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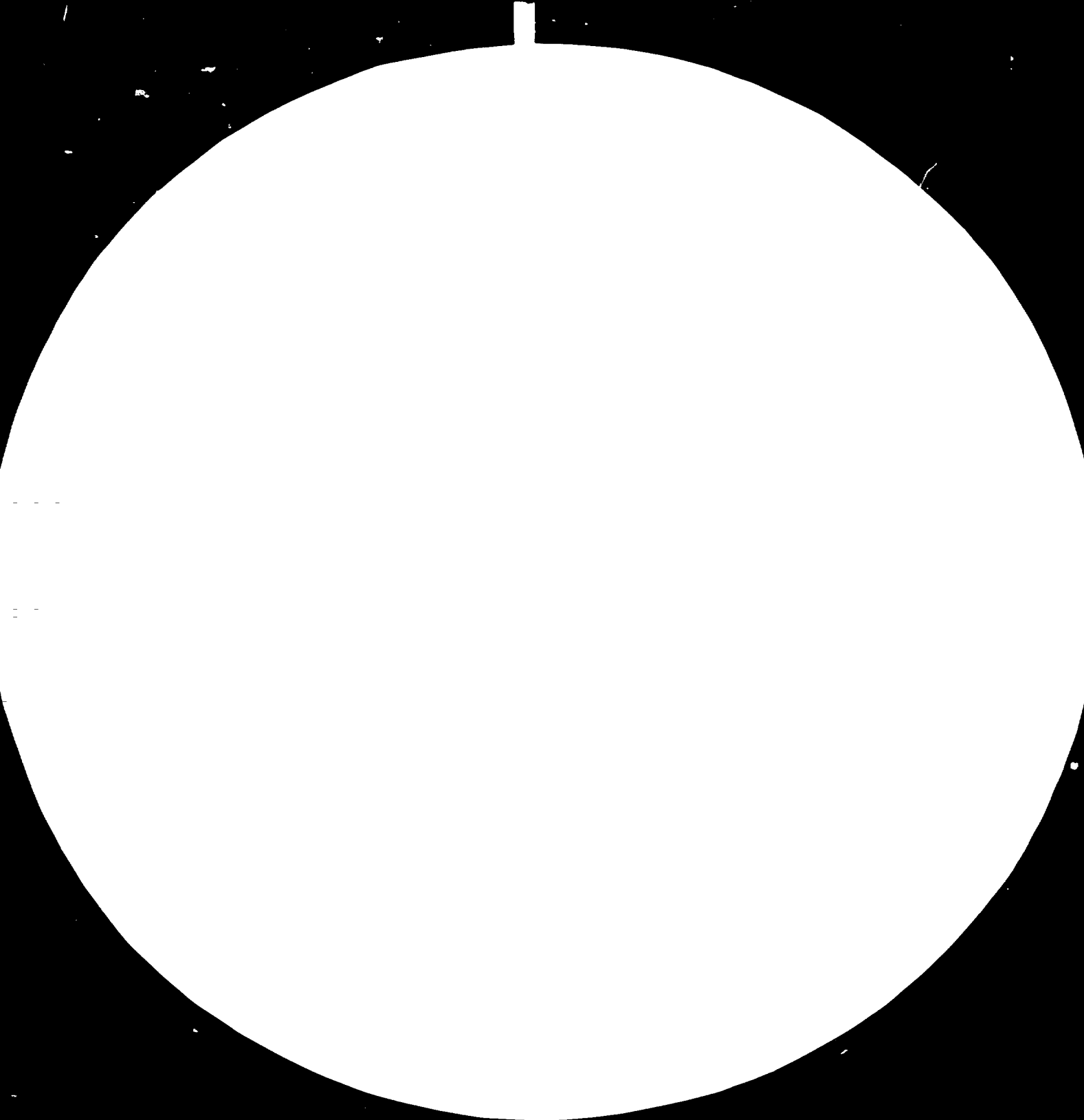
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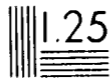


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DEVELOPMENT ORGANIZATION

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UNIDO TECHNICAL ASSISTANCE TO THE
TANZANIA INDUSTRIAL RESEARCH AND DEVELOPMENT ORGANIZATION (TIRDO) IN
INDUSTRIAL INFORMATION, DOCUMENTATION AND EXTENSION SERVICES

DP/URT/78/C19

UNITED REPUBLIC OF TANZANIA

Report of a preparatory mission *

12 - 27 November 1980

Prepared for the Government of the United Republic of Tanzania
by the United Nations Industrial Development Organization

Based on the work of
Renald Lafond
Industrial Information Officer
Industrial Information Section
Division for Industrial Studies

UNIDO

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Mr. C. A. Stone, Senior UNIDO Adviser at TIRDO who organized and participated in most of the visits and provided assistance for the preparation of the report, together with Ms. Stella Shoo, Project Secretary;

Mr. C. L. Tarimu, Director-General of TIRDO and

Mr. Saad K. Henein, SIDFA, UNDP/UNIDO

who actively participated in the discussions.

