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**ANNUAL  
REPORT  
OF THE  
EXECUTIVE  
DIRECTOR  
1984**

**84**

**INDUSTRIAL DEVELOPMENT BOARD, Vienna, 1985**

ANNUAL REPORT OF THE EXECUTIVE DIRECTOR, 1984

UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION  
Vienna



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INDUSTRIAL DEVELOPMENT BOARD  
Vienna, 1985



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## ABBREVIATIONS

ACC	Administrative Committee on Co-ordination
ACP	Group of African, Caribbean and Pacific States
AIDO	Arab Industrial Development Organization
ARCEDEM	African Regional Centre for Engineering Design and Manufacturing
ASEAN	Association of South-East Asian Nations
CEAO	West African Economic Community
CMEA	Council for Mutual Economic Assistance
COMFAR	UNIDO Computer Model for Feasibility Analysis and Reporting
CPC	Committee for Programme and Co-ordination
DND	Division of Narcotic Drugs
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ECOWAS	Economic Community of West African States
ECWA	Economic Commission for Western Asia
EEC	European Economic Community
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization of the United Nations
HABITAT	United Nations Centre for Human Settlements
IAEA	International Atomic Energy Agency
ICSC	International Civil Service Commission
IFC	International Finance Corporation
IIASA	International Institute for Applied Systems Analysis
ILO	International Labour Organisation
INSTRAW	International Research and Training Institute for the Advancement of Women
INTIB	Industrial and Technological Information Bank
IPF	Indicative planning figure
ISO	International Organization for Standardization
ITC	International Trade Centre UNCTAD/GATT
JPO	Junior Professional Officer
NGO	Non-governmental organization
OUA	Organization of African Unity
OECD	Organisation for Economic Co-operation and Development
OIC	Organization of the Islamic Conference
OLADE	Latin American Energy Organization
PAC	Purchase and Contract Service
PER	Project Evaluation Report
PPRS	Project Personnel Recruitment Section
SADCC	Southern African Development Co-ordination Conference
SDR	Special drawing rights
SELA	Latin American Economic System

SIDFA	Senior Industrial Development Field Adviser
SIS	Special Industrial Services programme
TIES	Technological Information Exchange System
UDEAC	Central African Customs and Economic Union
UNCDF	United Nations Capital Development Fund
UNCTAD	United Nations Conference on Trade and Development
UNCTC	United Nations Centre on Transnational Corporations
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Co-ordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDF	United Nations Industrial Development Fund
UNIDO	United Nations Industrial Development Organization
UNIN	United Nations Institute for Namibia
UNITAD	Joint UNIDO/UNCTAD modelling project
UNITAR	United Nations Institute for Training and Research
UNOV	United Nations Office at Vienna
VIC	Vienna International Centre
WHO	World Health Organization



**From the Executive Director, Dr. Abd-El Rahman Khane:  
By way of a preface, letter to a friend\***

Vienna, January 1985

Dear Friend,

As you know I have now been in Vienna for 12 years, and have spent 10 of those years at UNIDO. The past 10 years at the head of an international organization have been a very interesting and active chapter of my life.

I see very clearly, for example, that UNIDO's contribution over these 10 years to the cause of the industrialization of the third world countries—as you know, a very complex undertaking—has, when all is said and done, been appreciable, given the modest means made available to the organization. UNIDO has been able to achieve a relatively impressive increase in the technical assistance it furnishes. In addition, other activities which I also consider to be very important for the developing countries have been launched and developed to a considerable degree. Some of these are the System of Consultations, investment promotion and the industrial studies, the quality of which I am told is on the whole quite outstanding.

Technical assistance—the term technical “co-operation” is now used—comprises, as you know, a wide variety of activities. The countries receiving it are able to benefit from it to varying degrees, depending on the extent to which they have already acquired industrial and administrative infrastructure. It is designed to help the developing countries acquire practical technical know-how in fields as varied as the organization of national institutions participating in industrial activity, the evaluation of industrial projects or the vocational training of senior cadres in industry, and many other activities of this type, including promotion of industrial co-operation among the countries of the South.

The problem for UNIDO is that it must respond to a wide range of situations, involving large or small countries, land-locked countries or countries isolated in expanses of sea, countries possessing different types of natural wealth in different amounts, countries already well equipped or, on the contrary, wanting in physical and human infrastructure, and of course, countries scattered over the face of the globe. In addition to the complexity of these varying situations, there is the additional dimension introduced by rapid technological change in the industrial sector.

As UNIDO's mandate is to promote and accelerate the industrial development of the third world countries, the task assigned to it is clearly

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\*Original French.

immense. I am sure that you are able to picture to yourself the vast sums which such an organization would have to have in order to be truly able to provide assistance in situations of such complexity and to handle its task properly. Unfortunately, the means available to UNIDO are clearly inadequate to the responsibility entrusted to it. The annual expenditures of between \$120 million and \$130 million, of which roughly two-thirds go for providing technical assistance, are glaringly inadequate. We are compelled to spread the funds thin because all countries have an equal right to request assistance from the organization. Thus, we are now active in 136 countries. In 1984, for example, we continued our efforts under 1,503 projects of varying levels of complexity. Just add to this the fact that, every time you think you have trained someone in a specific area of industry, his new abilities call attention to him and he is very quickly lost to another "more interesting", and indeed generally more lucrative, activity. We therefore simply have to manage not to let ourselves get discouraged when we have to start the same exercise over and over again in the same country.

The reason for our frustrations in fact lies elsewhere. It is a matter of the whole political environment. In the face of the enormity of the task and of what I consider to be the responsibilities of our generation, it is impossible not to be surprised at those who are able to salve their conscience with the little bit that is being done, or those who do not hesitate to say that what is being done is already too much. There are also those who say they are aware that too little is being done but then turn around and plead the difficulties of the current situation, which prevent them from doing more. This is also not reassuring. This gives one the distressing feeling that the determination to take on the future in this area is not a matter of priority in the day-to-day concerns of the countries which in my view really determine how much can be done. The attitude would almost seem to be one of: "After me, let it be". The representatives of the third world countries by and large do not appear to have any great illusions either, and fight as best they can, some more bravely than others, as in all battles. What worries me is the feeling of helplessness which, in my opinion, still far too many developing countries seem to show in the face of such a desperate situation.

Since, at the beginning of 1975, I changed addresses and offices when I moved from OPEC to UNIDO, the latter has held three General Conferences. The one held in Lima (Peru) in March 1975 (UNIDO II), in the preparation of which I was not involved, was obviously the most important of the three. The Lima target: that at least 25 per cent of world industrial production should be accounted for by the third world countries by the year 2000, which was unanimously accepted, is now well enough known so I need not revert to it. However, how close to this target have we come today? It would seem that we still have a very long way to go. The international co-operation which could have helped achievement of the target has not put in an appearance. There is an ongoing divorce between words and deeds. In that connection, I think I have learned something about the art of multilateral diplomacy.

However, since the whole picture cannot be sombre, I should tell you that other recommendations made by the Lima Conference have indeed been implemented. For example, the United Nations Industrial Development Fund (UNIDF) has been set up, a System of Consultations has been established, and industrial studies have been instituted, even though UNIDF, after seven years of existence, has difficulty in collecting some \$12 million a year, even though the System of Consultations remains an incomplete instrument when it could

be used for genuine international co-operation and solidarity, and even though during every budget discussion the industrial studies have become the favourite target of those who think that they are totally redundant in trying to assist people who are unable to feed and clothe themselves adequately. Another Lima recommendation relates to conversion of the existing organization into a United Nations specialized agency. This will have taken 10 years and, at the time I am writing this letter, the process is not yet complete. However, this should not be a cause for complaint, for it would appear that this is quite normal, if not outstanding, for multilateral initiatives.

The next General Conference (UNIDO III), which was held at the beginning of 1980 in New Delhi (India), ended, as you will recall, in a disappointing failure although the secretariat had made considerable efforts to prepare for it, in particular by putting forward eight major proposals in international co-operation which we thought necessary to help in achievement of the Lima target. None of them attracted enough attention, and the Conference in the end broke up in disagreement on the question of the establishment of an industrial development fund.

This was one of our eight proposals, taken over by the Group of 77 and put into a form which, I confess, appeared to me from the outset to condemn it to failure. Nonetheless, on the basis of a mandate from the Conference, the secretariat tried to derive from it a new proposal in the form of an international bank for industrial development (IBID). This too ended in failure and my insistence on promoting the bank by demonstrating that it would serve everybody's interests only upset those who, for a variety of reasons, were opposed to the idea. I therefore realized, *a posteriori*, that it was less the unacceptable form than the very idea of a financial instrument essential for the acceleration under reasonable conditions of the industrialization process in the developing countries, which underlay the discord that was in the spotlight at New Delhi. I am sure that you, and I hope the developing countries, will readily appreciate the very basic implications that flow from such a perception.

We repeated the exercise four years later, at the General Conference (UNIDO IV) which was held, as you know, in August 1984 here at Vienna. We tried to make our contribution by devoting special care to detailed preparations for the Conference. Despite nearly three weeks of strenuous effort by all delegations, the final outcome was a repetition of familiar exhortations without anything new and without any commitment of additional resources. No shared perception of the world economic crisis emerged and, hence, no possible prescription for dealing with it. The most important resolutions, specifically those which would have concerned industrial finance and world industrial restructuring, remained unfinalized and were passed on to the United Nations General Assembly for consideration. In the event, at the end of its session in December, the General Assembly adopted the resolution on industrial restructuring. Given the international tensions of which you are aware, and in view of these meagre results, some have seen fit to speak of a semi-success and others of a semi-failure. As for me, I immediately said that if the words, even though both relevant and very important, did not really lead to any further practical measures for assisting the third world countries effectively in achieving their industrial goals, then UNIDO IV should be deemed to have been a failure, like the preceding Conference. To my mind, it was clear that the practical results of the Conference should not be confined merely to a strengthening of UNIDO's technical assistance capabilities; and even here, only the future can tell what measure of means will be made available to the

secretariat. To my way of thinking—let me repeat—adequate responses to the problems of protectionism, foreign debt and future terms for the financing of industrial programmes are much more important for the industrialization of the third world. On all these crucial issues, we must wait and see what is done during the next two years before reaching a final judgement.

As regards day-to-day action, for the secretariat the year 1984 was an average year. The general level of resources and activities of the organization was maintained at the same average level as in the past few years. The volume of technical assistance did nonetheless improve a little after the slippage of 1983, but remained at a level below the \$92 million which the organization achieved in 1982. The other activities did not suffer any particular disruptions.

I have already told you that the organization is preparing to change its status. I think that the advantages of conversion are obvious: administrative independence, conformity of budget resources to programmes (something that we do not now have) and, above all, the possibility for ministers of industry from around the world to meet more often, specifically every two years, to discuss the state of world industry, in the hope that, with the help of time, international co-operation will benefit as a result. However, in my opinion, the third world countries could derive greater benefit from the organization if they decided to adopt my proposal to assume a more representative share in the financing of the secretariat (25-30 per cent for the whole group, instead of the present level of 10 per cent) and also in the financing of the technical assistance of which they are still in need, for example, in the form of "trust funds", in other words, funds serving to finance projects for the benefit of the donor countries themselves. It does seem to me that, at the present time, the pressures being brought to bear on the organizations in the United Nations system, and particularly those whose activities are devoted to the development problems of the third world countries, make the adoption of such a strategy mandatory.

For the time being, however, the major subject of discussion, which appears to have prevented the conversion of UNIDO from taking place a year or two sooner, is the matter of the number of deputy directors-general which the new agency should have. The member countries must certainly have good reason for thinking that this is important. On careful consideration, I think there is no great disadvantage to having several "generals", provided that the substantive activities of the organization do not suffer as a result. The solution would therefore be to ensure that the resources of UNIDF are increased so that expenditures for other activities of the organization and for a somewhat overblown administration would be maintained within reasonable proportions in comparison with the volume of technical assistance expenditure. Perhaps a ratio of two-thirds/one-third between technical assistance delivery and administrative cost as is now the case could be a reference level. It might even be possible to do better if the funds for technical assistance were increased.

You have here a few brief comments on the occasion of my completion of 10 years of experience at the helm of an important United Nations agency, but one which is still under-age—although not for long, I hope.

There have been causes for satisfaction and for frustration here and there, as in any human undertaking, but from the personal point of view it has been a good observation point for looking out over the art of multilateral diplomacy. In addition, serving in a worldwide institution like the United Nations provides a rare opportunity and a privilege which is not always as highly thought of as it should be. Learning to place things in their universal context provides an incomparable enrichment at the same time as presenting a daily test of

modesty. In this connection—and I want to end my letter on this note—I have always been rewarded by meeting, either on the occasion of my many trips, or within the United Nations system in general and of course in UNIDO itself, people who are outstanding for their knowledge, competence, loyalty to the Charter of the United Nations and their availability for undertaking something which we agree will render some service to the cause of development and peace. These people come from all the continents, from the North as from the South, from the East as from the West. From a purely personal point of view, this is certainly one of the greatest satisfactions one can derive from serving the United Nations. Best wishes for 1985.

Cordially yours,

*(Signed)* Lamine

*P.S.* You have certainly already heard that the General Assembly has agreed to extend my term of office for two years, thereby making my third term run its normal course, until the end of 1986 or until the Director-General takes office, if the organization is converted into a specialized agency. Regards.



## *Chapter I*

# **INTERGOVERNMENTAL POLICY-MAKING ORGANS**

1. As an organ of the General Assembly functioning as an autonomous organization within the United Nations under the terms of General Assembly resolution 2152 (XXI), UNIDO is subject to the directives and monitoring of the General Assembly and the Economic and Social Council as well as the Industrial Development Board and its Permanent Committee. These bodies meet at least once a year. In addition a General Conference of UNIDO is convened every four years. The main functions of these conferences—the fourth of which was held in 1984—include: a review of progress in the implementation of previous plans of action on industrial development and co-operation and of major problems and policy issues affecting the world industrial situation; an examination of ways and means of increasing the share of the developing countries in world industrial output; and recommendations on policies and procedures to Governments as well as UNIDO and other United Nations organizations to facilitate industrial co-operation for the benefit of developing countries. The present chapter sets out, in chronological order, the decisions and recommendations of those bodies during 1984 that had, or are likely to have, a direct bearing on UNIDO and its activities. In addition, information is given on decisions taken by the Governing Council of the United Nations Development Programme (UNDP) relevant to UNIDO.

2. The UNIDO Constitution remained open for signature at United Nations Headquarters in New York. As of 31 December 1984, 138 States had signed the Constitution and 118 had ratified it. In accordance with its Article 25, the Constitution shall enter into force when at least 80 States that had deposited instruments of ratification, acceptance or approval notify the Depositary that they have agreed, after consultations among themselves, that the Constitution shall enter into force. The consultations requested by the General Assembly in paragraph 3 of its resolution 38/193 of 20 December 1983 took place in April and May 1984 at Vienna with the Legal Counsel representing the Secretary-General. The outcome of these consultations is contained in a report (A/39/376) submitted by the Secretary-General to the General Assembly at its thirty-ninth session. The Assembly subsequently adopted resolution 39/231 on the conversion of UNIDO into a specialized agency (see para. 28 below).

## INDUSTRIAL DEVELOPMENT BOARD

3. The Industrial Development Board held its eighteenth session in Vienna from 2 to 19 May 1984. It had before it 22 agenda items.<sup>1</sup>

4. In conclusion 1984/1, the Board adopted the report of the Permanent Committee on the work of its twentieth session (ID/B/309).

5. Action taken by the Board at its eighteenth session also included the adoption of resolution 57 (XVIII) on the Industrial Development Decade for Africa and conclusions on the follow-up to the Third General Conference of UNIDO and the eleventh special session of the General Assembly; restructuring of world industrial production and redeployment; the System of Consultations; development and transfer of technology, including the Industrial and Technological Information Bank; the regular programme of technical co-operation; preparatory arrangements for the Fourth General Conference; the United Nations Industrial Development Fund (UNIDF); progress of industrialization of the least developed countries; technical assistance to the Namibian people; technical assistance to the South African national liberation movements recognized by the Organization of African Unity; technical assistance to the Palestinian people; integration of women in development; and evaluation (conclusions 1984/2 to 1984/14 respectively).

## UNITED NATIONS DEVELOPMENT PROGRAMME

6. The Governing Council of UNDP held its thirty-first session at the Palais des Nations, Geneva, from 4 to 30 June 1984. In view of the importance of UNDP as the main source of finance for UNIDO technical co-operation programmes, some of the decisions of the Governing Council have a significant bearing on the activities of the organization; those of particular relevance are summarized below.

7. In decision 84/4 on measures to be taken to meet the changing technical co-operation requirements of the developing countries, the Governing Council *inter alia* urged UNDP to continue expanding and adapting its services and assistance to low-income developing countries and to ensure that the emerging needs of those countries in high technology and in other areas with new demands also receive adequate attention, as well as to continue to respond effectively to meet the technical assistance needs of the least developed countries, in particular towards implementation of relevant parts of the Substantial New Programme of Action for the 1980s for the Least Developed Countries.<sup>2</sup> The Governing Council also appealed to the participating organizations of the United Nations system to join with the UNDP in the efforts of host Governments to bring about wider and more effective

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<sup>1</sup>For the report of the Board on its eighteenth session, see *Official Records of the General Assembly, Thirty-ninth Session, Supplement No. 16 (A/39/16)*.

<sup>2</sup>*Report of the United Nations Conference on the Least Developed Countries, Paris, 1-14 September 1981* (United Nations publication, Sales No. E.82.I.8), part one, sect. A.

development co-operation at the country level. In decision 84/10 on the implementation of the Substantial New Programme of Action, the Governing Council reiterated its appeal to all countries, particularly donor countries, to make all possible efforts to increase their financial support to the least developed countries.

8. On the subject of evaluation, the Governing Council in decision 84/15 endorsed the course of action proposed by the Administrator of UNDP in section II of his report on the joint United Nations/UNDP/UNIDO evaluation of UNDP-financed technical co-operation activities of UNIDO in the field of manufactures (DP/1984/68) concerning the preparation of a programme advisory note on the manufactures projects, and the modification of the project formulation guidelines and of the training for programming.

9. By decision 84/37, the Administrator was requested to continue his efforts to reach greater harmonization of procurement procedures of executing agencies based on the principles of international competitive bidding and equitable distribution, by means of developing practical measures and by making available to the Governing Council for consideration at its thirty-second session the analysed results of the study on agency practices.

10. The Governing Council, in decision 84/41 on sectoral support, approved an allocation of \$2,031,000 to be used in 1986, together with any savings arising from previous years, to cover the net costs to UNDP for the services of Senior Industrial Development Field Advisers (SIDFAs); it also authorized the Administrator to finance the maximum number of SIDFAs within available resources, and urged him to continue consultations—jointly with the Executive Director of UNIDO—with recipient countries in order to achieve a sharing of the cost of these services in accordance with Governing Council decisions 81/39 and 82/38. The Council further urged continued close collaboration of SIDFAs with other United Nations agency field representatives under the co-ordination of the resident co-ordinator; appealed to developed countries to provide voluntary contributions to increase the number of posts for SIDFAs; and reaffirmed that priority shall be given in the provision of the services of a SIDFA, to those countries which have shared in the financing of the total net cost of those services, taking into account the special needs of the least developed countries.

11. Other decisions of interest to UNIDO are 84/6 on reports of the Joint Inspection Unit, 84/11 on assistance to the national liberation movements recognized in its area by the Organization of African Unity, 84/12 on assistance to Namibia, 84/13 on assistance to the Palestinian people, 84/16 on mid-term review of the third programming cycle, 1982-1986, 84/17 on country and inter-country programmes and projects, 84/20 on preparations for the fourth programming cycle, 84/40 on audit reports and 84/42 on reimbursement of services provided by UNDP field officers to other United Nations bodies.

## **ECONOMIC AND SOCIAL COUNCIL**

12. The second regular session of the Economic and Social Council for 1984 was held in Geneva from 4 to 27 July 1984. Under agenda item 13 on

“Industrial development co-operation”, the Council considered matters related to UNIDO. In decision 1984/167 it took note of the report of the Industrial Development Board on the work of its eighteenth session<sup>1</sup> and decided to transmit it, together with the recommendations contained therein, to the General Assembly at its thirty-ninth session. It also took note of the note by the Secretary-General transmitting the third progress report of the Executive Director of UNIDO and the Executive Secretary of the Economic Commission for Africa (ECA) on the Industrial Development Decade for Africa (A/39/301; E/1984/108) and decided to transmit it to the Assembly at its thirty-ninth session for consideration. On the implementation of the programme for the Industrial Development Decade for Africa, the Council also adopted resolution 1984/70 in which it reiterated the repeated appeals made to the international community to increase and intensify their technical and financial assistance, on preferential conditions, to African countries and to intergovernmental organizations in the formulation and implementation of the programme for the Decade.

13. In considering the report of the Committee for Programme and Co-ordination on the work of its twenty-fourth session,<sup>3</sup> the Council adopted resolution 1984/61 on programme planning and co-ordination, part A, section V of which deals with the evaluation of the UNDP-financed technical co-operation activities of UNIDO in the field of manufactures.

14. Other resolutions adopted by the Council at this session involving action by UNIDO are 1984/55 on implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples by the specialized agencies and the international institutions associated with the United Nations; 1984/56 on assistance to the Palestinian People; 1984/57, part B on the International Year of Shelter for the Homeless; 1984/58 on inclusion of Kiribati and Tuvalu in the list of least developed countries; and 1984/82 on the fortieth anniversary of the United Nations in 1985.

#### FOURTH GENERAL CONFERENCE OF UNIDO

15. The Fourth General Conference of UNIDO was held in Vienna (Austria) from 2 to 19 August 1984. The agenda of the Conference consisted of four main substantive items relating to: a review of the progress and prospects of industrial development *vis-à-vis* the Lima and New Delhi Declarations and Plans of Action; national and international actions in nine critical areas of industrial development during the years 1985-2000; the Industrial Development Decade for Africa; and UNIDO's co-ordinating role in the United Nations system in the field of industrial development.

16. Delegations from 139 States and representatives from 29 intergovernmental and 33 international non-governmental organizations participated. In preparation for the Conference, five high-level expert group meetings had taken place in 1983 on technological advances and development, industrial devel-

<sup>3</sup>Official Records of the General Assembly, Thirty-ninth Session, Supplement No. 38 (A/39/38).



*Deburring spring tines for cultivators at the agricultural implements factory UPROMA (Unité de production de matériel agricole), Kara (Togo)*

opment strategies and policies for developing countries, accelerated development of human resources for industrial development, industrial co-operation among developing countries, and energy and industrialization. In 1984, a number of preparatory meetings took place to consider common regional positions on the main issues of the Conference. An interregional meeting of the Group of 77 was also held in Vienna prior to the Conference.

17. The Conference adopted 12 resolutions by consensus on the following topics: accelerated development of human resources for industrial development; strengthening of scientific and technological capacities for industrial development in developing countries; energy and industrialization, with special emphasis on development and application of energy resources and manufacture of equipment; policies and measures for domestic industrial processing of raw materials in developing countries; industrial policies and measures to achieve rural development and self-sufficiency in food supplies of developing countries; least developed countries—implementation of the Substantial New Programme of Action; strengthening economic co-operation among developing countries; the Industrial Development Decade for Africa—review of progress and proposals on ways and means to attain its objectives; integration of women in industrial development; United Nations Industrial Development Fund; UNIDO's co-ordinating role in the United Nations system on industrial development; and immediate assistance to Lebanon for the reconstruction of its industrial sector (ID/CONF.5/RES.1 to ID/CONF.5/RES.12 respectively).



## Chapter I

The following three resolutions (ID/CONF.5/RES.13 to ID/CONF.5/RES.15) were adopted by vote: cessation of the war in the Gulf (adopted by 37 votes to 20, with 25 abstentions); technical assistance to the Palestinian people (adopted by a roll-call vote of 70 to 2, with 23 abstentions); and technical assistance to the southern African national liberation movements recognized by the Organization of African Unity (adopted by 66 votes to 6, with 21 abstentions).

18. The Conference decided that two draft resolutions—on mobilization of financial resources for industrial development (ID/CONF.5/C.1/L.16) and on world industrial restructuring and redeployment (ID/CONF.5/C.1/L.13)—on which no consensus agreement had been reached, would be forwarded by the President of the Conference to the Secretary-General with a request that they be considered by the Assembly at its thirty-ninth session.

19. Subsequently, the Assembly at its thirty-ninth session in decision 39/448 took note of the report of the Fourth General Conference (ID/CONF.5/46 and Corr.1). It also adopted by consensus resolution 39/235 on world industrial restructuring and redeployment, and in decision 39/446, requested the Secretary-General to attach that resolution to the report of the Conference as an addendum. Concerning draft resolution ID/CONF.5/C.1/L.16 on mobilization of financial resources for industrial development, the Assembly decided to transmit it to its fortieth session for consideration (decision 39/447).

### PERMANENT COMMITTEE

20. The Permanent Committee of the Industrial Development Board held its twenty-first session in Vienna from 19 to 23 November 1984.<sup>4</sup>

21. The Committee devoted part of the session to the examination of the proposed programme of work for the biennium 1986-1987. It also reviewed the Industrial Development Field Adviser programme, and the questions of co-ordination, evaluation and control and limitation of documentation.

### GENERAL ASSEMBLY: THIRTY-NINTH SESSION

22. The thirty-ninth session of the General Assembly opened on 18 September 1984 and was suspended on 18 December 1984. Matters directly related to UNIDO were discussed under agenda sub-item 80 (d) "Industrialization", when the Assembly had before it the report of the Industrial Development Board on the work of its eighteenth session,<sup>1</sup> a report by the Secretary-General on the conversion of UNIDO into a specialized agency (A/39/376), the report of the Fourth General Conference of UNIDO (ID/CONF.5/46 and Corr.1), a letter from the President of the Fourth General Conference addressed to the Secretary-General (A/C.2/39/8) and the third progress report on the Industrial Development Decade for Africa, prepared jointly by the Executive Director of UNIDO and the Executive Secretary of ECA (A/39/301).

<sup>4</sup>For the report of the Committee, see document ID/B/327.

23. The General Assembly adopted five resolutions and five decisions of direct concern to UNIDO.

24. Industrial development co-operation was the subject of resolution 39/232. In section I (Report of the Fourth General Conference of UNIDO), the Assembly *inter alia* endorsed the resolutions adopted by the Conference and called for their immediate and effective implementation, and welcomed the decisions of the Conference to accord high priority to industrial co-operation among developing countries and priority to strengthen the technological capabilities of developing countries in the activities and programmes of UNIDO. The Assembly also decided that adequate resources should be provided in the UNIDO budget to implement fully all its mandates and authorized the Secretary-General to take appropriate action to that end. It requested UNIDO to take appropriate action to implement the resolutions of the Conference and called upon all organs, organizations and bodies of the United Nations system to respond positively to the relevant resolutions and recommendations accorded to them by the Conference. The Assembly welcomed the announcements made during the Conference to allocate new and additional voluntary contributions to UNIDF, including contributions through trust funds, and called upon all countries, in particular the developed countries, to contribute or increase their contributions to UNIDF so as to reach, at the earliest date possible, the agreed desirable funding level of \$50 million a year.

25. In relation to the Fourth General Conference of UNIDO, the General Assembly also adopted resolution 39/235 on world industrial restructuring and redeployment and decisions 39/446 to 39/448 (see paras. 18 and 19 above).

26. In section II (Report of the Industrial Development Board on its eighteenth session), of resolution 39/232, the Assembly took note of the report;<sup>1</sup> decided that in the 1985 United Nations regular budget provision would be made for maintaining the total number of existing posts in the SIDFA programme, taking into account the allocation in the UNDP budget as well as voluntary funding through UNIDO, and requested the Secretary-General to take appropriate action; appealed to the developed countries to provide maximum voluntary contributions for the SIDFA programme; and reaffirmed its support for strengthening the System of Consultations in the light of experience gained, with the objective of increasing the industrial capacities of developing countries.

27. In resolution 39/233 on the Industrial Development Decade for Africa, the Assembly, *inter alia*, took note of the third progress report on the Industrial Development Decade for Africa. It endorsed resolution 8 of the Fourth General Conference of UNIDO and requested that appropriate measures be taken for the implementation of that resolution, in particular, paragraph 9 thereof concerned with recommendations for assistance to African countries and organizations in specific areas. The Assembly also endorsed Industrial Development Board resolution 57 (XVIII) on the Decade, as well as the appeal made by the Seventh Conference of African Ministers of Industry for the allocation of at least \$5 million, on a permanent annual basis, from the United Nations regular budget in order to enable UNIDO to assist the African countries and the intergovernmental organizations concerned in the implementation of the programme for the Decade, and reiterated its appeal to all

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countries, particularly the developed countries, and to multilateral financial institutions to increase their contributions to UNIDF taking into account the financial requirements of projects directed towards the implementation of the programme for the Decade. The Assembly further urged the international community to intensify and increase their technical and financial assistance to African countries in the context of the Decade, and requested the Executive Director of UNIDO, in co-operation with ECA, to submit to the Assembly at its fortieth session, through the Industrial Development Board and the Economic and Social Council, a report on the progress made in the implementation of the programme of the Industrial Development Decade for Africa.

28. In resolution 39/231 on the conversion of UNIDO into a specialized agency, the Assembly took note of the consensus outcome of the consultations; endorsed the report of the Secretary-General on the subject (A/39/376) and called upon all countries to abide by the outcome of the consultations as set out in that report; called upon those States that had not yet done so to ratify the UNIDO Constitution; decided, in accordance with its resolution 34/96, that adequate resources should be provided from the regular budget for the biennium 1984-1985 to ensure the provision of the necessary funds for the first session of the UNIDO General Conference to be held in two parts for a total duration of 13 days and for other costs associated with the conversion of the organization into a specialized agency; decided further that the Secretary-General should adjust the 1984-1985 calendar of Conferences and meetings so that only one session of the Industrial Development Board would be held in 1985; and requested the Secretary-General to continue his efforts, in accordance with resolution 38/193, for the immediate conversion of UNIDO into a specialized agency.

29. Decision 39/309 lists the following 15 States elected by the Assembly members of the Industrial Development Board for a three-year term beginning on 1 January 1985: Group A—China, Iraq, Ivory Coast, Lesotho, Philippines, Sierra Leone; Group B—Australia, Germany, Federal Republic of, Spain, Turkey, United Kingdom of Great Britain and Northern Ireland; Group C—Ecuador, Mexico, Venezuela; Group D—Czechoslovakia.

30. By resolution 39/234, the Assembly decided to include Brunei Darussalam in the list of States in part A of the annex to resolution 2152 (XXI).

31. By decision 39/315, the General Assembly confirmed the reappointment of Mr. Abd-El Rahman Khane as Executive Director of UNIDO for a further period of two years ending on 31 December 1986, or until the date on which the Director-General of the new UNIDO assumed office, whichever date came first.

32. As regards the programme budget for the biennium 1984-1985, the Assembly in resolution 39/237 resolved that the amount appropriated by resolution 38/236 A to the 1984-1985 UNIDO regular budget (\$72,149,500) should be increased by \$2,173,800.

33. In the Declaration on the Critical Economic Situation in Africa (annex to resolution 39/29), the Assembly stated that increased resources for rapid

implementation of the Industrial Development Decade for Africa were required and pointed out the need for further improvement in the co-ordination, efficiency and programme delivery of United Nations activities in Africa as well as the mobilization of additional voluntary contributions to ensure the implementation of projects and programmes in priority areas. Requests for continued and expanded co-operation between the United Nations and the Organization of African Unity and for active participation in measures to deal with the current economic crisis in Africa were the subject of resolution 39/8.

34. In resolutions 39/165 and 39/166 the Assembly drew attention to the grave situation of food and agriculture in many developing countries, especially in Africa, and urged the international community to respond to the need for the rehabilitation of the food and agricultural sectors in those countries. Concerning countries stricken by desertification and drought the Assembly in resolution 39/208 requested the organs of the United Nations to continue to support fully the development efforts of those countries and to provide the Secretary-General with all relevant studies carried out with respect to, *inter alia*, industrialization and raw materials for transmission to those countries.

35. As regards the implementation of the Substantial New Programme of Action for the 1980s for the Least Developed Countries, the Assembly in resolution 39/174 decided to convene the high-level meeting of the UNCTAD Intergovernmental Group on the Least Developed Countries from 30 September to 11 October 1985, to carry out the mid-term global review of the implementation of the Substantial New Programme of Action and readjust, as appropriate, the Programme for the second half of the 1980s. The Assembly emphasized the need for the conclusion of the first round of remaining country review meetings, at the latest before the mid-term global review, and requested all relevant organs, organizations and bodies of the United Nations system to submit reports containing a review of the implementation of the Programme within their fields of competence and proposals for further action as an input into the preparation for the mid-term global review. Concerning immediate measures in favour of the developing countries (39/175), the Assembly requested the relevant United Nations organizations to intensify their efforts to develop specific proposals and expedite actions for the implementation of resolution 38/200.<sup>5</sup>

36. Regarding the development of energy resources of developing countries, the Assembly, in resolution 39/173 called for the early and effective implementation of the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy; and in resolution 39/176, the Secretary-General was requested to promote, in consultation with the organs and organizations of the United Nations system, international co-operation for the development of internal technological and other capabilities in developing countries in order to achieve the development of their energy resources.

