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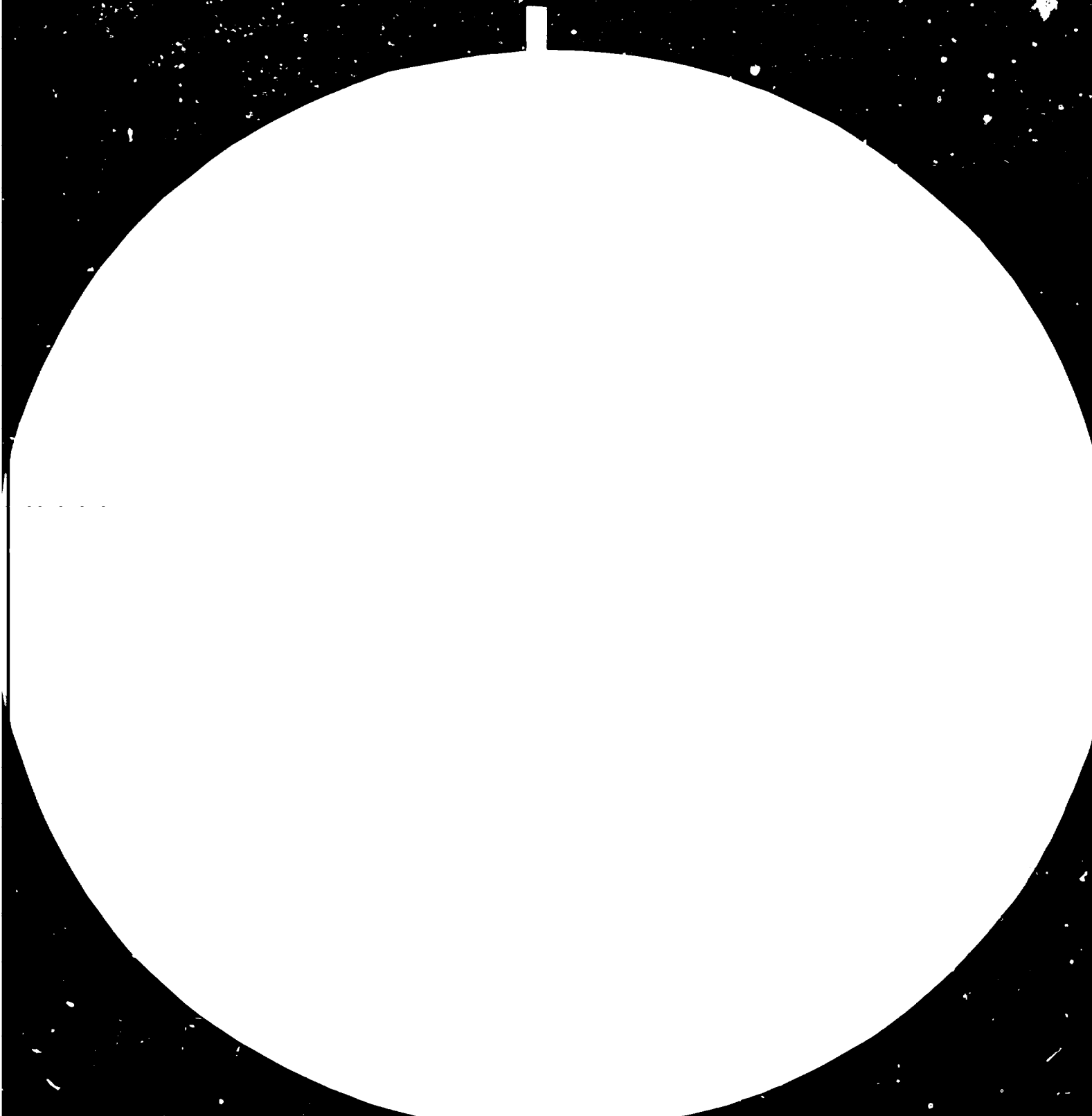
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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna

**UNITED NATIONS
INDUSTRIAL
DEVELOPMENT
FUND**

*Objectives
Achievements
Prospects*



UNITED NATIONS
New York, 1982

Foreword

The United Nations General Assembly established the United Nations Industrial Development Fund in December 1976 with the aim of "increasing the resources of the United Nations Industrial Development Organization (UNIDO) and enhancing its ability to meet, promptly and flexibly, the needs of the developing countries". In taking this action, the General Assembly was recognizing the wider mandate and the additional responsibilities of UNIDO that resulted from its endorsement of the Lima Declaration and Plan of Action on Industrial Development and Co-operation of 26 March 1975, adopted at the Second General Conference of UNIDO.

The message of this booklet is addressed to all potential recipients of assistance from the Fund and to all potential contributors, namely, Governments, intergovernmental and non-governmental organizations and other non-governmental sources. The pages that follow give an account of the origin and objectives of the Fund and some indication of what has already been accomplished. The main purpose of the booklet, however, is to put forward some ideas about new activities the Fund could finance if it were given greatly increased resources.