1. Objectives of the Mission

The Tanzania Industrial Research and Development Organization (TIRDO) was established in April, 1979 under an Act of the Parliament of the United Republic of Tanzania. UNDP/UNIDO assistance to the establishment of TIRDO, begun in 1979, has been continually increasing in scope. A Senior Technical Adviser is resident in Dar es Salaam and the TIRDO staff presently numbers sixteen professionals and nine university undergraduate trainees. The charter of TIRDO is included in the report UNIDO/ICD.287/REV.1/CORR.1 and the mandate includes the collection and dissemination of information as well as extension services. Buildings are now under construction and the transfer of activities to the new facilities is expected to begin in 1982. It was felt that the industrial and technological information activities could begin in early 1981. The objective of this preparatory mission was to:

- Identify the sources of industrial and technological information in Tanzania.
- Identify users' needs at the governmental, institutional and industry level.
- Define the role of TIRDO in industrial information and extension services.
- Identify the immediate needs for equipment and documentation.
- Assist in the selection of national staff and advise about their training.
- Draft the UNIDO experts' job description.

2. Industrial and Technological Information Structure in Tanzania

A number of government ministries and departments, parastatal institutions, associations, bilateral assistance agencies and industries were visited (Annex I) to both identify any of their services and resources which may be related to industrial development and to determine their needs for information. The description of some of the activities of various institutions is of importance in understanding the role of TIRDO.

2.1. Parastatal Institutions

Several parastatal institutions were created to fulfil specific needs and collection and dissemination of information appears as a mandate in the charter of most of them. The nature of this information varies depending upon the main objective of the institution and also includes advisory and/or consultancy services. Some of the parastatal institutions which play an important role in various aspects of information, consultancy and advisory services, are: The Tanzania National Scientific Research Council, the Tanzania Industrial Studies and Consulting Organization, the Small Industries Development Organization, the Tanzania Bureau of Standards, the National Central Library and the Tanzania Investment Bank. Most of these institutions have a documentation centre to assist their staff and to provide, to some extent, information to the government, other institutions and to industrial enterprises.

2.1.1. Tanzania National Scientific Research Council (TNSRC)

The TNSRC was inaugurated in June 1972 and has the main duty to monitor, enhance and foster scientific and technological research for the development of the country. The Council is undertaking a limited number of research projects and its objective is to establish research priorities and co-ordinate scientific research throughout the country. The Tanzania Research Information Service (TANRIS) is in the process of being developed within the Council. The purpose of TANRIS is to enhance information activities in support of the development of Science and Technology policies.

The Council, with TANRIS, has a portable computer terminal and is now linked to world-wide computerized data bases on a trial basis. Bibliographies will be provided to any users at a fee to be determined. Users can also purchase coupons to order documents from the British Lending Library. Photocopies of documents can be purchased in local currency. The Council is the focal point for NTIS in Tanzania and can provide NTIS documents.

The Council is also the national focal point for UNISIST. The Council has provided photocopying equipment to several other institutions. Although it is establishing this information service and has staff trained in Library and Information Science, the Council will not have a direct link with industrial enterprises.

2.1.2. Tanzania Industrial Studies and Consulting Organization (TISCO)

TISCO's main business is to carry out consultancy and advisory services on a fee basis for clients involved in industrial projects in all stages of project development from the project concept to operation. TISCO has an industrial information system to serve internal needs and those of their industrial clients.

TISCO holds about 2,000 titles including reference material and currently subscribes to 100 journals. This documentation centre is rarely used at the moment by other institutions or entrepreneurs because of limited publicity.

Most of the studies carried out by TISCO are confidential and belong to their clients, mainly medium- and large-scale enterprises. Their register of reports contains nearly 500 titles. TISCO also has registers of national and foreign consultants, a client register and an infrastructure register, all of them at the development stage.

Under a mandate given by the Ministry of Industry, TISCO will publish, in March 1981, a directory of production facilities in Tanzania listing some 1,000 manufacturers and their products. Other recent publications are a Manual for Investors in Tanzania and a Handbook for the Promotion of Industrial Projects. The development of the industrial information activities is limited by their budget and staff and collaboration with other institutions is desired.

2.1.3. Small Industries Development Organization (SIDO)

SIDO is a parastatal organization under the Ministry of Industries which started operating at the end of 1973, and is responsible for the planning, promotion and co-ordination of small-scale and rural enterprises. SIDO offers a wide range of services and technical assistance including training, loans and hire purchase for machinery, industrial estates and extension services. Each region of the country has an office where Small Industries Promotion Officers can be contacted. Information is the blood stream of their activities and they are at the same time generators and users of industrial information. They have prepared more than 400 feasibility studies which are regarded as confidential and have a collection of manufacturing profiles published by other organizations.

