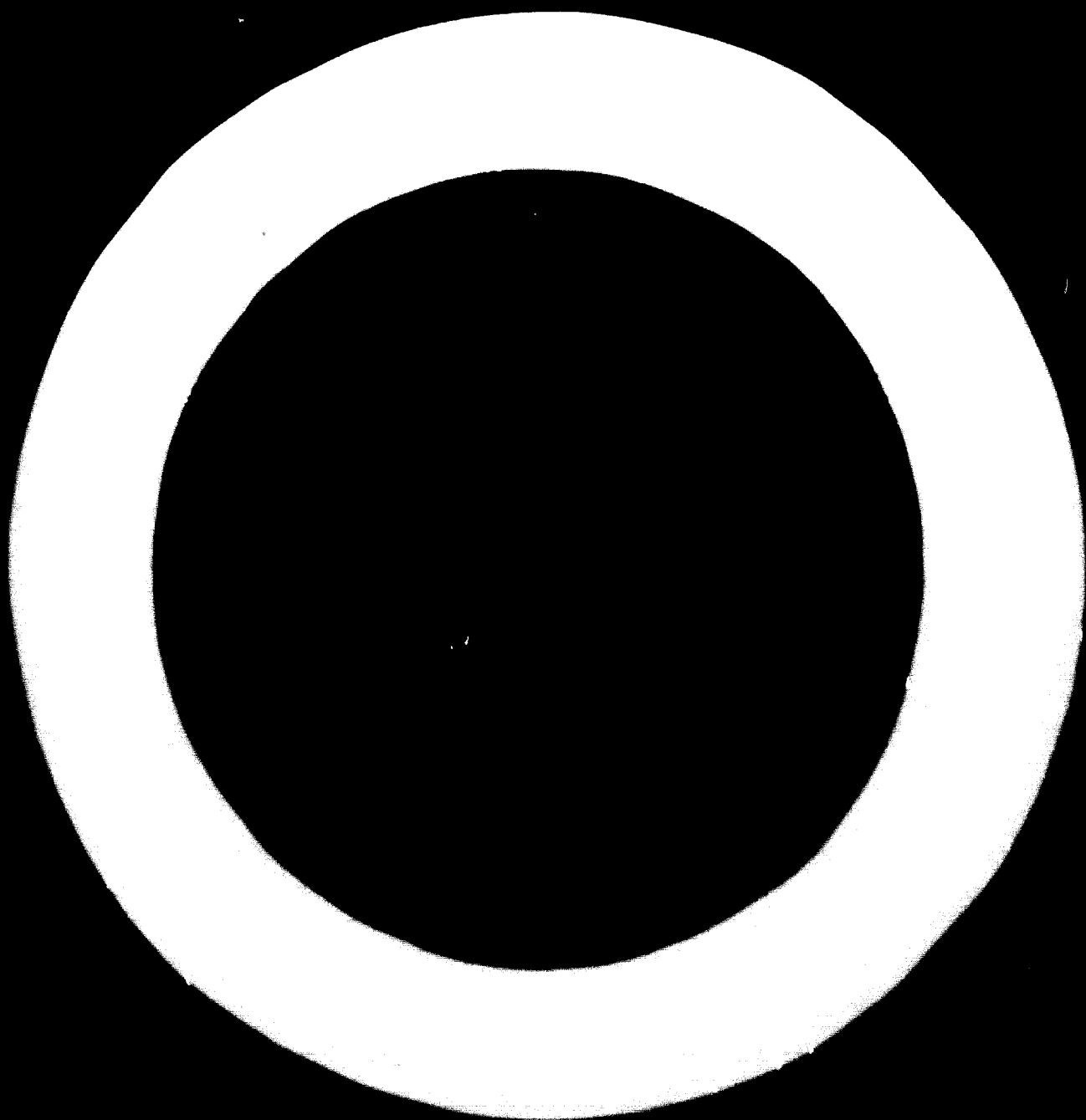
Seminar on Industrial Information
(for English-speaking countries of the ECA region)

Addis Ababa, Ethiopia, 6 - 15 November 1972

DRAFT REPORT

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.



PREFACE

The Seminar on Industrial Information held in Addis Ababa from 6 to 15 November 1972 was organized by UNIDO in co-operation with the United Nations Economic Commission for Africa for the purpose of bringing together policy-making and other responsible officials from the countries of the ECA region to recognize the important role of industrial information in the industrialization process of African countries, to determine efficient ways of promoting the flow of this specific information and how to apply it for the acceleration of the industrialization and economic growth of developing countries.

Invitations were sent to all governments of English-speaking countries in the ECA region. Egypt, Ethiopia, Ghana, Kenya, Liberia, Libyan Arab Republic, Nigeria, The Sudan (Dem. Rep. of), United Republic of Tanzania, and Uganda, and to the East African Academy, East African Community (EAC) and Industrial Development Centre for Arab States (IDCAS). Twenty-one participants from nine countries and three regional institutions took part in the meeting in addition to observers. For names, functions, and addresses of participants, see Annex I.

Appropriate documentation was prepared for the Seminar. This included:

1. Country papers
2. Discussion papers
3. Discussion notes
4. Background material

In the absence of Mr. Robert Gardiner, Executive Secretary of the Economic Commission for Africa, the Seminar was opened on his behalf by Mr. Sebat Hable Selassie, Acting Chief, Industry and Housing Division. Other opening addresses were delivered by: Mr. O. Czivis, UNIDO Representative and by Mr. V. Pavlov, Industrial Information Section, UNIDO, Director of the Seminar.

The following officers were elected: Chairman Dr. SALAH OSMAN of the Arab Republic of Egypt; Vice-Chairman Dr. ISAAC A. AKINRELE of Nigeria, and Rapporteur, Mr. A. H. K. JUMBA-MASAGAZI of the East African Academy.

It became obvious to all participants of the Seminar that the problems of industrialization in African countries and their solutions are very closely related to the information machinery in this field and complementary functions and measures to promote the economic and industrial development in Africa. The opportunity to meet around a table to analyse and discuss the problems and main issues emerging from the presented country reports, the expert papers and the policy documents submitted by the Secretariat were welcomed as useful and necessary by the participants.

The programme of the Seminar further provided a visit by the participants to local factories. A table giving the detailed programme of the Seminar is attached as Annex IV.

On behalf of all participants I would like to take the opportunity to thank the Economic Commission for Africa for its hospitality and the facilities provided for the Seminar. Recognition is also extended to UNIDO which perceived the urgent needs for applied information in the industrialization of our countries.

Dr. Salah Osman
Chairman of the Seminar

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I. INTRODUCTION: DEFINITION OF INDUSTRIAL INFORMATION AND RECOGNITION OF ITS IMPORTANCE

1. For the purpose of the Seminar, industrial information is defined as: "Those specific items of scientific, technical and economic knowledge which can be communicated and applied in industry in order to facilitate and accelerate the process of economic growth".
2. To promote effective industrialization in a country, it is absolutely necessary to organize primarily the local and national sources of information with special regard to the needs to cover production, maintenance, marketing, productivity, management, labour relations, financing, etc.
3. To organize information sources, means to generate knowledge and experience which must then be communicated and put to practical application. It means further, to have a permanent access to the data and facts which are elaborated and actualized in statistical offices, research institutes and documentation centres with direct relevance to industrial application.
4. It is obvious too, that developing countries need also the technical know-how from abroad on all aspects of industry. In line with the above mentioned definitions, the supply of technical information on a specific product and its production process should if successfully applied - result in "technology transfer".
5. The media of communication in the field of industrial information may be divided in two categories of "transfer vehicles":
 - (a) Books, trade journals, sales literature, technical fairs, conferences, meetings, study missions, training courses, etc. These primary resources are very essential in this field but don't lead to an effective transfer of operative technology for the reason that the technical and managerial skills for the successful selection and assimilation of technology from the sources of information are extensively rare, particularly in developing countries.
 - (b) Experts, consultant companies, equipment suppliers, engineering design offices, institutes for applied research and development, plant manufacturers and production companies, etc. These secondary vehicles combine the supply of information with the technical and organizational skill required for assuring its practical application.