37. In resolution 39/50 on the question of Namibia, the Assembly requested the specialized agencies and other United Nations organizations to make every effort to expedite the execution of Nationhood Programme for Namibia

<sup>5</sup>ID/B/320, chap. I, para. 42.

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projects and other projects in favour of Namibians and urged them to co-operate closely with the United Nations Institute for Namibia in strengthening its programme activities.

38. In connection with economic development projects in the occupied Palestinian territories (39/223), the Assembly called upon all concerned to facilitate the establishment of a cement plant in the occupied West Bank and a citrus plant in the occupied Gaza Strip. In another resolution (39/224), the Assembly, while taking note of the report of the Secretary-General<sup>6</sup> concerning the meeting on assistance to the Palestinian people held at Geneva in July 1984, requested the Secretary-General to convene a meeting of the organizations within the United Nations system to consider the co-ordinated programme of economic and social assistance to the Palestinian people. It also requested relevant organizations within the system to intensify their efforts, in co-operation with the Palestine Liberation Organization (PLO), to provide economic and social assistance to the Palestinian people and that United Nations assistance to the Palestinians in Arab host countries should be rendered in co-operation with the PLO and with the consent of the Arab host Government concerned.

39. As regards activities of the United Nations system in support of economic co-operation among developing countries (ECDC), the Assembly in resolution 39/216 urged the organs and organizations of the system to provide and to intensify support and assistance in accordance with their mandates to ECDC, giving due regard to the Caracas Programme of Action<sup>7</sup> and requested the Secretary-General, in consultation with the executive heads of United Nations organizations, to keep the activities of the United Nations system in support of ECDC under periodic review in the existing inter-agency machinery.

40. On the subject of integration of women in all aspects of development (39/128), the Assembly urged the United Nations organizations to ensure continued co-operation and co-ordination with the Commission on the Status of Women beyond the 1985 World Conference to Review and Appraise the Achievements of the United Nations Decade for Women, in order to achieve fully the goals of the Decade.

41. The composition of the Secretariat was the subject of resolution 39/245 in which the Assembly invited legislative bodies of all United Nations organizations to examine as soon as possible the situation with regard to implementation of the principle of equitable geographical distribution in their respective secretariats and to take measures, where appropriate, with the aim of securing its implementation throughout the system within the framework of Article 101.3 of the Charter of the United Nations and the relevant provisions of the constitutional instruments of the other organizations.

42. As regards its Second Committee (Economic and Financial Questions), the General Assembly in resolution 39/217 decided that in drawing up its biennial programme of work the Committee should endeavour to adopt a biennial cycle of consideration of reports submitted to it. The Assembly decided to approve, in principle, annex I to resolution 39/217 which contains

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<sup>6</sup>A/39/474 and Corr. 1.

<sup>7</sup>A/36/333 and Corr. 1, annex.



the programme of work for the Second Committee and to review it periodically. The Assembly also requested intergovernmental bodies reporting to the Second Committee to adjust their cycle of meetings to conform to the biennial programme of work. Annex I foresees the biennial consideration of the item "Industrialization" in even years. Annex II to the same resolution contains the 1985-1986 work programme for the Second Committee which foresees the consideration of the item "Industrial Development Decade for Africa" (documentation: Report of the Secretary-General on the Decade) in 1985 and the item "Industrialization" (documentation: Report of the Industrial Development Board; Report of the Secretary-General on the Industrial Development Decade for Africa) in 1986.

43. Pattern of conferences was the subject of resolution 39/68 in which the Assembly devoted a special section to the shortening of sessions on adoption of a biennial cycle for sessions of United Nations organs; urged its subsidiary organs to make further efforts, on the basis, *inter alia*, of current statistical data, to ensure that their requests for conference services correspond accurately to their requirements and that the services provided to them are utilized rationally and efficiently; and recommended that the bureaux of those organs monitor their utilization of the conference-servicing resources allocated to them with a view to including in their reports to the General Assembly an analytical survey of their utilization of those resources.

44. Among other resolutions that also have some bearing on the work of UNIDO are: co-operation between the United Nations and the Organization of the Islamic Conference (39/7); importance of the universal realization of the right of peoples to self-determination and of the speedy granting of independence to colonial countries and peoples for the effective guarantee and observance of human rights (39/17); International Youth Year: Participation, Development, Peace (39/22); United Nations Decade of Disabled Persons (39/26); implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples by the specialized agencies and the international institutions associated with the United Nations (39/43 and 39/91); the Programme of Activities in Observance of the Twenty-fifth Anniversary of the Declaration on the Granting of Independence to Colonial Countries and Peoples (39/93); the review and appraisal of the implementation of the International Development Strategy for the Third United Nations Development Decade (39/162); International Year of Shelter for the Homeless (39/171); implementation of the medium-term and long-term recovery and rehabilitation programme in the Sudano-Sahelian region (39/206); specific action related to the particular needs and problems of land-locked developing countries (39/209 and 39/221); co-operation between the United Nations and the Southern African Development Co-ordination Conference (39/215); financial operational activities for development (39/220); confidence-building in international economic relations (39/226); human rights and scientific and technological developments (39/133 and 134); protection against products harmful to health and the environment (39/229).

45. In a number of resolutions UNIDO, among other organizations of the United Nations system, was asked by the Assembly to bring to the attention of its governing body, the Industrial Development Board, the special needs of the Central African Republic (39/180), Lesotho (39/183), Democratic Yemen

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(39/184), Uganda (39/188), Cape Verde (39/189), Sierra Leone (39/192), Vanuatu (39/198), and Gambia (39/203).

46. Resolutions were also adopted on the special needs of Equatorial Guinea (39/181), Liberia (39/182), Benin (39/185), Guinea-Bissau (39/186), Sao Tome and Principe (39/187), Yemen (39/190), Madagascar (39/191), Comoros (39/193), Swaziland (39/194), Chad (39/195), Haiti (39/196), Lebanon (39/197), Mozambique (39/199), Djibouti (39/200), Ethiopia (39/201), Guinea (39/202), Nicaragua (39/204), the drought-stricken areas of Djibouti, Ethiopia, Kenya, Somalia, Sudan and Uganda (39/205) and island developing countries (39/212).

47. In decision 39/425 the Assembly invited, among others, the United Nations organizations to participate actively in the observance of the fortieth anniversary of the United Nations and to formulate such plans and programmes as are appropriate for the occasion.

48. When suspending its thirty-ninth session on 18 December 1984 (decision 39/456), the Assembly decided to convene, at a date to be announced, for the sole purpose of considering 13 agenda items, including item 38, the launching of global negotiations on international economic co-operation for development.

## Chapter II

# SOURCES OF FUNDS

### A. Technical co-operation planning and programme development

1. The main source of finance of UNIDO for technical co-operation activities continued to be the United Nations Development Programme (UNDP). Other sources included the Special Industrial Services (SIS) programme, which falls also under UNDP, the United Nations Industrial Development Fund (UNIDF), Trust Funds (TF) and self-financing arrangements, the UNIDO regular programme (RP) within the United Nations regular budget, the United Nations Fund for Drug Abuse Control, the United Nations Capital Development Fund (UNCDF), and the United Nations Financing System for Science and Technology for Development. The following paragraphs report on the availability and utilization of some of these financial resources during 1984. A summary of the situation with regard to support costs is also provided.

2. Concerning technical co-operation, a sound planning, initiation and development of programmes and projects is the base for the financing and building-up of the substantive activities of the organization. In the conception, preparation and implementation of these programmes and projects the immediate as well as the long-term objectives of the countries concerned serve as guidelines; UNIDO has continued to maintain momentum in developing programmes at national, regional, interregional and global levels and in implementing technical co-operation projects formulated on the basis of these programmes. Periodic evaluation carried out for some of the projects provide guidance for improving the quality of future programmes, and thus facilitating their funding.

3. During 1984, programming, programme review and project formulation missions were undertaken to 46 countries in line with the principle of continuous programming: (a) to incorporate urgent and viable new activities into existing programmes while allowing phasing out of activities of lesser priority and relevance and (b) to introduce projects with novel and innovative forms of implementation. As a result 633 new projects were developed and approvals amounted to \$103.4 million, about \$13.6 million more than in 1983.

## UNDP INDICATIVE PLANNING FIGURE AND COST SHARING

4. UNDP indicative planning figures (IPFs) continued to be the largest source from which UNIDO financed its technical co-operation programmes. Since the resource outlook for UNDP had not improved by the beginning of 1984, the resource projections, with the programming level being maintained at 55 per cent of the illustrative IPF, restricted the total amount available for all agencies to \$500 million for the year under review. Accordingly, UNIDO planned project executions from all UNDP resources for a target of \$61 million in 1984, about \$10 million more than in 1983. Sustained efforts made by UNIDO and increased priority given by many Governments to the industrial sector resulted in the achievement of that target.

5. With the approval of six more country programmes in 1984, the total number of the programmes approved under the UNDP third programming cycle (1982-1986) went up to 141 (see appendix C, table 1). A total of 533 projects at a value of \$432.2 million was allocated to the industrial sector. These projects account for 14.6 per cent of the total amount programmed for the third cycle. Nineteen countries, now included in the third cycle, did not have country programmes in the previous cycles. A comparison by region of the 122 country programmes approved during the second and third cycles indicates that the increase in the overall share of UNIDO has been maintained in all regions: Africa (including African Arab States)—from 11.5 to 13.2 per cent; the Americas—from 13.5 to 15.8 per cent; Arab States—from 9.6 to 11.6 per cent; Asia and the Pacific—from 13.5 to 17.5 per cent; and Europe—from 24.5 to 29.5 per cent (see appendix C, table 3).

6. The main subsectors covered by the approved country programmes include engineering industries, chemical industries, institutional infrastructure, agro-industries and metallurgical industries (see appendix C, table 2). An overview of project approvals financed from UNDP/IPF, cost sharing and UNDP/Special programme resources and special measures in 1983 and 1984 is provided in table 3A of the statistical annex.

7. During the year under review, 39 missions to discuss programmes and to elaborate projects were sent to the following 46 countries: Algeria, Angola, Argentina, Bhutan, Burma, Cameroon, Chile, China, Congo, Costa Rica, Democratic Yemen, Ecuador, Egypt, Ghana, Greece, Guatemala, Guinea, Haiti, India, Indonesia, Iran (Islamic Republic of), Ivory Coast, Kenya, Libyan Arab Jamahiriya, Mali, Mauritania, Morocco, Nepal, Nigeria, Pakistan, Panama, Philippines, Romania, Senegal, Sri Lanka, Thailand, Togo, Tunisia, Turkey, Uganda, Venezuela, Viet Nam, Yemen, Zaire, Zambia and Zimbabwe.

8. An interesting feature in the programming and implementation of technical co-operation projects is the increase in cost sharing by recipient Governments or by a third party. Nine new projects at a value of \$5.2 million have been approved during 1984 with cost sharing amounting to \$3.1 million, i.e. 60 per cent of total value as compared to \$1.9 million in 1983. The portion of cost sharing varies from 10 to 100 per cent of the total value. Arab States and countries in Latin America are showing increasing interest in this arrangement.

9. The following paragraphs highlight some of the projects developed during 1984 and financed either solely under UNDP/IPF sources, or under UNDP funds in combination with other sources such as trust funds, World Bank financing, cost sharing by the recipient Governments or by a third party; or under a hundred-per-cent cost-sharing arrangement.

10. *Establishment of a fluid control research institute in India.* The objective of the project, with an envisaged UNDP input of \$2.2 million, is to help through the establishment of such an institute, the design and development, and testing and evaluation of flow products, as well as provide training in this field, for large-, medium-, and small-scale industries. It is expected that the project will lead to reducing the import of foreign technology and will encourage the development of local technology. It should help to strengthen the country's capabilities in carrying out R + D in the field of flow products and upgrade its manufacturing capabilities for producing components of fluid control and fluid measuring systems which are widely used in hydraulic equipment in the different sectors of industry.

11. *Pollution control research institute, Hardwar (Uttar Pradesh, India).* Through this project UNIDO will assist in the review of pollution caused by different industries in Uttar Pradesh, in forecasting the extent of pollution growth in the next five to ten years and in evolving appropriate pollution control technologies. Action to be taken will involve assistance in R + D; evolving processes and control procedures for minimizing pollution; and generating and developing practical methods for recovery and re-use of industrial waste. UNDP input in the projects will amount to about \$2.9 million, including supply of equipment, experts and training.

12. *Development of regional activities at the Petroleum Development Centre in Sumbe (Angola).* The main objective of this Centre, established with the assistance of UNDP and UNIDO, is to help member States of the Southern African Development Co-ordination Conference (SADCC) in achieving an independent development of their energy sector, one of the essential inputs for industrial development. SADCC member States also voiced their desire that this Centre be developed further so as to provide training to technical and managerial staff of their petroleum industries and donors were approached for providing further assistance to the Centre. UNDP, at the request of the Government of Angola which acts as the co-ordinator of the SADCC energy development programme, decided to approve \$1 million for the implementation of the regional project. In addition, the Norwegian Agency for International Development, on the basis of a trust-fund agreement with UNDP, allocated an amount of \$4.4 million. The success of this innovative approach was only possible through complex negotiations with all parties concerned.

13. *Integrated assistance to the Bolivian industry.* This umbrella project, at a value of approximately \$700,000 with 37 per cent cost sharing, aims at creating a technical unit for centralizing the technical co-operation programmes in the field of industry. The key sectors expected to be covered are, *inter alia*, food processing, pharmaceuticals, cement production, leather and leather products, forging and welding, and metal mechanics.

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14. *Assistance in the formulation of an industrial master plan (phase II) for Cameroon.* The project, at a value of \$2.9 million with \$1.9 million cost sharing, will take into account the industrialization policy of the Government of Cameroon and its strategy which is based essentially on development of a number of key sectors such as wood, iron, bauxite and hydrocarbons. The formulation of the master plan will provide the necessary impetus to other sectors including agro-industries, small- and medium-scale industries, infrastructure development, transport and energy.

15. *Techno-economic investigation of production of de-ironed refractory bauxite in Greece.* Through this project, at a value of about \$145,000 with a cost-sharing arrangement of some \$45,000, technical assistance is being provided to the Hellenic Industrial and Mining Investment Company in developing mining and metallurgical operations in Greece. Laboratory-scale tests for beneficiation and de-ironization of local bauxites using the hydrochloric acid leaching process have already been carried out. It is envisaged that successful conclusion of the project will lead to other similar but larger scale projects.

16. *Extension services to small-scale industries in Liberia.* This project presents an interesting example of co-operation between UNIDO and the World Bank for providing technical assistance to a developing country. The assistance for that project by the International Development Association (IDA)—amounting to the equivalent of \$3.4 million in special drawing rights (SDR)—will be combined with UNDP inputs, with UNIDO as the executing agency. Among others, two experts will be provided for advising on project identification, preparation and appraisal, as well as consultants for subsectoral studies. The project is a key element in the efforts of the Government of Liberia to provide industrial and financial support to small-scale business operated by local entrepreneurs. It is also supportive of the World Bank (IDA) assistance to provide credit facility to small and medium sized enterprises.

17. *Industrial pollution control in Qatar.* The project, financed under a hundred-per-cent cost-sharing arrangement (approximately \$200,000) with the Government of Qatar, aims at assisting in the development of pollution control and treatment of industrial waste in order to protect the quality of the environment and furnish industrial complexes with better pollution control equipment. Two laboratories specifically concerned with the environment have been established during phase I of the project. During the second phase, it is planned that both laboratories will be put into operation and will provide necessary analysis of industrial waste as well as develop specific recommendations for industrial pollution control.

18. *Regional small- and medium-scale industry and entrepreneurship development in South Pacific island countries.* The project, financed under a hundred-per-cent cost-sharing arrangement (about \$480,000) with the Australian Development Assistance Bureau, is in line with the development policies of these island countries to diversify their economy through self-reliance and by strengthening their regional and national identity. The objectives of the project are to provide assistance in industrial development, diversification of exports, import substitution, the creation of new enterprises through establishment of joint undertakings and enhancement of inter-country co-operation in training.



*Maintenance and repair workshop with spare parts manufacturing capabilities, Antananarivo (Madagascar)*

19. *Assistance in the development of the pesticide industry in Egypt.* In a 1978 project, UNIDO and UNDP had been assisting a multipurpose pesticide pilot plant in Ismadye (Egypt). For this purpose, UNIDO had arranged co-operation between a company from an industrialized country and an Egyptian counterpart company. This successful co-operation was instrumental not only in improving the working of the pilot plant but also in marketing its products. As a result, the Egyptian company has indicated that it would be willing to contribute an equivalent of \$500,000 as cost sharing from its profits for further UNIDO technical co-operation. This approach is not only innovative but is also an indication of the effectiveness of UNIDO technical co-operation programmes implemented in Egypt.

### **SPECIAL INDUSTRIAL SERVICES PROGRAMME**

20. The SIS programme provides UNIDO with a flexible means to meet urgent and unforeseen requests from developing countries and assist them in finding solutions to their problems through the use of high-level advisory services and missions.

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21. Total resources available for the cycle 1982-1986 amount to \$25.2 million, including a carry over of \$0.2 million from the previous cycle. The actual sum available is, however, limited to \$13.95 million because of the restriction to the level of 55 per cent imposed to all UNDP programmes, including the SIS; the annual spending ceiling has therefore to be kept at \$2.79 million. Although requests from the developing countries for urgent assistance increased, shortage of resources forced UNIDO to adopt a cautious policy with regard to financing of new projects from this fund.

22. At the beginning of 1984, the residual value of SIS resources was \$2.4 million. Eighty-six new projects and 25 project extensions with a total value of \$2.7 million were approved during the year. There were, however, some cancellations of old projects and phasing out of accounts of completed projects amounting to \$0.5 million.

23. Approvals in 1984 according to region were: Africa including African Arab States—\$513,942 (23.5 per cent); the Americas—\$562,250 (25.7 per cent); Arab States—\$203,374 (9.3 per cent); Arab States excluding African Arab States—\$122,601 (5.6 per cent); Asia and the Pacific—\$846,222 (38.7 per cent); and Europe—\$143,772 (6.5 per cent).

24. Assistance under the SIS programme in 1984 again covered various fields of activity with a total of 135 projects related mainly to metallurgical and chemical industries, agro-industries, engineering industries and factory establishment and management. The distribution of SIS expenditures in 1984 by field of activity is given in table 1 below.

TABLE 1. SIS EXPENDITURES IN 1984, BY FIELD OF ACTIVITY

<i>Field of activity</i>	<i>\$ thousand</i>	<i>Percentage</i>
Industrial planning	47	2.64
Institutional infrastructure	66	3.70
Factory establishment and management	126	7.07
Agro-industries	342	19.19
Metallurgical industries	508	28.51
Engineering industries	213	11.95
Chemical industries	498	27.95
Development and transfer of technology	7	0.39
Adjustment of prior year's expenditure	(25)	(1.40)
TOTAL	1 782	100.00

25. A description of selected SIS projects under implementation during 1984, may serve to illustrate the special features of this programme. In Ethiopia, the ETHARSO Fibre Board Plant was operating far below its capacity and, owing to the inferior condition of its equipment, was turning out poor quality products. Upon request by the Government, UNIDO provided consultancy services for drawing up a detailed rehabilitation and development programme for production of fibre board. The recommendations of the consultant, aimed at improved production and a profitable long-term operation of the plant, are currently under consideration. For the Cook Islands, a study was carried out to identify the possibilities of developing a cottage industry for salt production. As a result, a project proposal is currently under consideration for the production



of sea salt on the Penrhyn Island. In Mongolia, UNIDO provided assistance to the Leather Research Centre at Ulan Bator. A specialist carried out repair and calibration of the tensile testing machine in the Centre so that regular quality control operations and applied research conducted at the Centre could be taken up again.

26. Another project concerned the CRIOSAL Glass Factory in Tarija (Bolivia), which supplies the region with glass bottles for beer and soft drinks. Assistance was given in diagnosing the technical problems facing the factory, particularly those relating to glass-blowing machines. A consultant in hollow glass manufacture formulated a plan of proposed improvements of production technology and equipment, and drew up an estimate of the necessary inputs. On the basis of these proposals, the Government has expressed the intention to proceed with the rehabilitation of the factory, possibly on a cost-sharing arrangement in co-operation with UNIDO. In the Dominican Republic, assistance to the sugar industry was related to the adoption of new technology and improvements in the technical and economic operation of the plant for production of white sugar. A cane sugar technologist assessed the equipment and made recommendations on its installation and on the additional equipment needed. The recommendations, which are currently under consideration by the Government, call for measures which would result in upgrading to international standards the quality of sugar produced, increasing productivity and reducing energy consumption.

27. Under a project approved in 1983,<sup>1</sup> UNIDO provided a textile expert for a period of six months to assist the Sayenu Garment and Manufacturing Company in Sierra Leone. The expert was involved in all technical and managerial activities ranging from effective utilization of old machinery, installation of new automatic sewing and processing machinery, training of operators and management staff, introduction of new systems of accounting, standardization and quality control, incentive schemes for workers as well as preventive maintenance and export promotion programmes. The improvements introduced enable the company to operate as an independent and viable enterprise. It is expected that the project will secure the country a good share of the garment market within the Mano River Union and the West African subregion and result in an additional source of foreign exchange for Sierra Leone. As a follow-up to the project, UNIDO may be requested to carry out a study on how to substitute the raw material hitherto imported for yarn production, either by using locally grown cotton or by using cotton imported from African countries north of Sierra Leone.

## UNITED NATIONS INDUSTRIAL DEVELOPMENT FUND

28. In 1984, the total amount of pledges for UNIDF reached a level of about \$15.7 million, which represents an approximate increase of 13 per cent over the 1983 pledges. The breakdown according to segments was: general-purpose convertible \$2.5 million; general-purpose non-convertible \$1.8 million; special-purpose convertible \$10.3 million; and special-purpose non-convertible \$1.1 million.

<sup>1</sup>ID/B/320, chap. II, para. 7.

## Chapter II

29. The positive trend prevailing over the last few years is particularly noteworthy in the light of the drastic budgetary saving measures introduced by most Governments during the same period of time and thus reflects the growing confidence by donor countries in the management of the Fund. The increase in pledges relates entirely to special-purpose contributions, while the general-purpose convertible contributions, which from the programming point of view, are the most strategic segment of the Fund, unfortunately decreased by approximately 10 per cent as compared to the 1983 level.

30. In 1984, some pledges were first announced during the Fourth General Conference of UNIDO, e.g. the Government of China announced a contribution (including a convertible currency portion) for South-South industrial and technical co-operation activities and the Government of the Netherlands a contribution for project preparation activities. An increasing interest has also been noted during 1984 on the part of non-governmental organizations who wish to contribute to the Fund. Modalities for the management of the latter type of contributions are being worked out by the secretariat.

31. The secretariat has further strengthened its dialogue with donor countries; several missions were carried out during 1984 to major donor countries in order to optimize co-operation between those countries and UNIDO within the framework of UNIDF. Efforts have also been made to improve further the evaluation of individual UNIDF projects.

32. During the year under review, the secretariat continued to programme UNIDF resources according to the nine priority areas endorsed by the Board. As in the past, and in order to ensure the maximum impact of the Fund's modest resources, emphasis continued to be placed on developing innovative projects of a pilot nature, i.e. programmes with a global, interregional or subregional impact. Special care has been exercised to sponsor projects within the programme of the Industrial Development Decade for Africa and for the least developed countries.

33. Project approvals by region in 1984, amounting to \$11.16 million, were as follows: Africa including African Arab States—\$2.23 million (20 per cent); the Americas—\$0.71 million (6.4 per cent); Arab States—\$0.15 million (1.3 per cent); Arab States excluding African Arab States—\$0.05 million (0.4 per cent); Asia and the Pacific—\$1.49 million (13.4 per cent); Europe—\$0.28 million (2.5 per cent); and global and interregional—\$6.40 million (57.3 per cent).

34. The following examples are illustrative of interesting and innovative UNIDF projects developed during 1984. In Pakistan, assistance was given in developing new technology for the production of yeast. This highly innovative project involves co-operation between Pakistan and an industrialized market-economy country. It deals with the development, through genetic manipulation and genetic engineering, of a new species of yeast which is particularly efficient in breaking down cellulosic material. The yeast species will be of particular importance in connection with the utilization of biomass. Another interesting project was the Symposium on Lactic Acid Fermentation in Food Industry, held in Mexico City from 27 to 29 November 1984, which, *inter alia*, made recommendations for certain activities to be carried out by the International Centre for Genetic Engineering and Biotechnology, once it becomes fully

operational. The objective of the Symposium was to present the state-of-the-art in the application of modern techniques of genetic engineering and biotechnology to fermented foods. It also identified the needs of selected developing countries related to process techniques for the manufacture of traditional foods with a view to increasing their nutrition value. The Interregional Seminar on Energy Saving in the Cement Industry, held in Paris from 11 to 29 June 1984, aimed at assisting developing countries in the exchange of information and the sharing of knowledge in the field of energy management and conservation in the cement industry. This highly energy-intensive industry is one of the key sectors where assistance of this type is needed. Mention should also be made of a pilot plant project for compost production from municipal solid wastes designed on the basis of the considerable experience acquired by UNIDO in assisting developing countries in this field. The aim of this project is to establish such a pilot plant in Beijing (China) and to provide assistance to the Beijing Environment Sanitation Research Institute (BESRI) in its research and development work on solid-waste management problems.

## TRUST FUNDS AND SELF-FINANCING ARRANGEMENTS

35. There are different types of trust fund operations which involve an agreement between UNIDO and a donor Government (or financing entity). One type of trust fund is a deposit with UNIDO by the donor party of a certain sum to be used for a specific technical co-operation activity aimed at assisting a determined developing country or group of countries. In 1984, 23 new trust-fund financed projects were approved with a total value of \$1.2 million. Most of these projects involved the financing of experts and associate experts from a number of industrialized countries. Other projects included assistance to the Asian regional workshop on the integration of women in the industrial planning and development process and support to the Investment Promotion Service in New York. A trust fund agreement was also concluded with the World Bank for two projects with a total value of \$201,400, covering assistance to the rehabilitation of leather, footwear and leather products industry in the United Republic of Tanzania and training in investment promotion in the Bahamas.

36. Under a similar arrangement the Government of Egypt has offered to put at the disposal of UNIDO, for a five-year period, a number of Egyptian experts for UNIDO technical co-operation projects in the context of the Industrial Development Decade for Africa. Salaries and other allowances for those experts would be borne by the Government.

37. Another type of trust fund operations are so-called self-financing arrangements, i.e. the deposit with UNIDO of a sum of money by a Government of a developing country to cover the costs of services that it wishes UNIDO to provide. An increasing number of developing countries—mainly oil-exporting countries—are entering into self-financing trust-fund agreements with UNIDO. In 1984, three projects and three project revisions at a total value of \$3.2 million were approved for financing under such arrangements.

38. An example of a self-financing arrangement is the large-scale cement project in the Libyan Arab Jamahiriya initiated in 1978, the value of which has

## *Chapter II*

grown considerably to over \$40 million with an annual implementation rate of \$4 to \$5 million. Within that project new areas of co-operation have been identified to include training and metal pipe production sectors; new forms of co-operation with counterparts in the Libyan Arab Jamahiriya have also been worked out involving joint interviews and selection of plant operational personnel. Through new approaches to co-operation, since 1978 and by the end of 1984, as many as 467 experts have been recruited for the Libyan Arab Jamahiriya in a number of manufacturing plants (see chap. VIII, para. 28). The Libyan experience has been utilized by UNIDO in its assistance to a cement plant in Egypt.

39. The developments with regard to these sources of funds have been encouraging. At the beginning of 1984 it was expected that resources from trust funds and self-financing trust funds amounting to \$15.0 million would be available for the formulation of UNIDO projects. Actual 1984 approvals exceeded this target by \$5.2 million (34.7 per cent). To a considerable extent, this success can be attributed to the interest shown by Arab countries and countries in the Latin American region to co-operate with UNIDO in generating innovative projects.

## **UNIDO REGULAR PROGRAMME OF TECHNICAL CO-OPERATION**

40. The UNIDO regular programme is being utilized essentially for strengthening the capabilities of developing countries in the field of training. Assistance in group training, establishment and strengthening of training facilities, individual fellowships and advisory services etc. is provided for the developing countries, with emphasis on the least developed countries.

41. Proposals submitted by the Executive Director suggesting allocations for the biennium 1984-1985 under the UNIDO regular programme of technical co-operation<sup>2</sup> were considered by the Permanent Committee at its nineteenth session in 1983. At the recommendation of the Permanent Committee, the Board at its seventeenth session in 1983 approved the tentative pattern of allocation for the 1984-1985 regular programme. In 1984, the Board at its eighteenth session approved the revised allocations for 1984-1985, based on the appropriation estimated by the Secretary-General of the United Nations.<sup>3</sup> Subsequently, the total for the biennium was reduced from \$6,823,500 to \$6,610,600 of which \$925,700 was to be made available in non-convertible currencies.

42. At the beginning of 1984, the allocation of \$6.6 million mentioned above was increased by a special allocation of \$506,900 in non-convertible currencies. Thus, the funds available for the biennium 1984-1985 amounted to \$7.1 million. Projects approved from these resources during 1984 amounted to 150 at a value of \$5.1 million. In April 1984, the allocation of the regular programme of

<sup>2</sup>ID/B/C.3/119.

<sup>3</sup>ID/B/323.



*Production of tablets in a pharmaceutical formulation and packaging plant, Conakry (Guinea)*

## *Chapter II*

technical co-operation for 1984 was increased by \$1 million from the regular budget for the implementation of the Industrial Development Decade for Africa (see paras. 46 and 52 below). The overall expenditure under regular programme resources amounted to \$3.7 million.

43. During the year under review, emphasis was placed on training in the form of individual fellowships and 38 projects were approved at a value of \$380,192, covering a wide variety of areas related to industrial development. Regular programme funds were also used for identifying and developing industrial training institutions in developing countries to strengthen and enlarge their own training capabilities and enable them to conduct training programmes for other developing countries. In 1984, nine projects related to the identification of such institutions were approved. Consultations at UNIDO headquarters with government officials from developing countries with a view to developing innovative activities in line with newly identified needs constituted a small but important feature of the regular programme. Under this component, 16 projects at a value of \$46,765 were approved.

44. In 1984 project approvals by region under the overall resources allocated to the regular programme amounted to: Africa including African Arab States—\$3.35 million (46.2 per cent); the Americas—\$0.39 million (5.4 per cent); Arab States—\$0.59 million (8.1 per cent); Arab States excluding African Arab States—\$0.43 million (5.9 per cent); Asia and the Pacific—\$1.05 million (14.5 per cent); Europe—\$0.06 million (0.8 per cent); and global and interregional—\$1.97 million (27.2 per cent).

45. Examples of projects approved under the UNIDO regular programme in 1984 included the improvement in skills of personnel concerned with industrial project preparation, evaluation and financing in Nigeria. For this purpose a six-week seminar, attended by some 25 government officials, was organized in Lagos. Another project provided for the visit of a team of Vietnamese personnel to the jute industry, R + D facilities and related UNIDO projects in Bangladesh. The team is to gain experience to be applied in developing a jute centre in Viet Nam where the jute industry has been growing at an annual rate of 20 per cent. The Government of Bangladesh agreed to receive a three-man delegation from Viet Nam and will be arranging a one-week visit to the relevant units during the jute season. For the People's Democratic Republic of Korea, two training programmes were organized in Austria at VOEST-ALPINE. The programme provided three months training in the production of both steel plates for large-size transformers and high pressure steel pipes by induction heating. Two in-plant group training programmes in the field of iron and steel industries were organized in the Union of Soviet Socialist Republics: one five-month programme for participants with limited experience and one three-month programme for higher qualified personnel. These programmes helped to upgrade the skills of 40 participants from selected developing countries in Africa, Asia and the Pacific, Europe, and Latin America. The participants were also provided with new technical literature for use as reference material in their home countries.

46. Concerning activities for the implementation of the Industrial Development Decade for Africa, 27 projects were approved in 1984. Examples of these activities are provided in chapter III, section B, Africa.

## PROGRAMME SUPPORT COSTS

47. In 1984, the question of programme support costs (formerly known as overhead costs) was again discussed at two sessions of the Consultative Committee on Administrative Questions (Financial and Budgetary Questions) and subsequently by the Governing Council of UNDP at its thirty-first session.<sup>4</sup> At its March session, the Budgetary and Finance Committee of UNDP reviewed questions which had arisen in the course of organizations' preparation of their contributions to the *ex post facto* report on support costs which was to be submitted to the Governing Council of UNDP at its thirty-first session. In June, the Governing Council reviewed the *ex post facto* report covering the biennium 1982-1983<sup>5</sup> which included an analysis of the financial information provided by the agencies to UNDP, the narrative statements submitted by the agencies and a summary thereof, and several detailed supporting tables.