SIDO has virtually no library at the moment and the above-mentioned information resides in the staff member offices. Although SIDO is linked with several institutions throughout the world to collect information, they could use additional information on processes, trade catalogues etc.

2.1.4. Tanzania Bureau of Standards (TBS)

TBS is a parastatal organization under the Ministry of Industries which became operational in 1976. It is responsible for the preparation and application of national standards, the certification of products and for application of health and safety standards. The main interest of TBS is to promote the manufacture of standardized and certified products.

TBS' library contains a collection of international standards in English (ISO, IEC, British, Canadian, Australian, Indian etc.) and a collection of indexes to other standards such as ASTM. TBS is a member of ISO, CODEX and other organizations involved with standards.

TBS is also equipped with testing facilities which will be improved in March 1981 when they will move into their new laboratories.

It was felt that, although they have excellent resources, they have some need for general technological information.

2.1.5. The National Central Library (NCL)

NCL is a parastatal organization under the Ministry of Education and is responsible for library activities in the country. It has over 1 million books and subscribes to about 2,500 periodicals, approximately 40 of them related to industry.

In 1975 they started the Tanzania National Documentation Centre (TANDOC) with an abstracting and inquiry service as the basic idea, in the fields of agriculture, industry and commerce, transport and education.

In 1978 they issued the "Tanzania Agricultural Abstracts" and in 1981 they will produce, on an experimental basis, an "Industry and Commerce Abstract", a quarterly publication. This publication will be distributed to industrial enterprises and photocopies of documents will be provided upon request at cost.

The activities of TANDOC are of great interest and close co-operation with TIRDO's Industrial and Technological Information Service should be envisaged.

2.1.6. Tanzania Investment Bank (TIB)

TIB decided in 1972/73 to participate fully in project identification, preparation and promotion. Accordingly, the Bank got involved from the early stage of projects and assisted in assembling the required information and developing the proposal to a stage when it could attract the interest of investors. In 1976, a technical assistance unit to assist parastatals in the preparation of pre-investment and feasibility studies was established. The Bank serves medium- and large-scale enterprises and has prepared a number of studies for its clients. With 42 professionals, including 5 technologists, TIB is a good source of knowledge.

The Bank has reports, documentation on technologies such as some UNIDO publications, trade catalogues etc. It also relies on external sources of information necessary to evaluate projects.

The Managing Director expressed the wish for additional information ranging from available technologies to current prices of equipment and products.

2.2. Industrial Associations

At the national level, two industrial associations were recently created: The Metal and Engineering Industries Development Association (MEIDA) and the Tanzania Food Manufacturers Association (TAFMA). MEIDA was visited and has the following functions in relation to industrial information:

- To conduct surveys and research in the various operational and development areas of the metal sector.
- To maintain close contact with other institutions in similar or attached areas of industries.
- To render active operational assistance and advice to industry.
- To establish documentation and information systems relevant to the development of the sector.
- To publish appropriate magazines, newsletters etc.

MEIDA was created in May 1979 and now has 63 member companies. The main activity so far has been to collect information on the activities, machinery, capacity utilization etc. of enterprises with the purpose of exchange of information, identification of common problems and encouragement of co-operation between members for common utilization of special machinery. The documentation centre is not yet established and it is planned at a later stage.

Associations of manufacturing enterprises are now being encouraged by the government. These associations will have information on the needs of their members and co-operation including exchange of information should be envisaged.

2.3. Other sources of information and documentation

The University of Dar es Salaam is a source of information and documentation with its general library and the special holdings of the departments. The teaching and research staff have expertise which can be exploited for the benefit of industrial enterprises. In addition to standard library holding of books, reference material and periodicals, the University library contains special collections such as the East African Collection, Tanzanian publications, UN documents etc. which should be exploited.

There are several other library and information sources in Dar es Salaam and elsewhere in the country. A few of these were visited. These sources have some books, periodicals, trade catalogues and reference material related to industry. This is particularly so for the United States International Communication Agency library and the British Council library.

Bilateral donor agencies were also visited and were found to have very useful studies and reports. These reports do not seem to be widely circulated even though they contain data on the country's economy, population, industry etc., often with projections. This information cannot always be identified from the title of the studies.

Co-operation exists among the donor countries at various levels, but neither central listings nor storage of reports could be identified. Nonetheless, most of these reports are available and should be exploited.

3. User Needs

The main objective of TIRDO is the industrial development of Tanzania through industrial services, research and development and information activities. Therefore, the clientèle is mainly the industrial enterprises themselves.

3.1. A number of industry visits were made during this mission but these were not sufficient to compile a list of specific needs for industrial information. A visit to one plant showed that information was required to solve a number of problems such as waste utilization and improvement of product quality. However, there was little attention paid to the solution of these problems. There was far less understanding that information could lead to better product quality at a lower production cost.