6. In this connection, it is helpful to use a common definition of industrialization.^{1/}

- The process of industrialization is the transition from primitive, subsistence, self-employed and mainly self-sufficient production methods to scientifically mechanized and rationally organized production systems employing labour and catering for an anonymous market.
- The action of industrialization is the conscious pursuit of policies designed to facilitate or bring about the introduction of scientifically improved technology and rationally devised organizational structures into the production process.
- The state of industrialization is the result of the industrialization process, a situation characterized by "men aggregated at power-driven machines, working for monetary return with the products of the manufacturing process entering into a market based on a network of exchange relations".

7. The participants of the Seminar recognized the special importance of industrial information for the different stages in the African countries. Observing the situation of industrialization in their countries and the respective problems, which characterize the information gap, the participants concentrated their discussions on the setting up and operation of industrial information services. After having identified six main issues for consideration, the delegates discussed intensively, formulated their ideas and recommendations which are listed in the following parts of this report.

II. LECTURES GIVEN BY ECA, UNDP AND UNIDO

Lectures were given by ECA, UNDP and UNIDO representatives on their various operational activities as they relate to industrial information.

It was observed that while these information services of UNIDO were widely used by many countries, African countries did not make full utilization of these services. Participants felt that it would be helpful if UNIDO would widen their publicity in collaboration with national institutions in respect of their industrial information to reach individuals at operational levels in government and industries.

^{1/} M. Nash, "Some notes on Village Industrialization in South and East Asia", Economic Development and Cultural Change, Vol.3, No. p. 271.

III. REPORTS ON THE SITUATION OF THE COUNTRIES AND RAISING THE PROBLEMS

ARAB REPUBLIC OF EGYPT

- A. Mr. M. Abou Zaghla of the General Organization for Industrialization (GOI) informed the Seminar - in addition to the previous report by Mr. Mohamed Abdel Rahim El Gaindi, about the activities of his organization. The organization is responsible for supplying information about different industries both to government and the private sector. It collects data and follows the development (technical) of various branches of industry.

It undertakes pre-investment services and studies all possibilities of maximum utilization of resources. If need be, it co-operates with foreign know-how to realize the maximum benefit from the country's industrial activities.

It plays the role of a laboratory in which Egyptian industrial projects are scrutinized and no project can be undertaken by government without its being approved by the board of directors of GOI.

The reporter told the Seminar that Egypt's industry falls under three main categories:

- Government sector
- Public sector and
- Private sector

One of the tools by which Egyptian industrial information is supplied is the National Information and Documentation Centre. This was co-operatively set up by the Egyptian Government and the United Nations in 1954 to provide information in the field of science and technology. This division disseminates information through abstracts, performs translation services and trains information scientists among other things. It is intended to turn the Centre's library into a national reference library for science and technology.

There are many other industrial organizations from which industrial information can be obtained. These include libraries such as the Egyptian National Library.

Problems:

(1) Organizational problems:

- (a) job analysis
- (b) job description
- (c) requirements
 - (i) manpower
 - (ii) equipment
 - (iii) finances

(2) Economic problems:

How the centre can be economical

Reading awareness - so that the material collected can be made use of rather than just being stored.

B. Under the Ministry of Industry, Petroleum and Mineral Wealth is the Productivity and Vocational Training Department. The activities of this department were reported to the Seminar by Mr. Mohamed Abdel Rehim El Guindi.

The department was established in 1954 and joined the Ministry of Industry in 1956. The purpose of the department is to help companies in the application of productivity and methods and techniques and to organize courses to train the personnel required for applying these techniques. Also the department is responsible to train workers required by the different companies in the vocational training centres which was established for this purpose.

To achieve its aims the department has two divisions:

(1) Productivity division

The main task of this division is to set and conduct courses for training personnel in the field of industrial engineering (work study, production planning, quality control, organization of maintenance) cost accounting, marketing, financial control, industrial safety, supervisory training, industrial relations (selection, motivation, incentives) and training officers. It also gives advice to the companies on managerial and production problems.

(2) Vocational training division

This division is concerned with training skilled and semi-skilled workers required for different industries, by training them in the various vocational training centres. It also conducts up-grading courses for the workers working already in the companies who got their skills through experience. Also it provides training for future instructors needed for vocational training centres for different trades.

The technical information section is one of the main activities in this department. It is responsible to give information in the particular activities of the department, to the different specialists in the department and also to those working in companies within the eight industrial sectors (public and private). This information is sent to industry by many means:

(a) Publicity

- (i) quarterly magazines called Productivity containing articles, researches, local experiments of and up-to-date news from abroad about new books, films, techniques;
- (ii) monthly bulletins called "The Documentation and Library Issue" including abstracts of selected subjects from foreign and local magazines, reports, newsletters;
- (iii) issuing technical arabic books and booklets.

(b) Seminars and Conferences for discussing specific subjects for specialized personnel.

(c) Exhibitions showing the different techniques and methods of raising productivity, its application in industry and the results achieved.

(d) Radio and TV programmes for managers and workers.

(e) Daily newspapers in different occasions.

(f) Answering questions for some specific problems dealing with management and training of personnel.

The service began to exchange its materials with the productivity centres in the Arab countries as well as with the foreign countries after making English abstracts to the published articles. A specialized library on industrial management and vocational training was set up and it is the main source of information.

The information officers feel that it is more valuable to go to the users and find out their needs rather than waiting for the user to come, and for this reason we are preparing now a questionnaire which will be sent to users in order to get information about their needs.

Problems:

- (1) lack of finances
- (2) delay of information coming from abroad (periodicals) reports, newsletters, bulletins ...)
- (3) training of information officers

ETHIOPIA

Reporting to the Seminar about industrial information activities in Ethiopia, Mr. Admassu Makonnen from the Technical Agency said that the Agency was responsible for surveying, identifying etc., and for appraising different industrial and agricultural projects among others, to supply information not only to government but also to the private sector.

He said that there was the Ethiopian Chamber of Commerce which acts as a bridge between foreign investors and the economic status of the country.

He enumerated a number of institutions from which industrial information could be obtained. Some of these were:

- (1) Chamber of Commerce which supplies information to investors, both foreign and local;
- (2) Ministry of Commerce and Industry which is responsible for legislating for the establishment of new industries;
- (3) Centre for Entrepreneurship Management. This brings together industrial managers to advise and if need be train them on scientific methods of industrial management.
- (4) The Ethiopian Standard Institute is responsible for the standardization of different Ethiopian commodities, mainly for export, to meet world standards;
- (5) The Agricultural Research Institute is responsible for promoting modern agricultural know-how based on scientific researches;
- (6) The Statistical Office compiles statistical data both from already established industries and by its own independent means.

Ethiopia has an edge over many African countries in that Addis Ababa, the capital, is the seat of numerous UN organizations as well as embassies. Proper utilisation of the above would have put Ethiopia on better starting point if the need of establishing Industrial Information Services were realized by those concerned.

Problems:

- (1) There is a dire need for a unified industrial information system.
- (2) Some information is distorted by established industries - giving wrong data to protect themselves against the taxman. So a problem arises as to how to obtain accurate information to help researchers.
- (3) There is a need and a problem to ascertain as to what the public considers as the most important information.