48. The Administrator, in his report, concluded that in most cases data provided by executing agencies were estimates of their total organizational support costs allocated "on the basis of predetermined percentages, or managerial decisions, which may vary from actual true costs . . . It was found that there were notable differences in the ability of individual executing agencies to provide in a consistent manner detailed and actual accounting information owing to differences in their accounting and management information systems, reporting requirements, budgetary processes as well as organizational structures."<sup>6</sup> The Governing Council, in decision 84/39, took note of the Administrator's report with appreciation and requested him to continue submitting such a report on a biennial basis. UNDP will thus continue its monitoring of the agencies' programme support costs through biennial *ex post facto* reports and UNIDO will supply its inputs to these reports as in the past.

49. Under the methodology developed by UNIDO for identifying support costs, distribution of direct and indirect costs of the substantive activities and its percentage relationship to technical assistance delivery for the last five years are as shown in table 2 below.

TABLE 2. PROGRAMME SUPPORT COSTS  
(In thousands of US dollars)

	1980	1981	1982	1983	1984
<i>Support cost</i>					
Indirect cost	5 963	6 917	6 294	5 855	6 029
Direct cost	17 220	16 615	17 322	18 478	17 824
Total costs	23 183	23 532	23 616	24 333	23 853
<i>Technical assistance delivery</i>					
	76 400	88 500	91 900	78 000	87 200
<i>Support cost as a percentage of technical assistance delivery</i>					
	30.3	26.6	25.7	31.2	27.4

<sup>4</sup>See also ID/B/300, chap. II, para. 37; ID/B/320, chap. II, para. 39.

<sup>5</sup>DP/1984/62.

<sup>6</sup>*Ibid.*, para. 9.

## Chapter II

50. It will be noted that in 1982 when the highest level of technical assistance delivery was recorded the support costs as a percentage of delivery were 25.7 per cent. In 1983 technical assistance delivery decreased by approximately 15 per cent compared with the 1982 delivery and the support cost as a percentage of delivery was 31.2 per cent, an increase of 21.4 per cent over the 1982 comparative percentage. In 1984 the level of technical assistance delivery increased by 11.8 per cent over the 1983 level resulting in the total cost as a percentage of delivery decreasing to 27.4 per cent. It is expected that as the level of technical assistance delivery by UNIDO increases the cost of such delivery would decrease. However, the present 13 per cent reimbursement provided to UNIDO for technical assistance delivery would appear to be inadequate compared to the percentages reflected in table 2.

### B. Regular budget

51. Activities other than technical co-operation projects were financed from appropriations from the United Nations regular budget for UNIDO. That portion of the regular budget is discussed under two separate headings. The first covers UNIDO (section 17 of the United Nations regular budget) and deals with the first performance report for the biennium 1984-1985 and the proposed programme budget for the biennium 1986-1987. The second heading deals with general expenses, including the running costs of the Vienna International Centre (VIC) (sections 28M—Administrative Services, Vienna; 29C—Conference Services, Vienna; and 29F—Library Service, Vienna) with regard to performance during the 1984-1985 biennium and proposed estimates for 1986-1987.

## UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

52. The General Assembly in part A of resolution 38/236 provided under section 17 of the budget appropriations for the biennium 1984-1985 an amount of \$72,149,500 for UNIDO. In part B of resolution 38/192 of 20 December 1983, the Assembly also decided to increase the allocation to UNIDO, to the extent possible through overall savings from the United Nations regular budget, by \$1 million in 1984 for the implementation of the Industrial Development Decade for Africa. The first performance report for the biennium 1984-1985 submitted by the Secretary-General to the General Assembly in December 1984<sup>7</sup> included a request for a decrease of \$4,803,000 in the appropriation for UNIDO. The net decrease was to offset the combined effects of (a) an exchange rate that was more favourable than had been assumed (from AS 19.00 per \$1 for the biennium to AS 19.80 in 1984 and an estimated AS 21.30 in 1985) amounting to a savings of \$4,667,400; (b) lower costs (\$723,700) resulting from an average inflation rate of 5.5 per cent in 1984 and an estimate of 4 per cent in 1985; and (c) higher costs

<sup>7</sup>A/C.5/39/88.



resulting from additional requirements (\$588,100) related to the adjustments to standard costs. The revised estimate, amounting to \$67,346,500, for the biennium 1984-1985 was subsequently affected by actions taken on the basis of the following recommendations of the Fifth Committee: (a) programme budget implications for the Industrial Development Decade for Africa (\$25,100) contained in resolution 39/237, (b) programme budget implications (\$926,000) of resolution 39/231 on the conversion of UNIDO into a specialized agency, (c) programme budget implications (\$1,135,000) of resolution 39/232 on industrial development co-operation, (d) programme budget implications (\$5,000,000) of resolution 39/233 on the Industrial Development Decade for Africa and (e) recosting of programme budget implications and revised estimates (-\$109,300) contained in resolution 39/237.

53. The requirements under section 17 of the programme budget for the biennium 1984-1985 approved by the Fifth Committee<sup>8</sup> (see also part A of General Assembly resolution 39/237) are given in table 3 below.

54. Preparation of the UNIDO programme budget for the biennium 1986-1987 was initiated and completed during the second half of 1984.

TABLE 3. REVISED BUDGET APPROPRIATIONS (SECTION 17—UNIDO) FOR THE BIENNIUM 1984-1985

(In US dollars)

	<i>Increase (or decrease)</i>	<i>Total</i>
I. <i>Initial appropriation</i> (General Assembly resolution 38/236)		72 149 500
II. <i>Revised estimates approved by Fifth Committee</i>		
(a) Rates of exchange	(4 667 400)	
(b) Inflation	(723 700)	
(c) Additional requirements related to adjustments to standard costs	<u>588 100</u>	
Subtotal	(4 803 000)	
III. <i>Programme budget implications and other adjustments approved by Fifth Committee</i> (General Assembly resolutions 39/231, 39/232, 39/233 and 39/237)		
(a) Industrial Development Decade for Africa (1984)	25 100	
(b) Conversion of UNIDO into a specialized agency	926 000	
(c) SIDFA programme	1 135 000	
(d) Industrial Development Decade for Africa (1985)	5 000 000	
(e) Recosting of programme budget implications and revised estimates	<u>(109 300)</u>	
Subtotal	6 976 800	
		<u>2 173 800</u>
Total of revised appropriation (General Assembly resolution 39/237)		74 323 300

<sup>8</sup>*Ibid.*, para. 47.

## VIENNA INTERNATIONAL CENTRE

55. With regard to the biennium 1984-1985, the General Assembly at its thirty-eighth session funded an amount of \$34,496,200 under section 28M (Administrative Services, Vienna) to cover general expenses, including the cost of running the VIC. The first performance report for the biennium 1984-1985<sup>7</sup> submitted by the Secretary-General to the General Assembly in December 1984 and document A/C.5/39/L.33 included a request for a decrease of \$3,079,600 in the appropriation under section 28M which was subsequently approved.

56. Also for the biennium, the Secretary-General submitted to the General Assembly at its thirty-ninth session estimates amounting to \$10,754,100 under section 29C (Conference Services, Vienna) as compared with the initial appropriation of \$11,602,500. This estimate was subsequently increased by \$1,790,800 to \$12,544,900 following the approval of the consolidated statement of conference-servicing costs<sup>9</sup> by the General Assembly in December 1984.

57. For the Joint Library Service of the VIC, which is administered by the International Atomic Energy Agency (IAEA) on behalf of all the organizations and units in the Centre, the Secretary-General submitted under Section 29F (Library Service, Vienna) an amount of \$538,700 as compared with the initial appropriation of \$586,600.

58. Table 4 below gives a detailed breakdown of the approved changes as well as the initial appropriations and revised estimates for the VIC for the biennium 1984-1985.

TABLE 4. INITIAL APPROPRIATION AND REVISED ESTIMATES UNDER SECTIONS 28M, 29C and 29F  
(In US dollars)

<i>Budget section</i>	<i>Initial appropriation</i>	<i>Rate of exchange</i>	<i>Inflation</i>	<i>Other changes</i>	<i>Revised estimates</i>
28M—Administrative Services, Vienna	34 496 200	(2 414 400)	(631 000)	(34 200)	31 416 600
29C—Conference Services, Vienna	11 602 500	(742 200)	(106 200)	1 790 800	12 544 900
29F—Library, Vienna	586 600	(40 500)	(7 400)	—	538 700
TOTAL	46 685 300	(3 197 100)	(744 600)	1 756 600	44 500 200

<sup>9</sup>A/C.5/39/98.

### Chapter III

## INDUSTRIAL OPERATIONS

### A. Implementation overall in 1984

1. Financial availability during 1984 failed to keep pace with needs expressed in Government requests for assistance. The authorized budget levels (ABL) of the United Nations Development Programme (UNDP) continued to be maintained at 55 per cent of the illustrative indicative planning figure (IPF). Nevertheless, as explained in chapter II, UNIDO was able to offset to a certain extent those financial constraints through efforts directed at project generation and implementation under cost-sharing by aid recipient countries, special-purpose contributions to the United Nations Industrial Development Fund (UNIDF) as well as trust funds and self-financing arrangements.

2. A total of 1,503 projects were implemented or under implementation in 1984, comprising 134 projects larger than \$1 million in value, 444 projects larger than \$150,000 in value and 925 projects below that value. Tables 1 and 2 below show technical co-operation expenditure in 1984, by source of funds and project component respectively.

TABLE 1. 1984 TECHNICAL CO-OPERATION EXPENDITURE,  
BY SOURCE OF FUNDS

Source of funds	1984	
	\$ thousand	%
Regular programme	3 665	4.2
UNDP		
IPF and cash counterpart	54 361	62.3
SIS	1 782	2.0
Special programme resources and special measures	479	0.6
Subtotal	56 622	64.9
UNDP-administered trust funds	3 638	4.2
Other funds		
Other trust funds	7 977	9.2
UNIDF	14 575	16.7
UNFDAC	59	—
Non-UNIDO funds	655	0.8
Subtotal	23 266	26.7
TOTAL	87 191	100.0

TABLE 2. 1984 TECHNICAL CO-OPERATION EXPENDITURE,  
BY PROJECT COMPONENT

<i>Project component</i>	1984	
	\$ thousand	%
Project personnel	42 478	48.7
Subcontracts	12 248	14.0
Fellowships and training	11 673	13.4
Equipment	18 629	21.4
Miscellaneous	2 163	2.5
TOTAL	87 191	100.0

3. Technical assistance delivery during the year amounted to \$87.2 million representing an increase of \$9.2 million or 11.8 per cent over 1983. Set against approvals for the entire year, however, delivery could have been higher were it not for the combined effects of a number of negative factors. Approvals during the earlier part of the year fell short of expectations. This could be attributed to the greater caution exercised in the approval process pending the completion of mandatory revisions and rephasings in the first half of the year. In several instances late approvals led to a postponement of project activities until 1985. Considerable delays were also incurred in several projects by the lack of available counterpart facilities which caused a certain reluctance on the part of certain Governments to initiate and proceed with implementation. Also, there were delays in the fielding of experts, the placement of fellows and the provision of equipment and contractual services which could in many cases have been avoided by a prompt response from the Governments concerned.

4. The pattern of technical assistance requirements shifted in 1984 as the trend towards greater specialization in technical co-operation activities continued. As a result, UNIDO tended to engage highly specialized consultants on a short-term basis rather than long-term experts. In certain countries, the coordinating function of international experts was successfully assumed by national project directors. Likewise there was an increase in the recruitment of national experts. This new policy required greater involvement of headquarters staff in project management resulting in an increased workload. The recruitment of short-term consultants placed an additional strain on the resources currently available for recruitment within the organization and increased the workload of the recruitment officers.

5. During the year under review there was a marked increase in the amount of funds used for subcontracting consultancy firms in response to the frequent need to provide, at a given moment, a full package of technical and managerial services. Further efforts continued to be made to use as far as possible consultancy firms from developing countries. In a parallel effort, technical co-operation projects were developed to upgrade consultancy skills within developing countries. Equipment was provided for the establishment of more and more pilot and demonstration units which are in most cases essential for the effective transfer of technology. Notwithstanding, the needs of the developing countries far exceeded the means available for technical assistance.

6. The fellowship and group training component of technical co-operation projects in the reporting year increased significantly (see paras. 159-174 below and appendix N). In real terms, the increase was even higher since, virtually, each project also encompassed a training component which was not reflected statistically.

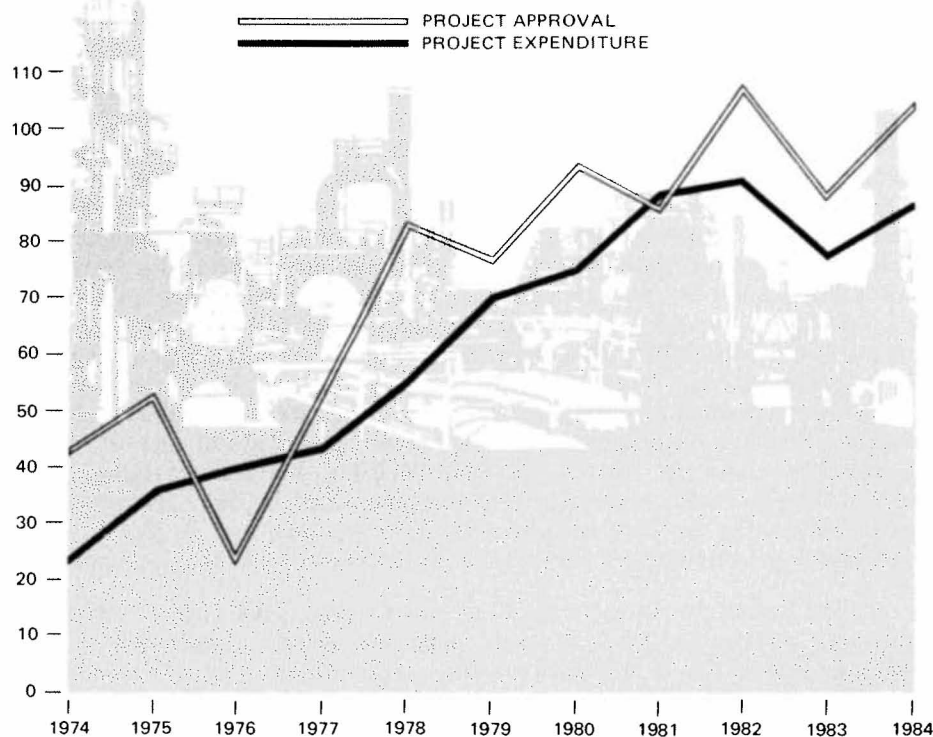
7. The Division of Industrial Operations continued to render technical services and inputs to programming and project formulation in close co-operation with the Division of Policy Co-ordination. An attempt was made to further sharpen the focus of technical co-operation in the light of the expressed needs of the developing countries. In this respect, increased efforts were also made to take advantage of the results of the other UNIDO programmes including the studies programme, the technology programme, the System of Consultations and the programme for economic co-operation between developing countries. Linkages were further strengthened with other bodies and organizations within the United Nations system, in particular with the regional commissions and the World Bank, as well as with a number of development banks and financing institutions. As in the past, the interregional advisers attached to the Division of Industrial Operations provided full support for the technical co-operation activities of the Division. Besides providing direct advisory services to Governments of developing countries, they also played an important role in assisting Governments in programme and project formulation, and in providing *ad hoc* direct technical assistance from headquarters.

8. The trend towards specialized and more sophisticated forms of technical assistance proceeded hand in hand with the priorities accorded by the developing countries to industrial production. The main concern of developing countries was to produce essential goods—not only food products, but also agricultural implements and equipment, basic metalworks, textiles, chemicals and pharmaceuticals. Technical assistance efforts aimed at increasing the utilization of local raw materials or, conversely, at the further processing of such resources. In many instances—technical co-operation projects in the field of metallurgical, engineering, chemical and food industries are examples—it was necessary to develop suitable technologies. At the same time, there was a growing concern, particularly among the least developed countries, to rehabilitate existing industrial facilities, which resulted in an increase in the number of rehabilitation programmes under implementation during the year under review. These programmes not only aimed at the rehabilitation of physical production facilities but also covered the upgrading of managerial and technical skills as well as such aspects as the introduction of maintenance systems and energy savings. Within the increasingly limited resources available for technical assistance, paramount importance was attributed to the development of local skills and expertise. This can be observed not only at the level of each project but also in the present project design system which makes increasing use of national experts for whom *ad hoc* training is also provided. UNIDO continued also its efforts to develop national skills with a view to eliminate the need to subcontract feasibility studies at high cost. In this respect, the Computer Model for Feasibility Analysis and Reporting (COMFAR) and the development of the appropriate software contributed substantially in many cases to a reduction in the cost of pre-investment studies.

9. The activities of UNIDO to promote economic and technical co-operation among developing countries (ECDC/TCDC) aimed at the creation

## TECHNICAL CO-OPERATION ACTIVITIES AT A GLANCE

(In millions of US dollars)



of joint core industries within the framework of established economic co-operation groupings and regional development centres. Programmes were also developed for co-operation in areas such as industrial consultancy and energy management. The methodology, experience and outputs gained in such projects can also be applied to countries in different geographical areas.

10. In all activities of the Division of Industrial Operations, strong support was given to develop the institutional infrastructure of the developing countries not only at the country but also at the regional level. At the same time, co-operation was sought from other organizations and institutions such as the International Institute for Applied Systems Analysis (IIASA) in the use of computers in management. Growing interest was observed in developing countries in computer utilization where the reduced cost of hardware permits a much wider application, but where specialized and tailor-made software has to be developed according to needs, levels of skill, etc.

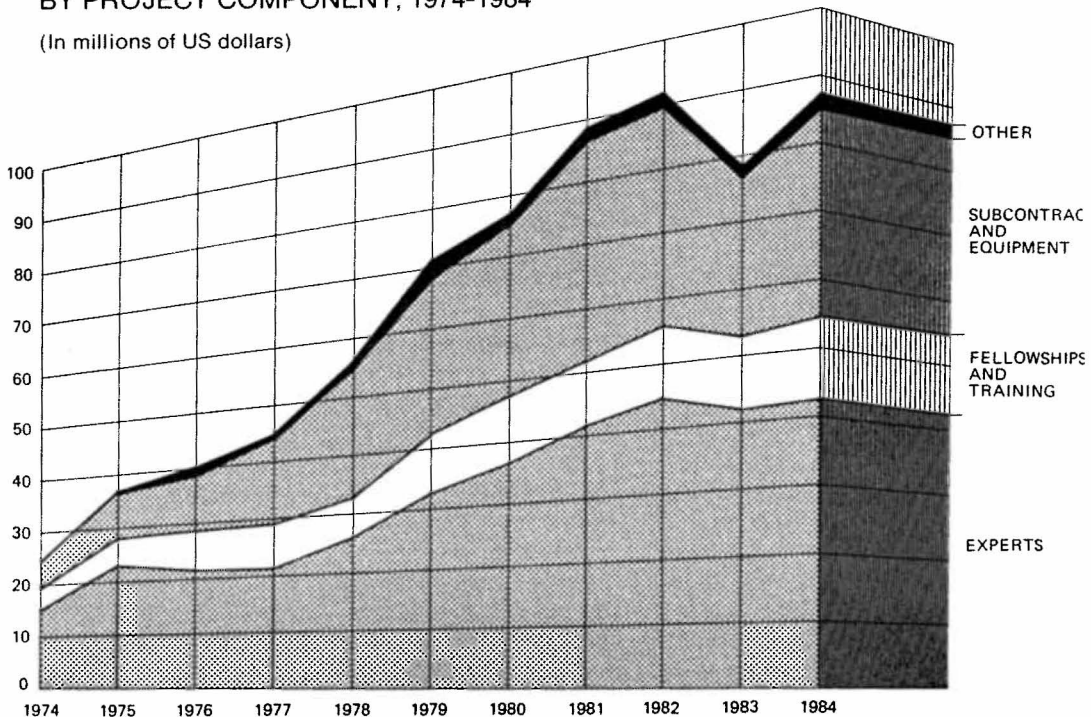
11. Other trends in the type of technical assistance requests from developing countries could be observed in 1984. There was, for example, an increased demand for assistance in industrial development planning and particularly in the preparation of medium-term industrial master plans with long-term perspectives. In the same field, a number of countries sought UNIDO assistance in reorienting their industrial structures. During the year, several workshops on industrial policies and strategies were held and high-level advisory missions undertaken to a number of developing countries.

12. Activities related to the Industrial Development Decade for Africa received high priority (see chapter V, "Special programmes"). These included assistance in the production of pharmaceuticals and low-cost building materials, the manufacture of agricultural machinery and implements, the processing of agricultural products, the promotion of small-scale industries, the utilization of renewable energy sources and the training of industrial manpower. In addition, a programme financed from a \$1 million special allocation from the regular budget for assistance to African countries within the framework of the Decade was initiated in 1984. Under this programme, African intergovernmental organizations received assistance for implementing subregional projects, while other activities included co-operation in intra-African manpower training, training in project preparation, evaluation and financing, assistance in clinker and brick manufacturing and pesticide formulation.

13. Assistance in the promotion and development of small- and medium-scale industries covered a broad spectrum of activities ranging from institution-building to direct assistance to enterprises. The importance of rural development of which rural industrialization is the prime catalyst was reaffirmed by the Fourth General Conference. During the period under review, there was a noticeable new trend towards more intensive and systematic upgrading of locally available raw materials in rural areas. Efforts concentrated on the creation of development poles in rural areas around which industries could be interlinked. Mobile facilities were put into operation which provided repair and maintenance services for industrial machinery in isolated areas.

**TECHNICAL CO-OPERATION PROJECT EXPENDITURES  
BY PROJECT COMPONENT, 1974-1984**

(In millions of US dollars)



### *Chapter III*

14. Activities related to the integration of women in the industrial development process continued to receive priority in 1984. In preparation of the Fourth General Conference, three regional workshops on the integration of women in the industrial planning and development process were organized in Africa, Asia and the Caribbean. The workshops provided a forum for discussion between policy makers and planners from Government and industry and representatives of women organizations, which covered a wide range of industrial development and planning activities as well as the roles and conditions of women in relation to industrialization. A workshop was also organized in Vienna in co-operation with the International Research and Training Institute for the Advancement of Women (INSTRAW) to design a modular curriculum for the training of women entrepreneurs in industrial management. The workshop analysed the specific needs of suitable curricula for women in technical and managerial functions. Technical co-operation activities specifically designed to upgrade women's capabilities and improve technologies traditionally used by women continued to concentrate on such areas as garment manufacturing, leather processing, salt production, ceramics and food processing.

15. Assistance in the field of energy-related technology covered a broad range of activities. In a large number of projects, energy planning and management concepts related to energy conservation and its efficient utilization were introduced, and group training programmes on the same subject dealt with specific industrial sectors. In other group training programmes, the economical use of energy formed an important part of the curricula. Projects in the field of energy generation and, in particular, renewable energy were concerned with small hydropower, the use of wind and solar energy, the improvement of thermal engines and engine components in order to save energy, and the production of biofuels including charcoal production, gasification and pyrolysis of agricultural residues. The gasification and liquefaction of coal and the production of synthetic fuels from coals and lignites were the subject of other technical co-operation projects.

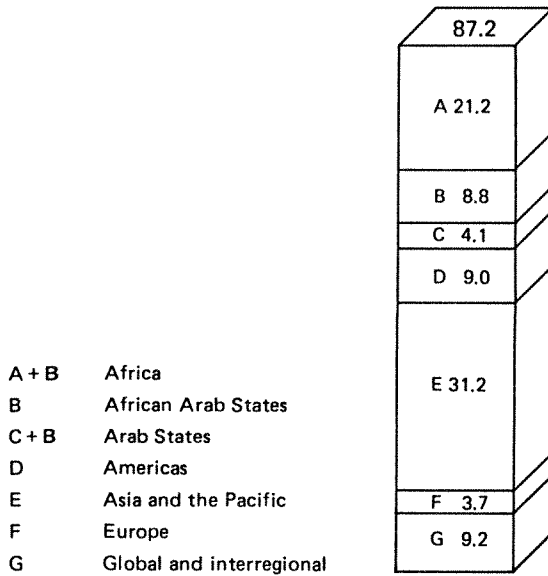
16. The growing preoccupation of many developing countries with industrial pollution control was reflected in the increase in the number of projects under implementation by UNIDO in that field. These covered air pollution monitoring and control, marine pollution control, waste treatment and utilization, development of non-waste technologies for chemical processes and recycling and conservation of environmental resources. In addition, account was taken of environmental aspects in all technical co-operation programmes and projects with primary importance placed on minimizing air and water pollution.

17. The diversity and increasing degree of specialization and complexity of technical co-operation activities called for a redoubling of efforts not only to ensure speedy implementation but also to maintain a high standard of delivery. Forward planning of implementation and continued management monitoring of projects were applied intensively to meet the requirements of effectiveness and efficiency of technical co-operation activities. In this context, the internal self-evaluation system proved useful in providing advance warning of projects in trouble so that timely corrective action could be taken.



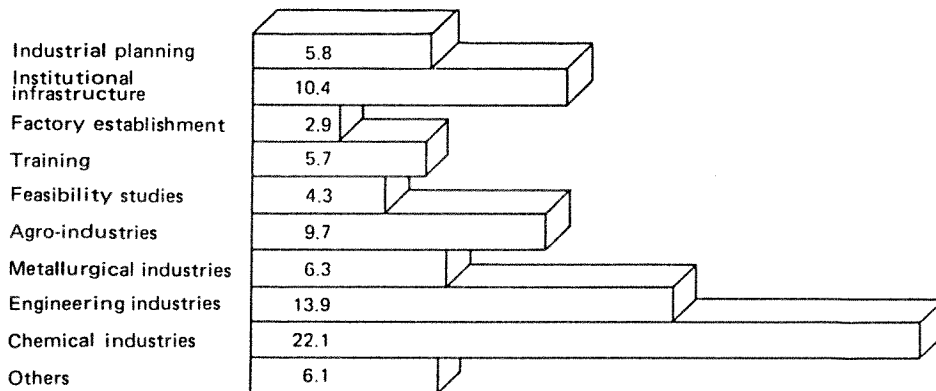
TECHNICAL ASSISTANCE DELIVERED BY UNIDO IN 1984

(In millions of US dollars)



DISTRIBUTION OF TECHNICAL CO-OPERATION ACTIVITIES IN 1984

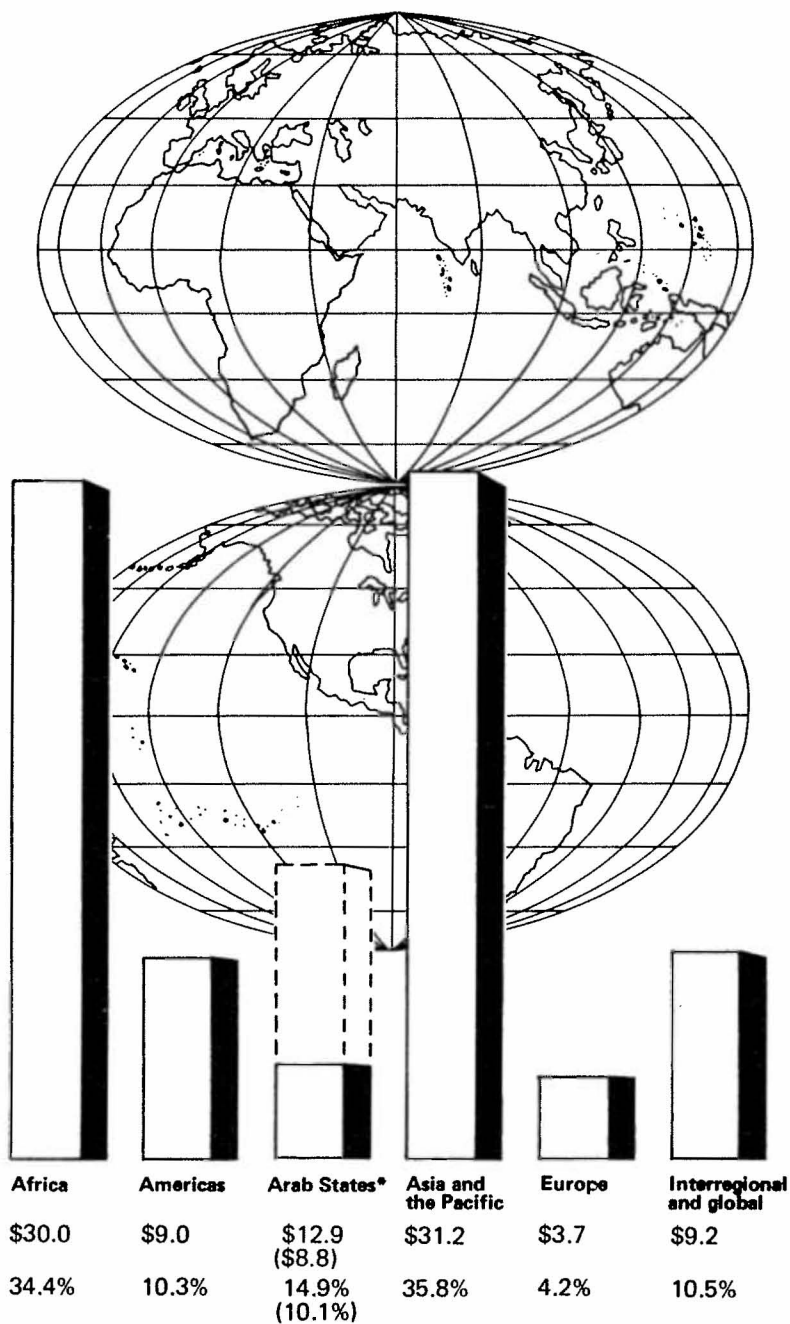
(In millions of US dollars)



Chapter III

TECHNICAL ASSISTANCE DELIVERED BY UNIDO IN 1984

(By geographical area, in percentages and millions of United States dollars)



\*Broken lines and figures in parentheses give an indication of the African Arab States which are also included under the column "Africa".

18. The increased complexity of technical assistance and the subsequent concentration of efforts to monitor and evaluate projects placed a severe strain on the workload of the Division of Industrial Operations at a time of financial constraints and the recruitment freeze imposed by United Nations Headquarters. The co-operative programmes which UNIDO had developed with a number of countries helped to offset to some degree the increasing requirements of specialized expertise. The joint UNIDO/national programmes with Bulgaria, Czechoslovakia, Hungary, Romania and Yugoslavia continued to serve as an effective means for the transfer of technology and training in a number of specialized areas. Similarly, a number of developed and developing countries offered their institutional facilities for research and training.

19. Internally, efforts continued to streamline procedures and practices and to strengthen the monitoring of projects in the light of changing conditions and requirements. Emphasis was placed on co-operation and teamwork within the Division of Industrial Operations, given the interrelationships of different technical co-operation projects. Particular attention was also given to the services sections to enable them to cope efficiently with the growing volume of work. Co-operation with national recruitment centres was further strengthened and measures initiated to tap the expert resources of non-governmental organizations, *inter alia*, through reimbursable loan arrangements. Likewise, increased efforts were made with regard to sources of supply of equipment, contractual services and training institutions. Considerable as these efforts were, further progress in technical assistance delivery would depend, however, on the availability of additional financial resources on a timely and predictable basis.

## B. Implementation by region

### AFRICA

20. The value of projects executed by UNIDO in Africa in 1984 amounted to \$30.0 million (including \$8.8 million for African Arab States) which constituted an increase of \$2.5 million or 9.1 per cent (\$1.8 million or 25.7 per cent for African Arab States) over technical assistance delivery for Africa in 1983. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 3 and 4 below.

21. During the year under review industrial development in Africa was adversely affected by worsening economic conditions, further aggravated by the spread of the drought in the Sudano-Sahelian region and beyond. As a result, the African continent had to contend with insufficient food production, difficulties in energy supply, unstable prices for most of its exports and an increase in external indebtedness. In an effort to alleviate these problems and in line with the programme for the Industrial Development Decade for Africa,

TABLE 3. 1984 TECHNICAL CO-OPERATION EXPENDITURE IN AFRICA,<sup>a</sup> BY SOURCE OF FUNDS

Source of funds	1984	
	\$ thousand	%
Regular programme	1 733	5.7
UNDP		
IPF and cash counterpart	15 226	50.7
SIS	635	2.1
Special programme resources and special measures	587	2.0
Subtotal	16 448	54.8
UNDP-administered trust funds	2 510	8.4
Other funds		
Other trust funds	6 031	20.1
UNIDF	3 081	10.3
UNFDAC	—	—
Non-UNIDO funds	210	0.7
Subtotal	9 322	31.1
TOTAL	30 013	100.0

<sup>a</sup>Including African Arab States (Algeria, Djibouti, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan, Tunisia).

TABLE 4. 1984 TECHNICAL CO-OPERATION EXPENDITURE IN AFRICA,<sup>a</sup> BY PROJECT COMPONENT

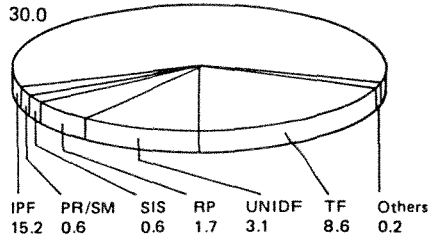
Project component	1984	
	\$ thousand	%
Project personnel	19 593	65.3
Subcontracts	4 069	13.6
Fellowships and training	2 279	7.6
Equipment	3 325	11.0
Miscellaneous	747	2.5
TOTAL	30 013	100.0

<sup>a</sup>Including African Arab States (Algeria, Djibouti, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan, Tunisia).