An analysis of 60 questionnaires received by TIRDO at the beginning of 1979, revealed a need for solution to problems which might be, at least partly, solved by information and documentation.

A discussion with TIRDO's staff members currently or recently employed in industrial enterprises also revealed a need for information and a need to teach the importance of information in the daily operations as well as for industry expansion and acquisition of new equipment.

A good example of industry problems is given in the July 1979 - June 1980 Annual Report of the Tanzania Development Bank which gives a review of its 10 years of activities. Those very closely related to industrial information are the following:

- Poor project preparation or evaluation leading to wrong decisions about the viability of projects. There was inadequate appraisal, particularly with regard to technical, managerial and budgeting requirements, during and after implementation.
- Wrong project design, poor choice of appropriate technology and poor location of factories compounded other problems of project implementation and management.
- There was insufficient knowledge of technologies of some projects and lack of experience in handling them.
- There were a few cases in which production could not be started because of imbalanced equipment which called for additional equity or loan funds and meant further delays in commencement of production.

Two of the causes for the problems encountered were due to:

- Failure to recognize that implementation of projects requires skilled people and specialized institutions. These were not available in sufficient number in the country.
- Failure to recognize the need to carry out comprehensive economic, technical, financial and manpower feasibility studies.

The above list shows an overall problem and need for industrial information at the pre-feasibility study and implementation levels which lead to operating problems. This situation also occurs at the expansion level.

At the operating level, specific needs are more difficult to identify even if they exist throughout a manufacturing plant. The few industries visited and examples discussed during institutional visits show the needs for information at many different levels which are difficult to list. The needs include assistance in identifying sources of raw materials, products, equipment and spare parts, testing methods, information on new technologies etc. An extension officer has to play a key-role in helping a plant manager to understand the important role of information in practical problem-solving.

3.2. Government Ministries

In the Ministry of Industry and some divisions of other Ministries, the principal need appears to be the management of internal publications and reports as well as management of the great number of reports received from external organizations. There is no central registry for reports (except for incoming and outgoing letters) and, although the existence of reports is often known, they frequently cannot be traced within the Ministry nor are they always easily available from the authors of the report. For example, this is the case for UNIDO documents concerning missions in Tanzania. This problem extends to other UN bodies and donor country reports.

There is also a need for ad hoc information on the country's industrial situation in terms of import and export data, production capacities and other such information. Much of this information is available within the Ministry itself, within

other ministries, parastatal institutions and in various publications for which the title does not necessarily indicate the content. Accessibility is not adequate, however.

In terms of industry planning, the same situation occurs. The information is available but very difficult to compile from the various sources of information in Tanzania.

3.3. Parastatal Institution and Industrial Associations

In general, the parastatal institution feels that there is a need for "general" information ranging from suppliers of products and equipment to information on technologies available to assist them in the choice of appropriate technology. They already have their own sources of information often related to the knowledge and expertise of the expatriates assisting them and their sources should be widened. The documentation resources and personal expertise of the institutions are not fully known to each other and there is a real need for some co-ordination for the purpose of knowing each others' activities and resources in greater detail. Industrial Associations will be aware of their members' needs and will be part of the extension service.

4. Role of TIRDC in Industrial Information, Documentation and Extension Service.

The visits to ministries, government departments, institutions, bilateral agencies and industries made during just over two weeks was not exhaustive and other sources of information as well as other information users remain to be identified. Time constraints did not allow an assessment of the usefulness of existing documentation/information centres and far less evaluation of the staff expertise of the institutions. It clearly appears that Tanzania has a significant amount of industry-related information and knowledge which is not being fully exploited by potential users. The apparent reason is a lack of knowledge of sources of information and of the extent of their own resources. Existing institutions seem to have their clientele and know little of each others' activities. This problem is most severe at the industrial level.

The industrial and technological information service should not necessarily be based upon a large documentation centre or library which would duplicate existing facilities. Rather, TIRDO should take a service-oriented approach with its extension function, backstopped by an information and documentation unit containing items frequently used or not available or readily accessible elsewhere in Tanzania. The information service should be constantly aware of other information sources, know the contents of libraries, publications, programmes and the individual expertise available in the country. It should also use international sources of information to augment local resources.

The role of TIRDO should be to:

- Take a problem-solving approach to information services and ensure close contact with users, particularly at the enterprise level.
- Actively promote its extension and information service and the role of information in practical problem-solving.
- Provide specific information, condensation of documentation and advice in response to questions or problems rather than disseminate information at large.
- Establish a system of identification and recording of information sources, reports, data and expertise within Tanzania.
- Co-operate informally or formally, as required, with other institutions in Tanzania to exchange information and thereby facilitate a network of information sources.
- Acquire information and documentation necessary to increase the national information resource.
- Establish links with international institutions and networks to selectively access information not available in Tanzania.