GHANA

The participants from Ghana reported that industrial information is the responsibility of the Ministry of Industries. However, there are other institutions which provide industrial information on various aspects of industry. Some of the institutions operating in this field are as follows:

- (1) Institute of Standards and Industrial Research
- (2) Council of Scientific and Industrial Research
- (3) University of Science and Technology
- (4) Capital Investments Board
- (5) Agricultural Development Bank
- (6) National Investment Bank
- (7) Commercial Banks

There is a Management and Productivity Institute which organizes periodic lectures (seminars, courses and the like) aimed at improving efficient running of industry. In addition, there are government training centres as well as a private organization - organization industrialization centre - which imparts skill to the local entrepreneurs.

The Ministry of Industries realizes the importance of a well organized industrial information system that it has attached an information officer to the ministry.

The National Investment Bank, which is not 100 per cent government owned has, as a main duty to provide loans to industrialists and agriculturists so as to stimulate interest in local entrepreneurship. They also finance projects which are not of immediate attraction to local people. So the bank carries out feasibility studies about different projects.

Existing sources of industrial information in Ghana include:

- (1) Central Bureau of Statistics - the information from here is not enough because it is not specific;
- (2) Importers - these are reluctant to give information because they fear competition from the new industries that may be established. To overcome this fear, bank officers are issued with identity cards to remove the tax fear and also the officers promise to keep the the information so obtained secret;
- (3) Established industries - the bank uses the same methods as those above. In addition, they send out questionnaires which they later follow up with personal visits by officers. Group tours are also arranged to established industries to discuss with the

policy making people of the industries or companies. This helps to get further information which would otherwise be difficult to obtain by a single officer of the bank.

- (4) Customs and Excise Department (for the data on returns they collected).
- (5) The bank undertakes feasibility studies for individual companies when requested. They run across the difficulties of technical manpower so sometimes they depend on related foreign expertise. In consulting foreign expatriates, the bank considers experience rather than availability of equipment or material from the foreign personnel because that foreign personnel is expected to train local people to carry out the work as soon as possible. The bank also has the responsibility of analyzing and giving advice on government projects. Seminars on project appraisal are organized by the bank.
- (6) Finally, the bank has built its own library in which as much material as possible on industry is collected. As that material is acquired, a list is made and circulated to people who might want to refer to it.

Problems:

- (1) Shortage of trained personnel and technical know-how;
- (2) Lack of finances
- (3) Lack of entrepreneurship capital. This is relieved by the fact that the Central Bank of Ghana has undertaken to provide guarantee covers to aspiring investors lacking adequate collateral security and whose applications for loans would have otherwise been rejected.

KENYA

Mr. A. M. Shikhule from the Kenya Industrial Estates Limited reported to the Seminar that there was a shortage of all types of industrial information in Kenya. As for the organization for which he works, he said that the Kenya Industrial Estates, a government parastatal body, was involved in promoting industrial development in the country and its major aim was to Kenyans in industry. The organization carries out feasibility studies and follows them up for their implementation. These feasibility studies are carried out through contacts with dealers and various agencies within the country or from outside the country if it is necessary.

The main sources of industrial information, he said, were:

- (1) Index of Manufacturers - published by the Ministry of Commerce and Industry. This gives a list of products and who makes them in Kenya.
- (2) Statistics Division of the Ministry of Finance and Economic Planning. This gives information on development in Kenya in general. It is not very useful for a specific study.
- (3) Department of Statistics of the East African Community. This information is not very useful since the data is based on an East African region.
- (4) East African Customs and Excise Department provides information on industrial imports and exports. The information can be useful but again it is not specific enough.
- (5) The Institute for Development Studies at the University of Nairobi conducts very useful research studies. Unfortunately, their findings are not readily available to the public sector although the information obtained from their finding would be very reliable and useful.
- (6) Information from the private sector is not always reliable.
- (7) Agricultural information is very advanced and reliable but information on agricultural based industries is lacking.

What is done:

- (a) Feasibility studies are based on information from dealers contacted personally. These are difficult because many times they play about with data for tax and other purposes.
- (b) Industry is predominantly foreign at present and it is, therefore, difficult to obtain information from the selfish foreign entrepreneur.

Needs:

There is need to:

- (a) Set up a Centralized Statistical Bureau.
- (b) Co-ordinate whatever sources of information exist now. The quality of the information obtained therefrom is bound to improve.
- (c) Set up regional industrial information centres.
- (d) Train industrial information officers with the help of International Organizations.

Problems:

Lack of technology. International organizations such as UNIDO or ECA, should try to bring aspiring industrial entrepreneurs in developing countries in touch with willing industrialists from industrialized countries.

LIBERIA

The status of industrial information in Liberia was presented to the Seminar by Mr. Johnson from the Liberian Development Corporation. He told the Seminar that the purpose of the corporation is to promote industry. In Liberia, industrial information should be obtained from ministries such as: Commerce and Industry and Planning and Economic Affairs. However, this is often very difficult. The availability of that information is scarce.

Problems:

- (1) The organization of an efficient industrial information service is an expensive undertaking. It demands special expertise and this requires substantial investment. This money cannot be easily obtained.
- (2) There is no specialized manpower, i.e. industrial information officers.
- (3) There are no facilities yet to train the required manpower.
- (4) There is no inter-African co-operation in terms of the exchange of industrial information.
- (5) Industrial activities are conducted by foreigners whose willingness to make industrial information available is almost nil.
- (6) Private Liberian entrepreneurship is limited by:
 - (a) lack of information;
 - (b) lack of adequate financing.

Needs:

There is a dire need to rectify the above problems. Most urgently, there is need to:

- (a) train local industrial information officers;
- (b) obtain funds for an industrial information system to be set up systematically;
- (c) encourage greater information exchange between African countries.

NIGERIA

Reporting on industrial information activities in Nigeria, Dr. I. A. Akinrele told the Seminar that although about 60 per cent of Nigeria's gross national income came from the industrial sectors which had expanded by between 25 and 60 per cent in a period of 15 years. In spite of this industrial growth it was his view that industrial information services could be further improved in the country.

There were these types of information on industry in the Federal Republic of Nigeria:

- (1) Statistical Data - on raw materials, national accounts, imported export trade obtainable from the Federal Office of Statistics.
- (2) The Investment Centre of the Ministry of Industry publishes brochures about investment projects, industrial policy and legislation, inventory on industrial establishment etc.
- (3) The private sector and government corporation produce business and trade reports which are distributed to industry in general.
- (4) Scientific and technological information can be obtained from government technical departments as well as universities and research institutes.
- (5) The Central Bank of Nigeria supplies information on economic and financial analysis of national development.
- (6) The Nigerian Standard Organization supplies information about standard specifications used in industry.

Problems:

- (1) The major problem is that there is no unified system of industrial information dissemination and as such, there is the risk of duplication by the different institutions.
- (2) Information is not given in such a manner that the user can pick precisely what he wants. The Federal Institute of Industrial Research is making attempts to adapt information, especially from foreign sources, to fit the local requirements and atmosphere. This information is being published in a bulletin aimed at the local entrepreneur.

- (3) There is the difficulty of obtaining information in sufficient depth that can be directly applied by users. Much of this is a result of such things as trade secrets and patent rights.
- (4) Much of the literature from foreign sources is old by the time it reaches Nigerian entrepreneurs.
- (5) Because there is no unified organization for the smooth dissemination of information, sources are fragmented and there is the need to collate the industrial information and standardize its dissemination.
- (6) Industrial information lacks adequately trained officers. Industrial information is just a minor subject in mass communication or in library schools.
- (7) Because of fragmented system of industrial information dissemination, sources of dissemination are not adequately equipped infrastructurally. They lack funds to purchase effective hardware.