Since the evolution of the world economy in recent times has made it even more difficult for the developing countries to achieve an accelerated and sustained industrial growth than it has been up to now, the new Fund needs a steady inflow of resources, year in, year out, at a much higher level than at present—as, indeed, the General Assembly itself has recognized. The prospects set forth in this booklet are not ready-made projects. They are intended to stimulate discussion, from which the UNIDO secretariat as initiator of proposals for the programme of the Fund would hope to benefit. The development of the world economy and of economic relations between developing and developed countries in the years immediately ahead will also affect the way in which such ideas might be put into practice. In responding to the needs of the developing countries the management of this Fund should be not only prompt and flexible, but also imaginative.

Abd-El Rahman Khane
Executive Director of UNIDO

CONTENTS

	<i>Page</i>
INTRODUCTION	1
The genesis of the United Nations Industrial Development Fund	1
The purpose and guiding principles of UNIDF	1
Arrangements in the event of the establishment of UNIDO as a specialized agency	2
 <i>Chapter</i>	
I. THE ROLE OF THE INDUSTRIAL DEVELOPMENT BOARD AND UNIDO SECRETARIAT	3
The involvement of Governments and intergovernmental bodies in planning UNIDF projects	4
The role of non-governmental bodies	5
Evaluation and follow-up	5
Co-ordination with other sources of official development assistance	6
II. FINANCIAL ARRANGEMENTS	7
III. HOW UNIDF RESOURCES HAVE BEEN USED	9
Sectoral programming	9
Co-operation among developing countries	15
The development and transfer of technology	15
The institutional infrastructure of industry	16
Promotion of industrial investment	16
IV. PROSPECTS	18
Energy for industry and industry for energy	18
Technical co-operation among developing countries	19

	<i>Page</i>
Management development and other training activities	19
Diagnostic advisory services	20
The Industrial and Technological Information Bank of UNIDO . .	20
Promotion of industrial investment and sectoral planning	21
Studies and research for the longer term	22

Introduction

The genesis of the United Nations Industrial Development Fund

The General Assembly first considered setting up an industrial development fund under United Nations auspices in 1973, on the initiative of the Industrial Development Board, the principal policy-making body of the United Nations Industrial Development Organization (UNIDO). In the following two years the programme of action on the establishment of a new international economic order adopted by the General Assembly and the Lima Declaration and Plan of Action on Industrial Development and Co-operation adopted at the Second General Conference of UNIDO both called for the expansion of operations and urged that larger resources should be made available to international institutions for this purpose. The legislative basis for the United Nations Industrial Development Fund (UNIDF) was laid by the General Assembly in two resolutions in 1976, 31/202, which provided for the management of UNIDF, and 31/203 which prescribed the procedures governing its operations.

The first of the annual pledging conferences was held in October 1977. Thanks to careful programme planning the first projects to be financed by UNIDF were approved quickly, and the Fund became operational at the beginning of 1978.

The purpose and guiding principles of UNIDF

The purpose of the Fund, as set forth in General Assembly resolution 31/202, is to increase the resources of UNIDO and its ability to meet, promptly and flexibly, the needs of the developing countries. The resolution adds that UNIDF "shall supplement the assistance provided by means of the resources of the United Nations Development Programme (UNDP) directed towards the achievement of accelerated and self-sustained growth of the developing countries in the industrial field".

The guiding principles for the use of UNIDF are those of the Charter of the United Nations and of the General Assembly resolution that, in November 1966, established UNIDO. For preparing programmes financed by UNIDF, the Lima Declaration and Plan of Action serves as the guidelines.

According to the Lima Plan of Action UNIDF should enable UNIDO: (a) to help bring into existence a new international economic order; (b) to foster international co-operation for development; (c) to implement the recommendations of the *Ad Hoc* Committee on Long-Range Strategy for UNIDO; (d) to undertake field projects, particularly innovative projects and those that benefit the least developed countries; and (e) to promote the development and transfer of technology.

The Third General Conference of UNIDO (1980), at which progress in industrial development since the Second General Conference was reviewed, adopted the New Delhi Declaration and Plan of Action on Industrialization of Developing Countries and International Co-operation for their Industrial Development, which called for UNIDF to be utilized mainly for activities having a high priority, such as strengthening technological capabilities in developing countries, promoting co-operation among developing countries, taking special measures for least developed, land-locked and island developing countries and organizing training programmes.

Arrangements in the event of the establishment of UNIDO as a specialized agency

As is generally known, a Constitution for UNIDO as a specialized agency of the United Nations system is currently open for ratification by Member States. It provides for the new UNIDO to have its basic resources supplemented by an industrial development fund with the same categories of donors and the same purpose as UNIDF. In resolution 34/96 adopted at its thirty-fourth session, the General Assembly authorized the Secretary-General to transfer to the new agency the assets of UNIDF, "provided that the agency agrees to use such assets in accordance with any undertakings by the United Nations towards the donors of these assets".¹ The way in which subsequent voluntary contributions are managed and their use programmed will be unchanged unless the General Conference of the successor organization decides otherwise.

¹ *Official Records of the General Assembly, Thirty-fourth Session, Supplement No. 46 (A/34/46), chap. V.*

I. The role of the Industrial Development Board and UNIDO secretariat

UNIDF is managed by UNIDO, the secretariat acting under the guidance of the Industrial Development Board. The Executive Director of UNIDO submits annually to the Board a plan of operations for the next two calendar years and programme proposals covering the first of those years.