In fulfilling this role, TIRDO can become a singular access point for industrial users who must now contact several sources in their quest for information and attract potential users who rarely, if ever, seek information. An urgent task to facilitate this key role in the co-ordination of information activities for TIRDO's needs and that of the users, is the compilation of an accurate and detailed directory of

information sources and resources in Tanzania.

TIRDO should develop its extension and information activities at a carefully calculated rate with emphasis on the quality of service provided rather than the number of clients served. User confidence will ensure the growth and future development of the service.

Although TIRDO has the goal of eventual financial self-reliance, it is suggested that information should be provided free of charge up to a pre-determined level of service. Information is a difficult commodity to sell and service charges should be carefully considered and applied when the service will have proven its "return on investment". For example, answers to specific questions could be provided free of charge provided staff time does not exceed a limit or the answers do not require costly information acquisition. Specific requests for equipment use, such as photocopies, microfiche prints or telex, or for document acquisition, should be charged or offered on an exchange of service basis as appropriate.

Careful cost management and accounting will be required to evaluate information system efficiency and to provide a basis for fee policies. Proper weight need be given to the promotional and sales value of the extension and information activities in furthering other lines of services, research and development provided by TIRDO. A responsive and effective extension unit can be invaluable in identifying project opportunities and establishing initial relationships with potential clients.

5. Personnel Requirements and Training

UNIDO has agreed to provide 24 man/months of expert assistance in 1980/81, (this has been extended to early 1982) to help TIRDO in setting up its Industrial Information and Extension Service.

The two experts should be hired as soon as possible for their assignments in the field before May 1981. The experts, under the supervision of the Senior Technical Adviser to TIRDO, will work in very close

co-operation. One will be more active in the industrial information extension services while the other will look more closely at the Information/Documentation aspect of the service. They will both be responsible for the establishment of the service as a single action-oriented unit. Draft Job Descriptions of the experts are given in Annex II.

National counterparts are now in the process of recruitment and applications have been received for the two posts advertised (see Annex III). The higher level for the two posts was attributed to the Documentation Officer while the Extension Officer would be given a lower grade. The role of TIRDO as envisaged puts emphasis on the extension service and should therefore be a senior post, it should be given to the extension service officer. The situation was discussed with the Director-General of TIRDO and there appears to be no problem in rectifying the situation. Hiring is most likely to be at levels lower than advertised.

A review of the applicants' qualifications showed that most of them have little or no industrial experience and this will have to be considered in the training programme. Details of the training programme can be established only after the candidates are selected.

It is suggested, however, that both national counterparts be trained in the Industrial Information Section of UNIDO where they will have a chance to perform actual work closely related to their assignments in Tanzania. The training in Vienna should be of about 2 months' duration. This should then be supplemented by a one-month training in one or two other organizations or institutions which have an extension service. This is particularly important for the extension officer.

Although 24 man/months were allocated for training in 1980-81, it is now suggested that initial training should not be more than 3 or 4 months. The trainee should return to Tanzania before or concurrent with the arrival of the experts and should begin the compilation of a detailed directory of information sources and resources in Tanzania. After four to six months of on-site training, training abroad should be continued. A third staff member should be hired by TIRDO for initial training beginning September 1981. This will ensure a continuity in the operation of the service by national staff.

6. Equipment and Supply Requirements

The TIRDO Industrial and Technological Information Service requires equipment and supplies for its activities. The selection takes into consideration the UNIDO contribution for equipment and the project agreement between UNIDO and the Government which stipulates that TIRDO will supply office equipment. Some operating expenses have been included under this budgetary item. Facilities are available at other institutions which involve service charges but does not necessitate the immediate purchase of equipment such as computer terminals and printing equipment. The following items are recommended:

- One vehicle to be used by the two experts and counterparts for official purposes within the country.
- One Telex with a two-year supply of paper etc. to be used for contacts within the country as well as for communication with worldwide sources of information. (Telex communication costs to be paid by TIRDO).
- One photocopying machine using regular paper with two-year supply of chemicals and service contract. This equipment should be purchased locally after careful selection to ensure the availability of servicing and spare parts.
- One microfiche reader/printer with assorted lens including service contracts and two-year supply of paper, chemicals and spare parts. Local purchase of this equipment should be considered to ensure servicing. This equipment is not available in Dar es Salaam and is required by the increased number of publications available on microfiche (UNIDO documents, NTIS documents, university theses etc.)
- Access to computerized data bases on trial basis (equipment and contract available with TNSRC) for 1981.
- Publications (Use of printing equipment etc.)
- 10 standard filing cabinets with 2,000 suspended files.
- One manual typewriter with a long carriage.
- Subscription to 20 periodicals for a period of 2 years.
- Reference material such as encyclopedia, trade catalogues, dictionary, and some basic books.

The choices of the periodicals and books will be made after a careful survey of what is available from other sources.

- 3,000 index cards with cabinets for subject, company, sources of information indexes.
- One cabinet for microfiche, capacity 10,000 microfiche.