Mrs. S. O. Abimbola reported that the National Library of Nigeria has also been very active through collection of books, journals, reports etc. in trying to disseminate information on industry. The Director of the National Library of Nigeria persuaded the Chamber of Commerce to establish an industrial library.

Further visits would be made to industrial institutions and organisations in the country to draw their attention to the importance of industrial information and also to inform them of the available industrial information sources in the country. The library has co-operated with the FID in the project FID 415 by compiling the publication "Technical Journals for Industry in Nigeria".

The SUDAN (Dem. Rep. of)

- A. Industrial information activities in the Sudan were reported by Mr. Hassan Osman Ahamed from Sudan's Ministry of Industry. He told the Seminar that the Ministry set up a section for industrial information and statistic whose duty would be, among others, to collect, collate and disseminate industrial information to foreign as well as local industry.

Problems:

In an attempt to handle industrial information so as to process it and pass it on to its would-be users, the section comes against certain problems the most significant of which are:

- (1) Some firms are not willing to supply the section with correct data fearing that the data would be used against these firms for tax purposes.
- (2) Some of the established industries don't want to supply information fearing competition from either other established firms or new industries. The Ministry gave a written guarantee that the data and information supplied by the factories would be treated with utmost secrecy.
- (3) There is a big shortage of trained personnel to handle, i.e. collect, analyse and evaluate the information.
- (4) There is no smooth supply of data. Sudan will need the co-operation of international organizations to effect a smooth supply and dissemination of this industrial information.

- B. Miss Cecile Wesley of the Sudan Industrial Research Institute gave the Seminar more insight into the industrial information activities in Sudan. She pointed out that Sudan's economy was previously agricultural, as a result there is not yet an established system of industrial information. Even the existing library services in industrial organizations are inadequate. The Sudan Industrial Research Institute is a joint UNIDO and Ministry of Industry project founded in 1965 with the aim of aiding and promoting the development of industry. The documentation and information section of the Institute collects and organizes industrial material. It issues current awareness services of recent acquisitions and published classified catalogues. More effort is needed to analyse, synthesize and disseminate information.

Problems:

- (1) Lack of legislation which supports and promotes industrial documentation and information services and establishes legal depositories for published and unpublished reports.
- (2) Lack of national centralized efforts to organize, co-ordinate and up-grade industrial information services.
- (3) Lack of information mindedness on one hand and lack of feedback on the other.
- (4) Lack of qualified professional personnel.

Challenges:

- (1) To promote co-ordination and co-operation between two proposed national efforts, studies should be made to decide on the functions of the national scientific and technical documentation of the National Research Council and those of Sudan Industrial Research Institute whose services are planned to serve industry on a national scale.
- (2) Studies are also needed to establish a publication system to facilitate the flow and transfer of local information.
- (3) The need to recruit industrialists to the information section.

UNITED REPUBLIC OF TANZANIA

Mr. F. A. Kinaiya from the Ministry of Commerce and Industry in Tanzania informed the Seminar that there were several sources or institutions for industrial information in his country. There was however, lack of organization among the institutions and the information procured and disseminated was sometimes inadequate or inaccurate.

He said that the Ministry was charged with promotion of industrial development in the country and therefore it had to procure and disseminate most of the relevant industrial information.

With regard to the problems of inadequacy and inaccuracy of the information he said that while, in some cases, the industrialists withheld or gave distorted information for fear of taxes and competition there were other fundamental reasons which occasioned such problems.

For instance:

- (1) Information may not be available with the firms in the form it is required.
- (2) The industrialist may not be technically competent or equipped to interpret the information he has into the form it is required.
- (3) The industrialist may not have the time to compile the information.

Lack of organization of the institutions involved in procurement and dissemination of information often irritate industrial firms and cause them not to co-operate. Lack of organization also result in the use of different definitions.

The participant felt that while the problems of inadequate and inaccurate information could be overcome by educating the industrialist and by legislating against withholding of information from the government, the problem of organization could be solved by co-ordination or centralization of the institutions for procuring and disseminating information.

Some of the sources and institutions for industrial information are:

- (1) Ministry of Commerce booklets listing different industries in the country and addresses for further sources of information.
- (2) Ministry trade journal giving the industrial development progress in the country.
- (3) The Industrial Studies and Development Centre carries out surveys on different aspects of industries in the country.

- (4) National Development Corporation which is the industrial investment arm of the country.
- (5) Bank of Tanzania and all the other banks in the country disseminate information to investors.
- (6) Then there are different organizations such as the Statistical Bureau, the Economic Research Bureau of the University of Dar-es-Salaam render information available to industry.
- (7) The East African Community.

Problem:

Industrial information services are many but not efficient enough and therefore it is difficult to get reliable information.

UGANDA^{1/}

The controlling body of industrial activities in Uganda is the Ministry of Commerce and Industry. It legislates for any new industry to be established and that is the place where one could obtain information regarding industrial regulations. However, there was set up a Uganda Development Corporation. This is the Ministry's industrial development arm. It sets up from small to large scale industries either on its own or with private shareholding.

The following are the possible sources of information:

- (1) UDC headquarters
- (2) Agricultural enterprises - this is mainly on agricultural products rather than agriculture based industries.
- (3) Uganda Hotels - on the hotel industry.
- (4) Tororo Cement Industry.
- (5) Kileleshwe Mines Industry.
- (6) Madhivan Sugar Works
- (7) Departments of the East African Community.
- (8) Uganda Technical College.

Problems:

- (1) There are numerous sources of information. Some of the people who store this information do not even know they have the information and certainly would-be users get confused as to where to go for particular information.
- (2) There is almost a vacuum for a Systematic Industrial Information System.
- (3) Until very recently, industry, other than the UDC run industry, was in the hands of the type of foreigners who were not willing to store information for research purposes. They passed information on between themselves and not to would-be local entrepreneurs.
- (4) Many industries are foreign based and their research findings - including feasibility studies and improvement and operational studies - are stored at the parent firm either in England, India or wherever the parent firm is.

^{1/} In the absence of the Ugandan delegate, the country report was kindly presented by Mr. A. H. K. Jumba Masagasi, Research Information and Executive Officer of the East African Community, Nairobi, who is a Ugandan citizen.

- (5) Lack of trained information scientists in general, documentalists and industrial information officers in particular.

Conclusion:

It is hoped that the National Research Council set up about three years ago under the Ministry of Economic Planning will co-ordinate research, encourage government to train personnel and spearhead systematic machinery for collecting, collating and disseminating research information in general and industrial research in particular.

EAST AFRICAN ACADEMY

The East African Academy, as reported on by Mr. A. H. K. Jumba Macagasi, its Research Information and Executive Officer, was started by East African Scholars about ten years ago with a purpose of stimulating scholarly work among indigenous East Africans. The belief was that development research for East Africa could only be done by people who had East Africa at heart; not by people who came to the region to research simply because they wanted to get Ph.Ds.

The relevance of the Academy to this Seminar is not that it is an industrial organization or an organization directly involved in industrial activities. The relevance is two-fold. First, the Academy's interests cover all fields of knowledge and members of the Academy come from all spheres of knowledge, including industry. Secondly, the Academy plays a stimulating role in all development activities. Many times, the Academy is a trouble shooter. Where development depends on certain aspects of knowledge, it is the Academy's self imposed role to draw the attention of any of the partner states of the East African Community, to the needed aspects of development. In this particular case, it is the useful and meaningful distribution or dissemination of industrial information.