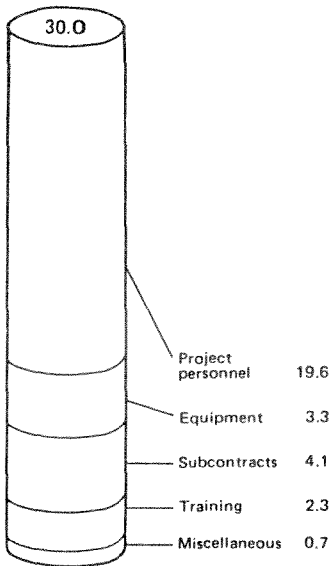
UNIDO paid increasing attention to the expressed concerns and needs of the African countries to reorient their industrial policies and strategies and make maximum use of domestic resources through a comprehensive industrial planning process. Particular emphasis was also placed on technical co-operation activities aimed at the production of key mass consumption goods to satisfy the urgent needs of the population at large; these activities covered the production of pharmaceuticals, low-cost building materials, and agricultural implements; the processing of agricultural products; the promotion of small-scale industries; the utilization of renewable energy resources; and the training of manpower.

# AFRICA

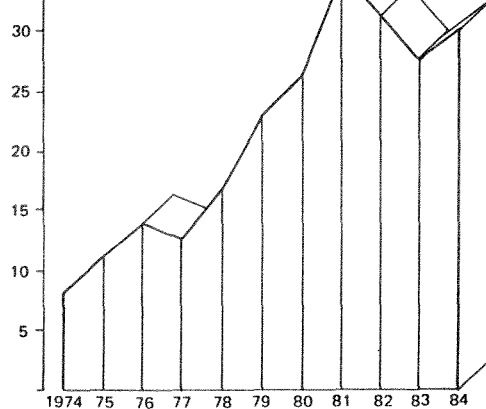
EXPENDITURES IN 1984 BY SOURCE OF FUNDS  
(In millions of US dollars)



EXPENDITURES IN 1984  
BY PROJECT COMPONENT  
(In millions of US dollars)



EXPENDITURES 1974 TO 1984  
(In millions of US dollars)



### *Chapter III*

22. The main thrust of UNIDO activities in the field of industrial planning, strategies, policies and surveys was concentrated in Africa in an effort to develop an integrated industrial sector which would help bring about sustained economic growth. Assistance was provided for the elaboration of industrial master plans in Cameroon and Mali. Assistance continued to the Ministry of Commerce and Industry of Kenya in the elaboration of a sectoral plan for the manufacturing industry as part of the country's fifth national development plan. In co-operation with the World Bank and UNDP, UNIDO assisted the Government of Guinea in drawing-up a new industrial strategy and formulating an industrial recovery programme. Further assistance was given in the reorientation of industrial strategies and policies in a number of countries including the Ivory Coast and Senegal.

23. Since efficiency of industrial planning depends on co-ordination between ministries of industry and other ministries or governmental bodies involved in the industrial development process, assistance in the management of the industrial planning process was given to Mali and Mauritania. Similar activities were planned for other countries of the region in the near future.

24. Assistance in the promotion and development of regional and sub-regional co-operation was intensified during the year under review. UNIDO participated in the preparation of three sectoral studies by the West African Economic Community (CEAO) on glass container, fertilizer and iron and steel industries, to facilitate the creation of those industries at the subregional level. Similar assistance was rendered to the Central African Customs and Economic Union (UDEAC).

25. Assistance was provided in pre-investment studies to facilitate decision-making on investments and to mobilize the requisite financial resources. Preliminary preparatory work was completed for a study in Chad, while studies were initiated in Madagascar, Zaire and Zambia; a feasibility study for Mali was finalized. In addition, assistance was provided to industrial project units in Congo and Ethiopia. Regional projects assisted the West African Development Bank and the Niger-Nigeria Joint Commission for Co-operation in the same field. A study on the creation of an industrial financing institution for the Mano River Union was under preparation.

26. Assistance in the establishment and strengthening of industrial service institutions to enable them to provide a broad range of services essential to the industrialization process continued in a number of African countries. The second phase of assistance to the Tanzanian Industrial Research and Development Organization (TIRDO) was mainly concerned with an energy conservation programme. Activities in the field of industrial information were under way in Angola, Mozambique, Nigeria, Sao Tome and Principe, Togo and Uganda. UNIDO supported the establishment, development and strengthening of institutions concerned with standardization, quality control and metrology through projects in Ethiopia, Nigeria and Zimbabwe.

27. With regard to mass consumption goods and industrial inputs related thereto, projects continued in Burkina Faso, Burundi, Cameroon, Mali and Rwanda to assist in the industrial production of pharmaceuticals from locally available medicinal and aromatic plants. In Rwanda, the establishment of a

pilot extraction and distillation facility for generating medicines from locally available herbs was under way and has stimulated the cultivation of other medicinal plants as well as research in their practical application at a university research centre in Butare. A similar plant is being installed in the United Republic of Tanzania. Assistance continued to Burundi in assessing the availability of raw materials for a pilot unit producing pharmaceuticals.

28. A project for the local production of oral rehydration salts in Zambia started in 1984, and in the United Republic of Tanzania UNIDO was requested to set up a production unit following a techno-economic study on the possibilities of producing oral rehydration salts in least developed countries in Africa. Under the UNIDO/Hungary Joint Programme for Co-operation, a regional project was carried out to identify the most needed vaccines in Africa, and examine the feasibility of establishing new vaccine production facilities or rehabilitating and expanding existing ones.

29. In view of the current food crisis in Africa, UNIDO attached high priority to activities in the food-processing industries which would encourage self-sufficiency in food production. Assistance in the rehabilitation, modernization and expansion of the food-processing industry was provided to plants in Angola, Guinea, Mozambique, Rwanda and Sierra Leone. At the same time, attention centred on ensuring the utilization of agro-based raw materials such as meat, sugar, bakery products, passion fruit and cassava.

30. A research project on the utilization of the fruit of *Balanites aegyptiaca*<sup>1</sup> in the Sahelian region was completed in 1984 and will be followed in 1985 by a model scheme in the Sudan to commercialize the process primarily for the production of edible oil and animal feed which are highly in demand in domestic markets. A study was also completed in 1984 on the establishment of a plant to produce cereal products with composite flour from local and other cereals by means of extrusion and UNIDO is currently ascertaining ways and means of establishing such a factory in one of the CEAO countries. In Mali, assistance to a packaging project to introduce a less expensive packaging system for locally produced fruit juices resulted in a considerable price reduction of fruit juices on the market.

31. In the field of building materials and construction, a project in Ethiopia<sup>2</sup> continued to assist the rehabilitation of marble and stone industries and the development of low-cost building materials based on volcanic tuff. The activities contribute to a housing programme which may enable the country to promote the industrial use of its diversified marble and granite resources. UNIDO experts in Niger demonstrated at a brick factory how an old production line could be used for the manufacture of unfired bricks. Assistance was also provided in the introduction of efficient working methods for maintenance and production operations, and in staff training. A project in the Gambia continued to consolidate the brickmaking operations of a newly established plant while in Cameroon assistance was given in the rehabilitation of an existing brick plant. In Botswana, assistance was provided to the establishment of a small-scale pilot unit to produce low-cost cement. For

<sup>1</sup>ID/B/300, chap. III, para. 195.

<sup>2</sup>ID/B/280, chap. V, para. 28.

### *Chapter III*

members of the cement manufacturers' association, CIMA-FRIQUE, a study tour was organized to a number of French-speaking countries in order to increase co-operation in the production of cement.

32. Assistance in the manufacture of agricultural tools, implements and machinery was provided to Burkina Faso, Lesotho, Somalia, Togo and Uganda. In co-operation with the Southern African Development Co-ordination Conference (SADCC), the first steps were taken to develop a network for agricultural tools, implements and machinery industry.

33. A number of technical co-operation projects were under implementation in the small- and medium-scale industry sector, where development is important for a balanced and harmonious economic growth. Assistance continued to the Société nationale d'études et promotion industrielles in Senegal, the Office de promotion de l'entreprise nigérienne in Niger, the Small Industry Development Organization in Zambia and the Kenya Industrial Estate. The second phase of assistance to the Ethiopian Handicraft and Small Industries Development Agency was launched in 1984 and concerned the establishment of two pilot industrial co-operative workshops for training and demonstration purposes. Rural industrial development was also promoted through establishment of small industrial units in Burundi, Comoros, Madagascar and Rwanda in provincial, semi-urban and rural areas. In Zaire and Zambia, mobile workshops provided repair and maintenance services for industrial machinery in remote areas.

34. Technical co-operation projects in the utilization of new and renewable energy resources—in particular solar, wind and hydropower—were implemented in Comoros, Mali and the United Republic of Tanzania. A demonstration pilot project was completed in the Comoros<sup>3</sup> with the object of demonstrating the use of solar energy in the distillation process of the ylang-ylang flower for the production of essential oils. Tests showed that solar energy could only contribute to a minor extent to the distillation process. However, through modification of the traditional wood stoves, considerable savings in wood consumption could be achieved. Preparatory assistance in the establishment of a low-cost, small hydropower plant in Mali made use of local production facilities for electro-mechanical equipment. A project which provided consultancy services to the National Science and Research Council of the United Republic of Tanzania<sup>3</sup> to assist in co-ordination, popularization and use of non-conventional sources of energy was completed in 1984. Other activities concerned assistance to Somalia in improving the charcoal production and to the Sudan in the gasification of agricultural residues. The National Energy Committee of Ethiopia also received UNIDO assistance.

35. Training activities in Africa covered all aspects of the development of manpower capabilities and managerial skills and 17 group training programmes were organized in 15 countries in the fields of management, manufacture of industrial goods, industrial maintenance, quality control, support to public enterprises, development of small- and medium-scale industries, foundry operations and project preparation, evaluation and financing. Group training programmes were also organized in other countries for African participants

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<sup>3</sup>ID/B/320, chap. III, para. 35



only, covering a variety of industrial sectors. Several hundred African participants attended interregional group training programmes carried out in non-African countries or received training through individual fellowships and/or study tours.

36. Under the programme to establish “centres of excellence”, attention focused on strengthening the capacities and capabilities of existing institutions in developing countries to enable them to organize local training programmes for national, regional and interregional participants. In Cameroon, the University of Douala opened its facilities to other French-speaking African countries and in 1984 assumed almost full responsibility for training programmes related to the management of industrial goods manufacture.

37. In the Ivory Coast, assisted by UNIDO, the Centre ivoirien de gestion des entreprises provided training and consultancy services to other African countries in the field of industrial management while under a regional project the Centre africain et mauricien de perfectionnement des cadres was assisted in the establishment of a regional system for advanced training in the area of small- and medium-scale industries. UNIDO also supported the efforts of the Institute of Applied Technology, Planning and Project Evaluation in Gabon which provides training in project preparation, formulation and evaluation for technicians and managers from member countries of UDEAC. In Nigeria, the UNIDO-assisted Centre for Industrial Research and Development at the University of Ife organized training courses for small-scale industries.

38. Under another project, mobile teams operated in Mali, Mauritania, Niger and Senegal and trained managers of small-scale enterprises in overall management techniques. In the Sudan,<sup>4</sup> assistance continued to prepare a report on manpower assessment and analyses for the sugar industry.

39. In support of the Transport and Communications Decade for Africa (1978-1988), an in-plant group training programme for engineers in the field of repair and maintenance of railroad equipment was once again organized for French-speaking African countries. It started in Belgium and moved on to the Ivory Coast and Burkina Faso. A parallel programme was also held for engineers from English-speaking African countries in the United Kingdom. An in-plant group training programme on repair and maintenance of small- and medium-size ships took place in Belgium.

40. As part of its efforts to develop projects aimed at improving and facilitating the integration of women in industrialization, UNIDO organized a workshop on the integration of women in the industrial planning and development process in Harare (Zimbabwe). Representatives from Kenya, Lesotho, Malawi, Nigeria, Uganda, United Republic of Tanzania, Zambia and Zimbabwe participated as well as observers from the secretariat of SADCC and African national liberation movements. The workshop agreed upon a series of recommendations concerning national strategies and programmes as well as regional and interregional programmes for the full integration of women in the industrial planning and development process. A group training programme for female entrepreneurs on the managerial and technical aspects of the expansion of small industrial enterprises was held in the United Republic of Tanzania.

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<sup>4</sup>*Ibid.*, para. 164.

### *Chapter III*

41. In addition to the priority areas mentioned in paragraph 21 above, UNIDO was engaged in technical co-operation activities in a number of other subsectors. In the area of transport and communications, UNIDO provided assistance to CEAO in the manufacture of land-based transportation equipment. Efforts concentrated on encouraging the local manufacture of rolling stock. A comprehensive study was prepared for the Union of African Railways (UAR) on the production of rails, sleepers and other steel railroad materials. The same theme was discussed at the Third Symposium of the Union of African Railways held in Libreville (Gabon) in October 1984, for which UNIDO prepared technical documents. Water-based transport was also the subject of technical assistance to boat building industries in Kenya and the Seychelles.

42. In the engineering industry subsector, UNIDO assistance focused on the repair and maintenance of industrial equipment and manufacture of spare parts. Projects were under implementation in Angola, Burkina Faso, Cameroon, Guinea, Madagascar, Mali, Niger, Sao Tome and Principe, Senegal and Somalia. A number of these projects were related to the production or maintenance and repair of manual and engine-driven water pumps and irrigation equipment.

43. In the metallurgical industry subsector a large part of the technical co-operation activities was concerned with the development of the foundry and metal transformation sector; projects were under implementation in Angola, Ethiopia, Mozambique, Niger, Somalia and United Republic of Tanzania. Within the framework of TCDC, 15 Angolan trainees were sent to the Foundry Industry Centre at Itauna (Brazil) for a one-year training period. UNIDO organized a study tour for personnel from a pilot and demonstration foundry project in Ethiopia to the pilot and demonstration plant erected by UNIDO in Nepal in 1982. Co-operation in the foundry sector was also arranged between Egypt and Somalia and financed from the \$1 million contribution of Egypt to assist African countries in projects related to the Industrial Development Decade for Africa. A second regional demonstration workshop on managed maintenance in metallurgical and foundry industries for African countries was held in Egypt from 17 November to 7 December 1984. The impact of the workshop was further enhanced by the computerized maintenance and process control systems provided by UNIDO to the Egyptian Iron and Steel Company plant at Helwan.

44. In the iron and steel subsector technical assistance continued to improve foundry and steel rolling operations in Mozambique. The project included on-the-job training in Bulgaria. As a follow-up, expert advice is being provided on the overall planning and development of the iron and steel industry in Mozambique. In Angola, the first scrap collection and processing centre is being erected to supply the only steel making and rolling plant in the country.

45. Assistance in maintenance operations was provided to the Zimbabwe Iron and Steel Plant, which in turn lends assistance to steel industries in Ethiopia, Mozambique and Uganda. UNIDO co-operated with the African Regional Centre for Engineering Design and Manufacture (ARCEDEM) in the organization of a workshop and study tour on metallurgical and engineering core industries in Hungary. Assistance was also provided to the Central Metallurgical Research and Development Institute in Nigeria.

46. Technical co-operation activities in the leather industry in Africa aimed at the improved utilization of domestic resources. Under a World Bank financed project, UNIDO provided assistance to the United Republic of Tanzania in order to set up an infrastructure for the leather, footwear and leather products sector in that country. Activities involved integrated development planning for the establishment of the Tanzania Institute of Leather Technology and the planning of the rehabilitation of existing leather and footwear factories. Machinery and installation services for the Institute were financed by a special-purpose contribution to UNIDO from Italy. In Burundi, a project assists the setting-up of a tannery. Kenya, Lesotho, Madagascar and Sudan were other countries which received assistance in the sector. One phase of a multi-stage project devoted to leather and leather products development in Ethiopia was completed.

47. In the textile industry, a large-scale project to strengthen the Tanzanian National Textile Corporation continued. UNIDO provided expertise to the Sayenu Garment and Manufacturing Company in Sierra Leone in technical and managerial activities including the training of staff at all levels. Under another project, assistance was rendered to the Pan Africanist Congress of Azania in the establishment of a women's garment manufacturing workshop in the United Republic of Tanzania.

48. In the wood-processing industry, further assistance was provided within the framework of the ECA/FAO/UNIDO Forest Industries Advisory Group for Africa. Projects were under implementation to assist the Sonfonia Furniture Factory in Guinea in the production of furniture and to rehabilitate a match factory in the Congo. Other projects included the assistance in the production of wood-based panels and school furniture in Rwanda and the manufacture of bentwood chairs in the Sudan. The annual seminar on furniture and joinery industries hitherto always hosted by Finland, was held in 1984 in Mauritius.

49. Within the context of the Industrial Development Decade for Africa as well as General Assembly resolution 38/192, section II, UNIDO assisted a number of African countries and intergovernmental organizations including the Economic Community of West African States (ECOWAS), the Preferential Trade Area for Eastern and Southern Africa (PTA), and the Central African Customs and Economic Union (UDEAC) in monitoring the implementation of their programmes for the Decade. In co-operation with the Governments concerned, seminars were organized to discuss national industrial strategies as well as the programme for the Decade. Further activities included the development of intra-African co-operation in industrial manpower training activities, a regional seminar on project preparation, evaluation and financing, assistance to a clinker factory and a foundry, the establishment of a pesticide formulation plant and the setting up of a trailer-mounted, mechanized brickmaking unit based in the United Republic of Tanzania to introduce mobile brickmaking technology. The experience gained will be made available to other interested countries in the region. These activities were financed from a \$1 million special allocation to UNIDO from overall savings in the regular budget, as decided by the General Assembly.

50. Assistance in the field of industrial management continued to be directed at the improvement of the utilization and rehabilitation of the installed

production capacity of industrial sectors ranging from shipbuilding to fruit processing and textile production. Projects were under implementation in Senegal, Sierra Leone, Somalia, Sudan and Zaire. The solutions put forward included the introduction and utilization of micro-computers with appropriate software. In Somalia and Malawi, assistance continued to the Ministries of Industry in improving the performance of industrial enterprises. In Mauritania, the Ministry of Commerce and Industry was reorganized with UNIDO assistance and comprehensive programmes for industrial promotion including entrepreneurship development and management assistance to enterprises were set up.

## THE AMERICAS

51. The value of projects executed by UNIDO in the Americas in 1984 amounted to \$9.0 million which constituted a decrease of \$1 million or 10 per cent over technical assistance delivery for that region in 1983. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 5 and 6 below.

52. To cope with the problems stemming from the serious financial crisis which, to a greater or lesser degree, affected in 1984 most Latin American countries, Governments in the region requested UNIDO assistance in selected industrial sectors which—if effectively and systematically developed—could be instrumental in reducing the development gap between Latin America and the industrialized countries.

TABLE 5. 1984 TECHNICAL CO-OPERATION EXPENDITURE  
IN THE AMERICAS, BY SOURCE OF FUNDS

Source of funds	1984	
	\$ thousand	%
Regular programme	254	2.8
UNDP		
IPF and cash counterpart	6 170	68.5
SIS	434	4.8
Special programme resources and special measures	42	0.5
Subtotal	6 646	73.8
UNDP-administered trust funds	212	2.4
Other funds		
Other trust funds	665	7.4
UNIDF	1 109	12.3
UNFDAC	59	0.7
Non-UNIDO funds	55	0.6
Subtotal	1 888	21.0
TOTAL	9 000	100.0

TABLE 6. 1984 TECHNICAL CO-OPERATION EXPENDITURE  
IN THE AMERICAS, BY PROJECT COMPONENT

Project component	1984	
	\$ thousand	%
Project personnel	5 671	63.0
Subcontracts	594	6.6
Fellowships and training	819	9.1
Equipment	1 602	17.8
Miscellaneous	314	3.5
TOTAL	9 000	100.0

53. In this connection, emphasis in 1984 continued to be given in a number of countries to the programmed development of capital goods industries. Financed under a seventy-per-cent cost-sharing arrangement, a project was under implementation in Venezuela to develop its capital goods industry.<sup>5</sup> The project concentrated on the formulation of global strategies for the development of the sector, programming of capital goods industries related to petrol and electricity, technical assistance to foundries, forging and steel fabrication and the development of a technology information centre. The project also served as a focal point for inter-institutional relations and developed links between policy makers, purchasers and producers of capital goods in both the private and public sectors. A plan was elaborated for the development of human resources in the fields of engineering and industrial design, taking into consideration existing institutions for specialized training as well as possibilities for in-plant training.

54. A number of projects implemented in the region aimed at the satisfaction of people's basic needs in terms of food and health care and the optimal utilization of local natural resources. Assistance in the field of agro-based industries was provided to Dominica, Ecuador and El Salvador in different subsectors of food processing industries such as utilization of banana waste, production of animal fodder and quality control of processed food; to Cuba and the Dominican Republic in the area of leather products; and to Bolivia, Chile, Honduras, Nicaragua and Peru in the development of wooden bridges by using local raw materials.

55. Several countries in Latin America have accorded high priority to the health sector and have been endeavouring to achieve self-reliance in the supply of essential drugs. While assistance continued to be provided to Cuba in the establishment of a multi-purpose pilot plant for pharmaceutical products a new project started in Brazil aimed at assisting the Instituto de Tecnología de Paraná in the production of the most important classical vaccines. The National Centre for Biological Investigations in Cuba was assisted through the provision of three high-level consultants who suggested future research programmes and, at the same time, identified the needs of the Centre in terms of equipment and manpower.

<sup>5</sup>*Ibid.*, para. 44.

### *Chapter III*

56. On account of restrictions on new investments, there was a reluctance on the part of Governments of the region to devote their scarce financial resources to feasibility studies. Nevertheless, the Government of Jamaica requested a fact-finding mission of two experts to advise on the qualitative and quantitative aspects of the establishment of a caustic soda plant using the natural resources of the country and reducing dependence on imports. Following a training workshop on the preparation of feasibility studies in Cuba, a team of experts was selected to assist in the preparation of a pre-feasibility study in the production of newsprint paper from bagasse through the use of advanced technology developed in the country.

57. The implementation of certain operational projects was also hampered by the difficult economic situation prevailing in the region. In Guyana, for example, a large-scale project providing assistance in the introduction of new management procedures in public sector enterprises<sup>6</sup> has been unoperational for one year and a regional rehabilitation project for Central America had to be interrupted. The international recession continued to cause serious problems for the economies of the countries of the Caribbean which have as a countermeasure attempted to reduce production costs by improving efficiency. In Barbados, for example, a computer-based system is being developed to assist the Barbados Industrial Development Corporation to improve its management through systems for strategic planning, operations planning, control and reporting.

58. The different measures adopted by individual countries of the region to counteract economic difficulties are reflected in the requests for technical assistance received in 1984. The Government of Argentina, which is currently formulating a stabilization programme aimed at improving the country's economic situation, requested high-level advisory services to strengthen the technical and managerial capabilities of the National Institute of Industrial Technology and thus increase its efficiency in providing services to industry and the Government. In Brazil, the second phase of a project on metrology, standardization and industrial quality control was assisting the Government in a massive programme to improve the competitiveness of Brazilian products on export markets.

59. In the field of metallurgical industries, UNIDO assisted the Government of Chile in assessing a multi-disciplinary R + D programme on the innovative bacteriological leaching process for treating copper ores. Another project under implementation in Chile deals with the handling and recovery of ore residues. Whilst the main objective of this project is to improve the safety factors of large ponds of metallurgical plant effluents, efforts are being made to assess the viability of long-term treatment of these effluents. Besides, other projects currently under implementation in Argentina,<sup>7</sup> Mexico,<sup>7</sup> Paraguay and Peru<sup>7</sup> to strengthen and establish iron and steel research institutes reflect the trend towards higher steel production in the region.

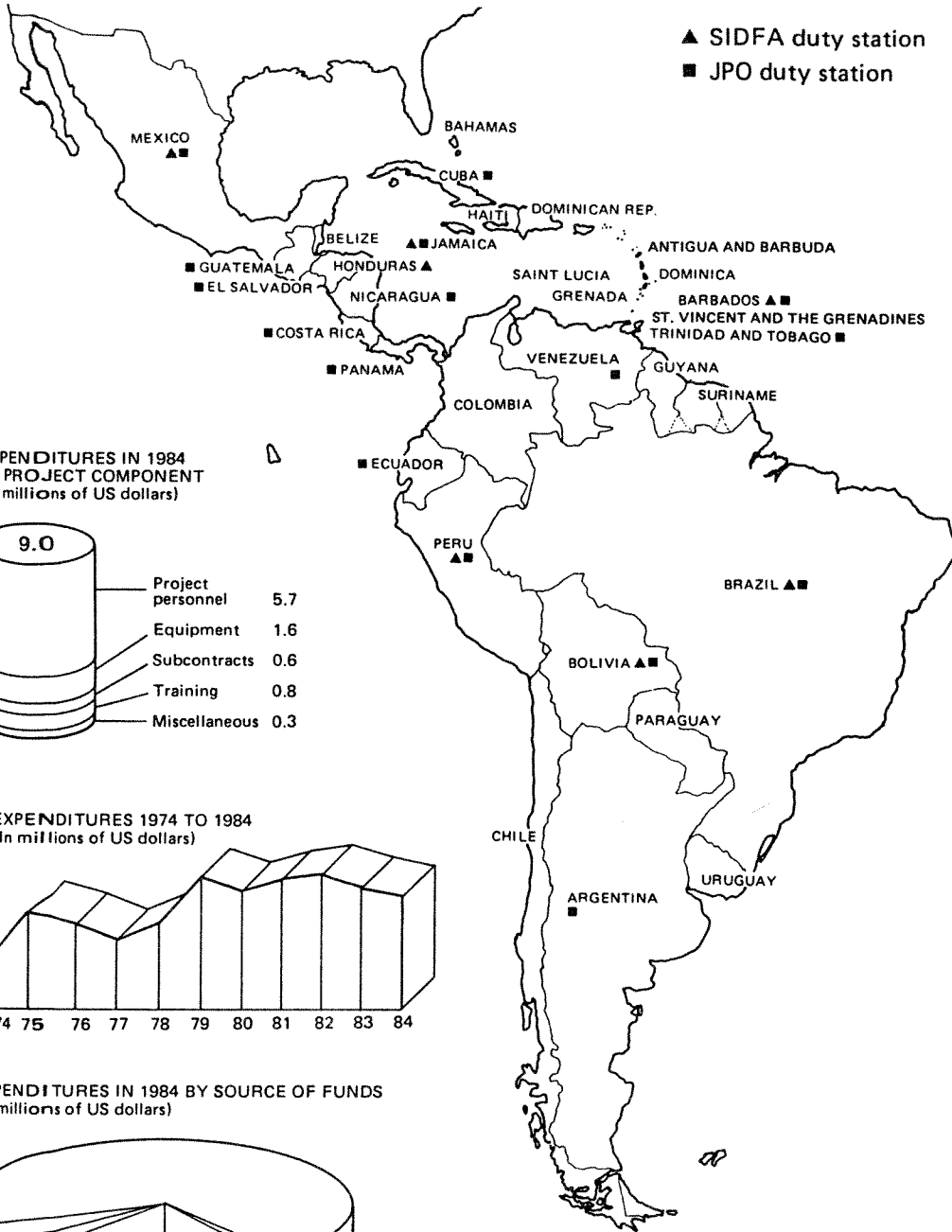
60. The sugar industry plays a key role in the national economies of a number of Latin American countries where export earnings from the sugar

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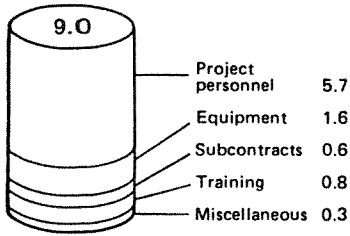
<sup>6</sup>ID/B/300, chap. III, para. 49

<sup>7</sup>ID/B/320, chap. III, para. 49.

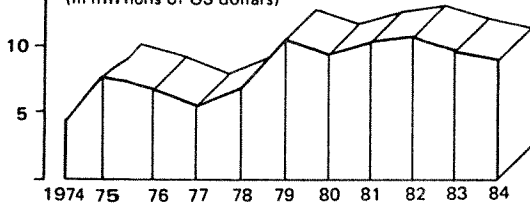
# THE AMERICAS



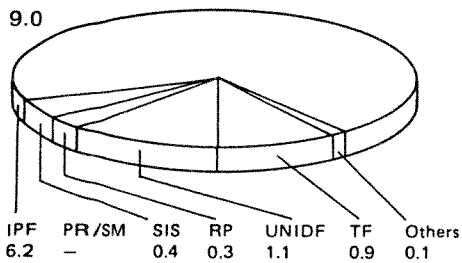
**EXPENDITURES IN 1984 BY PROJECT COMPONENT**  
(In millions of US dollars)



**EXPENDITURES 1974 TO 1984**  
(In millions of US dollars)



**EXPENDITURES IN 1984 BY SOURCE OF FUNDS**  
(In millions of US dollars)



industry represent a large part of foreign exchange revenues. In view of this, emphasis was placed on a regional programme for some 12 Central, Latin American and Caribbean countries in the field of repair and maintenance and reconditioning of sugar industry equipment. Experience gained will also be applied, at the national level, in Guyana, where the central repair workshop of the national sugar corporation, GUYSCUCO, will receive UNIDO assistance in resolving a number of technical problems.

61. As in previous years, individual fellowships and study tours continued to be an effective component of the technical co-operation activities of UNIDO in Latin America aimed at the development of human resources. The year under review saw the implementation of individual programmes for candidates from Latin American countries covering a wide range of industrial sectors.

62. During the year under review an Investors' Forum was held at Bogota (Colombia) in July 1984 and an investment promotion meeting for the Caribbean at Bridgetown (Barbados) in October. In addition, country presentation meetings were organized for Barbados, Chile, Colombia and Uruguay as well as for the Caribbean countries.

### ARAB STATES

63. The value of projects executed by UNIDO in the Arab States in 1984 amounted to \$12.9 million (including \$8.8 million for African Arab States) which constituted an increase of \$1 million or 8.4 per cent (\$1.8 million or 25.7 per cent for African Arab States) over technical assistance delivery for the region in 1983. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 7 and 8 below.

64. Projects under implementation in 1984 in the Arab States centred on provision of industrial advisory services, improvement of the capacity utilization of industries, processing of locally available raw materials and strengthening of industrial infrastructure.

65. Assistance continued to Yemen in setting up an industrial advisory service within the Ministry of Economy and Industry. A second project initiated in Yemen in 1984 included as part of its activities, an in-depth evaluation of the first project by UNDP and UNIDO jointly. In identifying the benefits derived from the project, the evaluation concluded that it had contributed primarily to the preparation of the second five-year plan, to the establishment of procedures for issuing permits for new industrial projects, to the organization of training of counterparts, and to the provision of advisory services to entrepreneurs. The second phase of a project which provides industrial advisory services to the Ministry of Industry and Electricity of Saudi Arabia was under implementation and included advice on industrial policy and strategy and on the identification and evaluation of projects. UNIDO provided advice on the procedures involved in the evaluation of feasibility studies and industrial promotion at the United Arab Emirates Industrial Bank. Assistance to Qatar in industrial planning and programming was continued.



TABLE 7. 1984 TECHNICAL CO-OPERATION EXPENDITURE IN ARAB STATES,<sup>a</sup> BY SOURCE OF FUNDS

Source of funds	1984			
	\$ thousand		%	
Regular programme	260	(70)	2.0	(0.8)
UNDP				
IPF and cash counterpart	6 003	(3 009)	46.5	(34.2)
SIS	209	(43)	1.6	(0.5)
Special programme resources and special measures	—	—	—	—
Subtotal	6 212	(3 052)	48.1	(34.7)
UNDP-administered trust funds	82	(82)	0.6	(0.9)
Other funds				
Other trust funds	5 948	(5 532)	46.1	(62.8)
UNIDF	409	(70)	3.2	(0.8)
UNFDAC	—	—	—	—
Non-UNIDO funds	—	—	—	—
Subtotal	6 357	(5 602)	49.3	(63.6)
TOTAL	12 911	(8 806)	100.0	(100.0)

<sup>a</sup>Including African Arab States (Algeria, Djibouti, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan, Tunisia). The amounts relating to these States are shown in parentheses since they have also been included under "Africa" in table 3 above.

TABLE 8. 1984 TECHNICAL CO-OPERATION EXPENDITURE IN ARAB STATES,<sup>a</sup> BY PROJECT COMPONENT

Project component	1984			
	\$ thousand		%	
Project personnel	10 239	(7 262)	79.3	(82.5)
Subcontracts	447	(154)	3.5	(1.7)
Fellowships and training	548	(237)	4.2	(2.7)
Equipment	1 393	(1 061)	10.8	(12.1)
Miscellaneous	284	(92)	2.2	(1.0)
TOTAL	12 911	(8 806)	100.0	(100.0)

<sup>a</sup>Including African Arab States (Algeria, Djibouti, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan, Tunisia). The amounts relating to these States are shown in parentheses since they have also been included under "Africa" in table 4 above.