TIRDO should be expected to provide the following:

- One direct telephone line independent of the foreseen TIRDO telephone switchboard for direct communication with the Information Service.
- Communication Costs.
- Periodical displays, shelves and book-shelves to be made locally.

The above equipment except books should be ordered as soon as possible to be available when the experts arrive. TIRDO should proceed immediately with a survey of photocopying machines and microfiche reader/printers available locally to determine their reliability and the service provided.

7. Medium- and Long-Term Assistance Requirements

TIRDO's research activities will increase substantially in 1983 when the laboratories will be completed. Assistance from donor countries will be required for laboratory supplies. The research activities will create an increased demand in industrial and technological information from the staff of TIRDO and it is foreseen that demand from industrial users will increase constantly from 1981.

The extension and information activities at TIRDO require continuous and increasing support throughout the 1982-86 period. UNIDO can play a particularly important role in the establishment of TIRDO through its support for the extension/information function. For the period 1982-86, UNDP/UNIDO should provide 60 man/months of expert assistance related to industrial information and 24 man/months of training for national staff.

A maintenance level for equipment and supplies is estimated to be at least \$10,000 per year for the period. Expansion and technological

sophistication may become desirable during the period. This would entail substantial additional expenditures for both equipment and training.

(ii) ANNEXES

ANNEX I - List of people visited in Dar es Salaam

Mr. C. A. Stone
Project Co-ordinator/Senior Technical Adviser
TIRDO
P.O. Box 23235

Mr. C.L. Tarimu
Director-General
TIRDO
P.O. Box 23235

Dr. P. K. Haule
Principal Research Officer
TIRDO
P.O. Box 23235

Mr. Saad K. Henein
SIDFA, UNDP/UNIDO
P.O. Box 9182

Dr. H.Y. Kayumbo
Director-General
Tanzania National Scientific Research Council (TNSRC)
P.O. Box 4302

Mr. Hamasi Nguli
Scientific Officer
Tanzania National Scientific Research Council (TNSRC)
P.O. Box 4302

Mr. J.C. Gera, Librarian
Mr. S. Saigy, Assistant Librarian
University of Dar es Salaam
P.O. Box 35091

Mr. G. K. Nagri
Chief Librarian
United States International Communication Agency
P.O. Box 9170

Mr. B. E. Holmberg
Tanzania Industrial Studies and Consulting Organization (TISCO)
IPS Building
P.O. Box 2650

Mr. Joel Levy
Press Attaché
Embassy of the United States of America

Mr. Daniel J. Yett
Regional Library Consultant
Embassy of the United States of America
P.O. Box 30143
Nairobi, Kenya

List of people visited in Dar es Salaam contd.

Ms. Gunilla Wickbom
SIDA
Extel. Com. Bldg.
P.O. Box 9274

Mr. A. Christopher Bury
Assistant Representative
The British Council
P.O. Box 9100

Dr. Satyam, Adviser
Mr. Y.G. Ssebunyoya, Research and Planning Manager
Mr. Frank Salter, Promotional Aids Consultant
Board of External Trade
P.O. Box 5402

Mr. C. T. Thomas, Chief Economist
Ms. Katarina Lindgren, Documentation Section
Small Industries Development Organization (SIDO)
P.O. Box 2476

Mr. Alan C. H. Smith
Counsellor (Development)
CIDA
Canadian High Commission

Mr. D. F. G. Elderenbosh
Third Secretary
Netherlands Embassy
P.O. Box 9534

Mr. K. B. Andersen
Attaché
DANIDA Mission
Royal Danish Embassy
P.O. Box 9171

Mr. N. D. Mwobahe B.L.
Director
Tanzania Bureau of Standards
P.O. Box 9524

Mr. W. L. Nyachia
Dr. Felician S. Mujuni, Principal Secretary
Ministry of Industries
P.O. Box 9503

Mr. G. K. Handa
UNIDO Adviser (Pesticides)
National Chemical Industries
P.O. Box 9643

List of people visited in Dar es Salaam contd.

Mr. Normand Hiza
Documentation Centre
National Central Library
P.O. Box 9293

Mr. Birger Swensson
International Team Leader
Leather Industry Expert - UNIDO
Tanzania Leather Associated Industries
P.O. Box 5640

Mr. Leonhard M. Lindi, Executive Secretary
Mr. Sam J. Lemboko, Legal Administrative Secretary
Metal Engineering Industries Development Association (MEIDA)
P.O. Box 5891

Mr. A. T. Pallangyo
Director of Planning and Development
Ministry of Industries
P.O. Box 9503

Mr. C. P. N. Mushailizi
Deputy Director
The Institute of Finance Management
P.O. Box 3918

Mr. G. F. Mbowe
Chairman and Managing Director
Tanzania Investment Bank
P.O. Box 9373

Mr. Richard Benjamin Mngulwi
Registrar of Patents, Trade Marks, Companies
Ministry of Trade
P.O. Box 9393