Not only does the Academy encourage exchange of knowledge by organizing seminars, talks and annual symposia on wide ranges of topics concerned with East African development, it also tries to fish research information, especially unpublished materials, from where that information might go to rust, and tries to bring to people who might need to use it.

For that reason, a research information centre, which the reporter heads, was set up some four years ago, to collect, collate and disseminate research information on Africa in general but East Africa in particular. The humble contribution by this centre to East African development include such works as a bibliographic compilation on "Science and Technology in East Africa" which include as much industrial information as could be obtained through the Academy's meagre means.

Problems:

- (1) Lack of co-operation with research institutes.
- (2) Ignorance about the need for information dissemination on the part of policy makers who think that once there is a Ministry of Information and a radio and television station broadcasts and telecasts news, the information system is superb and complete.
- (3) Lack of trained personnel.
- (4) Lack of finances.

EAST AFRICAN COMMUNITY

The East African Community is a Socio-Economic regional organization whose main aim is to regulate and strengthen industrial development among the partner States of Kenya, Tanzania and Uganda. Reporting on the industrial information activities of the organization, Mr. Muema Ndavi, Regional Information Officer of the organization said that the main source of industrial information in the Community is the East African Statistics Division of the Common Market Secretariat. The Common Market Secretariat has set up a research centre to study possibilities of regional industrial development.

Other sources of industrial information with the Community are:

- (1) East African Community's research institutes - such as the East African Industrial Research Organisation - which publish results of their findings and make recommendations. There are eleven of these research institutes.
- (2) Meteorological Department - which gathers information for the whole African region.
- (3) Corporations - These are the East African Airways, East African Railways, East African Harbours, and East African Posts and Telecommunications.
- (4) East African Community Information Office - this has four main ways of disseminating information: (a) through its monthly magazine called "The Community" (b) through a periodic "East African Community Handbook" (irregular) (c) through an annual report on all Community activities of the year, and (d) through daily and weekly releases to mass media.

Problems:

- (1) Lack of co-ordination between
 - (a) Community services and services of the partner states;
 - (b) Central office and Corporation Information Bureaux.
- (2) Expansion - it is difficult to successfully pass through the red tape of approving and intended project for expansion.

(3) Getting information:

- (a) Information is not allowed; much of it being classified;
- (b) Civil servants do not want to give information to information officers;
- (c) Research officers, mainly the expatriates, prefer to publish their findings in prestigious international journals.
- (d) Language - there are two official languages - English and Kiswahili. Not everybody understands both, or one of these languages.

IDCAS

This is the Industrial Development Centre for Arab States (IDCAS) consisting of 14 Arab States and 4 Gulf States. Its activities were reported on by Mrs. Soumaya Shaaban of the same organization.

The organizational set up of IDCAS is a division of the centre into six major departments one of which is concerned with industrial information and its dissemination. This department is again divided into units. Furthermore, there are eight centres (in eight Arab States) each of which specializes in a particular industry and supplied information on that industry.

To effect an efficient industrial information system, IDCAS co-operates with other governmental and non-governmental international organisations so as to avoid duplication of work. The information system of IDCAS is computerized and stored both in Arabic and English.

Although IDCAS is mainly concerned with Arab States, obviously foreign documents are also used to extract information. So a world-wide correspondence is maintained.

The centre organizes courses for industrial information officers.

Problems:

- (1) The main problem is to have our users seek the help of our enquiry service in facing their problem. They would like to get more enquiries from other organizations especially private or national industrial organizations.
- (2) The Centre finds difficulties in obtaining unpublished material for quick usage by their customers.
- (3) There is a reluctance by some organisations engaged in similar activities thinking it a competitive work.
- (4) IDCAS finds difficulties in identifying its users or would be users and pinpointing their problems unless they answer our questionnaires concerning their exact field of specialization.

IV. MAIN ISSUES OF THE DISCUSSION

After presentations of country reports which outlines situations of industrial information in various countries, there arose issues among which the following were discussed by the seminar as a whole:

1. Realization of the importance of industrial information services and setting up industrial information systems

It was generally agreed that whatever economic system a country adopts the development of any country is measured by its industrialization process. This industrialization is the country's ability to transform its economy from a predominantly primary product oriented to a secondary product oriented. The country no longer depends predominantly on agricultural goods or raw materials but can turn those primary products into secondary products.

Industrialization, it was pointed out, falls into three stages:

- (a) The process of industrialization;
- (b) The action of industrialization;
- (c) The state of industrialization.

It was agreed that an industrial information system is an integral part of the whole industrialization system. It should, therefore, be considered with utmost urgency. By industrial information is meant those specifications of scientific, technical and economic knowledge, which can be communicated and applied in industry so as to facilitate and accelerate the process of economic growth.

It was agreed that in starting an industrial information service it would be necessary to analyse the relevant benefit to the national economy via its industry. There would be need to know the objectives of such a service and an analysis of its functions would have to be set out. It would be necessary to have a good foundation as far as the statistical data of the country is concerned.

An industrial information service would have to identify the type of information, relevant to industrial growth, that would be needed and the same service would try to promote usage of available knowledge. One of the duties of such a service would be to locate all sources of information and pull all local resources as, perhaps, a nucleus for co-ordinated networks. The service or system (the terminology does not really matter) would analyse and scrutinise that information, when assembled, to make it effectively usable.

It is not necessary to start an information system with many people. A small staff (of about three to five people - with one or two industrial information officers, with two or three helpers) can start an efficient information centre. This can be within a government department or it can be a department of an existing information system such as a library or a documentation centre.

2. Role of Government

Government is responsible for the development of a country. Industrialization accelerates development. As has been stated above, industrial information is an integral part of industrialization. So, governments should play an effective role in the organization of industrial information.

Most of the country reports pointed out an existence of a number of industrial information sources. These reports, however, also pointed out that these sources were fragmented and extremely unco-ordinated. It was agreed that proper co-ordination would, therefore, have to have government effective participation in setting up a co-ordinating machinery to avoid parallelism in the information source organs for one thing and to streamline the collection, processing and dissemination of this information for another.

Besides, much of the information, for example, statistical data, comes from government departments. Even those sources of information which are not part of government machinery, would be brought more in line if government were actively involved in the process of co-ordination than if the dissemination were left entirely in the hands of a private organisation.

3. The Users

It would be a time wasting exercise to set up an industrial information system or any other information system for that matter, if that system is not going to be properly utilized. The question of locating users, therefore, is very crucial to the whole organization of an information system.

It was suggested that the process of setting up an information system should go hand in hand with the campaign to educate the users of that system. Industrial information officers should go to the users and not wait for the users to always come to them. It was agreed that field services were very effective means of disseminating information.

Some systems had found it difficult to know who their users were and what sort of information they wanted. It is, therefore, necessary to locate the users and find out what their profiles are. It is also necessary to establish rapport with the users.

4. Sources and Transfer of Industrial Information

To start an industrial information service, it is essential to know what exists within the country. There is information that can be obtained from the country - local information. This is, primarily, statistical information. It includes such information as availability of manpower, natural resources, investment and industrial laws, labour laws, power supply, transport facilities and the like. Other information, however is foreign-technology transfer and marketing information. Much of this is written information in the form of reports, abstracts and other types of publications.

All these sources have to be located and utilized.

5. Training

It was agreed, that as industrial information is a special concept of information as a whole, so is the training of industrial information officers more specialized compared with information officers in general.

There is need for industrial information officers to have background education in technology or economics in order to be effective. Developing countries should recruit such specialists for additional training in industrial information techniques through courses organized in their own countries or abroad.