The plan of operations contains estimates of future resources of UNIDF and their proposed apportionment. The programme gives details of the kind of activities it is proposed should be undertaken, with estimates of expenditures according to type of activity. The programme is so formulated, however, as to provide a margin of flexibility in the final choice of projects to be implemented in a given year.

The Industrial Development Board approves the programme and authorizes the allocation of funds for projects. Authority to approve projects is vested in the Board, but may be delegated to the Executive Director. It is currently so delegated.

The formulation of projects is the responsibility of the UNIDO secretariat, which is required to prepare a detailed project document in each case, including a budget estimate. Field projects, in particular, are formulated in the light of discussions with Governments of the developing countries or intergovernmental bodies. Special care is exercised in co-operation with the United Nations Development Programme to ensure a proper co-ordination between multilateral and bilateral assistance agencies in order to avoid a duplication of efforts.

One of the tasks of the secretariat is to ensure that certain broad themes that have been the subject of concern in international forums are taken into account wherever appropriate in the design of individual projects. Examples of such themes are: the encouragement of rural development, the enhancement of the capacity of developing countries for self-reliance, the African Development Decade, and special measures for the least developed countries.

The secretariat is continuously engaged in building up a stock of project concepts and proposals suitable for UNIDF financing. The definitive approval of projects for implementation, however, can be given only in the light of the balances held and anticipated cash flow of the Fund. A project review committee within the secretariat evaluates project proposals for financing by UNIDF and submits projects it recommends to the Executive Director for approval. Once projects have been approved for implementation, the project documents are signed by or on behalf of the Executive Director and, in the case of field projects, on behalf of Governments or intergovernmental bodies.

The involvement of Governments and intergovernmental bodies in planning UNIDF projects

Relations between Governments that make special-purpose contributions to UNIDF and UNIDO are described in chapter II. To make effective use of contributions in non-convertible currency, donors must be consulted on how the contributions are to be spent within the country concerned.

Any Government seeking assistance from UNIDF should submit a written request to the Executive Director of UNIDO explaining in detail its goals and the kind of assistance required to achieve them. The Government should also state what services and facilities it expects to be able to contribute itself. The procedure is essentially the same as in requests for assistance from UNDP.

All developing countries belonging to the United Nations are eligible to receive assistance financed from UNIDF, whether they contribute to the Fund or not. In this respect, the operations of UNIDF and UNDP are the same. The level of resources available to UNIDF, however, is not large enough to make country allocations on the lines of UNDP indicative planning figures (IPF) feasible. While it is hoped over the years to execute field projects in all countries requesting assistance from UNIDF, individual requests have to be examined in the light of the geographical distribution of field projects already approved and the resources already committed for various activities.

Governments are sometimes not in a position to make a formal request with the precision and degree of detail indicated above. In those circumstances, discussions should be opened with the UNDP resident representative or the senior industrial development field adviser, who will involve the headquarters staff of UNIDO as necessary. These officials, on the spot and at headquarters, will bear in mind when discussing such requests the need for co-ordinating activities financed by UNIDF with those financed by UNDP.

Intergovernmental organizations are placed, in principle, on the same footing as Governments in their relations with UNIDF, either as donors or as recipients of assistance. Their involvement in planning UNIDF projects must obviously depend on the authority and powers Member States have conferred upon them. One function of UNIDF is to further programmes of UNIDO relating to co-operation among developing countries and between developing and developed countries. Potentially, therefore, there is much scope for implementing regionally, or even interregionally, projects that promote such co-operation.

The role of non-governmental bodies

In deciding that non-governmental organizations may also contribute to UNIDF, the General Assembly recognized that such bodies may fruitfully collaborate with UNIDO to foster the industrialization of the developing countries. Such bodies include consulting firms and productivity centres, universities and research institutions, professional associations and federations of industries and trade unions. Other potential contributors include industrial enterprises, co-operatives and rural development agencies.

In many cases, the only contribution to UNIDO activities a non-governmental organization is in a position to make is a non-financial one: advice based on experience and specialized knowledge, personal contacts and offers of short-term service. Such contributions can be of great value to the work of UNIDO in general and to the non-traditional, innovative activities that may be financed by UNIDF in particular. Cost-sharing arrangements between UNIDF and a non-governmental body in implementing a project may also be considered. In principle, UNIDF resources can also be used to commission studies or research work from a non-governmental source.

Evaluation and follow-up

UNIDO systematically evaluates industrial projects and the programme as a whole, to enable the Industrial Development Board to exercise effective control over the use of the Fund's resources.

Considerable importance is attached to follow-up action. Each project document has to identify the follow-up action expected to be taken on completion of the project; the establishment of a basis for such follow-up action may in itself be a suitable objective for a project.

Co-ordination with other sources of official development assistance

As mentioned earlier, UNIDF is intended to supplement the assistance to the developing countries provided by the United Nations and UNDP. The need for appropriate co-ordination with UNDP is clear—and, indeed, is stated in General Assembly resolution 31/202. However, bilateral official development assistance may also have to be taken into account. The resources of UNIDF can be used for projects that will stimulate, or prepare the way for, UNDP or bilateral assistance. In brief, the various sources of finance, including UNIDF, should be used to reinforce one another in furthering the industrialization of the developing countries, and UNIDO, in its programming, makes a continuous effort to do exactly that.