66. In Democratic Yemen, the performance efficiency unit<sup>8</sup> established within the Ministry of Industry to review the performance of industrial enterprises continued to function satisfactorily. The unit is concentrating its activities on 16 industrial enterprises. Study tours and fellowships were carried out in 1984. As a result of technical assistance provided so far by UNIDO, better utilization of the capacity installed and the improvement of labour efficiency have been achieved. Another project under implementation in 1984 in Democratic Yemen related to the modernization of the foundry and associated mechanical workshop at the Revometal Spare-parts Factory.<sup>8</sup> With the help of

<sup>8</sup>*Ibid.*, para. 58.

### Chapter III

UNIDO, steel furniture for office, hospital and domestic use and other products can be manufactured for the first time in the region. In view of the high demand in the region for metal furniture, inter-Arab co-operation is envisaged to develop human resources for metalworking industries in the region through the organization of training courses or individual fellowship training, in addition to co-operation in commercial aspects.

67. A project under implementation in the Sudan to improve the efficiency of industries in the public sector provided assistance in 1984 to general improvement of industrial branches such as textiles, leather and food. A UNIDO/UNDP evaluation of the project recommended that the project be continued, particularly in the textiles and food industries branches, which are essential for the local population. Technical assistance continued to the Saudi Arabian Standards Organization in the field of standardization, quality control and metrology.<sup>9</sup>

68. In the petrochemical industries field, a symposium took place in three cities in Saudi Arabia (Riyadh, Dammam and Jeddah) to encourage Saudi Arabian entrepreneurs and industrialists to set up downstream processing industries, primarily for plastics, rubbers and synthetic fibres, using the raw materials that are actually being produced, or will be produced in the near future, by the national petrochemical industry. Financed on a hundred-per-cent cost-sharing basis, the project was organized in co-operation with the Saudi Arabian National Council for Science and Technology, the Saudi Arabian Basic Industries Corporation and the Chambers of Commerce and Industry of the three cities.

69. Given the importance of cement as a fundamental element not only for industrialization but also for irrigation, agriculture and housing, assistance to the cement industry in the Libyan Arab Jamahiriya<sup>10</sup> was strengthened and diversified during the year under review. High priority accorded to the development of the sector by the Government led to the establishment of three large cement factories. The cement industry has stimulated the introduction of other building materials industries including the production of building lime, ceramic bricks, concrete blocks and cement products, in addition to the production of paper bags for cement and lime. The purpose of assistance is to transfer the necessary know-how and experience through the provision of high-level expertise to ensure full capacity utilization and to train local personnel.

70. Co-operation at the regional level covered several fields of activities. A large-scale project to establish an Arab regional packaging centre<sup>11</sup> entered its operational phase in 1984. The counterpart executing agency is the Arab Industrial Development Organization (AIDO) which has earmarked \$600,000 for complementary activities being implemented under AIDO management. This project is mainly training oriented and includes seminars and short-term training courses in a number of Arab countries. During 1984, seminars were held in Amman (Jordan) and Casablanca (Morocco). A study tour was arranged for 13 participants from different Arab countries to visit European countries.

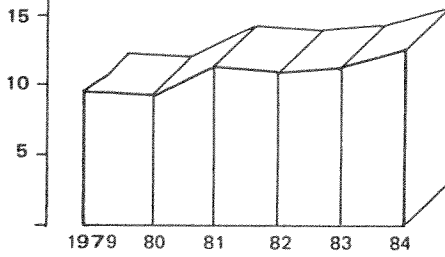
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<sup>9</sup>*Ibid.*

<sup>10</sup>*Ibid.*, para. 64.

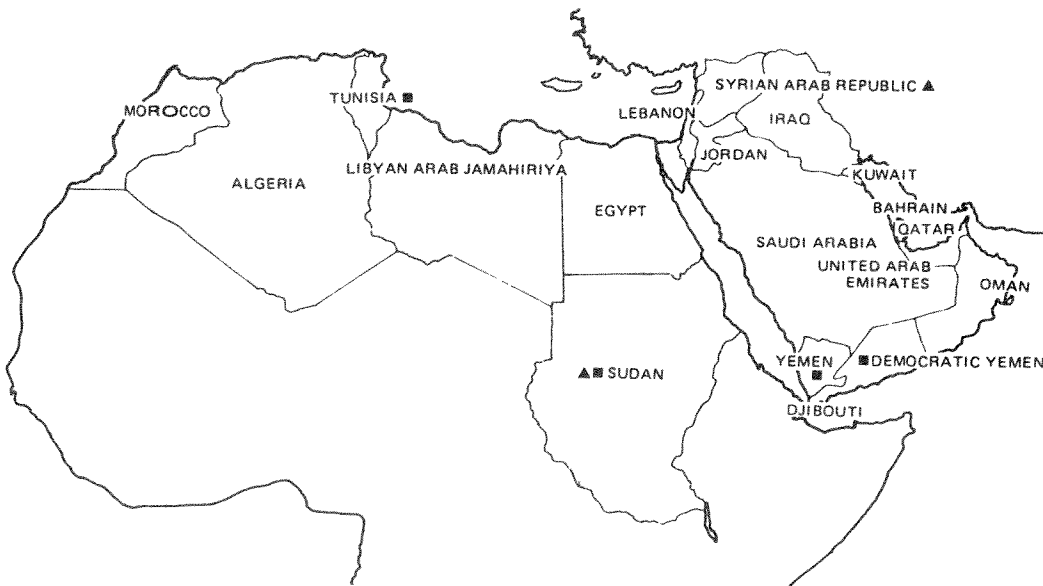
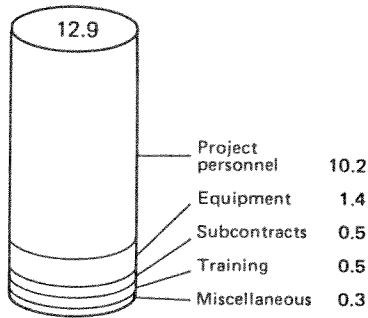
<sup>11</sup>ID/B/300, chap. III, para. 62.

EXPENDITURES 1979\* TO 1984  
(In millions of US dollars)

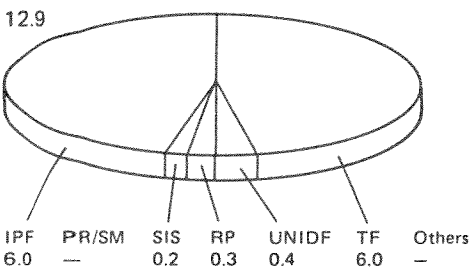


\* For previous years, expenditures related to Arab States were reported partly under Africa and partly under Europe and Western Asia.

EXPENDITURES IN 1984  
BY PROJECT COMPONENT  
(In millions of US dollars)



EXPENDITURES IN 1984 BY SOURCE OF FUNDS  
(In millions of US dollars)



## ARAB STATES

- ▲ SIDFA duty station
- JPO duty station

### Chapter III

71. Despite the great importance attributed by the Arab countries to the development of the iron and steel industry, there is still an increasing imbalance between the installed production capacity and iron and steel consumption. In co-operation with the Arab Iron and Steel Union,<sup>12</sup> UNIDO assisted the member countries in improving capacity utilization through the provision of training.

72. In the field of engineering and metalworking industries, technical co-operation projects in the Arab region were carried out in Egypt, Iraq, Jordan and Tunisia. In Egypt, a project aimed at energy conservation in industry was under implementation in co-operation with the Ministry of Industry, with emphasis on ways and means to increase operating efficiency. The utilization of computers in the field of energy conservation will be demonstrated to local engineers in the course of on-the-job training. The second phase of assistance to the Specialized Institute for Engineering Industries in Iraq<sup>13</sup> concentrated on strengthening engineering production, testing and quality control and introducing computer-aided engineering and low-cost automation. A technical co-operation project was initiated in the field of fabrication of moulds for plastic articles production in Tunisia.

73. Within the framework of TCDC, the experience gained by the Egyptian Iron and Steel Company as a result of UNDP/UNIDO assistance in the field of computerized maintenance is being shared with other countries of the African region. Following the second regional demonstration workshop on managed maintenance in metallurgical and foundry industries for African countries, held in Cairo (Egypt) from 17 November to 7 December 1984, it is planned to hold such workshops on a continuous basis. In support of the Industrial Development Decade for Africa, the Government of Egypt is providing Egyptian expertise to the value of \$1 million to other African countries through UNIDO.

## ASIA AND THE PACIFIC

74. The value of projects executed by UNIDO in Asia and the Pacific in 1984 amounted to \$31.2 million which constituted an increase of \$6.5 million or 26.3 per cent as compared to technical assistance delivery for the region in 1983. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 9 and 10 below.

75. Sound economic policies enabled the countries of Asia and the Pacific to achieve a more successful economic performance than the rest of the developing world during the year under review. Governments in the region took a number of steps to control inflation and improve cost effectiveness through appropriate monetary and financial policies, import liberalization, energy conservation measures and measures to encourage exports of manufactures.

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<sup>12</sup>*Ibid.*, para. 64.

<sup>13</sup>*Ibid.*, para. 61.

TABLE 9. 1984 TECHNICAL CO-OPERATION EXPENDITURE IN ASIA AND THE PACIFIC, BY SOURCE OF FUNDS

Source of funds	1984	
	\$ thousand	%
Regular programme	365	1.2
UNDP		
IPF and cash counterpart	26 587	85.1
SIS	463	1.5
Special programme resources and special measures	(151)	(0.5)
Subtotal	26 899	86.1
UNDP-administered trust funds	744	2.4
Other funds		
Other trust funds	540	1.7
UNIDF	2 335	7.5
UNFDAC	—	—
Non-UNIDO funds	349	1.1
Subtotal	3 224	10.3
TOTAL	31 232	100.0

TABLE 10. 1984 TECHNICAL CO-OPERATION EXPENDITURE IN ASIA AND THE PACIFIC, BY PROJECT COMPONENT

Project component	1984	
	\$ thousand	%
Project personnel	11 009	35.2
Subcontracts	5 208	16.7
Fellowships and training	3 689	11.8
Equipment	10 804	34.6
Miscellaneous	522	1.7
TOTAL	31 232	100.0

76. Consequently, UNIDO assistance focused in 1984 on activities in support of the corrective strategies being adopted by Governments to strengthen their economies. At the same time, emphasis continued to be given to the metallurgical, engineering and textile industries which represent high priority areas in the region.

77. In the field of industrial energy management besides a large-scale project to provide facilities for consultancy services and training which continued to function successfully in the Philippines,<sup>14</sup> two projects were initiated in Sri Lanka. One project to introduce an industrial energy conservation programme included a large component for energy-measuring equipment. A second project, to establish an energy management unit at the National Engineering Research and Development Centre, will include the provision of a mobile unit equipped with energy measurement instruments.

<sup>14</sup>ID/B/320, chap. III, para. 69.

78. The member countries of the Association of South-East Asian Nations (ASEAN)—traditionally commodity exporters—attach high priority to the development of export-oriented industries in order to enhance the advancement of their economies and improve their international balance of payments. In co-operation with ASEAN, UNIDO launched early in 1984 a group training programme on the development and promotion of export-oriented industries for policy makers of these countries. The main objective of the project was to identify and upgrade the skills of policy makers, both from Government and industry, in the application of modern production management techniques and the use of legal measures to produce high-quality products meeting the requirements of the international market. A project in Sri Lanka involved strengthening the investment promotion capabilities of the Greater Colombo Economic Commission, an autonomous body responsible for all capital investments within the investment promotion zones. It is expected that, through better quality feasibility studies, improved administrative services to applicants and investors and the establishment of wide international contacts, including the utilization of UNIDO's Investment Promotion Services, the flow of capital to Sri Lanka will increase. A large-scale project under implementation in Burma<sup>15</sup> involved the preparation of feasibility studies for the Ministry of Industry on the establishment of industrial plants outside the metropolis, which would alleviate the problem of rural unemployment and contribute to the integration of the rural sector in the development process. UNIDO and the Economic and Social Commission for Asia and the Pacific (ESCAP) jointly implemented a project in Fiji to review and formulate industrial development strategy and policies, taking into consideration the specific features of an isolated island country.

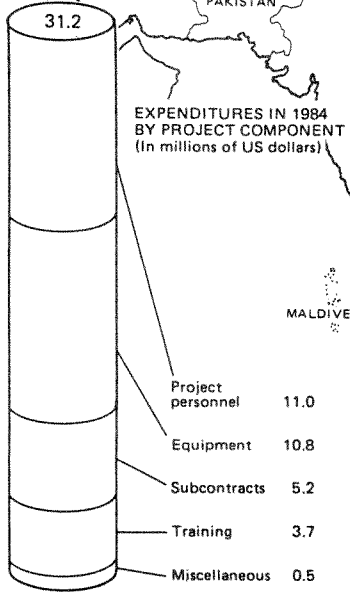
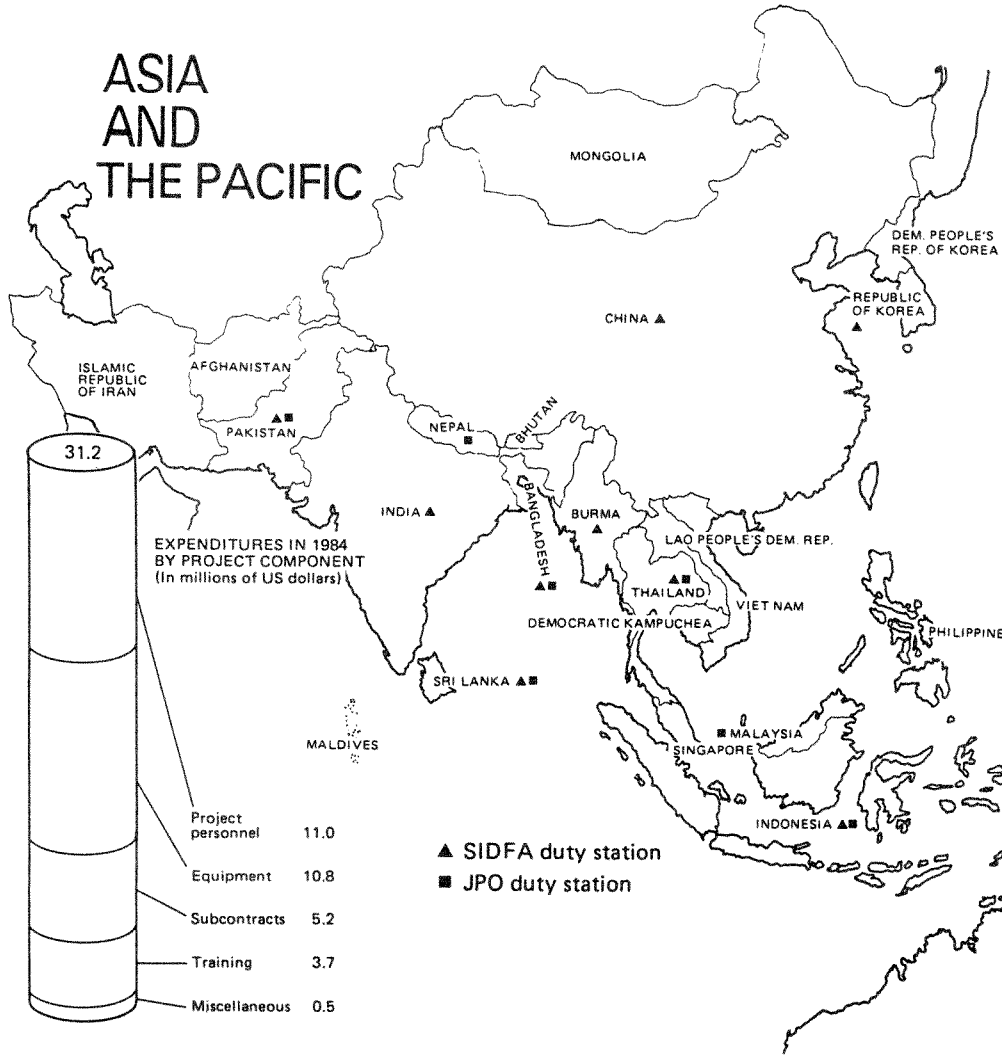
79. The implementation of regional projects could lead to enhanced South-South co-operation in the industrial development of the countries of the South Pacific subregion. For these countries with relatively limited domestic markets, access to subregional and regional markets could mark an important step in enlarging their export possibilities. In this connection, a new regional project was initiated to develop small-scale industry and entrepreneurship in the South Pacific region. The project aims at strengthening existing capacities so as to improve and accelerate the flow of business and technical know-how in the region. The project will also foster local entrepreneurship capabilities, with emphasis on assistance in setting up new industrial enterprises and joint ventures at regional level. Once again at the regional level assistance was provided to the small island countries in the Pacific region, through a training course on timber engineering which aimed at increasing the utilization of timber in construction to make better use of a national renewable resource and at the same time satisfy the growing needs for building.

80. Bearing in mind the recommendations of the Third Consultation on the Leather and Leather Products Industry, held in Innsbruck (Austria) in April 1984, special attention was paid to the development of this sector in the Asian region through projects of different magnitude. While in several countries such as China, Philippines and Sri Lanka, large-scale projects of assistance to leather centres reached their final stage of implementation in 1984, contributing to the better utilization of domestic resources and

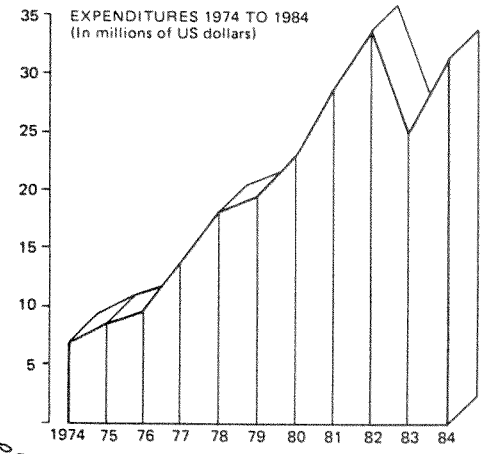
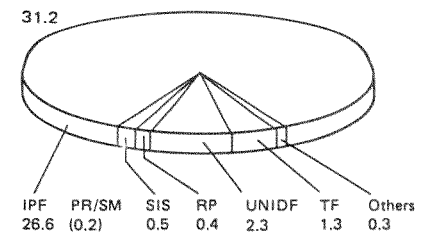
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<sup>15</sup>*Ibid.*, para. 70.

# ASIA AND THE PACIFIC



**EXPENDITURES IN 1984 BY SOURCE OF FUNDS**  
(In millions of US dollars)



### *Chapter III*

increased share of value-added products, in other countries such as Burma and Mongolia a number of new projects were initiated in an attempt to solve specific technological problems.

81. As in the past, the majority of large-scale projects in the textile sector were implemented in the ESCAP region. In Bangladesh the assistance to the jute industry by providing central testing laboratories for jute goods is nearing completion. The laboratories will contribute to ensure consistent quality of jute goods for export certification. Under another large-scale project in India assistance continued to the development of a hosiery and knitwear industry. After an interruption for reasons beyond the control of the project, activities are proceeding according to expectations. A project to assist the Sri Lankan textile industry in the establishment of a textile training and service centre continued successfully. The first phase of the project is nearing completion, and a second phase is under consideration. In Viet Nam assistance to selected textile factories in the South in improvement of maintenance procedures and production management practices will be completed in early 1985. During the course of a workshop, organized in India in co-operation with the International Institute of Cotton, representatives of the South-East Asian knitting industry were introduced to a computerized system to establish production parameters for high-quality cotton knitted fabrics.

82. UNIDO activities in the metallurgical industries sector gained momentum in the ESCAP region during the year under review: large-scale projects were approved or implemented, special industrial services delivered and an increased number of workshops and courses organized. In India, for example, a large-scale project was approved to assist in the production of super purity aluminium for local use as well as for export. The development of a basic industry for the production of alumina was also the long-term objective of a project in the Islamic Republic of Iran which initially involved identifying ways to carry out a techno-economic feasibility study for the production of alumina from indigenous alunite ores. Assistance was also provided to China to increase national capability to assess and evaluate bauxite deposits and introduce newer technologies for alumina production. During the year, UNIDO responded to a number of requests for urgent assistance under the Special Industrial Services (SIS) programme. Short-term projects of this kind were undertaken in China, Democratic People's Republic of Korea, India and Viet Nam. In Pakistan, detailed plans and a project document were formulated for the establishment of a metallurgical research and development institute. An increasing number of countries from the region called on UNIDO experts to organize workshops and courses in the metallurgical industries sector. One example is the group training on alumina production and aluminium electrolysis held at the Zheng Zhou Light Metal Research Institute in China and organized within the framework of the joint UNIDO/Hungary aluminium industry programme. An interregional workshop was hosted by the National Welding Research Institute in Tiruchirapalli (India) to promote welding technology in developing countries. The workshop, which was attended by participants from 14 developing countries, recommended the establishment of a regional centre for applied research and development for countries of the ESCAP region. Organized in co-operation with the Tinplate Company of India Ltd., a workshop on tinplate production in the ESCAP region discussed the status of tinplate manufacture in the region and possible co-operation between countries in that field.



83. In the field of engineering industries, a number of new trends were evident in 1984 regarding the pattern and direction of requests from Asian countries. One of these trends was towards the strengthening of institutional engineering capabilities in specific products or group of products, as illustrated by a large-scale project in Viet Nam on repair and maintenance of electrical, electronic and optical equipment. Another new trend among countries of the region with more advanced technical information was for UNIDO assistance in high technology areas such as fibre optics and numerically controlled machine tools, e.g. in India and the Democratic People's Republic of Korea respectively. Another large-scale project approved for India in 1984 aims at promoting the use of transport electronic systems by decreasing production costs and increasing operational efficiency. The project is expected to lead to a self-reliant product development capacity in this field.

84. Technical assistance activities aimed at the control of industrial pollution gained new impetus in 1984 with the initiation of a large project in India to establish and develop a pollution control research institute in Hardwar, New Delhi (India). Research work is under way to identify the best cost-effective techniques in controlling air, water, noise and solid waste pollution with particular attention paid to the control of pollution generated by power plants, selected chemical plants and metal equipment manufacturing plants. The issues of environmental law, environmental economics and mathematical modelling of pollution control will all be dealt with in developing comprehensive planning and in formulating a national consultancy service to provide guidelines to policy makers and industrial concerns at both the national and transnational levels.

## EUROPE

85. The value of UNIDO technical assistance delivery to Europe in 1984 amounted to \$3.7 million, constituting an increase of \$0.9 million or 32 per cent over the figure for 1983. A breakdown of technical assistance delivery, by source of funds and project component, is given in tables 11 and 12 below.

86. In the past few years requests for UNIDO technical assistance from European countries dealt primarily with strengthening of research institutions, acquisition of sophisticated technologies and training of national staff abroad. This trend continued in 1984.

87. In Albania, UNIDO assisted the Government in the development of the Centre for Studies and Design in Automation and Electronics—the only one of its kind in Albania.<sup>16</sup> Certain activities in process control and automation for assembly lines and for plants in the chemical and mineral processing industries commenced in 1984. Assistance was provided to the Automated Production Instrumentation Centre of Bulgaria in the introduction of modern management methods, as well as the establishment of an instrumentation centre for the design of instruments and the training and upgrading of national manpower skills.

<sup>16</sup>*Ibid.*, para. 90.

TABLE 11. 1984 TECHNICAL CO-OPERATION EXPENDITURE IN EUROPE, BY SOURCE OF FUNDS

<i>Source of funds</i>	<i>1984</i>	
	<i>\$ thousand</i>	<i>%</i>
Regular programme	23	0.6
UNDP		
IPF and cash counterpart	3 427	93.7
SIS	84	2.3
Special programme resources and special measures	—	—
Subtotal	3 511	96.0
UNDP-administered trust funds	—	—
Other funds		
Other trust funds	29	0.8
UNIDF	96	2.6
UNFDAC	—	—
Non-UNIDO funds	(1)	—
Subtotal	124	3.4
TOTAL	3 658	100.0

TABLE 12. 1984 TECHNICAL CO-OPERATION EXPENDITURE IN EUROPE, BY PROJECT COMPONENT

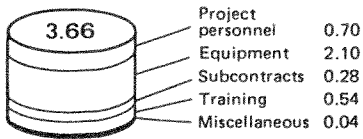
<i>Project component</i>	<i>1984</i>	
	<i>\$ thousand</i>	<i>%</i>
Project personnel	699	19.1
Subcontracts	285	7.8
Fellowships and training	540	14.7
Equipment	2 095	57.3
Miscellaneous	39	1.1
TOTAL	3 658	100.0

88. Among the national institutions which received assistance in strengthening their technical capabilities was the Plastics Development Centre in Bucharest (Romania). Expert services were provided to help resolve technical problems and train staff of the processing units in the operation of technological equipment; improve the processing of plastics; facilitate production of new plastics compounds; and set up a quality control and testing procedure to determine the physical, chemical and mechanical properties of the compounds.

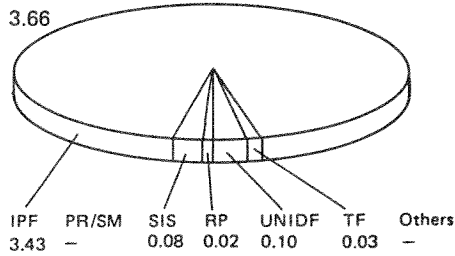
89. A number of activities were undertaken in energy-related fields in the region. In the province of Slovenia (Yugoslavia) the optimum heat insulation of buildings was determined, taking into account prevailing climatic conditions, technical design and economic factors. Present regulations will be evaluated and, if necessary, new ones proposed. In association with WHO, assistance was provided to the Institute of Chemical Engineering of the University of Tuzla (Yugoslavia) in the expansion of plastics applications in engineering, automotive, furniture and building industries and domestic appliances.



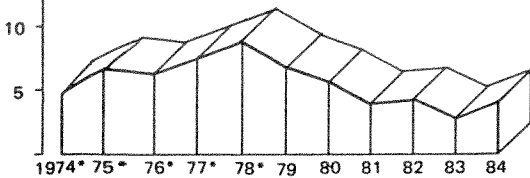
EXPENDITURES IN 1984  
BY PROJECT COMPONENT  
(In millions of US dollars)



EXPENDITURES IN 1984 BY SOURCE OF FUNDS  
(In millions of US dollars)



EXPENDITURES 1974 TO 1984  
(In millions of US dollars)



\*The figures for 1974-1978 combine Europe and Western Asia and include twelve countries which, since 1979, are listed under Arab States.

### *Chapter III*

90. In view of the extensive deposits of coal in Poland, as well as the lack of crude oil resources, the Government of Poland places high priority on the development of technologies for coal gasification, pyrolysis and liquefaction in order to increase the share of coal in the total energy supply pattern. UNIDO provided support for the national programme to convert high-sulphur bituminous and brown coals into synthetic fuels in an environmentally acceptable manner. Technical data gathered from the operation will serve as a basis for the design of a future demonstration plant.

91. In Romania, work began on the development of biomass-processing technologies as well as new chemical and related industries. Activities included the establishment of facilities to investigate various processes for conversion of biomass into chemical products and usable, non-toxic residues, such as animal fodder or fuel. Through this activity the research and development capacity of the Institute of Energy-related Chemistry and Biochemistry will be strengthened in the field of energy-related biochemistry and applied enzymatic technology.

92. In Hungary, significant results were obtained in 1984 in the complex utilization of low-grade raw materials for metallurgy as well as coal of low calorific value.<sup>17</sup> Optimum technologies for extracting high value materials from low-grade coals through burning were developed in the course of laboratory and pilot scale investigations. These results could be disseminated on a regional and interregional basis for the benefit of other developing countries.

93. Consultancy assistance for negotiations on the establishment of a new alumina plant was provided to Greece under a trust fund project. A second project in Greece involved a techno-economic investigation to prove the suitability for future industrial-scale production of de-ironed refractory bauxite. The process to be applied is a specific selective autoclave acid leaching of the iron oxide content of bauxite to a degree satisfying refractory grade requirements of white bauxite, which does not occur in natural form in Europe. Another project in Greece was initiated in 1984 to develop a network of integrated activity complexes for the nursing of international competitive industries. This included training of the labour force, establishment of a micro-computer supported data base, research and development and the identification of investment opportunities. UNIDO also provided expertise on ways to enhance local capacities for industrial project generation, implementation and evaluation.

94. UNIDO continued to assist the Government of Cyprus in the establishment of the Free Industrial Zone in the vicinity of Larnaca International Airport and the sea-port. The aim was to improve investment promotion activities and operational capacities as well as the existing investment incentives.

95. A project continued to assist small-scale industries in Turkey by providing industrial extension services. Special assistance was given to those enterprises moving into new facilities in industrial estates. The petrochemical

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<sup>17</sup>ID/B/300, chap. III, para. 87.

industry in Turkey received assistance to strengthen its research and development capabilities while help was given to the pulp and paper industry to improve its productivity. At the same time, Turkey is involved to an increasing extent in helping other developing countries through the organization of in-plant group training programmes. Six programmes were hosted by Turkey in 1984 on the cement industry, sugar beet processing, iron and steel industry and small-scale foundry operations.

96. At the regional level, preparatory assistance to the project on regional co-operation in the field of industrial energy conservation was nearing completion. All the co-operating countries—Bulgaria, Czechoslovakia, Cyprus, Hungary, Malta, Poland, Romania and Yugoslavia—were visited and discussions were also held with the Economic Commission for Europe (ECE) on the possibility of sharing experience on energy conservation in industrial subsectors such as iron and steel, non-ferrous metal production, non-metallic minerals, chemicals and petrochemicals and food-processing. A follow-up project, to be formulated at an expert group meeting early in 1985, will involve building up a network for the exchange of information and forecasting, implementation of energy audit programmes, and the provision of specific know-how to the participating countries in specific subsectors.

### C. Implementation by field of activity

97. The technical assistance provided by individual sections and branches in the Division of Industrial Operations in 1984 is treated in the paragraphs that follow. As a great many of the projects under implementation are of an “ongoing” or continuous nature and have therefore been covered to a greater or lesser extent in previous *Reports*, no more than an outline is provided here, with appropriate references to those earlier *Reports*. It should be borne in mind in reading this part of the *Report* that even though projects may be mentioned under very specific “activity” headings—e.g. metallurgical industries—their implementation cuts across administrative lines to bring into play the economic and technical experience of not only the entire Division of Industrial Operations, but of UNIDO as a whole. Thus, individual sections or branches of the Division provide inputs to and benefit from the activities of, for example, the System of Consultations and the Investment Co-operative Programme—not to mention Programme Development and Evaluation.

98. Technical co-operation projects under implementation in 1984 and the regional distribution of technical assistance delivery during the year by field of activity are listed in tables 13 and 14 below.

### INDUSTRIAL PLANNING

99. In 1984, technical co-operation expenditures under the heading industrial planning amounted to \$5.8 million. Some 80 per cent of the total implementation was financed from UNDP resources. A total of 67 projects were implemented or under implementation in 1984.

TABLE 13. TECHNICAL CO-OPERATION PROJECTS UNDER IMPLEMENTATION IN 1984, BY FIELD OF ACTIVITY AND SIZE OF PROJECT

Field of activity	Number of projects/Amount			Total
	<\$150 000	\$150 000- \$1 000 000	>\$1 000 000	
Industrial planning	33	27	7	67
Institutional infrastructure	62	49	21	132
Factory establishment and management	20	22	8	50
Training	169	25	2	196
Feasibility studies	39	22	8	69
Agro-industries	92	53	13	158
Metallurgical industries	77	46	13	136
Engineering industries	77	66	27	170
Chemical industries	179	99	33	311
Other <sup>a</sup>	177	35	2	214
TOTAL	925	444	134	1 503

<sup>a</sup>Not implemented by the Division of Industrial Operations.

TABLE 14. REGIONAL DISTRIBUTION OF TECHNICAL CO-OPERATION EXPENDITURE, BY FIELD OF ACTIVITY

(Percentage)

Field of activity	Africa	Americas	Arab States <sup>a</sup>	Asia and the Pacific	Europe	Inter- regional/ global	Total
Industrial planning	41	17	4 (—)	36	1	1	100
Institutional infrastructure	48	17	12 (7)	27	2	1	100
Factory establishment and management	65	2	23 (13)	19	3	1	100
Training	28	1	2 (1)	11	5	54	100
Feasibility studies	35	4	23 (3)	36	—	5	100
Agro-industries	17	19	5 (2)	52	2	7	100
Metallurgical industries	32	12	8 (4)	42	10	—	100
Engineering industries	19	9	9 (4)	60	6	1	100
Chemical industries	47	5	32 (29)	30	6	9	100
Total technical co-operation expenditure	34.4	10.3	14.9 (10.1)	35.8	4.2	10.5	100

<sup>a</sup>Figures in parentheses relate to African Arab States.

100. Technical co-operation activities related to industrial planning concentrated on: a comprehensive assessment of the progress of, and constraints to, industrial development at the sectoral and subsectoral levels; the identification of subsectors with development potential and comparative advantage; formulation of medium and long-range industrial master plans; preparation of subsectoral plans, particularly for the capital goods industry; industrial restructuring; formulation and/or modification of industrial policies and policy measures; strengthening of technical and institutional capabilities for industrial planning and development; and promotion of multinational and regional industrial co-operation.