Another possibility for training industrial information is the in-service training. UNIDO is requested to make wider use of in-service training in the form of scholarships.

It should be mentioned that not only information officers are to be trained but users too. The best solution seems to be to teach future users of industrial information already at the universities, high-schools and industrial school levels, what information services do exist in their special field of interest, how they can acquire them and how they can use them.

6. Co-operation

Industrial development flourishes when there is exchange of technical know-how between states. This is co-operation in industrial information.

It was agreed that there is very little co-operation between African countries in the field of industrial information. It was pointed out that one of the purposes of all All Africa Trade Fair held in Nairobi in February/March 1972, was to strengthen industrial co-operation between African countries. The seminar resolved, therefore, that African states should exchange whatever industrial information they can have at their disposal, and encourage the collection of industrial data on a regional basis as a means of extending potential market for industrial products.

African states, it was suggested, should be more aggressive in advertising and sharing their industrial achievements with their fellow African states. This should be done through trade fairs, exchange of trade missions and the like.

There should also be encouraged exchange of industrial information on bilateral basis between African or developing countries and industrialized countries.

Finally, there should be co-operation through international organizations such as UNIDO.

V. RECOMMENDATIONS

It is recognized that there is need for industrial information services and therefore recommended that:

- (1) Governments should accept responsibility for the transfer of information to industry in developing countries to the same degree and in the same spirit that they accept responsibility for economic development itself.
- (2) When setting up or re-enforcing these services, governments should aim at achieving co-ordinated industrial information services so as to make the optimum use of all local information resources.
- (3) Scientific and technical documentation centres should be strengthened and should be more user-oriented; that is to say, information in these centres should be adapted to the needs and conditions of the country so that the users can understand it more readily.
- (4) In orienting the information services, priority should be given to collecting and disseminating material that is relevant to the kind of industries existing and planned in the country.
- (5) African countries should build up relations with each other in the field of industrial information services by exchanging all possible information.
- (6) African governments should make all possible efforts to avail themselves with the services of UNIDO in the field of industrial information.
- (7) The seminar feels there is great need for training in the field of industrial information; therefore, governments, should provide training facilities for training industrial information officers.
- (8) The participants support the objectives of UNIDO's clearing house project activities to assist developing nations in the establishment and strengthening of local, national and regional industrial information capacity and institutions as part of their basic industrial infrastructure.

- (9) In order to help developing countries in building up and re-enforcing their industrial information services, UNIDO should solicit co-operation of other agencies of the United Nations to show the importance of these services during the seminar and training courses organized by them.
- (10) As UNIDO is the main international organization dealing with industrial information, it should undertake to provide developing countries with fellowships for training industrial information officers and also give information about the existing facilities of training in all countries and other international organizations in this field and help in increasing the number of fellowships offered by these countries.
- (11) Industrial Technology, Industrial Consultancy and Feasibility study services, Industrial and Investment Promotion and Industrial Information Services and Training constitute a specialized category of essential infrastructure for African industrialization. It is recommended that African countries should be assisted in developing these facilities through the establishment of Africa-based Regional Institutions for this purpose. ECA and UNIDO should give thought to this and formulate appropriate proposals for joint action.

ANNEX I

LIST OF PARTICIPANTS

Country/ Organisation	Name and Function	Office address	Home address
EGYPT	Mr. MAHMOUD I. ABOU ZAGHLA Director General	General Organization for Industrialization, Garden City, Cairo, Egypt	65 Mamail Street Cairo, Egypt. Tel. 847042
	Mr. MOHAMED ABDEL REHIM EL GUINDI Head of Technical Information Section of P and V.T. Department	Productivity and Vocational Training Department, Cairo, Egypt	Productivity and Vocational Training Department, Cairo, Egypt
	Dr. Ing. SALAH OSMAN General Technical	Organization for Technical Industries, 3 Ismail Abou El Fotouh Street, Dokki, Cairo, Egypt	28 Talat Harbsi Cairo Egypt
ETHIOPIA	Mr. ADMASSU MAKONNEN Economist	I.E.G. Technical Agency, P.O. Box 3433, Addis Ababa, Ethiopia	c/o I.E.G. Technical Agency, P.O. Box 3433, Addis Ababa, Ethiopia
	Mr. ESHETU INDESHAW Senior Management Consultant	Centre for Entro- preneurship and Management, P.O. Box 3246, Addis Ababa, Ethiopia	P.O. Box 2333, Addis Ababa Ethiopia
GHANA	Mr. S. K. CHARWAY Public Relations Officer	Ministry of Industries, P.O. Box M 39, Accra, Ghana	Ministry of Industr P.O. Box M 39, Accr Ghana
	Mr. KWAKU GYAM FI Joint Director	Development Service Institute, National Development Bank, Accra, Ghana	P.O. Box 3726, Accra, Ghana
KENYA	Mr. ALFRED NUKA SHIKULE Deputy General Manager	Kenya Industrial Estates Ltd.	P.O. Box 18282, Nairobi, Kenya

LIBERIA	Mr. FRANCIS TORBOR Financial Analyst	Liberian Development Corporation, Monrovia, Liberia	c/o Liberian Development Corporation, Ministry of Commerce, Industry + Transport Monrovia, Liberia
	Mr. L. KWIA JOHNSON, Jr. Executive Secretary	Liberian Development Corporation, Monrovia Liberia	"
LIBYA	Mr. ASHIURAKIS Head of Training and Information Section	Training and Information Section, Ministry of Industry, Tripoli, Libya	Training and Information Section, Ministry of Industry, Tripoli, Libya
	Mr. FATEH GATATA Director General of Financial Administration	Industrial Research Centre, P.O. Box 3633 Tripoli, Libya	Industrial Research Centre, P.O.Box 3633 Tripoli, Libya
NIGERIA	Mrs. STELLA OLUREMI ABIMBOLA Head of Cataloging Department	National Library of Nigeria, 4 Wesley Street, P.O.Box 12626 Lagos, Nigeria	11 Sam Shonibare Street, Surulere, Lagos, Nigeria
	Dr. ISAAC ADEDAYO AKINRELE Director of Research	Federal Institute of Industrial Research Oshodi, Lagos. Nigeria	19 Lugard Avenue Ikeyi, Lagos Nigeria
SUDAN	Miss CECILE WESLEY Head of Documentation and Information Section	Sudan Industrial Research Institute, Khartoum, Sudan	P.O. Box 317 Khartoum, Sudan
	Mr. HASSAN OSMAN AHMED	Ministry of Industry, P.O. Box 2184 Khartoum, Sudan	Ministry of Industry P.O. Box 2184 Khartoum, Sudan
TANZANIA	Mr. FERDINAND A. KINYAIYA Senior Industrial Officer	Ministry of Commerce and Industries, P.O. Box 234, Dar-es-Salaam, Tanzania	P.O. Box 234, Dar-es-Salaam Tanzania
EAST AFRICAN ACADEMY	Mr. JUMBA-MASAGAZI Research Information and Executive Officer		P.O. Box 30756 Nairobi, Kenya
EAST AFRICAN COMMUNITY	Mr. MUEMA NDAVI	East African Community P.O. Box 1001, Arusha, Tanzania	P.O. Box 30005, Nairobi, Kenya
IDCAS	Mrs. FAREA ZAHAWI Acting Director, Documentation and Scientific Computation Department	IDCAS, 33 No 14 Street, Mwadi, Cairo P.O.Box 1297 Cairo Egypt	16 Nile Street Giza - Cairo, Egypt
	Mrs. SOUMAYA MOUSTAFA SHAABAN Documentalist and Terminology Officer	IDCAS, P.O. Box 1297 Cairo, Egypt	37 El Ansar Street Dokki, Cairo, Egypt