Just as there are grounds for countries to extend bilateral assistance and also to contribute to UNDP, so there are arguments for contributing to both UNDP and UNIDF. UNIDF can finance activities that UNDP cannot—or at any rate rarely does—finance. Furthermore, UNIDF offers greater scope than UNDP for innovation because many Governments are reluctant to include novel projects of uncertain outcome in their IPF when preparing the UNDP country programmes. Ideas that have proved their worth with the aid of UNIDF resources will later find their way into IPF projects. The programming of UNIDF resources has convincingly demonstrated the force of these arguments.

Furthermore, several UNIDF projects have, by their very success, mobilized funds from other sources for follow-up projects. The development of mechanical workshops in Nepal and the use of plastics in agriculture in the Upper Volta are cases in point. Some UNIDF projects have led directly to investment in industrial production facilities.

II. Financial arrangements

No attempt is made here to deal exhaustively with the financial arrangements of UNIDF, which are covered by the procedures set out in General Assembly resolution 31/203, supplemented by the Financial Regulations and Rules of the United Nations and as necessary by exceptions and additions thereto relating specifically to UNIDF. It is desirable to provide some information on this subject, however, because the programming and management of UNIDF are significantly affected by these arrangements.

The main features of the Fund are as follows:

- (a) Contributions are voluntary and may be accepted from Governments, intergovernmental and non-governmental sources;
- (b) Donors may choose the currencies in which they contribute;
- (c) Donors may make contributions for special purposes, provided that these are consistent with those of the Fund;
- (d) UNIDF makes a contribution to the support costs (including administrative costs) of its programme, which is modelled on the practice of UNDP in partially reimbursing the support costs of its executing agencies. At present, 13 per cent of the value of expenditures against project budgets is debited to the Fund.

Four financial factors have a considerable influence on the kind of programme that the UNIDO secretariat can propose. These are:

- The total amount of annual contributions to UNIDF
- The extent to which Governments make pledges covering a number of years at a time, rather than on an annual basis
- The ratio of special-purpose contributions to other (i.e. general-purpose) contributions to UNIDF
- The ratio of contributions made in non-convertible currencies to those made in convertible currencies

The minimum size of budget for some kinds of projects is such that the secretariat could not responsibly submit them for approval unless the annual

income of the Fund were far greater than at present, because these projects would absorb an unjustifiably large proportion of total resources. The secretariat would also be more disposed to propose projects with a duration exceeding one year if it had the greater assurance of continuity of income that is provided by pledges covering a number of years.

As to special-purpose contributions, their use may be limited to a particular industrial sector, institution or country, or may be even more narrowly restricted. However, the task of drawing up a coherent programme of activities is made easier if donors define the special purpose they have in mind as broadly as possible, leaving the secretariat to make specific project proposals.

When contributions are received in non-convertible currencies, the secretariat must seek to formulate UNIDF projects that call for goods or service than can be acquired with such currencies. The associated costs of programme support and administrative services, however, have to be incurred, with possibly some minor exceptions, in convertible currency.

The constraints imposed on programming the resources of UNIDF by the form in which contributions are received can be simply illustrated by reference to the experience of the three years 1978-1980. The table below shows the distribution of resources committed according to type of contribution, and how much of the total was devoted to training programmes and to strengthening industrial training institutions in developing countries.

<i>Form of contribution</i>	<i>Total (thousands of \$US)</i>	<i>Training (thousands of \$US)</i>	<i>Share of training in total (%)</i>
Special-purpose, convertible	19 200	5 169	26.9
Non-convertible	9 900	7 043	71.1
General-purpose, convertible	11 100	827	7.5
Total	40 200	13 039	32.4

During the three-year period the 125 training projects approved accounted for 32.4 per cent of the resources committed. These projects absorbed 71.1 per cent of the non-convertible currency resources, however, mainly because it is difficult to finance the salaries of project personnel or the purchase of equipment with a non-convertible currency. The reason why 26.9 per cent of special-purpose contributions in convertible currency was committed to training is that donors wished it so. The training projects are among the most successful of those financed by UNIDF.

Clearly, the programming of the resources of UNIDF will be subject to severe constraints until contributions made in convertible currencies for general purposes form a considerably greater share of total contributions than they do now.

III. How UNIDF resources have been used

Although the Fund has only a short operational history, it is already possible to point to some novel projects that it has helped finance. In this booklet the examples selected illustrate the various elements in the UNIDF programme. The first examples describe projects relating to specific sectors of industry, after which the more general themes of concern to UNIDF will be taken up.

Sectoral programming

Agro-industrial production and industrial use of natural resources

Castor beans, which grow well only in the tropics, are rich in proteins, but their toxicity has precluded human consumption. UNIDF resources have been allocated to develop a technology for detoxifying the castor bean and deallerginating castor meal.

UNIDF has supported extensive research and development work sponsored by UNIDO for six years to produce *Spirulina* algae meal, which is high in protein and natural pigment products, for human food and animal feed. A pilot plant set up in Mexico in due course became a semi-commercial operation for processing the algae. The processing technology is being developed that the volume of production can be increased to a commercial scale. Several developing countries are interested in establishing this industry, which offers promising export possibilities.