101. Industrial development planning has become more and more commonplace in developing countries. Despite the efforts and resources devoted by these countries to a rapid industrial development, achievements have fallen short of expectations. As a result, the year under review witnessed an increasing number of requests for UNIDO assistance in the preparation of medium-term industrial master plans with long-term perspectives.

102. Under the industrial master plan project in Malaysia, the study and analysis of 14 industrial subsectors were completed.<sup>18</sup> These are to be supplemented by studies on industrial infrastructure, national endowment factors, industrial technology, research and development, inter- and intra-sectoral linkages, and industrial policies and incentive measures. The industrial master plan is scheduled to be completed in July 1985. UNIDO projects in the Ivory Coast and Mali provided similar assistance. Assistance continued to the Ministry of Commerce and Industry in Kenya<sup>19</sup> and a sectoral plan was prepared for the manufacturing sector as part of the country's Fifth National Development Plan (1984-1988).

103. In Cameroon, the second phase of a project to prepare the country's industrial master plan began.<sup>19</sup> During this phase, 38 sectoral studies will be undertaken, covering priority industries in the four key industrial subsectors, namely iron and steel, aluminium, petrochemical and wood and agro-industries. Other pertinent issues—spatial planning, promotion of manufactured exports, development of industrial infrastructure and transportation and distribution systems—will also be considered and detailed market analysis and projections for selected industrial products will be made for up to the year 2000. In Bolivia, expert services were provided to the Ministry of Industry in the formulation of industrial policies, and a number of projects related to industrial planning were under implementation in the Latin American region.

104. In view of the present global financial and economic situation, many developing countries sought UNIDO assistance in reorienting their industrial structures. In Thailand, UNIDO assisted the Interministerial Committee on Industrial Restructuring in examining the structure and performance of the automotive, mechanical, iron and steel, petrochemicals and textile industry subsectors.<sup>20</sup> Specific recommendations were made on the reorientation of the industrial strategy, policies and policy measures for strengthening the structure,

<sup>18</sup>ID/B/320, chap. III, para. 102.

<sup>19</sup>*Ibid.*, para. 101.

<sup>20</sup>*Ibid.*, para. 99.

### Chapter III

efficiency and viability of the subsectors concerned. The problems of industrial efficiency and higher productivity were also examined. A number of seminars were organized in the major cities to acquaint participants with the concepts and techniques of industrial restructuring and to seek their active involvement in the country's industrial restructuring programme. UNIDO also provided similar assistance in Guinea and the Ivory Coast.

105. Industrial consultancy services provided to Qatar under a trust-fund project focused on the diversification of the predominantly oil-based economic structure of the country, by promoting new industries. In Pakistan, UNIDO assisted the Ministry of Industry in the procurement, establishment and operation of a computerized data bank designed to store information for the formulation of industrial plans and policies at national level, and monitor the progress thereof. An analysis of the structure and performance of the textile industry in Pakistan has already been completed and results have been entered into the data bank.

106. In Latin America emphasis continued to be given to the programmed development of capital goods industries. In Mexico, a large-scale development programme<sup>21</sup> focused in 1984 on the reorientation of the capital goods programme to take account of the financial crisis and the restrictions imposed on new investments and imports. Particular attention continued to be given to strengthening existing production outlets. A detailed analysis was made of steel fabrication plants operating in Mexico, with recommendations for production streamlining, technology improvements and financial requirements. The capital goods project under implementation in Venezuela<sup>22</sup> concentrated on the formulation of global strategies for the development of the capital goods sector; the production of capital goods industries for the petroleum and electric sectors; a technical co-operation programme to manufacturers of equipment for the foundry, forging and steel industries; and the development of a technological information centre. The project also served as a focal point for inter-institutional co-operation and established links between public and private organizations dealing with capital goods either as policy makers, investors or producers. Similar projects were implemented in Pakistan and Turkey. A project was also initiated in Colombia.

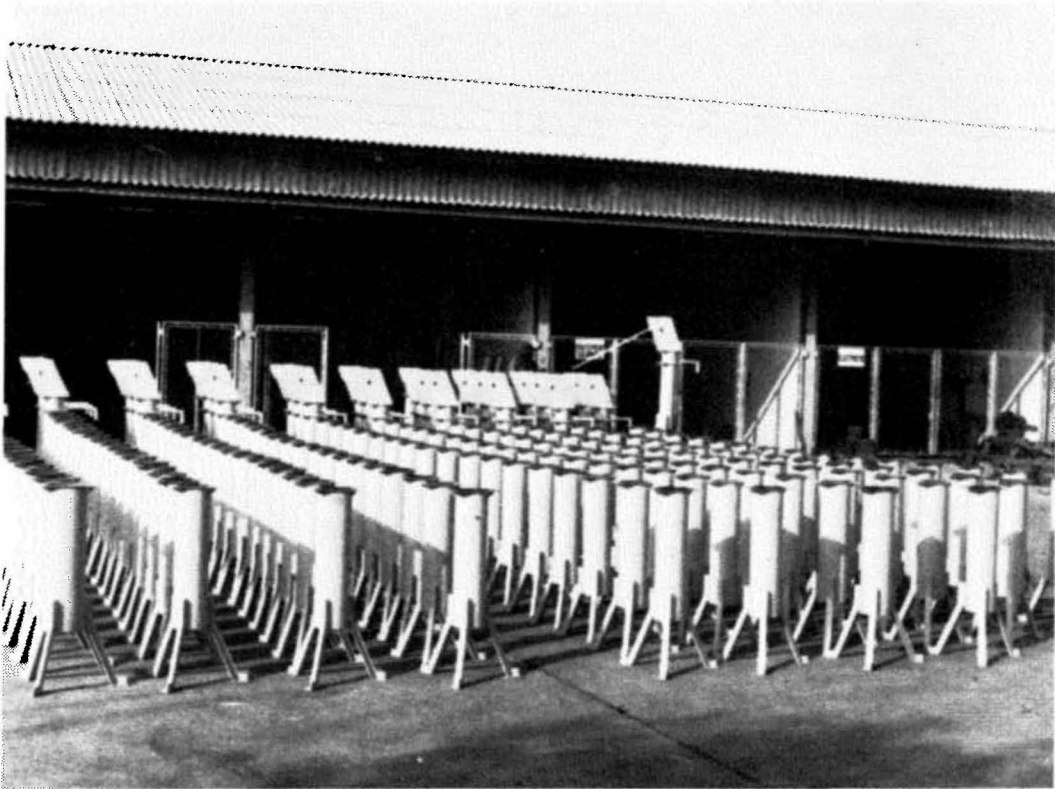
107. In order for industrial planning to be effective, it is imperative that the ministries and institutions concerned be in a position to manage the processes involved. Many developing countries suffer from insufficient co-ordination between the ministry of industry and other ministries and institutions involved in the implementation of the plan, in particular those responsible for trade, technology, manpower, infrastructure, utilities and the supply of agricultural and mining resources as well as financing institutions. In 1984 UNIDO assisted a number of developing countries in this area. In Mali UNIDO continued to assist in the preparation of an industrial master plan which will help strengthen the role of the Direction nationale des industries in planning and managing overall development of the industrial sector. A preliminary study was completed in the course of 1984 in preparation for a similar project in Guinea.

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<sup>21</sup>ID/B/300, chap. III, para. 105.

<sup>22</sup>*Ibid.*, para. 106





*Series production of hand-operated water pumps at EMAMA (Entreprise malienne de maintenance), Sikasso (Mali)*

108. Within the framework of the programme for the Industrial Development Decade for Africa, assistance was rendered to African countries in formulating integrated subregional industrial promotion programmes including multinational core industrial projects with investment potential. As a follow-up to the subregional meetings held in 1983 and early 1984 and financed from the \$1 million special allocation by the General Assembly for the Decade, assistance was extended to a number of regional organizations such as the Economic Community of West African States (ECOWAS), the Preferential Trade Area for Eastern and Southern Africa (PTA), and the Central African Customs and Economic Union (UDEAC), in project identification for key industrial subsectors and in strengthening subregional co-operation. At the national level—and also financed from the same special allocation—UNIDO co-operated with Governments in the organization of workshops on national industrial strategies for the Decade.

109. Regional and subregional co-operation is a prerequisite for the achievement of industrial development of most developing countries—particularly those in Africa—in view of their narrow and fragmented markets. In an effort to develop subregional co-operation, the West African Economic Community (CEAO) was assisted in the preparation of sectoral studies on glass container, fertilizer and iron and steel industries, with a view to examining the possibilities of creating viable industrial units at the subregional level within those branches.

Market studies were carried out and projections were prepared for periods ranging from 10 to 15 years. Some preliminary locations for the three industries were suggested, taking into account the need for an integrated structure for each industrial branch and the need to ensure a balanced distribution of the industries in the subregion. Similar assistance was rendered to UDEAC.

110. Assistance was also provided to a number of developing countries to promote industrial investment and development in selected regions or provinces. Following a detailed economic survey of six regions of Indonesia to identify development potential,<sup>23</sup> investment profiles were prepared for each of the regions concerned. Seminars were held in Jakarta and other areas to inform participants of the development opportunities available in the respective regions and seek wide support for the regional industrial development efforts in the country. In Thailand, assistance was provided in financial planning and control as part of the task of monitoring the implementation of the country's Eastern Seaboard Development Programme, within the framework of the country's fifth national economic and social development plan (1982-1986).

111. The integration of women in the industrial development and planning process continued to receive priority during 1984 and UNIDO organized three regional workshops in Harare (Zimbabwe)—in co-operation with the Government of Zimbabwe—for eastern and southern African countries, in Georgetown (Guyana)—in co-operation with the Caribbean Community (CARICOM)—for CARICOM member countries, and in Bangkok (Thailand)—in co-operation with ESCAP—for Asian countries. These workshops brought together policy makers and planners from Government and industry and representatives of women's organizations to discuss the roles and conditions of women in the industrial planning and development process. A wide range of issues were addressed and proposals and recommendations made for action at national, regional and international levels.

112. Substantive support in industrial planning was also provided through training workshops and seminars. Regional group training for Arab industrial planners was carried out in co-operation with the Arab Planning Institute in Kuwait. This co-operation—the first in the region—is expected to be further developed. Similar training programmes on industrial planning were organized in co-operation with the University of Economic Science at Berlin (German Democratic Republic) and in Tokyo in co-operation with the International Development Centre of Japan. The above training programmes were implemented jointly with the UNIDO Training Branch.

113. An expert group meeting on industrial planning was held in Kiev (USSR) in May 1984 for senior planners and economists from a number of countries in Africa, the Americas, Asia and the Pacific, Europe and the Middle East. During the meeting, ideas and experiences in the concepts, techniques and practices of industrial planning were exchanged and the draft guidelines for industrial planning in developing countries, currently under preparation by UNIDO, were analysed. The guidelines will be finalized in the light of the conclusions and recommendations of the meeting.

<sup>23</sup>ID/B/320, chap. III, para 107.

114. As a follow-up to the "Survey of the manufacturing industry in the West Bank and Gaza Strip" (UNIDO/IO.584) prepared by three UNIDO consultants,<sup>24</sup> an expert group meeting on the survey was held in Vienna in September 1984. Ways of improving the current economic conditions in the occupied territories were considered. The conclusions and recommendations of the meeting will form a basis for consideration of a plan of actions, designed to promote economic development, and improve economic conditions in the occupied territories.

115. Finally, a new type of project was developed in 1984 to assess the possible medium- and long-term environmental impact of industrialization. Contacts were established with the International Institute for Applied Systems Analysis (IIASA) in Laxenburg (Austria) where international scientists have already developed computerized models for environmental forecasting for larger, as well as for smaller, regions. Preparations are under way for the initiation of a project of this kind in India.

### INSTITUTIONAL INFRASTRUCTURE

116. In 1984, technical co-operation expenditures under the heading institutional infrastructure amounted to \$10.4 million. Some 90 per cent of the total implementation was financed from UNDP resources. A total of 132 projects were implemented or under implementation in 1984.

117. Institutional support services in developing countries are often very limited, and many countries have been obliged to purchase imported institutional services at considerable outlay of foreign exchange—a problem which has hitherto been underestimated. Similarly, UNIDO has been endeavouring to alleviate this problem. Through its technical co-operation projects, it has been assisting the Governments of developing countries in the establishment and strengthening of appropriate industrial service institutions to enable them to provide a broad range of upgraded services essential to the industrialization process. In providing such assistance consideration is given to the characteristics of each country and its industrial development programme. The institutions cover such fields as industrial research and development, industrial information services, standardization, quality control and metrology, product adaptation, small- and medium-scale industry development, rural industrialization and other special support programmes servicing industrial development including assistance to industrial fairs, chambers of commerce and industry and entrepreneurship development for industry. In all projects and activities, attention was given to the integration and direct participation of special population groups including women, youth and rural people.

118. Assistance to industrial research and development institutions was extended in 1984 to Argentina, China, Guyana, Libyan Arab Jamahiriya, Mexico and the United Republic of Tanzania. UNIDO continued to be involved as co-operating agency in a large-scale government-executed project to assist the Institute of Applied Science and Technology in Guyana in the fields of mineral technology and natural products chemistry.<sup>25</sup> The third phase of a

<sup>24</sup>ID/B/300, chap. III, para. 109.

<sup>25</sup>ID/B/320, chap. III, para. 118.

large-scale project for assistance to the Libyan Arab Jamahiriya in strengthening the research capabilities of the Industrial Research Centre was continued in 1984.<sup>26</sup> The project, which has a great impact on the overall industrial development of the country, is expected to continue through 1986 with substantial financial support from the Libyan Government. The Tanzanian Industrial Research and Development Organization received assistance under the second phase of a long-term project,<sup>27</sup> the main activities of which dealt with an energy conservation programme.

119. In the field of industrial information, 12 technical co-operation projects were under implementation in 1984 covering seven developing countries—Angola, Mongolia, Mozambique, Nepal, Nigeria, Sao Tome and Principe, and Togo—and the Arab Industrial Development Organization (AIDO).<sup>28</sup> Several new projects were initiated in the course of the year and preparatory assistance missions were undertaken to Lebanon, Portugal and Uganda; the second phase of assistance to the Federal Institute of Industrial Research<sup>29</sup> in Nigeria started at the end of 1984.

120. The benefits for industrial development that can be derived from a well-run industrial information centre were illustrated by a project in Angola where such a centre was established with UNIDO assistance. During the implementation phase, the centre started publication of a newsletter to keep enterprises and government institutions informed about its activities, documentation available and sources of information. The centre also published the first national directory of companies with more than 10 employees or capital exceeding 500,000 Angolan kwanzas.

121. During the year under review, UNIDO continued to support the establishment, development and strengthening of standardization, quality control and metrology activities in developing countries through the implementation of technical assistance projects at national, regional and international levels in Bhutan, Brazil, Democratic People's Republic of Korea, Ethiopia, Greece, India, Nepal, Nigeria, Pakistan, Peru, Saudi Arabia, Sri Lanka, Viet Nam and Zimbabwe. Projects aimed to assist developing countries to identify their needs and to create or strengthen the appropriate institutional, technical, legal and administrative infrastructure. All activities related to the standardization discipline—standardization, quality control, testing, inspection, certification and metrology—were covered. In some countries—particularly those in which suitable institutions, organizations or laboratories already exist—the UNIDO programme linked the activities of such institutions to a network or national system. A national system or network, aimed at the development and implementation of national policies in standardization, quality control, certification marking, etc., ensures the more rational use of available financial, technological and human resources.

122. UNIDO assistance in the field of standardization not only facilitated the introduction and expansion of standards in priority areas, but also encouraged

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<sup>26</sup> *Ibid.*, para. 114.

<sup>27</sup> *Ibid.*, para. 117.

<sup>28</sup> *Ibid.*, para. 119.

<sup>29</sup> ID/B/300, chap. III, para. 125.

the implementation of those standards and specifications in industrial and trading practices for the benefit of industry and trade, and the overall protection and well-being of consumers. In the area of quality control, testing, inspection and certification, UNIDO endeavoured to provide the necessary physical and technological bases, such as laboratory facilities and testing equipment for the definition of characteristics of products, with a view to their certification in compliance with either national or international standards.

123. UNIDO projects concerned with metrology involved the establishment of national metrology services, including laboratories and the provision of national primary, secondary and working-level reference standards. The national metrology systems and laboratories also covered the needs of industrial plants for reference standards, instrument repair and maintenance as well as calibration services. The implementation of a large-scale project in the Democratic People's Republic of Korea began in 1984 to assist the National Institute of Metrology of the State Committee for Science and Technology in the modernization, re-equipment and strengthening of testing laboratories as well as in the establishment of new laboratories.

124. During the reporting period, UNIDO also supported the participation of representatives of developing countries in technical meetings of the International Organization for Standardization (ISO). Under this project, candidates were sponsored from Brazil, China, Democratic People's Republic of Korea, Dominican Republic, Egypt, Ethiopia, India, Iran (Islamic Republic of), Ivory Coast, Malaysia, Peru, Philippines and United Republic of Tanzania to attend eight technical committee meetings of ISO concerned with the formulation of international standards in specific areas of interest to developing countries.

125. The UNIDO technical co-operation programme for the promotion and development of small- and medium-scale industries continued to cover a broad spectrum of activities ranging from advice to Governments on policies and strategies in institution building, to direct assistance to small- and medium-scale industries. Emphasis was given to an integrated approach, providing a comprehensive package of technical services and facilities to meet the specific assistance—technical, financial or managerial—required by the small- and medium-scale industry sector. Taking fully into account the particular conditions of small- and medium-scale industries in developing countries, assistance focused on (a) the establishment and/or strengthening of indigenous institutional mechanisms providing assistance to small- and medium-scale industries on a systematic basis, and (b) the delivery of technical assistance directly to small- and medium-scale industries, rather than through their respective support institutions. This type of aid covered general consultancy and promotional assistance as well as entrepreneurship development. Activities undertaken by UNIDO under this programme included the identification of economically viable projects and sources of financing, compilation of a list of potential entrepreneurs, the establishment and operation of industrial units, product design, technology and marketing counselling, training and extension services to upgrade small- and medium-scale industries.

126. Large-scale projects in Honduras and Mexico serve as an illustration of the integrated approach mentioned above.<sup>30</sup> The major achievement of the

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<sup>30</sup>*Ibid.*, para. 125.

Honduras project was to establish within the Industrial Development Centre a programme of loans to small-scale enterprises linked with delivery of technical assistance. For that purpose, a multi-disciplinary team of experts was set up within the Centre to diagnose problems encountered by entrepreneurs requesting loans and, once the loan is granted, assist in solving those problems. The combined technical and financial assistance is expected to result in a more selective loan policy, better use of loans and greater productivity. The monitoring of loans was further enhanced by the introduction of a computerized system. The project also concentrated on assistance to small-scale enterprises in rural areas selected as pilot cases in sectors with growth potential. The project in Mexico continued to consolidate efforts to promote and develop the small- and medium-scale industrial sector through policy measures and comprehensive strategies emanating from the highest levels of Government. Studies were undertaken by experts to explore the problems and gaps in development and an international workshop was conducted in which several concerned agencies examined and identified suitable mechanisms to improve collaboration and to mobilize as well as optimize resources.

127. Assistance continued to Kenya Industrial Estates.<sup>31</sup> Whereas technical co-operation during the initial years had concentrated on technical start-up support necessary for the organization to reach its full operational capacity, assistance is currently focused on the operation of small-scale industrial units. The Industrial Estate Authority of Thailand continued to receive UNIDO assistance, which was directed particularly towards the control of pollution and industrial effluent in the environment and waste disposal aspects. A new project assisted the Office de promotion de l'entreprise nigérienne in the consolidation of two of its departments: one for feasibility studies, promotion and implementation of new small- and medium-scale industries, and another for assistance to existing industries. As a result, 23 small-scale projects were under implementation, mainly in the building materials and agro-industrial sectors.

128. In Zambia, assistance continued to the Small Industry Development Organization to strengthen the institutional capacity of both headquarters and regional offices and enable the Organization to render extension services to small-scale industries and to provide techno-economic counselling to prospective industrial units. Following a survey of small-scale industries in Zimbabwe, a pilot project was initiated to improve the performance of those industries in selected areas, mainly through extension services and on-the-job training of entrepreneurs. If the programme is successful, it will be repeated in other regions of the country.

129. Small- and medium-scale industries need to have at their disposal information on product lines, technologies and processes, skill levels of the labour force, output levels, as well as structural characteristics of the sector as a whole and broken down into regions. Harmonization and standardization of data originating from various sources and their possible transfer to a microcomputer was one of the objectives of a similar project undertaken in Mexico.

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<sup>31</sup> *Ibid.*, paras. 30 and 126.

130. A project in Madagascar<sup>32</sup> to create favourable conditions for the development of small- and medium-scale industry was given greater impetus in 1984 through the fielding of consultants to study the statistical census of the sector from the point of view of management, financing, and transfer of technology. Finally, a consultant was sent to Nigeria to advise the Government on policy and strategies to be adopted. Once the consultant has completed his work and the recommended measures have been adopted by the Government, the sector will be restructured and it is hoped that there will be a marked improvement in productivity of the agro-based industries in particular. Concurrently, intensive seminars for local entrepreneurs and administrators of industrial promotion offices were successfully conducted in the country.

131. The Fourth General Conference of UNIDO stressed the importance of rural development of which rural industrialization is the prime catalyst. Rural industrialization concepts are receiving greater attention on the part of developing countries. There is a noticeable new trend towards more intensive and systematic valorization of locally available raw materials in rural areas in order to alleviate as far as possible dependency on imported raw materials.

132. To cope with problems such as rural unemployment and economic stagnation, activities in support of rural industrialization efforts concentrated on the creation of development poles in rural areas around which industries could be interlinked. Projects were developed to provide special facilities including training-cum-production centres for managerial and technical personnel, pilot and demonstration plants and mobile facilities for on-the-spot technical assistance. Mobile facilities were put into operation in Zaire and Zambia,<sup>33</sup> where a mobile workshop provided a repair and maintenance service for industrial machinery in isolated areas, resulting in increased productivity.

133. A new thrust was given in 1984 to UNIDO activities related to international industrial fairs, which provide—at relatively low cost—an opportunity of accelerating the transfer of technology to developing countries. Specialized workshops on technology or products were organized during fairs for participants from selected developing countries and advice given to visitors on emerging and appropriate technologies. The fairs also served as an occasion to establish useful contacts with potential partners, including engineering and consulting companies, government organizations and other exhibitors. Concepts for new projects were formulated and UNIDO activities promoted through press conferences and radio interviews. UNIDO participated in the International Foundry Fair “GIFA ’84”, Dusseldorf (Federal Republic of Germany) in June 1984, the International Poznan Fair, Poznan (Poland) also in June 1984, and the twenty-sixth International Engineering Fair, Brno (Czechoslovakia) in September 1984.

134. The lack of effective entrepreneurship constitutes a serious constraint to industrial development especially in those countries where potential entrepreneurial capabilities and capital are concentrated in small areas and groups of people. Technical co-operation in this field is aimed at the identification, mobilization and strengthening of indigenous capacities. Technical support was

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<sup>32</sup>ID/B/320, chap. III, para. 128.

<sup>33</sup>*Ibid.*, para. 129.



### *Chapter III*

provided in 1984 to national institutions to seek out prospective entrepreneurs and to organize special motivation programmes to help them develop the necessary skills. Assistance took the form of pre-investment studies, technical counselling and obtaining supporting facilities towards the actual setting up of industrial enterprises.

135. Special support was given to national development programmes aimed at stepping up the flow of business and technical know-how to entrepreneurs and operators in co-operatives and cottage industries. UNIDO projects in Dominica and Jamaica assisted in upgrading the productivity of tourist and export-oriented handicraft industries, while in the Philippines assistance was given to cottage industries. In response to requests, pipeline projects were under negotiation for the establishment of industrial crafts services centres in Afghanistan, Bangladesh and Burma.

136. Further satisfactory progress was made in 1984 on a project covering a regional network of non-destructive testing (NDT) institutions in Latin America and the Caribbean,<sup>34</sup> implemented in co-operation with the International Atomic Energy Agency (IAEA) as associated agency. Funds were made available for the new phase of the project by the Government of Italy.

137. With the aim of establishing domestic and international subcontracting exchanges in seven Arab countries, preparatory assistance missions were undertaken towards the end of 1984 to Algeria, Egypt, Iraq, Jordan, Morocco, Syrian Arab Republic and Tunisia. The immediate objective of these missions was to analyse the current situation and conditions in these countries and prepare a proposal for a large-scale, regional project.

## **FACTORY ESTABLISHMENT AND MANAGEMENT**

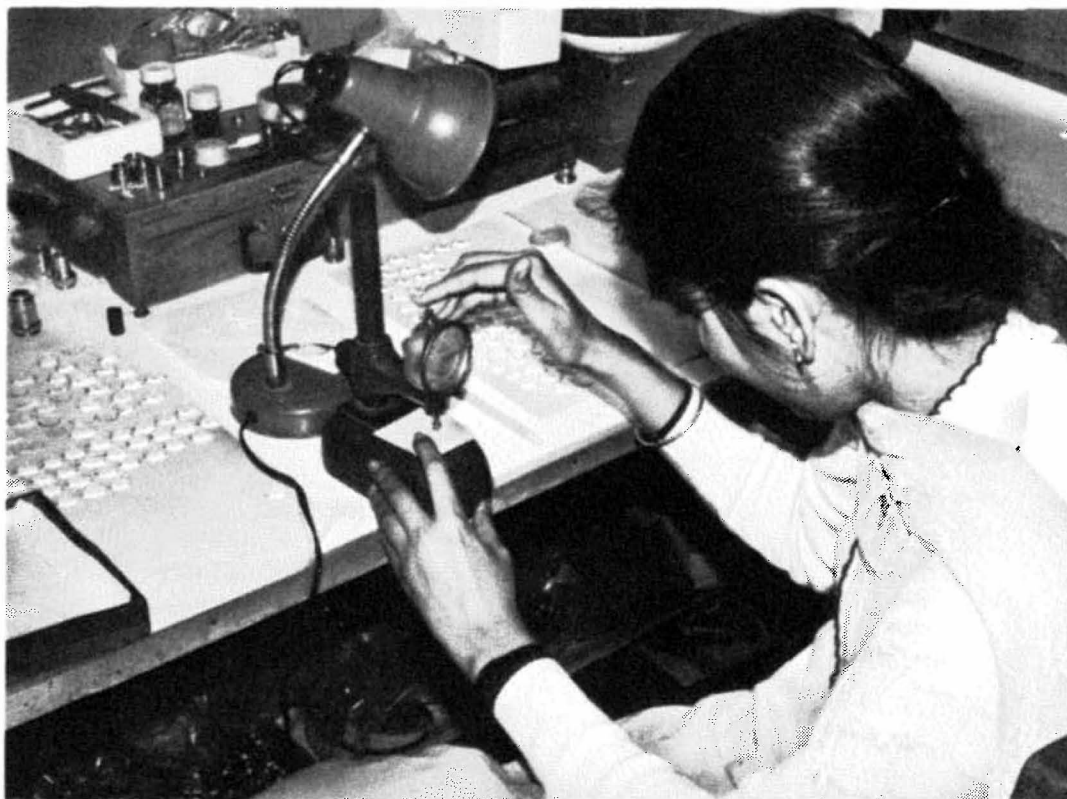
138. In 1984, technical co-operation expenditures under the heading factory establishment and management amounted to \$2.9 million. Some 90 per cent of the total implementation was financed from UNDP resources. A total of 50 projects were implemented or under implementation in 1984.

139. Despite various constraints which continued to affect implementation in 1984, the second half of the year witnessed a growing need for assistance in the fields of management, consultancy and rehabilitation, as demonstrated by the number of requests and newly approved projects. The new approvals should mean higher implementation in 1985 and an opportunity to embark more intensively on programmes oriented towards such areas as development of national consulting capabilities, computer utilization in management, increased productivity and efficiency particularly in least developed and African countries, and the rehabilitation of existing production facilities. It is hoped that the constraints encountered in 1984—reduction of project budgets or delayed signature of large-scale project documents, non-approval or delayed approval of non-UNDP funded projects—will largely be overcome in 1985.

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<sup>34</sup>*Ibid.*, para. 115.





*Calibrating sample lenses at the Instruments Design Development and Facilities Centre, Ambala (India)*

140. Overall trends continue to indicate the need by developing countries for self-reliance in management, business development, production and plant organization. These trends will be featured in future programming activities which will emphasize increased involvement of local institutions and organizations in the development of management as well as consultancy skills. It is also apparent that in certain fields such as training and research, universities can provide valuable support to industry. An effort is being made to involve universities in consultancy activities including the training of consultants and the development of consultancy activities within the universities themselves.

141. Despite interest expressed by many developing countries, efforts to provide assistance to improve construction and contract management for the establishment of factories have been largely hampered by financial constraints. In the face of limited availability of funds for larger-scale projects, a different approach to technical co-operation is currently being adopted, whereby seminars will be organized to tackle specific management problems, particularly in Africa.

142. Industrial management problems—which involve organization, production processes, equipment and plant maintenance, distribution, inventory control, financial management, marketing and distribution—have proven most intractable at the enterprise level, particularly in African countries, owing to a shortage of national expertise and other constraints. The situation has been further aggravated by the adverse world economic situation and the extreme shortage of foreign exchange available for spare parts and raw materials as well as by environmental difficulties including drought, which affect many of the agro-based industries. Industrial management projects have focused on minimizing the effects of these problems by undertaking selective action on priority enterprises or areas, thus contributing to the raising of capacity utilization, efficiency and skills.

143. Efforts directed to strengthening institutional capacities through direct assistance to government bodies met with marked success in 1984. In Somalia<sup>35</sup> and Malawi, assistance continued to the ministries of industry in improving the performance of industrial enterprises. Sectoral approaches to problems of management techniques continued to show positive results in several industries in the Sudan;<sup>36</sup> in addition to solving specialized production problems, project activities led to possibilities for further investment and expansion of the sectors concerned and the overall development of skills. The impact of these and other large-scale projects was further reinforced by national conferences and workshops which dealt with specific management problems.

144. In Zaire, a project to improve the financial management of enterprises is continuing its initial momentum, after a pilot phase in 1983-1984 which enabled the project to test management improvement tools and to prepare “management books” for different types of enterprises. In view of the results achieved so far, the Government has requested that 14 additional experts and consultants, including five national experts, be added to the project, and UNDP agreed to increase the budget accordingly to \$2.4 million. By means of a systematic approach to accountancy and to organizational problems the project will improve management procedures in a total of 22 State enterprises. In Mauritania, assistance provided under UNIDF financing has enabled the Ministry of Commerce and Industry to set up a comprehensive programme for industrial promotion in the coming years. The programme paves the way for two types of UNIDO activities: entrepreneurship development and management assistance to enterprises, with financing expected from both UNDP and the World Bank.

145. Priority was attached in 1984 to assistance to the developing countries in strengthening their capabilities in energy management and conservation and the efficient use of energy in industry. This assistance is of particular importance for the developing countries as it aims at reducing the heavy burden of imported energy on the balance-of-payments as well as on the production costs. The preparatory phase of a large-scale project for regional co-operation in the field of industrial energy in Europe was nearing completion at the end of 1984.<sup>37</sup> A project co-ordinator was engaged and visits to co-operating countries

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<sup>35</sup>*Ibid.*, para. 142.

<sup>36</sup>*Ibid.*, para. 143.

<sup>37</sup>*Ibid.*, para. 149.

were initiated to ascertain trends and needs in energy management in the region, to identify potential counterpart institutes and to define a programme of activities at overall and subsector level. These activities have been carried out in co-operation with the Economic Commission for Europe (see para. 96 above).

146. Two projects on energy conservation and management were initiated in Sri Lanka. The first project is providing energy measuring equipment for use by the principal energy-intensive industrial subsectors of the country as well as training programmes and consultancy services. The project has raised high expectations in the Government and among the industries concerned. It should play a catalytic role in the broader energy conservation programme for 1983-1987 presently being developed by the Government of Sri Lanka. The second project foresees the establishment of an industrial energy management unit at the National Engineering Research and Development Centre in Sri Lanka. A mobile unit, equipped with energy measuring instruments suitable for carrying out energy audits in a large number of industries will permit quick diagnosis and constant monitoring. In the Philippines<sup>37</sup> preliminary energy audits in 30 facilities have identified potential savings of \$5 million through the more efficient use of fuel. Micro-processor controlled test equipment was installed in the laboratory to test and certify air conditioners. Negotiations were undertaken with manufacturers to perform quality control tests and issue certificates of energy efficiency.

147. During 1984 new proposals for activities in the field of energy management were prepared for the African region in connection with the Industrial Development Decade for Africa. Energy-related activities are also being pursued in Thailand, Turkey and Viet Nam.