Mr. Frank C. S. Maregeli
Managing Director
Mercantile Tanzania

Mr. Virendra C. Sagar
Tanzania Baby Food Mfg. Co. Ltd.
P.O. Box 20182

Mr. B. A. Chaudry
Chief Accountant
Tanzania Crown Cork
P.O. Box 2982

Mr. Fidellis Swai
Senior Reference Assistant
United Nations Information Centre, c/o UNDP

Mr. H. Kasembe
Senior Information Assistant
United Nations Information Centre, c/o UNDP



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

Request from the Government of the United Republic of Tanzania

3 December 1980

JOB DESCRIPTION

DP/URT/78/019/11-06/31.3.J

Post title	Expert in Industrial and Technical Information and Documentation Systems
Duration	Twelve months with possibility of extension
Date required	As soon as possible
Duty station	Dar es Salaam with possibility of travel within the country
Purpose of project	To assist the Tanzania Research and Development Organization (TIRDO)
Duties	<p>The expert will work under the general supervision and guidance of the Senior Technical Adviser to TIRDO and in close co-operation with the Extension Advisory Expert and TIRDO management and staff, and in close liaison with other industrial and technical information activities in Tanzania. The expert will specifically be expected to:</p> <ol style="list-style-type: none">Develop a system for information classification, filing, retrieval and synthesis in support of industrial extension and advisory services;assist in establishing co-operative arrangements with other Tanzanian and foreign information sources;participate in the documentation training of young national TIRDO staff with university background;develop plans including resources and activities for the growth of technical information facilities at TIRDO;participate with the Extension Expert in providing services responsive to industry needs.

..../.²

Applications and communications regarding this Job Description should be sent to:

Project Personnel Recruitment Section, Industrial Operations Division
UNIDO, P.O. Box 707, A-1010 Vienna, Austria

Qualifications

University degree in engineering or applied sciences with at least three years of industrial or research experience and three years experience in information/documentation services related to industry.

Experience in or for developing countries would be an asset.

Language

English

Background information

TIPDO has been created by an Act which has become operative on 1 April 1979.

- (1) The functions of the Organization shall be:
 - (a) to carry out, and promote the carrying out of, applied research designed to facilitate the evaluation, development and use of local materials in industrial processes;
 - (b) to carry out research in various aspects of local and foreign industrial techniques and technologies, and evaluate their suitability for adaptation and alternative use in local industrial production;
 - (c) to promote, or provide facilities for the training of local personnel for carrying out scientific and industrial research;
 - (d) to monitor and co-ordinate applied research carried out within Tanzania, or elsewhere on behalf of or for the benefit of the Government of Tanzania, and to evaluate the findings of that research;
 - (e) to establish a system for the registration of, and to register, the findings of applied research carried out within Tanzania, and to promote the practical application of those findings in industrial production;
 - (f) to establish and operate a system of documentation and dissemination of information on any aspect of applied research carried out by or on behalf of the Organization;
 - (g) to provide to the Government, and to firms or organizations engaged in industrial production, technical and advisory services, and advice and guidance on technical matters, necessary for the furtherance of, or relating to, industrial activity;

- (h) to advise the Government and firms or organizations engaged in industrial production, on the adaptation of technology in industrial production;
- (i) to provide to the Government, and to firms or organizations engaged in industrial production, advice and assistance relating to the provision of technical facilities in industrial enterprises, and the establishment of systems for the control and regulation of industrial processes, so as to improve performance and to avert or minimize the sources of industrial pollution;
- (j) to do anything which may be necessary to uphold and support the credit of the Organization, to obtain and justify public confidence, to avert or minimize any loss to the Organization and to facilitate the proper and efficient performance of its functions.

(2) In particular, the Organization may -

- (a) undertake, either alone or in association with any person or body of persons within or outside Tanzania, the establishment, equipment and management, on a zonal or sectoral basis, of a centre or centres within Tanzania for the performance of any of its functions;
- (b) carry out, and promote the carrying out of applied research and investigation into the causes, and the ways of abating and preventing industrial pollution;
- (c) in co-operation with the Government or any person or body of persons, evaluate and, if necessary, adapt foreign technological processes for use in Tanzania;
- (d) provide to industrial enterprises technical services connected with the design of prototype industrial plants, machinery and equipment for manufacture or use in Tanzania;
- (e) provide to industrial enterprises technical services connected with the repair and maintenance of industrial plants, machinery and equipment.

- (3) For the purposes of the better performance of its functions the Organization shall establish and maintain a system of consultation and co-operation with any person or body of persons established by or under any written law and having functions related to those specified in subsection (1) or (2) or which relate to technological research or to industrial development generally.

TIRDO's facilities and staff housing will be located at a 40 ha site at Msasani, Dar es Salaam, Construction work has been started and it is expected that all buildings will be finalized by the end of 1982.