Other projects have introduced new or modified technologies. Pilot plants have been set up to separate fibres in bamboo pulp and to produce animal feed from agricultural residues.

The use of natural resources is combined with meeting basic needs by projects for the production of building materials.

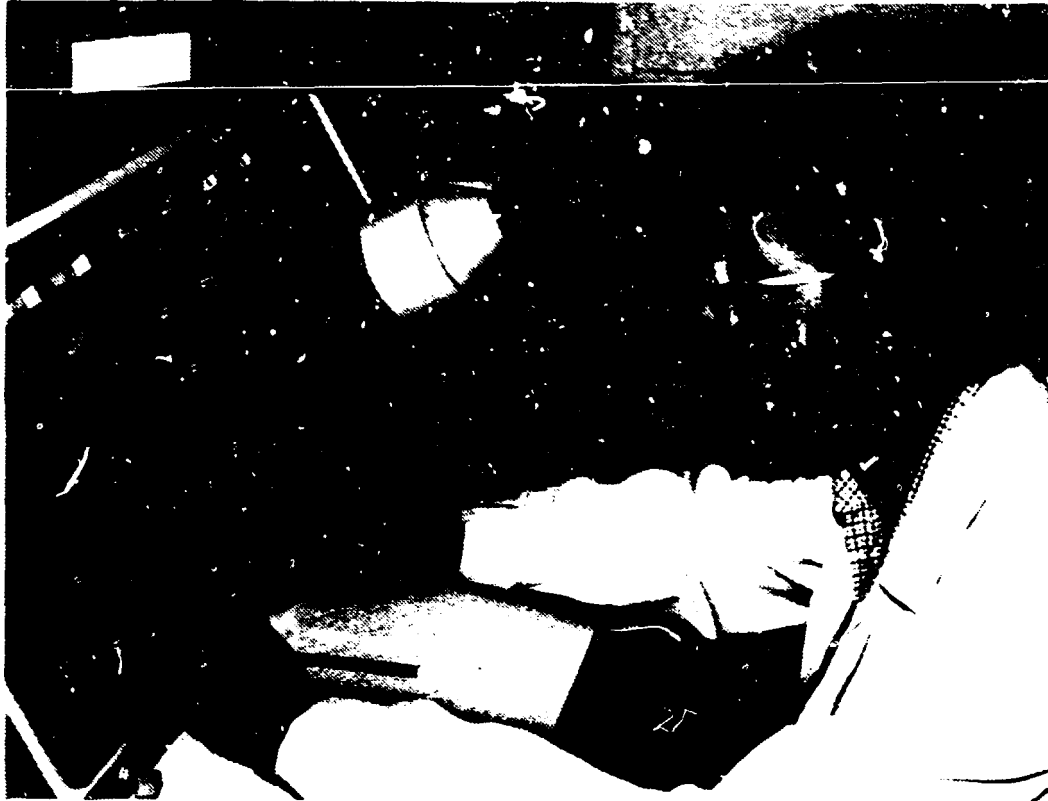
UNIDF has enabled UNIDO to assist the Association of Natural Rubber Producing Countries in a research project to develop semi-plastic, powdered and liquefied natural rubber and composite materials based on natural rubber with industrial applications.



Spare parts fabricated at the Industrial Research Institute at Khartoum, Sudan, keep industrial light machinery in operation. The Institute, with some support from UNIDO, provides consultation and assistance to the public and private sectors.

A technique developed with help from UNIDO used wooden modules to build this bridge in the Lao People's Democratic Republic. Prefabrication of wood and light steel units makes use of local lumber.





The control board for the electronic microscope at the Cement Research and Development Centre at Ankara, Turkey. This and other equipment for the Centre was provided by UNIDO, which also sends international students there for training.

Clearing weeds from wet land, using a mini cultivator driven by a single-horsepower gasoline engine, is made possible by machinery developed by the International Rice Research Institute at Los Baños, Laguna, Philippines, which receives some of its support from UNIDO.



The metallurgical sector

Resources have been allocated to investigate a technology for producing iron concentrates through beneficiation of nepheline cyanites.

UNIDO has assisted the Association of South-East Asian Nations in formulating common steel standards and specifications by adapting the relevant recommendations of the International Organization for Standardization.

The Revolution Workshop Foundry, the largest foundry in Democratic Yemen, is being modernized with the aid of UNIDF resources. The goal of the project is to upgrade the skill of operators, so that the foundry can produce a wider range of more sophisticated components and of higher quality than it does at present. Demonstration equipment, expert assistance and the training of local personnel are essential elements of this project. It is of interest to note that the financial resources involved include three non-convertible currencies as well as convertible currencies.

Renewable sources of energy

UNIDO makes use of UNIDF resources in connection with proven technologies for exploiting renewable sources of energy and with very promising ones. Biomass is one such area. Technical consultations among developing countries on large-scale biogas technology have been organized in co-operation with the Government of China.