UNIDO AND ECA EXPERTS AND REPRESENTATIVES

UNIDO Expert	Mr. ERNST-JOACHIM FREIHERR VON LEDEBUR Chief, Documentation Centre of the German Foundation for Develop- ing Countries	53, Bonn Endenicherstr. 41 Germany	53 Bonn Bad Godesberg Hoekrenzallee 155, Germany Tel. 75374
UNIDO Expert	Mrs. SUSAN LEVAI Director, Technoinform	Hungarian Central Technical Library and Documentation Centre (OMKDK-TECHNOINFORM)	Budapest 8 P.O. Box 12 Revizky - u.6
UNDP Expert	Prof. LARS GIBERTZ Regional Adviser	Bouwcentrum Internat- ional Education, P.O. Box 299, Rotterdam, The Netherlands	Jesus Pobre por Gata de Gorgos (Alicante) Spain
UNIDO Director of the Seminar	Mr. VLADIMIR PAVLOV Chief, Industrial Inquiry Service	Industrial Information Section of UNIDO Lerchenfelderstr. 1 Vienna, Austria	1220 Vienna Schiffmuhlenstr. 95/2/11
ECA Director of the Seminar	Mr. YURI V. KARTSEV Industrial Section, Industry and Housing Division	Industry and Housing Division, UNECA	Africa Hall P.O. Box 3005 Addis Ababa Ethiopia

OBSERVER

Observer	Mr. KIM S. LOSSEV Head of Division	VINITI (Institute of Scientific and Technical Information of the Academy of Science of the USSR) Baltiiskaya 14 Moscow A-219 USSR	Gotwalda 14 K.Moscow A-47 v. 31
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ANNEX 2

OPENING STATEMENT

by

Mr. R. K. A. Gardiner
Executive Secretary
Economic Commission for Africa

I should like to extend to you all a very warm welcome to Africa Hall as participants of the Seminar on Industrial Information jointly organized by ECA and UNIDO.

This Seminar originated from various recommendations made to the ECA and UNIDO by Governments for action aimed at developing and strengthening industrial information services in African countries. The African industrial symposium which was held in Cairo in 1966 under the sponsorship of ECA and the Centre for Industrial Development - the precursor UN organ to UNIDO - provided one of the first opportunities for the examination of questions related to industrial research and industrial information at the regional level. The symposium called upon member States of the Commission to set up a regional scientific information and documentation centre for the collection and dissemination of technical information; to strengthen existing information centres and training institutes and to promote the training of personnel to many existing and new centres.

There is a great deal of industrial information in the world today. Difficulties, therefore, arise in handling this type and quantity of information and in making it readily available and relevant to the needs of African countries. Moreover, there is wide variety of sources of information such as the universities, schools of technology, libraries, development institutions, industrial research and technology services, industry, and national and multi-national agencies dealing with one or another aspect of development problems. The mechanisms by which information is accumulated are equally varied and numerous. They include research studies, pre-feasibility reports, technical publications, economic surveys, productivity bulletins, investment promotion and industrial extension activities and the operations of demonstration plants. A systematic and integrated approach is called for in order to collect, collate and disseminate from a variety of sources and mechanisms industrial information for the use of decision-makers and personnel engaged in industry. This is the primary task of an efficient system of industrial information.

Industrial information services are not an end in themselves but a means of speeding up the implementation of industrial development programmes. A system of industrial information should not only be efficient but also effective in the sense that it should be relevant to the specific needs of African countries. There are three important goals in this respect. First, industrial information services should enable African countries to reduce the gestation period required for project realization. There is a huge backlog of feasibility studies in many countries. Delays in project implementation have been one of the major causes for the rising cost of industrialization. An effective system of industrial information designed to function as an integral part of investment promotion activities should help achieve the goal of speedy realization of industrial projects. Second, a network of information systems is essential for the efficient transfer and acquisition of industrial technology. This is an important and indispensable function of industrial information services considering the diversity and magnitude of technological know-how in the world on the one hand and the importance of the choice of technical problems to African industrialization on the other. Third, industrial information services play a key role in the sustained progress of established industries. Information on productivity, the results, of industrial research and experiences on various aspects of the operations of enterprises are significant to fostering technological and managerial innovations. These actions will need to be pursued systematically if we are to promote successfully the growth of our infant industries to maturity.

The significance of this Seminar lies in the recognition of the fact that industrialization depends on new knowledge as well as on existing know-how. In providing an opportunity for discussing in depth the problems that must be dealt with in building up industrial information services, the Seminar will contribute to a better understanding of the underlying problems and to the creation of the conditions for pursuing effective actions. There is need for strengthening existing industrial information services and creating new ones; for developing a strong and complementary network of information systems; for promoting the required skills; for intensifying the search for new approaches to process and use available information and knowledge; and for facilitating the task through inter-African and international co-operation.

It is my hope that the results of this Seminar will give a new impetus to actions by Governments and international organizations.

I have pleasure in declaring open the Seminar on Industrial Information.
Thank you.

ANNEX

Timetable of the Seminar

9.30 a.m. - 12.30. a.m.

3.00 p.m. - 5.30.p.m.

6.11.1972	Registration of participants	Opening session Election of officers for the Seminar Finalization of the Agenda and the timetable; presentation of documents prepared for the Seminar
7.11.1972	Presentation of the documents prepared by ECA Presentation of the country reports	Presentation of country reports
8.11.1972	Lectures	Country reports
9.11.1972	Discussion	Discussion
10.11.1972	Lectures	Discussion
11.11.1972	Visits to factories	Free
12.11.1972	Free	Free
13.11.1972	Presentation of the Draft Report of the Seminar	Discussion
14.11.1972	Discussion	Discussion
15.11.1972	Adoption of the report	Closing session

ANNEX 4

LIST OF INDUSTRIAL INFORMATION CENTRES (INSTITUTIONS) IN THE VARIOUS COUNTRIES WHICH CAN ACT
AS COLLECTION, PROCESSING AND DISTRIBUTION CENTRES WITHIN THE UNIDO INFORMATION SYSTEM

NO	Country	Name of Centre (Institution)	Address
1.	Egypt	<ul style="list-style-type: none"> - Productivity and Vocational Training Dept. (Technical Information Section) - General Organization for Industrialization 	3 Ismail Abou El Fotuk Street Dokki, Cairo 6 Khalil Agha Garden City, Cairo
2.	Ethiopia	<ul style="list-style-type: none"> - Ministry of Commerce, Industry and Tourism - The Ethiopian Chamber of Commerce - The Central Statistics Office 	P.O. Box 1760, Addis Ababa
3.	Ghana	<ul style="list-style-type: none"> - Ministry of Industries - National Investment Bank - Capital Investment Board 	P.O. Box M39, Accra P.O. Box 3726, Accra Accra
4.	Liberia	- Ministry of Planning and Economic Affairs	The Ministry of Planning and Economic Affairs Monrovia
5.	Libya	<ul style="list-style-type: none"> - Ministry of Industry and Minerals - Industrial Research Centre 	Tripoli L.A.R. P.O. Box 3633, Tripoli
6.	Kenya	<ul style="list-style-type: none"> - Ministry of Commerce and Industry - Kenya Industrial Estates Ltd. - Industrial and Commercial Development Corporation - Institute for Development Studies 	P.O. Box 30430, Nairobi P.O. Box 18282, Nairobi P.O. Box 45519, Nairobi University of Nairobi