148. In the field of computer application, the rapid development of hardware which had led to an increased use and application of computers, has not been followed by the development of appropriate software for use in developing countries. Further efforts were therefore made to assist developing countries not only in the appropriate use of computers but, above all, in developing the capacity to design software. During 1984 activities involved both computer-specialized projects as well as assistance in the use of computers in projects dealing with overall improvement of management, capacity utilization and maintenance. One new computer-oriented project which may serve as a model for other countries was implemented in Barbados, where the Barbados Industrial Development Corporation was assisted in the use of micro-computers in order to improve the efficiency of its technical assistance in industrial management. A computer-based management information system was designed and a computer training programme for staff is planned for the future. Another project approved in 1984 on computerized decision aids for industrial management involved co-operation between UNIDO and IIASA in assembling computerized training tools to compensate for the lack of trained industrial management personnel in developing countries and adapting them for use on inexpensive, portable micro-computers. The first workshop on the dynamics of sustainable resource systems organized under this project in Hungary, September 1984, was designed to provide an introduction to methods of dynamic simulation and operational gaming as teaching and research tools. The workshop, which was attended by 30 participants from 18 countries,

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demonstrated a systems approach to high productivity, sustainable management of a region's resources and use of computers for teaching the principles of industrial management.

149. During 1984 the use of micro- and mini-computers as a management aid was extended to ongoing projects in other fields. In the Philippines a mini-computer was installed for a national data base showing energy consumption by 20 industrial sectors. The mini-computer will also be used for energy models and the design of rehabilitation programmes. In Somalia a micro-computer introduced for the training of counterpart staff will, upon completion of the project (see para. 143 above), be used for management applications. Micro-computers will also be introduced at several levels of management at a project in Zaire to improve the financial management of State enterprises (see para. 144 above), and a micro-computer has been ordered for use in a project in Democratic Yemen. Other computer-oriented projects were designed during the course of the year for Cuba, Fiji, Mexico and Sudan.

150. In-house activities in the area of micro- and mini-computers during 1984 included a series of control systems for project monitoring and demonstrations on project control. These were demonstrated to government officials from Bangladesh, Ethiopia, Somalia and Zaire. A system was developed for tracking procurement activity for technical co-operation projects backstopped by the Factory Establishment and Management Section. A business model was also developed for use on small micro-computers. The model simulates nine years of operations of manufacturing facilities and can be used for management training and operational analysis. Software models have been developed for use as training tools and for analyses of operational decisions at plant level.

151. There is a growing trend among developing countries to seek better use of already installed production capacity. In most cases this calls for an integrated approach encompassing rehabilitation programmes, upgraded management, increased productivity, development of new products or design. Current difficulties in maintenance, inadequate initial technology and shortage of skills as well as problems arising from a lack of industrial tradition and weak overall infrastructure for industrial development, require an appropriate mobilization of national resources complemented by UNIDO inputs in areas where experience is not on hand.

152. During 1984, a substantial number of countries, particularly in Africa, expressed interest in obtaining UNIDO assistance in the rehabilitation of industries. Whereas some of the problems experienced by the industrial sector have been dealt with through existing projects in a number of countries, the broader and more complex rehabilitation problems requiring additional inputs in terms of equipment, expertise and technology remain to a large extent unsolved owing to limited technical assistance funds, both from UNDP and UNIDO resources. As illustrated in the following paragraphs, a number of rehabilitation projects were nevertheless initiated in Africa.

153. In Senegal, a relatively small project resulted in an interesting change both on the management/marketing side and in the technical organization of the shipyards in Dakar (about 1,500 employees). Recommendations resulted in a large increase in productive working hours by the technical and management

staff, as well as a better use of the existing investments in machinery and in infrastructure. Based on experts' reports terms of reference were prepared which will be used for the proposed inclusion of the shipyard in a World Bank-financed rehabilitation project for State enterprises in Senegal.

154. A successful project in Somalia closely involving national management brought about all-round improvements in the operation of SOMALTEX, the only textile factory in the country. SOMALTEX plays a crucial role in the Government's policy of encouraging import substitution and economizing badly needed and scarce foreign exchange; the Government has invested considerably in terms of equipment, financial and human resources. UNIDO originally provided consultancy services to assist primarily in the introduction of new types of fabric, but other technical and production management problems affecting the capacity utilization and productivity of this factory have since been identified. As a result the Government further requested UNIDO to draw up an effective production management system and arrange suitable training programmes for the factory's technical and management staff.

155. Experience has shown that institutional projects to help industrial development centres in least developed countries do not always result in the anticipated establishment of factories. A new approach was adopted in Mali. Assistance was extended to the Centre d'études et de promotion industrielle (CEPI) to make better use of its human resources (industrial engineers and economists) by working directly with the existing factories to solve urgent problems, and by a team approach to the creation of new industries. In Sierra Leone a fruit processing factory which had been encountering continuous problems in the production of jams and jellies of acceptable quality, was assisted in its rehabilitation programme.

156. A number of projects in the field of industrial consultancy were successfully implemented and urgent requests for assistance were met. Efforts to develop local consultancy capacities continued not only at the national level but also at the regional level where—as a consequence of UNIDO preparatory actions—further activities were approved for financing by UNDP in Asia. The regional project will aim at the mobilization of co-operation of the countries concerned in such areas as training, research and exchange of information on industrial consultancy through the closer involvement of established national or regional institutions rather than the establishment of new centres or institutions. Similar programmes are planned for Africa.

157. Short-term industrial consultancy services are being provided to Egypt in numerous fields under an umbrella-type project. A pool of international experts has been involved in strengthening specialized functions at the Ministry of Industry, developing products for export, eliminating obstacles at the plant level and advising on marketing. Emphasis is simultaneously placed on training. Under another project, experts provided through UNIDO by Spain free-of-charge continued to develop local consultancy in Uruguay.

158. In co-operation with the University of Aleppo, assistance was provided in the development of an integrated industrial consultancy programme for the establishment and management of factories in the Syrian Arab Republic. Technical meetings were held at the University, which had encountered

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problems in implementing a system plan for data base, and explanations were given on the design of data base specifications. It was agreed that a subcontractor would finalize the system plan, preparing programme logic, input/output forms, and input instructions. In Mauritius the need was recognized to establish a consulting group to aid industrial enterprises in solving problems connected with plant management; consequently, a mission will be undertaken in 1985 by a UNIDO staff member to accommodate the needs of the manufacturing sector of the Mauritian economy. This will be a follow-up to an ongoing project which had previously included a university course to improve production techniques and accounting systems.

## **TRAINING**

159. Expenditures for fellowships and training components in all technical co-operation projects implemented by UNIDO in 1984 amounted to \$11.7 million. Of that total, \$6.3 million were spent for fellowships and study tours and \$5.4 million for group training activities and meetings. In 1984, technical co-operation expenditures under the heading of training which received substantive backstopping from the Training Branch amounted to \$5.7 million. Some 15 per cent of the total implementation was financed from UNDP resources. A total of 196 projects were implemented or under implementation in 1984.

160. As in previous years, fellowships and study tours continued to be an effective component of the technical co-operation activities of UNIDO. The number of individual training programmes initiated in 1984 was 4.8 per cent higher than in 1983 (1,278 compared to 1,220), while the number of placement arrangements by host countries was higher by 11.1 per cent compared with 1983 (2,166 compared to 1,949). Of these placements, 448 or 20.7 per cent were arranged in developing countries, thus contributing to technical co-operation among developing countries. A total of 167 (13.1 per cent) of the trainees came from least developed countries and 141 (11.0 per cent) of the trainees were female. The trend towards study tours for high-level industrial personnel continued upward.

161. Ninety-six in-plant and other group training programmes with a total of 1,764 participants were implemented during the year under review. Of the 1,764 participants, 495 came from least developed countries and 178 were female. Forty-one of the 96 programmes were carried out in developing countries (1983: 32), i.e. more than 43 per cent of all group training programmes conducted by UNIDO.

162. Field operations continued to suffer from shortage of funds. Thus, while the number of field projects remained about the same as in the past years, both the total value of approved projects and project delivery declined in 1984. At the same time the number of approved small projects increased and the number of approved large-scale projects decreased.

163. Under the programme to establish "centres of excellence", activities during the year under review continued to focus on building up existing institutions in developing countries to serve as training centres (see

paras. 36-38 above). Transfer of training capacities in the field of production management techniques from the University of Louvain in Belgium to the University of Douala in Cameroon (Higher School for Economic and Commercial Sciences) met with unprecedented success.<sup>38</sup> During 1984 the University of Douala assumed almost full responsibility for the implementation of the project which covered aspects relating to institution building, the training of trainers, industry/university linkage and repair and maintenance. The Government of Cameroon agreed to share its national training capacities and capabilities with other French-speaking African countries as well as Lebanon in an effort to stimulate the potential of those countries to set up and organize their own institutional and on-the-job training programmes.

164. Special emphasis was given to the training of trainers in the course of in-plant group training programmes carried out in the field of grain milling and storage in the Union of Soviet Socialist Republics as well as in maintenance and repair projects for diesel engines in Czechoslovakia.

165. Satisfactory results were achieved in 1984 by a number of other large-scale projects including projects in Gabon, Ivory Coast and Nigeria. In Gabon, a subregional, multi-sectoral Institute of Applied Technology, Planning and Project Evaluation was established to train government officials as well as technical and managerial personnel of the Central African Customs and Economic Union (UDEAC). In the Ivory Coast, the Government is making a direct contribution of 70 per cent of the total cost of a large-scale project to strengthen the Centre ivoirien de gestion des entreprises which organizes training courses and provides consultancy services in the field of industrial management.<sup>39</sup> Under a project to assist the Centre for Industrial Research and Development in Nigeria, training courses and seminars were organized for small-scale industrialists and others interested in the development of small-scale industries.

166. The Governing Council of the Association of African Development Finance Institutions (AADFI) met in Tunis (Tunisia) in May 1984 to approve a five-year training programme for African development finance institutions (DFIs). The programme, which is intended to foster co-operation among DFIs at the national, regional, subregional and interregional levels, contains elements relating to institution building and the training of trainers. Five institutions were identified in 1984 as potential host institutions for implementation of the programme. UNIDO is co-operating with AADFI to elicit the interest of potential donors and obtain future financing for the programme. So far, UNIDO has assisted the Economic Development Institute of the World Bank in organizing group training programmes on development banking in Abidjan (Ivory Coast) and on small-scale industries in Arusha (United Republic of Tanzania) and Dakar (Senegal).

167. Greater attention was given to the identification of industrial training needs. Activities undertaken in this context involved participation in the design and promotion of large-scale projects for which countries had been able to secure loans from the World Bank, including a rehabilitation programme for

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<sup>38</sup>ID/B/300, chap. III, para. 159.

<sup>39</sup>ID/B/320, chap. III, para. 158.



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the sugar industry in the Sudan and the extension of the industrial training and development centre in Turkey. UNIDO also co-operated with the Government of Turkey in assessing training and manpower needs with the aim of establishing a technological and manpower development centre for the iron and steel industry. It is envisaged that such a centre would gradually be expanded into an interregional centre. In co-operation with the International Center for Public Enterprises in Developing Countries (ICPE), a group training programme was organized in Ljubljana (Yugoslavia) for managers of public enterprises responsible for manpower planning and the assessment of training needs. In Latin America, a mission fielded to selected countries identified training needs in the field of repair and maintenance.

168. Following an exploratory mission to Bolivia, carried out in 1983, a project was developed to establish a training centre for meat and dairy products processing which will also serve member countries of the Andean group. The project is expected to become operational in 1985.

169. In the field of energy management, group training programmes were held in the iron and steel, cement and glass sectors, the latter in co-operation with the International Labour Organisation (ILO). UNIDO also co-operated with the Government of the Philippines in the organization of a seminar on energy efficiency in Manila (Philippines) for participants from least developed countries. In view of the success achieved, the seminar will be repeated in 1985.

170. In support of the Transport and Communications Decade for Africa (1978-1988), training programmes were once again organized in the field of repair and maintenance of railroad equipment. These programmes were organized in co-operation with the Union of African Railways (UAR) in Ivory Coast and Burkina Faso and were held separately for French- and English-speaking participants. An in-plant training programme in the field of repair and maintenance of small- and medium-sized ships was held for French-speaking African participants in Belgium.

171. Within the framework of the Industrial Development Decade for Africa, a regional project of assistance to African countries and institutions in the development of sectoral/functional industrial manpower training activities was developed and implemented. Two African countries—Egypt and Nigeria—were selected on a pilot basis to host training programmes for some 25 African managers engaged in foundry, sheet metalworking and leather industries in 1985. Proposals were made for a five-year plan of intra-African co-operation and training. Other specialized training programmes will be offered in the near future in different industrial sectors to enhance the role of existing training institutions in Africa.

172. A special training programme was developed for managers of management training institutions in least developed countries in Africa. Further activities to assist least developed countries included group training programmes in foundry operations and the industrial utilization of medicinal herbs, conducted in Turkey and Romania respectively.

173. During the year under review, renewed efforts were made to enhance the role of women in the industrialization process. A joint workshop was organized



in Austria by UNIDO and the International Research and Training Institute for the Advancement of Women (INSTRAW) for women entrepreneurs, aiming at the design and development of a modular curriculum for training of female industrial managers. A large-scale project to develop a training centre for women entrepreneurs in Indorra (India) was developed and is currently under consideration by the Indian Government and the United Nations Development Programme.

174. The entire spectrum of UNIDO training activities has been under review since August 1984, to take into account the directives contained in the resolution of the Fourth General Conference<sup>40</sup> on the accelerated development of human resources for industrial development. A reflection of those views is already to be found in many of the training activities reported above.

### FEASIBILITY STUDIES

175. In 1984, technical co-operation expenditures under the heading feasibility studies amounted to \$4.3 million. Some 80 per cent of the total implementation was financed from UNDP resources. A total of 69 projects were implemented or under implementation in 1984.

176. The Feasibility Studies Section continued its efforts to upgrade national skills in the application of advanced methods and techniques for project preparation, evaluation and financing by conducting training seminars. Five of the eight seminars organized in 1984 were at the national level—in Cuba, Ethiopia, Madagascar, Sudan and Togo—and destined for local personnel from development banks, consulting firms, industrial promotion centres, training institutions, ministries of industry and planning and other governmental institutions involved in pre-investment activities. Whenever possible, local lecturers were engaged to present topics specific to the situation of the country. In the Sudan, for instance, the techniques used by Islamic banks in financing of investments projects were illustrated.

177. A four-week regional training seminar within the framework of the Industrial Development Decade for Africa was carried out in Guinea-Bissau for participants from Cape Verde, Guinea-Bissau and Sao Tome and Principe. The participants, representing ministries, development banks and other governmental institutions, were trained in advanced methods and techniques of project identification, preparation, evaluation and financing. A case study based on local conditions in Guinea-Bissau was used to illustrate the complexity of the problem. The seminar was conducted in Portuguese and a lecturer was provided by Brazil within the framework of the programme of economic co-operation among developing countries (ECDC). Another regional training seminar on the financial and economic evaluation of industrial investment projects was organized in Togo for international personnel of the West African Development Bank. Emphasis was placed on financial techniques, methods of drawing up financial plans and the promotion of industrial projects. An interregional training seminar—the third in a series co-financed by the Government of Poland and UNIDO—was organized in Warsaw on the same subject.

<sup>40</sup>ID/CONF.5/46, chap. II, sect. B (ID/CONF.5/RES.1).

178. The Computer Model for Feasibility Analysis and Reporting (COMFAR),<sup>41</sup> which is based on the widely used *Manual for the Preparation of Industrial Feasibility Studies* (ID/206), witnessed further positive development in 1984. It can now be installed on selected personal computers currently available on the market. The application of the software was demonstrated to the delegations participating at the Fourth General Conference; Governments, financial institutions and consulting firms have ordered the software for their own use. Invitations have been received from several Governments, banks and consulting organizations for demonstrations of COMFAR. By the end of 1984, 13 COMFAR systems had been installed in a number of countries including Congo, Ethiopia, Germany, Federal Republic of, Guyana, Indonesia, Madagascar, Pakistan, Turkey and Zambia. Over 20 orders for its installation in 1985 have been received from countries such as Bolivia, the Democratic People's Republic of Korea, Iraq, Mexico, Mongolia, Peru, Saudi Arabia, Sri Lanka, Sudan, Togo and several industrialized countries. Preparations have been made for the enlargement of the COMFAR programme to cover national cost/benefit analyses and a graphic display system. Translation into the six official languages of the United Nations is expected to be made.

179. Training courses on the use of the COMFAR system were held in Ethiopia, Guyana, Indonesia, Madagascar, Thailand and Zambia. A special course was organized at UNIDO headquarters for the training of trainers who will be involved in future COMFAR courses in developing countries.

180. UNIDO persisted in its efforts to promote the quality of pre-investment studies to encourage direct investment by both foreign and domestic parties. Co-ordination of activities within UNIDO has improved the management, and reduced the costs, of pre-investment studies and made it possible to provide an optimum service to Governments. Among the pre-investment activities carried out in 1984 for the least developed countries were advisory and project identification missions to Benin, Burundi, Guinea, Haiti, Rwanda, Togo, Uganda and United Republic of Tanzania. The missions elicited several requests for the installation of the COMFAR system and for seminars on project identification, preparation and evaluation. Advice was sought by some countries on the conduct of feasibility studies for potentially promising investments.

181. The links between technical co-operation and investment activities as well as the contribution of pre-investment studies to investment decision-making and investment follow-up were discussed at an inter-agency meeting on investment promotion held in Vienna in October 1984. The meeting, organized by UNIDO following a decision of the Administrative Committee on Co-ordination Consultative Committee on Substantive Questions (Operational Activities), was attended by 11 specialized agencies and United Nations organizations. It provided for the first time an opportunity for professional staff, directly concerned with pre-investment studies and the monitoring of investment potential in technical co-operation projects, to exchange experience in technical aspects of their work.

182. A large-scale project continued in Indonesia to assist in the identification, preparation and implementation of industrial projects in selected

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<sup>41</sup> ID/B/320, chap. III, paras. 180-182.

regions.<sup>42</sup> In spite of difficulties common to developing regions—lack of infrastructure, remoteness from industrially more developed urban areas, shortage of labour, and inexperienced entrepreneurs—the project made good progress in the promotion of industrialization in the provinces. Three industrial plants were established in 1984 while others are under construction. A suitable methodology was established for the preparation of pre-investment studies together with entrepreneurs and a procedure introduced for the systematic screening of industrial projects. The result was high efficiency in the processing and implementation of individual industrial projects. At the tripartite review meeting held in September 1984, it was decided to extend the project beyond 1986 with a budget of approximately \$3 million.

183. A similar project in Thailand put into operation in 1983,<sup>43</sup> with the aim of decentralizing industry from the metropolis to the north-east region of the country, achieved success in four provinces, in view of which the Government is considering extending the project for a further two years to enable 14 provinces to be covered. The training of national staff has begun so that eventually the Ministry of Industry will be in a position to provide the services now offered by the project.

184. Assistance to the Foreign Investment Advisory Committee in Sri Lanka aimed at strengthening the Committee's capabilities in project preparation and appraisal and investment promotion as well as improving efficiency. The third phase of assistance to the Greater Colombo Economic Commission started in 1984 with similar objectives. The Greater Colombo Economic Commission is an autonomous agency responsible for all capital investment within the investment promotion zones, while the Foreign Investment Advisory Committee approves investment projects outside those zones. As a result of investment promotion activities (better quality pre-investment studies, improved administrative services to applicants and investors and establishment of wide international contacts, including the utilization of UNIDO's Investment Promotion Services) the flow of capital to Sri Lanka is expected to increase. Effective co-ordination of the two projects has ensured an integrated approach to industrial development both in the investment promotion zones and the rest of the country. UNIDO also provided technical assistance to Cyprus in establishing an export processing zone for the purpose of promoting further investment. As was the case in Sri Lanka, it was necessary to encourage participation of domestic companies in and around the zone.

185. In Sierra Leone, UNIDO carried out a feasibility study for the modernization, expansion and diversification of the National Workshop, which is the only metal-working facility in Sierra Leone manufacturing simple tools, machines and spare parts for agriculture, building, mining, automotive and other industries. The feasibility study—financed under a UNIDF special-purpose contribution—determined the scope of the National Workshop's proposed modernization and expansion and presented a bankable investment project. The Government changed the legal status of the National Workshop, converting it to a limited liability company with mixed public and private capital. Foreign and national investors have shown interest in financing the project.

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<sup>42</sup>*Ibid.*, para. 188.

<sup>43</sup>*Ibid.*, para. 187.

186. A large-scale project was initiated in 1984 for Madagascar involving the preparation of a number of industrial pre-investment studies. The chief technical adviser of the project—a locally recruited national expert—is assisted by international consultants, and local consulting firms are also participating in the preparation of pre-investment studies. In order to involve the staff of the General Directorate of Planning in the preparation and evaluation of the pre-investment studies, a four-week training course was organized for more than 40 participants to up-grade local skills and abilities in the financial and economic evaluation of investment projects. Six officials will be directly involved in the financial and economic analysis of the studies. They were trained in the application of the COMFAR programme which will be used for the pre-investment studies. In Mali, a feasibility study on the production of solar equipment was finalized at the request of the United Nations Sudano-Sahelian Office. In the long run, the project could result in less dependence on imports in the field of energy and promote the exploitation of national renewable energy resources, particularly solar energy.

187. In Panama, UNIDO experts supported by seven national consultants, systematically screened the various industrial subsectors for potential investment possibilities. The use of local consultants has proven to be of great value to the international experts as they are in a better position to obtain the required facts and figures. Moreover, local consultants will also assist in the training of counterparts which is an essential feature in technical co-operation projects.

188. In the United Arab Emirates, assistance continued to be provided to the Emirates Industrial Bank which was established in 1982. The advisory services provided by UNIDO concern almost all facets of its activities, from management and procedural arrangements to project appraisal and industrial promotion. Assistance continued to the Ministry of Industry and Electricity of Saudi Arabia and advice was given on industrial policy and strategy and on the identification and evaluation of industrial projects.

### AGRO-INDUSTRIES

189. In 1984 technical co-operation expenditures under the heading agro-industries amounted to \$9.7 million. Some 70 per cent of the total implementation was financed from UNDP resources. A total of 158 projects were implemented or under implementation in 1984.

190. Projects carried out in the agro-industries sector covered the following light industries: wood products and processing including timber engineering; textile production and garment making; food-processing and agro-industrial complexes; leather and leather products; and rubber products and packaging. These industries play an important part in rural development, the use of natural resources and the employment of women and thus contribute significantly to broadening the economic bases of developing countries. The development and transfer of technology and the development of human resources are priority areas for UNIDO's activities in the field of agro-industries.

191. The wood and wood products industries continued to benefit from smaller projects designed to provide highly specific technical assistance. These covered both the structural and non-structural fields and were mainly funded through SIS or UNIDF. Further assistance was given to countries in Africa within the framework of the ECA/FAO/UNIDO Forest Industries Advisory Group for Africa.<sup>44</sup> In Latin America, continued interest in the UNIDO low-cost modular prefabricated wooden bridge system resulted in new projects in Nicaragua and Peru.<sup>44</sup> In Asia and the Pacific, demonstrations were made of the structural use of coconut wood and rubber wood and model houses were built in the Philippines using coconut wood. A second demonstration project was approved to develop prefabrication techniques using coconut wood in Quezon Province (Philippines). In the non-structural applications of wood, UNIDO helped to reactivate existing factories both in Africa and Asia, and initiated a technical survey of the furniture industry in Guyana.

192. As in the past, specialized training courses were a useful vehicle for the provision of technical assistance to the wood and wood products sector.<sup>45</sup> These were financed from special-purpose contributions and organized by various specialized institutes. In 1984, a technical course on timber structures was held for participants from Latin America—the first of its kind for Spanish-speaking countries—consisting of two weeks' theoretical training in Costa Rica followed by one week of study visits to the UNIDO-assisted workshop for the manufacture of bridge components and various bridge sites in Honduras.<sup>46</sup> A training course on timber engineering for countries of Asia and the Pacific was held in May 1984 in New Zealand, in conjunction with an international Pacific timber engineering conference. The annual seminar on Furniture and Joinery Industries hitherto held in Finland, was held for the first time in 1984 in a developing country, namely Mauritius; a technical course on criteria for the selection of wood-working machines was held in Milan (Italy) for the fifth time. The large number of candidates nominated is indicative of the positive response to the training courses. Material for use in these courses is continually being revised, improved and updated and is often reproduced for general distribution. Guides to documentation and information systems for furniture and joinery plants in developing countries are being prepared, as well as new manuals, on a simple prefabrication method for wooden houses and on the UNIDO prefabricated bridge system.

193. The majority of projects in the textile and garment-making sector were, as in the past, large-scale projects. In 1984, 10 large-scale projects, all financed by UNDP, were under implementation in Bangladesh, Egypt, India, Sri Lanka, United Republic of Tanzania and Viet Nam. Nine of these were concerned with the establishment or strengthening of institutions to serve the industry following the trend towards indirect assistance which has emerged in recent years. All other projects in this sector were related to direct assistance to the industry.

194. A diagnostic study on the restructuring needs of the Argentine textile industry was completed in 1984. A seminar organized jointly by UNIDO and

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<sup>44</sup>*Ibid.*, para. 200.

<sup>45</sup>*Ibid.*, para. 201.

<sup>46</sup>ID/B/300, chap. III, para. 187.

the International Institute for Cotton in Manchester (United Kingdom) in April 1984 demonstrated the application of computer programmes to establish knitting parameters. In order to share the new technique with cotton-knit manufacturers in developing countries, regional workshops were conducted in Coimbatore (India) and Mexico City (Mexico), funded by a special-purpose contribution from the United Kingdom.<sup>47</sup> Preparations were made for a third workshop scheduled to take place in Brazil in 1985. While the computerized predictive model is a useful tool for production management in the cotton-knitting industry, it requires accurate control of all processing stages. The stringent quality control measures that have to be introduced by manufacturers wishing to avail themselves of the new technique should, in turn, enhance the competitiveness of the cotton-knitting industry in developing countries. In Sierra Leone, assistance provided to the Sayenu Garment and Manufacturing Company under the SIS programme has enabled the company to operate as an independent and viable enterprise. The project may be followed up by a study on local substitutes for the raw material used in yarn production, hitherto imported (see chap. II, para. 27).

195. In the food-processing subsector, priority was given in 1984 to the planning of large-scale projects, particularly those which supported the development of technology or encouraged co-operation between developing countries. In order to make optimum use of available agro-based raw materials and to improve factory utilization, a programme was designed for the production of rubberseed oil, for human consumption as well as for technical uses, involving an important research and development component. The *Balanites aegyptiaca* utilization programme in the Sahel was completed in 1984,<sup>48</sup> and will be followed up in 1985 by the establishment of a commercialization scheme in the Sudan. The product and process development work on the detoxification and de-allergination of castor beans was completed.<sup>49</sup> The new technology along with relevant analytical control units is now being demonstrated in connection with commercial industrial operations including large-scale tests of animal fodder. Considerable effort was involved in planning a large project to assist the grape-processing industry (wine, brandy and other products) of Bolivia and in preparatory assistance aimed at rehabilitating the agro-industries of Guinea. Both programmes involve close relations with FAO and the World Bank. In co-operation with the United Nations Fund for Drug Abuse Control, a project was initiated in Peru to develop the food industry as a support to the programme of drug plantation eradication. Technical assistance to food processing research and development and quality control continued in Argentina, El Salvador and Ecuador.

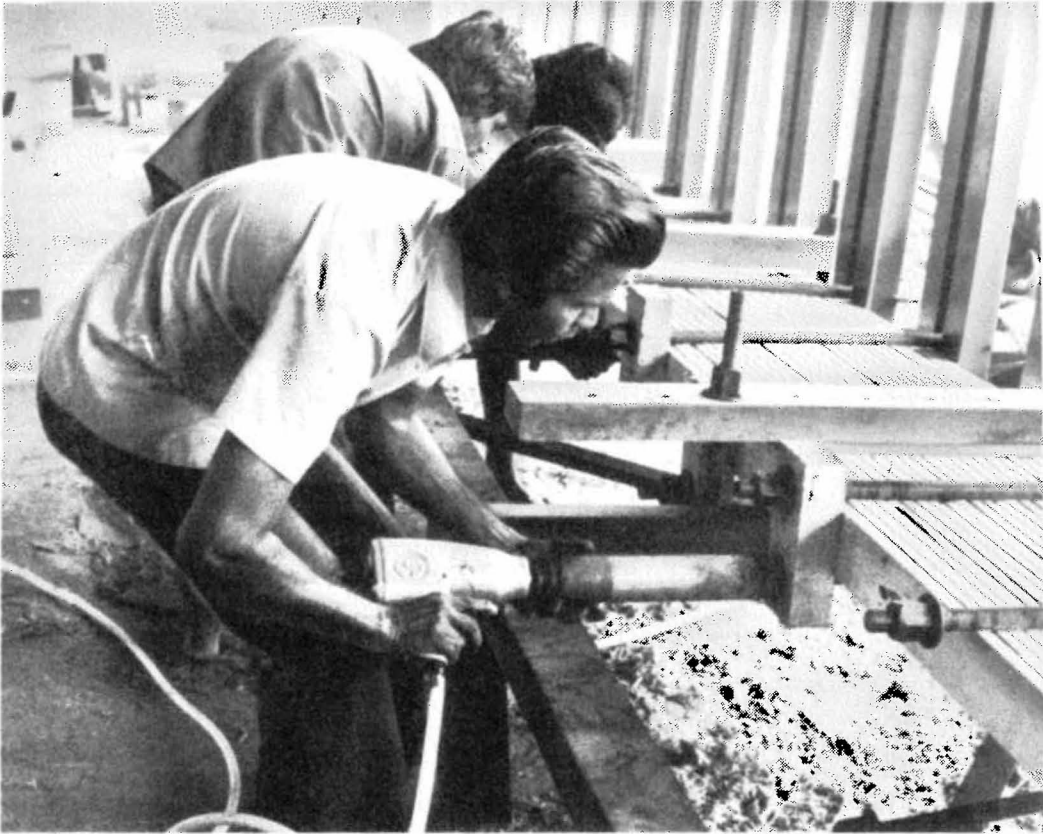
196. As an example of technical co-operation among developing countries, Brazil provided expert assistance in the setting-up of integrated agro-industrial complexes for the production of a variety of food items in Angola, El Salvador, Guinea, Mozambique, Paraguay, Senegal and Sierra Leone. Projects were also implemented in co-operation with regional and subregional organizations such as the West African Economic Community (CEAO) which has created a special branch in its secretariat to deal with agro-industries.

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<sup>47</sup>ID/B/320, chap. III, para. 204.

<sup>48</sup>ID/B/300, chap. III, para. 195.

<sup>49</sup>ID/B/320, chap. III, para. 208.



*Manufacturing glued-rubberwood beams, Horana (Sri Lanka)*

197. Progress was made in 1984 on a number of projects to rehabilitate food-processing industries in Angola, El Salvador, Mexico and Mozambique. A study for the African region on the establishment of an industrial plant to produce cereal products by extrusion was completed in 1984, and UNIDO is currently investigating the possibility of setting up the factory in one of the CEAO member countries within the framework of the Industrial Development Decade for Africa. UNIDO activities in the agro-based product and process development sector—financed primarily by UNIDF—continued to receive world-wide interest and, as a result, there is a tendency towards expansion. This aspect was highlighted at the Second Consultation on the food processing industries held in Copenhagen (Denmark) in October 1984.

198. Technical assistance activities in the leather and leather products sector—within the scope of limited financial resources—were directed in 1984 towards an integrated programme approach to maximize the potential of the leather and leather products industry in developing countries, as recommended by the UNIDO Third Consultation on the Leather and Leather Products Industry, convened in Innsbruck (Austria) in April 1984.



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199. In several countries, a number of large-scale projects in the field of leather, leather products and rubber products reached the final stage of implementation in 1984, contributing to the better utilization of domestic resources and an increased share of value-added products. An evaluation is currently under way of the outputs of large-scale projects of technical assistance to the leather and leather products sector in the United Republic of Tanzania. Positive results have already been shown by projects in China, Pakistan, Philippines, Sri Lanka and Kenya.<sup>50</sup> Based on this experience, a project is now under implementation to expedite the start-up of a tannery in Burundi. A number of small-scale projects to solve specific technical problems related to the leather and leather products sector were completed in 1984. One such project in Democratic Yemen involved the use of surplus raw sheepskins. A study on the viability of the intended scheme proved to be positive, and it is hoped that the Government may decide to set up a small processing plant.

200. Good progress was made in 1984 by a number of projects related to the packaging industry. Under a large-scale project to establish a national food packaging centre at the Institute of Food Technology at Campinas (Brazil) fellowships and study tours were arranged and experts' services and equipment delivered. Complementary activities are being sponsored by the Interamerican Development Bank. Packaging projects in Jamaica and Turkey, concerned with the strengthening of packaging research and development centres involved a number of high level fellowships in specific fields of packaging science and technology; delivery of laboratory equipment for research and development purposes also took place.

201. Specialists in the economics, industrial production and standardization of paper, board, plastics, metals and glass packaging were engaged in an analysis of the packaging industry in Mexico. Their recommendations will be studied in the light of national development priorities and parameters, and a final study undertaken of the technical, legal and fiscal measures which could be taken by the Government to promote and support an integrated development of the national packaging industries. A packaging project in Mali introduced a less expensive packaging system for locally produced fruit juices, thus reducing the price of the fruit juices on the market by approximately 40 per cent as compared to 1981. The project is currently seeking to improve the pasteurization process.