Another biomass application that was taken up in the early operations of UNIDF is the production of alcohol (ethanol) by fermentation of vegetation. This is an age-old process, but its exploitation on an industrial scale had been limited by the greater attraction in the industrialized countries of other chemical routes. Fermentation alcohol can be used as a fuel as well as a chemical feedstock. A workshop organized in 1979 in co-operation with the Government of Austria and Austrian industry was attended by 37 participants from 25 developing countries and 89 participants from 37 companies and 17 universities and research institutes from developed countries. Forty-six papers were presented and discussed. UNIDO has subsequently received a number of inquiries and requests for assistance in this field, which have already resulted in projects in Ethiopia, Kenya and Panama.

Technologies for exploiting other renewable sources of energy in developing countries are emerging—for example, solar energy and small-scale hydroelectric power. One project has fostered the distillation of natural oils



Yarn-winding machinery is part of UNIDO-supplied equipment for producing knitwear samples at a knitwear facility in Ludhiana, India. Since 1974 UNIDO has provided more than \$US 1 million worth of winding, dyeing and finishing machines for the facility.

using solar energy. As to hydroelectric power generation, attention has been focused on installations with a capacity of 5,000 kW and below. Generating units in the range 100 kW to 1,000 kW, sometimes termed mini power stations, and even units of under 100 kW, termed micro power stations, can make a significant contribution to the development of small and medium-sized industries in rural areas and isolated settlements. New technologies are making possible the construction of such installations in developing countries. UNIDF resources were used in 1979 for a seminar-cum-workshop in Nepal on the transfer of technology in this field and an exchange of experience by China, the Philippines and Central American countries. Technical and economic questions and institutional arrangements to encourage the construction of these small-scale units were the subject of detailed examination. A manual on mini hydropower generation, for decision makers, is in preparation, financed by UNIDF.

Sectoral Consultations within UNIDO

The purpose of the System of Consultations established within UNIDO in accordance with the Lima Plan of Action is to facilitate changes in the geographical pattern of industrial production that will enable the target set in the Lima Declaration—a share in world industrial production of the developing countries of at least 25 per cent by the year 2000—to be met.

The Consultations, in which government officials, representatives of industry, labour, and consumer groups from interested countries participate, serve as a forum for negotiating agreements in key sectors of industry between developed and developing countries and among developing countries themselves. UNIDF resources have been used to support the preparations for some of these Consultations.

The technical and economic documentation put together for each Consultation, the discussions to which it gives rise and the concrete measures of co-operation to which the Consultations lead, add up to a considerable body of technical assistance. As a result of the first Consultations on fertilizers and petrochemicals, for example, UNIDF resources supported the preparation of several model forms of contract, designed to facilitate negotiations between contractors and purchasers of turnkey projects, engineering-services-only projects and industrial projects intermediate to these types. A UNIDF project to investigate the feasibility of establishing downstream petrochemical industries in developing countries lacking natural resources of petroleum originated in the preparations for the Consultation in this sector.

Co-operation among developing countries

Co-operation among developing countries in industrialization depends first and foremost on political decisions by Governments, though UNIDO may assist in devising practical measures. At the initiative of UNIDO, "solidarity meetings" have been convened since 1979 to explore ways in which the developing countries invited to a given meeting could co-operate in the industrial development of the host country. There is particular scope for UNIDO to promote technical co-operation among developing countries (TCDC), because increasingly often developing countries can benefit from advice and assistance from other developing countries that have recently passed through a comparable phase in their industrialization.

Following the adoption of the Buenos Aires Plan of Action by the United Nations Conference on Technical Co-operation among Developing Countries in September 1978, UNIDO has given priority to promotional activities such as meetings, consultations for exchange of information and various kinds of study tours, to determine how TCDC can contribute to the solution of development problems. Several of the UNIDF sectoral projects already described have involved TCDC. To make brief mention of a few other examples, Brazil and Angola have co-operated in the food processing industry, Uruguay and Kenya in quality control of leather and India and Cuba in establishing a pilot pharmaceutical plant.

The development and transfer of technology

Promotional activities, studies and research relating to the development and transfer of technology, as distinct from training activities, have been the object of more than 50 UNIDF projects, with budgets totalling more than \$US 5 million. Some of these projects are concerned with surveying domestic and imported technology in current use in developing countries and in supporting the development of new technology more appropriate to conditions in those countries. Other projects have been concerned with the preparation of national technology policies and the selection of appropriate technologies.

UNIDF resources have also been used to establish the Technology Information Exchange System (TIES), through which the technology transfer registries of developing countries are linked together, and to enable these registries to exchange experience on the acquisition of industrial technologies.

A "technical services delivery system" established under one UNIDF project helps medium- and small-scale industrial enterprises in the rural areas

of a developing country. Under the project, experts in fields such as production management, marketing, applied research and product development determine what services these enterprises need and when such services are inadequate they give advice themselves. An important goal of the project is to develop a system linking the rural entrepreneurs with the institutions capable of providing the necessary technical services.

Group training programmes are an important element in the transfer of technology. Increasing use is now being made of research and development centres in the developing countries for transferring know-how. For example, UNIDO has sponsored training programmes at the Engineering and Industrial Design and Development Centre at Cairo for Egyptians and nationals of neighbouring countries. Similar programmes have been supported at the Cement Research and Development Centre at Ankara.