No.	Country	Name of Centre (Institution)	Address
7.	Nigeria	<ul style="list-style-type: none"> - Federal Institute of Industrial Research, Oshedi - Investment Centre of the Federal Ministry of Industries - Nigerian Industrial Development Bank - Federal Ministry of Information - Federal Office of Statistics - National Library of Nigeria 	<ul style="list-style-type: none"> P.O. Box 1023, Ikeji, Lagos Lagos " " " 4 Wesley Street, P.M.B. 12626, Lagos
8.	Sudan	<ul style="list-style-type: none"> - Sudan Industrial Research Institute 	P.O. Box 268, Khartoum
9.	Tanzania	<ul style="list-style-type: none"> - Ministry of Commerce and Industry - Central Statistics Bureau - Industrial Studies and Development Centre - Tanzania Industrial Investment Bank 	<ul style="list-style-type: none"> Box 234, Dar-es-Salaam Ministry of Development Planning Dar-es-Salaam Ministry of Commerce and Industry Dar-es-Salaam "
10.	East African Academy	<ul style="list-style-type: none"> - East African Academy, Research Information and Publication Services 	P.O. Box 30756 Nairobi, Tel. 22976
11.	East African Community	<ul style="list-style-type: none"> - Directorate of Information - Common Market Research Centre - East African Statistical Department 	<ul style="list-style-type: none"> P.O. Box 1001, Arusha, Tanzania P.O. Box 1007, Arusha, Tanzania P.O. Box 30005, Nairobi,
12.	IDCAS	<ul style="list-style-type: none"> - Industrial Development Centre for Arab States - Documentation and Scientific Computation Dept. 	<ul style="list-style-type: none"> 33 No. 14 Street, Saeidi, Cairo, P.O. Box 1297, Cairo
13.	Uganda	<ul style="list-style-type: none"> - Ministry of Commerce and Industry - Ministry of Finance and Economic Planning - Uganda Development Corporation - Ministry of Agriculture - Ministry of National Resources - Ministry of Information - Ministry of Tourism 	<ul style="list-style-type: none"> All these Ministries are in Kampala

~~SECRET~~

LIST OF DOCUMENTS

<u>Symbol</u>	<u>Title and Author</u>
1. ID/WG.119/1	Provisional Annotated Agenda
2. ID/WG.119/2	Note for Participants
3. ID/WG.119/3	List of Participants
4. ID/WG.119/4	Provisional List of Documents
5. ID/WG.119/5	Institutions for the Transfer of Technology - Hans Einhaus, Chief, Geneva Branch, UN Office for Science and Technology
6. ID/WG.119/6	Training of Industrial Information Officers for Developing Countries - Mrs. Susan Levai, Director of General, Technoinform, Hungarian Central Technical Library and Documentation Centre (OMKDK)
7. ID/WG.119/7 E/CN.14/INR/195	Review of Information Activities in Selected African Countries - A report by ECA
8. ID/WG.119/8	Nature of the Information Problem in African Industrialization - A report by ECA
9. ID/WG.119/9	Tentative ECA Proposals for Development of Information Machinery - A report by ECA
10. ID/WG.119/10	Facts and Trends Relating to the Improvement of Industrial Information with Reference to the African Market - Mr. von Ledebur, Head Central Documentation Branch, German Foundation for Developing Countries
11. ID/WG.119/11 E.CN.14/INR201	Directory of Investment Promotion Contacts for African Industrialization - A report by ECA
12. ID/WG.119/12	Report of the Seminar
13. ID/WG.103/4*	Technological Transfer Through Information - Scope and Limitations - Hans Einhaus, Chief, Geneva Branch, UN Office for Science and Technology
14. ID/WG.77/6**	Information and Documentation Services and Their Part in International Co-operation - contribution by UNESCO
15. ID/WG.77/7 Part I**	Information and Documentation Services for Industry in CMEA Member Countries - K. Lossey, Head of Dept. Institute of Scientific and Technical Information of the Academy of Sciences in the USSR (VINITY)
16. ID/WG/77/7 Part II**	Information and Documentation for Industry in OECD Member Countries and in Some Latin American Countries - K. Lossey, VINITY

17. ID/WG/77/8
Industrial Information Services in Industrializing Countries (Outside the Common Area) and Co-operation between Such Services and their Counterparts in Developing Countries - by P. O. Halang, National Research Council of Canada
18. Working Paper No 1 **
Observations on Industrial Information for Developing Countries - A Discussion Paper - J. Schwarzhel, Assistant to the Director, Industrial Services and Institutions Division UNIDO
19. ID/WG.61/DO.4 ***
Establishment of Industrial Information Services in Developing Countries - Mrs. Susan Levai, Director General, Technoinform, Hungarian Central Technical Library and Documentation Centre
20. ****
An Introductory Course on Informatics/Documentation by A. I. Mikhailov and R. S. Giljarevskij
21. ID/B/97 (Part II, Add. 1)
Programme of Work for 1973, Report of Activities in 1971 and Updating of 1972 Programme, Part II, Add. 1, Industrial Services and Institutions Division (Groups 7 to 11 and 16)
22. ID/B/97 (Part III)*****
Programme of Work for 1973, Report of Activities in 1971 and Updating of 1972 Programme, Part III, List of Operational and Selected Supporting Projects
23. ID/40/13
UNIDO Monograph on Industrial Development Industrialization of Developing Countries: Problems and Prospects - Monograph No 13 Industrial Information
24. ID/WG.119/CRIa
Report of Technical Information Section in the Productivity and Vocational Training Department, Ministry of Industry, Petroleum and Mineral Wealth - Mohamed Abdel Rehim El Guindi, Egypt
25. ID/WG.119/CR1b
M. I. Abou Zaghla, General Organisation for Industrialization, Egypt
26. ID/WG.199/CR2
Paper on Industrial Information Services in Ethiopia - Eshetu Endeshaw, Admassu Makonnen I.E.G. Technical Agency, Centre for Entrepreneurship and Management
27. ID/WG/119/CR3
Report on the Industrial Information in Ghana S. K. Charway and K. Agyei-Gyamfi
28. ID/WG.119/CRA
Industrial Information in Kenya - A. Shikule, Kenya Industrial Estates Ltd.
29. ID/WG.119/CR5a
Country Report on Liberia - L. Kwia Johnson, Jr.
30. ID/WG.119/CR5b
The Role of the Liberian Development Corporation in the Industrialization of Liberia

31. ID/WG.119/CR6 Country Report from Nigeria - Dr. I.A. Akinrele, Federal Institute of Industrial Research
32. ID/WG.119/CR7a Industrial Information Services in Sudan Democratic Republic - Hassan Osman Ahmed, Ministry of Industry
33. ID/WG.119/CR7b Industrial Information in the Sudan with Special Reference to Sudan Industrial Research Institute - Cecile Wesley, Sudan Industrial Research Institute
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35. ID/WG.119/CR9 East African Community Contribution to Industrial Information - Muema Ndavi, East African Community
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- * This report by Mr. Einhaus was prepared for the UNIDO Seminar on Industrial Information for the ECLA Region, Lima, Peru, 13-24 September 1971
- ** All those documents were used in the Seminar on Industrial Information, Teheran, Iran, 14-25 September, 1970.
- *** This report by Mrs. Levai was prepared for the UNIDO Seminar on the organization and administration of Industrial Services in Asia and the Middle East, Tashkent, USSR, 12-26 October 1970.
- **** On request of UNESCO this report was prepared by A. E. Mikhailov and R. S. Giljarevskij of VINITI, USSR
- ***** This is a document of the VI Session of the Industrial Development Board, 23 May - 2 June 1972, Vienna.



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