During the first phase of UNDP/UNIDO assistance this project will provide six experts (R and D Management, Engineering, Analysis and Testing, Electronics Instruments, Repair and Maintenance, Information Retrieval and Information Extension) and eight fellowships for training of TIRDO staff abroad. More detailed information can be found in the policy statement on TIRDO's mission.



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

Request from the Government of the United Republic of Tanzania

3 December 1980

JOB DESCRIPTION

DP/URT/78/019/11-07/31.3.J

Post title Expert in Industrial Information, Extension and
Advisory Services

Duration Twelve months with possibility of extension

Date required As soon as possible

Duty station Dar es Salaam with travel in the country

Purpose of project To assist the Tanzania Industrial Research and Development
Organization (TIRDO)

Duties The expert will work under the general supervision and guidance
of the Senior Technical Adviser to TIRDO and in close co-operation
with TIRDO management and staff and with the Ministry of Industry
and in close liaison with other ministries and institutions
having industrial and/or information activities. The expert
will specifically be expected to:

- a) Establish an operational industrial extension cum
advisory service system at TIRDO;
- b) promote the service by participating in Association's
meetings and advise on the preparation of publicity
pamphlets;
- c) assist in establishing co-operative arrangements with
other Tanzanian and foreign information sources;
- d) participate in the information/extension training of
young national TIRDO staff with university background;
- e) develop plans including resources and activity priorities
for the orderly growth of TIRDO extension services;
- f) participate with the documentation expert in the establishment
of systems for information acquisition, storage/access and
processing.

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Applications and communications regarding this Job Description should be sent to:

Project Personnel Recruitment Section, Industrial Operations Division
UNIDO, P.O. Box 707, A-1010 Vienna Austria

Qualifications

University degree preferably in industrial, chemical or mechanical engineering with five or more years of industrial experience and at least three years experience in industrial extension and information services.

Experience with developing country industries would be a definite asset.

Language

English

Background information

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 - (e) to establish a system for the registration of, and to register, the findings of applied research carried out within Tanzania, and to promote the practical application of those findings in industrial production;
 - (f) to establish and operate a system of documentation and dissemination of information on any aspect of applied research carried out by or on behalf of the Organization;
 - (g) to provide to the Government, and to firms or organizations engaged in industrial production, technical and advisory services, and advice and guidance on technical matters, necessary for the furtherance of, or relating to, industrial activity;

- (h) to advise the Government and firms or organizations engaged in industrial production, on the adaptation of technology in industrial production;
- (i) to provide to the Government, and to firms or organizations engaged in industrial production, advice and assistance relating to the provision of technical facilities in industrial enterprises, and the establishment of systems for the control and regulation of industrial processes, so as to improve performance and to avert or minimize the sources of industrial pollution;
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Job Description of National Counterparts

ANNEX III

TANZANIA INDUSTRIAL RESEARCH AND DEVELOPMENT ORGANIZATION

This organization is being developed in Dar es Salaam to seek solutions to technological problems experienced by existing industries, to develop or adapt processes that will be required for the establishment of new industries and to assist with their application. Offices, laboratories and staff houses are being constructed in adjacent localities at Msasani, Dar es Salaam. Applications are invited from suitably qualified Tanzanians for the following key posts:---

DOCUMENTATION OFFICER

(one post)

QUALIFICATIONS:

Candidates must have a good degree in any one of the physical sciences or biology and must have had at least five years working experience after graduation in a scientific field. Qualifications and experience in librarianship will be an advantage.

DUTIES:

- (1) Collect technological information from within and without the Organization and develop an information and technical data bank for the safeguard of the collected information.
- (2) To prepare abstracts from published or unpublished reports and publications for documentation.
- (3) To co-ordinate and supervise the operations and activities of the library.
- (4) To edit and publish the Organizations' reports and other technical documents.
- (5) To provide information of a general nature to industries where necessary.
- (6) To advise the Chief Research Officer on matters relating to the Organizations' library and information system.

SALARY:

MSU 8 -- 38,580/-x 1,500/- -- Shs. 46,080/

EXTENSION OFFICER

(one post)

QUALIFICATIONS:

Candidates must have a good degree in any one of the physical sciences or biology and have had at least 3 years working experience in a scientific field. Experience in industrial liaison will be an advantage.

DUTIES:

- (1) To liaise with entrepreneurs and industry generally, with a view to identifying problems that will be undertaken by the Organization.
- (2) To disseminate research findings and technical information to industry and other interested parties.
- (3) To follow up the practical application of research findings and technical information given to entrepreneurs and industrial management and advise the Organization accordingly.
- (4) To assist the Documentation Officer in the setting up of an information and technical data bank.

In carrying out the above duties, the Extension Officer will work under the direction of the Chief Research Officer.

SALARY:

MSU 7: Shs. 31,080/-x 1,200 - --37,080 - p.a.
37,080/-.



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