In a wider sense, of course, the development and transfer of technology are inherent in the work plan of almost all UNIDF projects devoted to particular industrial sectors.

The institutional infrastructure of industry

The institutional infrastructure of industry needs to be more extensive in developing countries than in most developed countries because it must in part compensate for the absence of a long tradition of industrialization. Projects in this area, however, must provide substantial and sustained assistance if they are to prove effective. Useful support has been given, for example, to quality control laboratories in Kenya (leather) and the United Republic of Tanzania and Yemen (food processing); to an industrial information system in the Arab States; and to a marketing and distribution system in Mexico. General workshops or mobile specialized workshops have been established in some developing countries to strengthen engineering repair and maintenance facilities. A shortage of resources has so far prevented UNIDF from undertaking large, long-term projects to establish such institutions.

Promotion of industrial investment

UNIDO acts as an intermediary in promoting investment in the construction of industrial production facilities in the developing countries. It assists Governments in undertaking pre-investment studies, and it endeavours through a variety of activities to bring together sponsors of such projects and would-be investors. It has fostered links between development banks in developed and developing countries and has encouraged the exchange of

information and experience between such banks in various developing countries. To carry out these activities, UNIDO, in collaboration with the host Government, has established investment promotion offices in six countries.

With regard to pre-investment studies, it has long been recognized that the work put into them often fails to lead to actual investment in industrial production facilities, particularly in the least developed among the developing countries. Through UNIDF, UNIDO has assisted several countries in reviewing the studies of existing industries and initiating follow-up action with a view to investment.

UNIDF has figured prominently in the promotion of industrial investment, to which it has devoted some 17 projects with budgets totalling \$US 7 million. By way of example, the investors' forum held at Dakar, Senegal, in September 1978 under the joint auspices of the host Government, the European Economic Community, the Economic Community of West African States and UNIDO was attended by more than 400 participants, 300 of whom came from financial institutions and companies in 16 industrialized countries. Thanks to this Forum, some 100 investment projects, which the representatives of 14 West African countries and subregional organizations wished to promote, could be discussed with many potential investors. Inevitably, some time is required for such promotional meetings to bear fruit, but in this case one year later firm agreements had been reached for projects involving the investment of over \$US 65 million.

IV. Prospects

Contributors to UNIDF, Governments that have received assistance from the Fund, policy-making organs of the United Nations and the secretariat of UNIDO—all these parties can look back, it may well be believed, with a certain measure of satisfaction on what has been achieved in the comparatively short period in which the Fund has been operating. Inevitably, perhaps, each party tends also to be disappointed that it has not been possible to achieve more.

Earlier sections in this booklet have made clear the difficulties that arise in programming when too large a proportion of the resources of UNIDF consists of special-purpose contributions or contributions made in non-convertible currencies. What is decisive, however, will always be the total amount of annual contributions to UNIDF. In 1977, the General Assembly endorsed the recommendation of the Industrial Development Board that the desirable funding level of UNIDF should be \$US 50 million per annum and has at subsequent sessions reaffirmed that this amount is required if the Fund is to operate effectively. To date, however, contributions have attained only about one quarter of this level (\$US 6.7 million in 1978, \$US 10.0 million in 1979 and \$US 14.6 million in 1980).

At this juncture, it may be useful to suggest some new activities the Fund might finance if it were given greatly increased resources, in the hope of stimulating a discussion between contributors and recipients of assistance that would result in concrete projects. As such, these ideas, described below, have not been formally presented to the programming committee of the UNIDO secretariat. The proposals themselves will evolve in response to future economic events.

Energy for industry and industry for energy

Ensuring a supply of energy is essential for industrial development. UNIDO has three major concerns in this area. One is to foster the rational use and conservation of energy by industry. The second is to assist in increasing energy supplies for industry through the production of new fuels from

renewable sources. Thirdly, UNIDO seeks to encourage the manufacture of appropriate equipment for generating, distributing and using energy derived from non-conventional sources, especially in the developing countries. The manufacture of products that are derived from the same raw materials as fuels—plastics, fertilizers or insecticides—or whose manufacture involves the same or related processes, needs to be taken into consideration when activities concerned with the supply of fuels are being planned. The scope for employing UNIDF resources in furtherance of these concerns is undoubtedly wide.

Technical co-operation among developing countries

Developing countries are increasingly aware that they can benefit by co-operating among themselves to promote industrialization and that a country can both give assistance in some industrial sectors and benefit from assistance in other industrial sectors. What is needed, in order to consolidate progress to date, is often strengthened or additional institutions. This is especially true with regard to interregional co-operation. Expanded UNIDF resources might be used for promotional activities and field projects in the institutional area, as a necessary investment that would lead in the course of a few years to the preparation of a larger number and greater variety of TCDC projects and would also improve the effectiveness of these projects.

Management development and other training activities

The underutilization of manufacturing capacity in developing countries has no single cause, but poor management is as often at the root of such troubles as low labour productivity, physically run-down plant and poor marketing. At senior levels of management, improvement is most likely to be achieved in such circumstances by on-the-job instruction. Given larger UNIDF resources, management consulting firms might be subcontracted to diagnose on the spot the causes of poor performance and to help senior management to introduce remedial measures.

For small-scale rural industries, the problem is different. First, potential industrial entrepreneurs in a basically agricultural environment have to be identified, by some kind of aptitude testing, and then they have to receive some basic training.

Training is also necessary for personnel in research institutes or other bodies and in government departments. The shortage of nationals with the necessary skills for preparing and evaluating industrial investment projects

and for organizing their financing is a severe handicap, particularly in the least developed countries. A complete programme of courses for senior officials and decision makers might be organized at UNIDO headquarters on a continuing basis. This programme might be supplemented by courses for middle-level officials organized in the developing countries. Officials with greater expertise would prepare industrial projects more efficiently, and consequently Governments would be better able to decide what studies could be undertaken locally and to prepare terms of reference for foreign consultants.

Diagnostic advisory services

Operational difficulties often arise in the early years of a manufacturing enterprise—and sometimes much later on—that are technical rather than managerial in origin and call for urgent diagnosis and cure. The enterprise cannot afford to wait until local workers have been trained to solve them. The question has always been how to organize assistance in such cases through an international channel because this type of service cannot be neatly planned in detail.

UNIDF resources might be used for an experimental scheme that would cover enterprises in a branch or sub-branch of industry where the demand for a diagnostic service would be fairly homogeneous and was thought to be substantial—for example, small-scale steel plants based on scrap or rerolling of imported products. One or two firms of consultants would be subcontracted to make continuously available over a period of 12 months between four and eight experts who would work in one developing country after another. UNIDO would advertise the scheme before making a firm commitment with consultants, in order to check on the likely demand. Governments would be expected to agree in advance to make all necessary arrangements to receive the experts sent to them by the consulting firms at, say, four weeks' notice.

The Industrial and Technological Information Bank of UNIDO

The Industrial and Technological Information Bank (INTIB) is a UNIDO activity with a strong claim on any additional resources of UNIDF, because it has undertaken a great deal of pioneering work with the encouragement of the General Assembly. However, expansion is hampered by financial

constraints. INTIB complements the activities of UNIDO as a clearing-house of industrial information for the developing countries, which have been built up largely on the basis of voluntary contributions both before and after the establishment of UNIDF. INTIB is both a source of information stored by UNIDO and a means of drawing on information and expertise available in an international network. It offers help in selecting technology for specific industrial sectors by providing annotated information on the choices available. It also holds data concerning the conditions under which developing countries obtain access to technology. INTIB has not yet been able to provide these services, however, in respect of all industrial sectors of major interest to the developing countries.

Promotion of industrial investment and sectoral planning

UNIDF resources might be used more extensively to enable UNIDO to collaborate with regional development banks, funds and similar institutions and Governments of developing countries in creating "bankable" projects. UNIDO and these institutions would jointly identify industrial projects for financing and appraise projects submitted to the institutions.

More general requests for financing received by these institutions, or referred to them by UNIDO, could be evaluated jointly. Technical assistance is often required if a project is to be viable. UNIDF could provide this assistance in whole or in part; in the latter case it could be used to help mobilize other necessary resources.

UNIDO and an institution would decide, on a case-by-case basis, what work had to be done and how the cost should be apportioned between UNIDF and the institution. This kind of collaboration would enable the institutions to expend their available resources for industrial investment more promptly than at present.

Regional institutions often find their task hampered by the absence or limited nature of sectoral planning in individual countries. In some cases, an industrial sector ought preferably to be studied at the subregional rather than the country level. This is true, for example, of many African least developed countries. The countries comprising the subregion may, however, find it difficult to finance such planning. In most African countries, agro-industry is being identified as a priority sector for industrial development. Since the General Assembly has declared the 1980s the Industrial Development Decade for Africa, there would be merit in a UNIDF-financed project concerned with planning for a common sector of industry in several African countries simultaneously, particularly in the least developed countries.

Industrial joint ventures by enterprises in different countries are not inevitably confined to large-scale operations. However, many small- and medium-sized firms in developed countries and industrially more advanced developing countries may be deterred from considering industrial investment in another country by their limited knowledge of its economic situation and the not inconsiderable cost of making an on-the-spot pre-investment study. UNIDF resources might be used to make it easier to overcome this obstacle—for example, by underwriting part of the cost of such studies.

Studies and research for the longer term

A fund whose resources cannot satisfy all requests for assistance for short-term projects will not be used for many projects whose benefits will be apparent only in the longer term. Yet failing to tackle deep-seated problems incapable of quick solution is almost to guarantee trouble in the future. With significantly larger resources accruing to UNIDF, UNIDO could place a greater emphasis in the annual programming exercise submitted to the Industrial Development Board on studies and research for the longer term.

In fact, UNIDF has financed some of the studies undertaken by UNIDO at the request of the General Assembly on shifts in industrial capacity between developed and developing countries and on the changes currently taking place in the industrial structure of developed countries. The prolonged slow-down in economic growth witnessed recently in developing and developed countries alike has intensified the economic—and also the social and political—pressures that produce these changes. There is an undeniable need for further studies and research in the area, to which UNIDO could make its own special contribution. This is perhaps the most pressing, but by no means the only, long-term development issue to which a better-endowed UNIDF might allocate resources.