202. Assistance related to the establishment of the Arab Regional Packaging Centre in Morocco which included many training-oriented activities as well as supply of equipment for scientific analysis. Other projects of technical assistance to the packaging industry were under implementation in Cuba, Guinea-Bissau and the Republic of Korea.

## METALLURGICAL INDUSTRIES

203. In 1984, technical co-operation expenditures under the heading metallurgical industries amounted to \$6.3 million. Some 85 per cent of the total implementation was financed from UNDP resources. A total of 136 projects were implemented or under implementation in 1984.

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<sup>50</sup>*Ibid.*, para. 209.



204. In 1984 the Metallurgical Industries Section continued to accelerate its technical co-operation activities in the field of extractive and physical metallurgy covering light and heavy non-ferrous metals (aluminium, titanium, copper, lead, zinc etc.), the iron and steel industry, ferrous and non-ferrous foundries and other metal transformation and forming processes (rolling, forging, heat treatment, extruding, welding), and the strengthening and establishment of units or centres for metallurgical research and development.

205. Approximately 25 projects related to the planning, establishment, expansion and operation of metallurgical plants including the improvement of plant performance and quality control. Another 15 projects dealt with the strengthening or establishment of centres for metallurgical technology or laid the ground for future development in this direction. Projects of this nature were under implementation for Argentina, China, India, Iran (Islamic Republic of), Jamaica, Mexico, Mozambique, Pakistan, Paraguay, Nigeria, Peru and Yugoslavia. An important share of technical assistance under the heading metallurgical industries related to the establishment of pilot and demonstration plants, particularly for foundry industry development.

206. Special emphasis was also placed on projects to assist developing countries improve their capabilities in the evaluation, concentration and beneficiation of ores and minerals and to promote the integrated development of the mineral dressing and processing sector to produce concentrates, agglomerated products and sponge iron, etc. This is mainly achieved through laboratory and pilot test work to identify optimum uses of indigenous raw materials for local processing, and through techno-economic evaluation. Projects were under implementation in 1984 in China, Cuba, Greece, India, Iran (Islamic Republic of), Mauritania, Mongolia, Sri Lanka and Viet Nam. Consideration was given to environmental aspects in projects to promote the utilization of solid wastes from metallurgical operations. Projects of this nature were under way in Chile, China, India and Jamaica.

207. As in the past, the selection and transfer of appropriate and new technologies was effectively promoted through a number of projects including the production of silicon for use in the electrical and semi-conductor industry in Pakistan,<sup>51</sup> the electro-refining of copper in Peru, the manufacture of magnetic materials for use in electronic engineering in Viet Nam, the elaboration of a new process (combimelt) for the processing of iron ore to steel in Mexico and the complex utilization of low-grade ores and low calorific coals in Hungary. New projects initiated in 1984 included bacteriological leaching of copper ores in Chile, the manufacture of super purity aluminium in India and the production of de-ironed refractory grade bauxite in Greece. Other projects related to the dissemination of computerized maintenance systems in metallurgical plants in Egypt and Czechoslovakia,<sup>52</sup> and the introduction of energy saving measures in aluminium smelters and alumina plants in China and India.

208. In 1984, UNIDO continued its efforts to develop the bauxite/alumina/aluminium industry in developing countries. In Yugoslavia work progressed in

<sup>51</sup>*Ibid.*, para. 246.

<sup>52</sup>*Ibid.*, para. 225.

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the establishment of an aluminium institute for research and development in Titograd.<sup>53</sup> Equipment, including an electron microscope, X-ray diffractometer and other analytical instruments, was supplied and a research programme, ranging from investigation of bauxite and alumina up to development of aluminium semi-finished products, was elaborated.

209. In order to achieve a broader, multiplier effect from training, a number of developing countries requested UNIDO to provide experts for locally organized workshops and courses. The six-week group training on alumina production and aluminium electrolysis organized at the Zheng Zhou Light Metals Research Institute in China within the framework of the Joint UNIDO/Hungary Aluminium Industry Programme is an example of this practice. Seven Hungarian experts lectured to a group of 32 Chinese nationals, following the pattern of similar group training held in Hungary in 1979 and 1983. Other countries also expressed interest in training local staff on-the-spot with the participation of visiting experts rather than sending candidates abroad on study tours. Other activities carried out in 1984 within the framework of the Joint UNIDO/Hungary Aluminium Industry Programme included a design study for aluminium extrusion and anodizing plants prepared by a team of Hungarian experts and published by UNIDO in July 1984. The study was widely disseminated to developing countries and received a favourable response.

210. Following a feasibility study carried out in 1983 for the reconstruction of an alumina calciner for energy conservation in India,<sup>54</sup> a demonstration unit is being established at the Bharat Aluminium Company, Korba. UNIDO was also requested to assist in a study on the production of special aluminas and the optimization of rolling mill operations. Under another project, subcontracting was arranged for the preparation of a conceptual design study for the production of super purity aluminium at one of the smelters of the same company. Super purity aluminium is currently being produced in a few industrialized countries only for use primarily in the electronics industry.

211. The pilot plant for bauxite investigation at the Jamaica Bauxite Institute<sup>55</sup> was completed in 1984 and the official opening is scheduled for February 1985. A demonstration workshop on laboratory and pilot-scale processing for participants from the Caribbean region, originally scheduled to be held in 1984, was postponed until the second quarter of 1985. Based on the encouraging results of pilot-scale testing of samples of Jamaican bauxite residues (red mud),<sup>56</sup> for the production of construction blocks, bricks and tiles, similar assistance was initiated in China and India. In India, an opportunity study is being prepared on the production of building materials using red mud and locally available additives, while in China assistance will focus on the selection of appropriate technology for the processing of bauxite wastes from the Shangdong Alumina Plant.

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<sup>53</sup>*Ibid.*, para. 233.

<sup>54</sup>*Ibid.*, para. 231.

<sup>55</sup>*Ibid.*, para. 235.

<sup>56</sup>ID/B/300, chap. III, para. 213.

212. In the heavy non-ferrous metals subsector, UNIDO provided assistance to Chile in assessing a multi-discipline programme of research and development on an innovative bacterial leaching process for treating Chilean copper ores. It was found that, although the R + D work to be carried out at the country's laboratories was well conceived, increased industrial-scale testing was an imperative if the industrial application of the process in the country's copper industry were to be assured. Consequently, a large-scale project was drawn up to boost the R + D work necessary for the application and control of the bacterial leaching process. In Peru, expert services were provided in advanced technologies for copper production and advice given on the establishment of a pilot operation for electro-refining of copper.<sup>57</sup>

213. In the iron and steel sector technical assistance continued to Mozambique<sup>58</sup> in foundry and rolling operations. Key personnel of the Companhia Industrial de Fundação e Laminagem received two months' on-the-job training in Bulgaria to upgrade their technical skills in steel rolling operations. As a follow-up, expert advice is being provided on the overall planning and development of the iron and steel industry in Mozambique as well as within the subregion. In this connection, a technical study for a metal products development demonstration unit was completed to be followed by the preparation of a detailed project design and execution programme for the establishment of a network of metal production and processing development units. In Angola the first scrap collection and processing centre is being erected under the guidance of a UNIDO project manager to supply the only steelmaking and rolling plant in the country.<sup>58</sup>

214. Progress was made during the year in the selection and appraisal of appropriate metallurgical technology for a major public sector undertaking in India, with a view to recovering the full metallic values such as vanadium and iron and other by-products contained in various raw materials.

215. UNIDO continued to provide assistance to the Mexican Iron and Steel Institute in the development of new innovative technologies for the production of steel from iron ores in one stage (combismelt process). A small-scale project has become operational in the Democratic People's Republic of Korea with the immediate objective of improving alloy steel production in basic oxygen furnaces.

216. UNIDO continued to provide advisory services to the Egyptian Iron and Steel Company (EISCO) in the field of computerized maintenance<sup>59</sup> and the installation of a computer system for process control was completed in 1984. The positive experience accumulated during implementation of the long-term project will be used to assist other enterprises in different industrial sectors in Egypt. A second regional demonstration workshop on managed maintenance in metallurgical and foundry industries for African countries was held in Cairo from 17 November to 7 December 1984. A technical consultancy and training centre established in Czechoslovakia under a UNDP/UNIDO assisted project became operational in 1984, providing training and consultancy services in the

<sup>57</sup>ID/B/320, chap. III, para. 238.

<sup>58</sup>*Ibid.*, para. 223.

<sup>59</sup>*Ibid.*, para. 225.

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metallurgical and basic industrial sectors to the local industry as well as to other developing countries. A computerized management information system for small piece and batch manufacturing was also established in Czechoslovakia. On the basis of the above activities, India, Mexico and member countries of the Association of South-East Asian Nations (ASEAN) have expressed interest in the introduction of computerized maintenance systems for the metallurgical industry.

217. In Zimbabwe, UNIDO provided experts' services for maintenance of the iron, steelmaking and steel rolling facilities at the Zimbabwe Iron and Steel Plant, as the first stage of a new technical co-operation project. Expertise gained at the pilot and demonstration plant for the production of sponge iron in Kothagudem (India) is being successfully applied by a project in Hungary, to convert an old cement kiln for the production of sponge iron using local raw materials.

218. Experts were recruited in 1984, under an SIS project in Ethiopia, to assist the only existing steel works in the country in improving productivity and upgrading the quality of melted steel and rolled products. Advice will also be provided on the establishment of a full-scale metallurgical and quality control laboratory.

219. A project which was successfully concluded during the year under review involved a techno-economic examination and evaluation of the process route for the establishment of a steel industry in the United Republic of Tanzania. Study work and laboratory smelting tests of the Tanzanian ores—which contain chromium, titanium and vanadium—were carried out based on most appropriate technology and results may lead to further industrial development in this area.

220. A concurrent top and bottom blown converter for steelmaking was established on the latest technological lines at the Research and Development Centre of the Steel Authority of India Ltd. and is expected to raise steel production in India. An experimental blast furnace at the same Centre was designed for trial injection of various raw materials and reductants for application on an industrial scale. Consultancy services were provided to Bolivia, Gabon and Guinea to give advice on the exploitation of their iron ores, natural gas and other raw materials for the establishment of iron ore processing, pelletizing and steel industry.

221. Welding plays a vital role in industrialization since most of the modern technological industrial achievements have been made possible by developments in welding technology. In co-operation with the National Welding Research Institute, Tiruchirapalli (India), established under a large-scale technical co-operation project in 1971,<sup>60</sup> an interregional workshop on the promotion of welding technology in developing countries was held from 30 January to 4 February 1984. The workshop was attended by five participants from different developing countries. Lecture papers by Indian experts were presented to participants. Recommendations included the establishment of a regional centre for applied research and development for

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<sup>60</sup>*Ibid.*, para. 244.

countries of the Asia and Pacific region, twinning arrangements between the National Welding Research Institute and sister institutions in developing countries and the preparation of a case study by the Institute of the Indian experience for the growth of the welding/electrodes/flux industry in other developing countries.

222. In co-operation with the Tinplate Company of India Ltd., a workshop on tinplate production in the Asia and the Pacific region was held in India from 2 to 6 April 1984 to discuss the status of tinplate manufacture and possible co-operation between the countries of the region.

223. The Metallurgical Industries Section provided inputs to the UNIDO Task Force on Iron and Steel Development and assisted in the preparation of a number of studies for the iron and steel industry, including a report on direct reduction processes for sponge production (economics and technology) prepared for the International Symposium on Direct Reduction organized by the Arab Iron and Steel Union in Algiers in October 1984. A paper examining the operational problems of steel plants in developing countries and the role of UNIDO's technical co-operation programmes was presented to an international seminar on iron and steel, hosted jointly by Pakistan and India in Karachi (Pakistan) in May 1984, as a follow-up to the Third Consultation on the Iron and Steel Industry (see chap. V, para. 42).

224. In the course of 1984, projects related to development of the foundry and metal transformation industry sector were under implementation in Afghanistan, Angola, Democratic Yemen, Ethiopia, Malta, Morocco, Mozambique, Nepal, Nicaragua, Niger, Republic of Korea, Somalia, United Republic of Tanzania and Viet Nam.

225. In Angola, a master plan was elaborated for the further development and modernization of the foundry industry sector. Fifteen Angolan trainees were sent to the Foundry Industry Centre at Itauna (Brazil) for a one-year training period.<sup>61</sup> The possibility of establishing a centre for the foundry industry in Huambo (Angola) is currently being examined. Assistance to the foundry sector was also provided to Morocco through the establishment of a Research and Development Foundry Laboratory designed to act as a quality testing centre.

226. The inauguration ceremony of the pilot and demonstration foundry in Nepal<sup>62</sup> took place in Kathmandu in March 1984. The annual value of production of the foundry will be approximately \$2 million. During its first year of operation the foundry produced spare parts for a wide range of industries, thereby avoiding costly imports. The success achieved so far by the foundry has encouraged other developing countries to develop their metal-processing potentials. In this connection, study tours were organized to the foundry for specialists from Afghanistan and Ethiopia, and others planned for nationals from Bhutan, Central African Republic and Rwanda. Two national seminars to improve the quality of castings were organized at the Nepal foundry in March and July 1984 and were attended by 32 technicians from

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<sup>61</sup>ID/B/300, chap. III, para. 216.

<sup>62</sup>ID/B/320, chap. III, para. 240.

various enterprises in the country. Technical data such as blueprints and plant layouts which have been effectively utilized in foundry projects are being made available for other investors from least developed countries.

227. UNIDO participated in the International Foundry Fair "GIFA '84" held in Dusseldorf (Federal Republic of Germany) in June 1984. During the course of the Fair the UNIDO Information Stand dealt with some 600 requests for information and held 60 specific consultations, and also organized a foundry seminar for presentation of the UNIDO technical co-operation programme. A study tour including visits to foundry and metallurgical plants in the vicinity was organized for six engineers from Angola, Morocco, Nepal, Somalia and United Republic of Tanzania, by courtesy of the Fair's management.

228. Technical co-operation activities were initiated in 1984 to establish a surface treatment centre at the Institute of Machinery and Metals of the Republic of Korea. The proposed centre will serve the local metalworking industry by carrying out a number of activities, including tackling the problem of waste water treatment, assisting in the acquisition of know-how, providing technical training and acting as an information centre.

229. In Viet Nam the local manufacture of magnetic materials and components for use in electronic engineering is being promoted through a UNIDO project which became operational in 1984. The object of the project is to establish a pilot plant at the Telecommunications Equipment Factory. Local staff will receive extensive training to enable them to conduct research and development activities in various fields of magnetic material processing and application and, in turn, assist the local electronics industry. In the same country another project aims at quality improvement of cast spare parts for textile industries, while under a third project, laboratory bench-scale investigations will be undertaken on the production of sponge iron for steel making based on domestic iron ores and coals.

230. Close co-operation was pursued with the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM) and a joint study tour and workshop on core metallurgical and engineering industries was organized in Hungary from 8 to 25 October 1984, for 20 participants from 10 African countries including 6 least developed countries.

231. The establishment of a silicon technology centre in Pakistan was also completed at the end of 1984 and it is expected that the sophisticated technology for silicon chip production for photovoltaic generation of electrical power will shortly be introduced in Pakistan on a major scale.<sup>63</sup>

232. Under a large-scale project in Paraguay aimed at strengthening the metallurgical industry<sup>64</sup> processes were introduced on a pilot-scale for the production of metallurgical charcoal for use in the blast furnaces of Siderurgia Paraguaya. A project under implementation during 1984 in Chile dealt with the handling and recovery of ore residues from effluents and slurries of mining and metallurgical operations, and the seismic stability of unutilized residue

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<sup>63</sup>*Ibid.*, chap. III, para. 246.

<sup>64</sup>*Ibid.*, para. 243.

deposits. Whilst the main objective of the project was to improve the safety factors of large ponds of metallurgical plant effluents, it was also endeavoured to assess the viability of processing and utilizing these effluents. The project will continue in 1985. A second environment-related project under implementation during 1984 concerned the utilization of the by-products and elimination of pollution in the sponge iron plant in Andhra Pradesh (India).<sup>65</sup> The application of new technology for utilization of waste products represents a step forward in efforts to control pollution.

## ENGINEERING INDUSTRIES

233. In 1984 technical co-operation expenditures under the heading engineering industries amounted to \$13.9 million. Some 90 per cent of the total implementation was financed from UNDP resources. The reduction in UNDP funds continued to affect particularly the field of activities through cuts in the equipment component which represents an essential input to engineering projects. Activities in this field were also hampered by the increasing embargo on the acquisition of certain types of high technology equipment. A total of 170 projects were implemented or under implementation in 1984.

234. In providing technical assistance in the field of engineering industries account was taken of the need for the development of existing infrastructure and the increased use of available and potential resources. Projects in the field of engineering industries could be categorized as those affecting technological development in the industry and related sectors in general and those contributing to specific subsectors. In order to promote overall technoeconomic development, the following major areas continued to receive a high priority: industrial production; industrial technology; energy-related industrial technology; and development of human resources.

235. Technical co-operation activities in 1984 aimed at the creation of new or improvement of existing production capacities and diversification of products. At the same time, the development of engineering services was encouraged through the strengthening of existing engineering and allied institutional capabilities at the national level, and the promotion of regional and subregional co-operation. The six main subsectors receiving assistance were: agricultural machinery and implements; electronic and electrical machinery and products; computer and computer-related equipment; metal-working and machine tools; land-based or water-borne transport equipment; and energy-related equipment. The majority of requests were within the first three categories.

236. Efforts continued to be directed at the further improvement of national capabilities in product design, manufacture and maintenance and repair. Assistance in the production of irrigation machinery, drilling equipment and hydropower equipment of all types continued to support the exploitation of natural resources in the developing countries. The development of process machinery and the production of spare parts for industries based on agriculture such as rice, sugar and palm oil, represented a significant new trend.

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<sup>65</sup>*Ibid.*, para. 219.

237. Within the framework of the Industrial Development Decade for Africa, priority was given to developing appropriate engineering activities in Africa. New activities initiated in 1984 included a preparatory mission to the nine member countries of the Southern African Development Co-ordination Conference (SADCC), to develop a programme network for the agricultural machinery industry. Technical discussions, with ARCEDEM were conducted on strengthening national engineering institutional capabilities in selected member countries. Progress was made in upgrading existing production facilities in Africa, in product diversification and in the production of intermediate level equipment. A UNDP/United Nations Capital Development Fund (UNCDF) financed programme in Togo on serial production of agricultural equipment was further extended and projects related to the production of agricultural tools and machinery continued in Burkina Faso, Lesotho and Somalia.

238. Emphasis was given to maintenance and repair, spare parts production and training in the area of agricultural implements, pumps and irrigation equipment. Further assistance was provided to a workshop in Cameroon to enhance its capabilities in maintenance and repair as well as in the production of spare parts for local small- and medium-scale industries. As part of the activities of a large-scale project in Madagascar,<sup>66</sup> a national seminar on industrial maintenance was held in March 1984. Progress was achieved in assisting the African National Congress (ANC) in the establishment of a mechanical workshop at Mazimbu (United Republic of Tanzania).

239. In Senegal, training covered the operation and maintenance of motor-driven irrigation pumps. A pump repair unit is being installed at a mechanical workshop and foundry in Somalia with a view to extending the lifespan of pumps and making optimum use of existing facilities and manpower. Installation will be completed in the first half of 1985. A project in Mali jointly financed by UNDP, UNIDF and UNCDF, made significant progress in the manufacture of hand-operated water pumps and in upgrading capacities for maintenance and repair as well as the manufacture of spare parts for industrial and transport equipment. The current production rate is around 1,200 pumps per year, satisfying the present internal market requirements and permitting some export to neighbouring countries. The Mali project represents a good example of multifunded technical assistance.

240. The provision of engineering design services for power-operated agricultural machinery was of particular interest to certain developing countries. In Poland, assistance continued to strengthen research and design in the agricultural machinery industry,<sup>67</sup> while in Pakistan, a large-scale programme was initiated in the area of component production and phased manufacture as a follow-up to a survey of tractor production. An evaluation centre in China was converted with UNIDO help into an integrated agricultural machinery centre to test and evaluate machinery and promote local production. The centre will also determine quality of both existing and imported farm machinery, and provide guidance to users in the interpretation of test reports.

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<sup>66</sup>*Ibid.*, para. 275.

<sup>67</sup>*Ibid.*, para. 256.



241. UNIDO continued to co-operate with other United Nations bodies and organizations to develop the agricultural machinery subsector in developing countries. At the regional level, further support was given to the Regional Network for Agricultural Machinery in Asia and the Pacific and co-operation strengthened with ARCEDEM, SADCC and the Common African and Mauritian Organization (OCAM). UNIDO provided technical inputs to the Interagency Working Group on Desertification and submitted proposals on the development of manufacturing capabilities for pumps and agricultural tools in Africa. Technical inputs were also provided to the Working Group of the Administrative Committee on Co-ordination Task Force on Science and Technology for Development related to joint activities within the African Regional Network for Agricultural Tools and Equipment.

242. Technical co-operation in the area of electronic and electrical machinery covered design and development, testing and quality control, maintenance and repair and extension services to industry. A project on instrument design and development in India provided technical services for local manufacturers of electrical equipment. Test laboratories established by UNIDO in Mexico extended testing and quality control services to the electric power industry.<sup>68</sup> In Viet Nam, a large-scale project was initiated in the area of maintenance and repair of electrical, electronic and optical equipment. Located at Hanoi, the centre will provide technical assistance and support to universities, R + D institutes, medical institutions, industrial production units and technical service agencies throughout the country.

243. A number of developing countries gave priority to the development and application of electronics industries. The electronic reliability and environmental test centre established with UNIDO assistance in the Republic of Korea became a member of the National Committee to the International Electro-technical Commission, thus entitling the centre to carry out all tests on electrical and electronic products prior to local use or export.<sup>68</sup> In India, a project to assist in the design and development of electronic instruments required for agro and dairy industry continued to make progress.<sup>69</sup> The qualification and surveillance laboratory for consumer electronic products set up in China in 1983<sup>70</sup> is in the process of applying for full membership to the Inspection Co-ordination Committee for International Standards which will enable it to participate in the international certification activities. A service centre of testing technology in China and an automated production instrumentation centre in Bulgaria—both with support of UNIDO assistance—started rendering technical services to industry. Preparatory assistance in the development of a calibration and quality control centre in Viet Nam was successfully completed in 1984. Projects to strengthen maintenance and repair of electronic equipment in Hungary and Malta placed emphasis on industrial training and the provision of expertise.

244. The year under review witnessed a growing trend in a number of developing countries towards high technology in the field of electronics application. A computer manufacturing centre in Czechoslovakia was nearing

<sup>68</sup>*Ibid.*, para. 269.

<sup>69</sup>*Ibid.*, para. 273.

<sup>70</sup>*Ibid.*, para. 270.

completion at the end of the year and will provide assistance to the metalworking industry. Progress was made by projects on numerically controlled machine tools in the Democratic People's Republic of Korea, the introduction of computer-aided design (CAD) in Hungary, advanced manufacturing and engineering methods in Bulgaria<sup>71</sup> and training in the use of micro-computers systems and their applications in China. New projects on the design and development of semi-conductor devices for use in transportation systems in India, the introduction of computer graphics into CAD and CAM in the machine building industry in Poland, and the industrial application of micro processors in Bulgaria were initiated in 1984. The latter project will focus on the introduction of micro processors into industrial environmental control.

245. Technical assistance in the field of metal working and machine tools covered such activities as technical analysis, maintenance, technical services and training. As a follow-up to preparatory assistance undertaken in 1983 in the Democratic People's Republic of Korea<sup>72</sup> UNIDO initiated a large-scale project to introduce numerically controlled machine tools to the industries of the country. In India, assistance in strengthening the Industrial Design Service at the National Institute of Design<sup>73</sup> was re-oriented to encourage the application of industrial design techniques, make optimum use of available materials, improve productivity and help generate employment opportunities.

246. In Trinidad and Tobago, the activities of the Metal Industries Company were expanded to cover industrial services in addition to tool-making. A new project was initiated in India to develop horological engineering testing and training techniques with emphasis on technical manpower development, absorption and adaptation of imported technology as well as the development and extension of domestic technology. The aim of the project is to lay a foundation for the establishment of a national focal point in the field of micro-precision engineering. In Iraq, work was initiated to strengthen the activities of the Specialized Institute for Engineering Industries to cover industrial engineering, computer-aided engineering and low-cost automation. Assistance to the Central Institute for Sewing Machines Development in India was extended to cover semi-automation and extension services to the sewing machine industry.<sup>74</sup> Another project in India to improve the facilities of the National Test House in Calcutta included an extended training programme and service to industry. Specialized training programmes for technicians in the machine building industry in China and the metalworking industry in the Republic of Korea resulted in highly trained local technical personnel.

247. In the area of transportation engineering, activities covered the production of land-based or water-borne equipment—fishing boats, ships, automotive and railway equipment—as well as maintenance and repair programmes. New activities initiated in 1984 included a techno-economic survey to work out measures for the diversification of shipyard production techniques in Malaysia; assistance in the establishment and operation of a boat-yard and boat maintenance complex in the Seychelles; and assistance in the organization of

<sup>71</sup>*Ibid.*, para. 274.

<sup>72</sup>*Ibid.*, para. 266.

<sup>73</sup>*Ibid.*, para. 265.

<sup>74</sup>ID/B/300, chap. III, para. 232.

the Pendik shipyard in Turkey.<sup>75</sup> At the Ocean Engineering Centre of the Madras based Indian Institute of Technology, a project was under implementation to provide assistance in the testing and designing of instruments for marine installations.

248. In the field of automotive engineering, preparatory assistance was given to Indonesia in the establishment of a quality control, testing and service centre for the automotive ancillary and allied industries. Activities undertaken in 1984 under the project included exchange of experience with a similar institute in India. Direct assistance covering transport engineering, maintenance and repair was rendered to Angola and Bhutan.

249. There was a new trend in 1984 for assistance in the improvement of engines with respect to quality, performance, life-cycle and environmental characteristics. Projects under implementation in 1984 covered such areas as the quality improvement of oil filters for tractor engines in China; the improvement of engine parts for heavy trucks in Yugoslavia; the inspection and monitoring of emission from motor vehicles in the area of Hong Kong; and preparatory assistance in the establishment of a fatigue testing laboratory for the benefit of the automotive industry in India.

250. In the area of railway engineering, emphasis was placed on the development of co-operative programmes with the Union of African Railways as well as the West African Economic Community (CEAO). As a follow-up to a technical study conducted during the previous year in China, progress was achieved in the design and prototype development of a locomotive diesel engine with reduced fuel consumption and increased reliability and efficiency.<sup>75</sup>

251. Within the programme of the Transport and Communications Decade for Africa (1978-1988) special emphasis was placed on existing manufacturing capacity, as well as on the production of new related equipment in African countries. Shipbuilding and repair, and automotive and railways engineering remained the areas of prime interest to the countries of the region and attention continued to be given to maintenance and repair and the manufacture of components and spare parts.<sup>75</sup> Emphasis was placed on the production of new types of fishing and cargo boats and related maintenance and repair in selected countries. Under a regional project UNIDO co-operated with the Union of African Railways (UAR) in the development of national capabilities in this sector, while CEAO was assisted in the production of railway wagons. UNIDO staff participated in the Third UAR Symposium held in Libreville (Gabon) in October 1984, for which technical papers had been prepared.

252. In the area of energy and process engineering, activities covered equipment for non-conventional sources of energy as well as the improvement of the performance of existing equipment using conventional energy. In the United Republic of Tanzania, a technical analysis was completed on the development of renewable energy sources. In the area of solar energy, five different prototypes of solar distillation devices for ylang-ylang flower

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<sup>75</sup>ID/B/320, chap. III, para. 253.

essential oil production were tested in the Comoros.<sup>76</sup> A regional training course on the manufacture and application of solar collectors using selective absorbing technology was carried out in Melbourne (Australia) in 1984.

253. The improvement of engines and engine components in order to save energy is another area which is considered as a priority by many developing countries. During the year, a study tour for Romanian specialists was organized to Japan in order to improve techniques for the manufacture of thermal engines. In Romania a new project dealt with the utilization of ceramics in the engine and turbine industry, while another project aimed at the improvement of piston ring technology for internal combustion engines through flame-coated molybdenum. Also in Romania, a specialized training programme was held for selected developing countries on metal spraying techniques and the rehabilitation of worn out parts. A new project on energy conservation was initiated in Pakistan. Further results were achieved by a project in India<sup>76</sup> on the development and adaptation of internal combustion engines using methanol as a fuel. Within the activities of this project, the Indian Institute of Petroleum placed special emphasis on the development of two-stroke spark ignition and four-stroke compression ignition engines.

### CHEMICAL INDUSTRIES

254. In 1984, technical co-operation expenditures under the heading chemical industries amounted to \$22.1 million. Some 45 per cent of the total implementation was financed from UNDP resources. A total of 311 projects were implemented or under implementation in 1984.

255. The activities of the Chemical Industries Branch concentrated on five broad subsectors: basic chemicals, environment and pulp and paper; building materials and construction industries; fertilizers, pesticides and organic chemicals industries; petrochemical industries; and pharmaceutical industries.

256. Efforts continued during the year under review to make optimum use of existing plant capacities for the pulp and paper industry in developing countries. Consequently, care was taken to develop the supporting industries which produce basic chemicals essential to the industry—salt, caustic soda and chlorine—in order to reduce imports. Since 60 per cent of pulp and paper production in developing countries is based on non-wood fibres, UNIDO continued to lend support in 1984 to scientific research related to non-wood fibre pulping and paper making.

257. A desilication method to remove silica from bamboo black liquors was developed in India.<sup>77</sup> In China, a chemo-thermo-mechanical pulping pilot plant unit was erected and is now ready to test the suitability of indigenous fibrous materials for newsprint paper production. The pulp and paper pilot plant in Burma is in full operation and specialized papers based on bamboo and waste-paper compounds were developed.<sup>78</sup> A multi-stage effluent treatment unit was

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<sup>76</sup>*Ibid.*, para. 276.

<sup>77</sup>*Ibid.*, para. 280.

<sup>78</sup>ID/B/300, chap. III, para. 260.

introduced at the pilot plant and scientific research started on ways to improve pulp and paper mill effluents under tropical conditions.

258. UNIDO experts were assigned to paper mills in Bolivia, the Democratic People's Republic of Korea, Turkey and Viet Nam, where they put into operation existing machinery and helped improve operations.<sup>79</sup>

259. Salt production started at the newly erected salt works in Jamaica and Kiribati.<sup>80</sup> In Benin, the construction of a salt works is nearing completion and will be put into operation early in 1985. Century-old salt producing methods using fuel wood for the final evaporation of water in Niger are being modified by the introduction of solar evaporation techniques replacing fuel wood and thereby reducing deforestation of large areas of this country.

260. Activities concerning industrial pollution control expanded. A number of projects were implemented on air pollution monitoring and control, marine pollution control, waste treatment and utilization, development of non-waste technologies for chemical processes, advisory services in developing an institutional framework for environmental protection, training of scientific and managerial personnel in industrial pollution control, recycling and conservation of environmental resources. Co-operation continued with the World Health Organization (WHO), the United Nations Environment Programme (UNEP), the International Maritime Organization (IMO), the International Institute for Applied Systems Analysis (IIASA) as well as regional and national organizations. A large-scale project began in India aimed at establishing and developing a pollution control research institute. Research work should lead to the evolution of the best cost-effective techniques for controlling air, water, noise, liquid and solid waste pollution, with particular attention to the control of pollution generated by power plants, selected chemical industries and foundries. The outputs of the Indian project will serve as useful guidelines to policy makers and industrial concerns both at the national and transnational levels and provide technological know-how leading to the manufacture in India of pollution control equipment.

261. Activities concerning the building materials and construction industries focused on ways of achieving fuller use of local, non-metallic raw materials, developing innovative methods of construction and introducing new materials. In all cases, care was taken to make optimum use of installed production capacities and to promote production technologies appropriate for the countries concerned. In the construction industry, large-scale projects were implemented on low-cost housing and special aspects of the industry such as earthquake-resistant technologies and base isolation techniques. Regional projects in this field met with considerable success first in Europe<sup>81</sup> and currently Asia and the Pacific. In view of the pressing world-wide need for earthquake-resistant construction methods, preparations were undertaken for a global meeting on rubber base isolation which will be held in China in the second quarter of 1985 with participants from Latin America, the Caribbean, southern Europe, North Africa, the Middle East, south-east Asia and the

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<sup>79</sup>ID/B/320, chap. III, para. 291.

<sup>80</sup>ID/B/300, chap. III, para. 261.

<sup>81</sup>ID/B/320, chap. III, para. 294.

Pacific. An international conference organized by UNIDO on the same subject in 1982 in Malaysia had received positive response.<sup>82</sup>

262. UNIDO projects on building materials and construction in earthquake prone areas include work on rubber-steel mounts for base isolation of buildings, a technique which has already been applied in the construction of the City Hall of San Bernardino (United States of America).

263. The regional network on low-cost building materials and construction systems which started early in 1983,<sup>83</sup> became fully operational in 1984 with a membership of 12 Asian and Pacific countries. Two group training programmes were carried out, training through individual fellowships provided, and regional consulting activities have been initiated. In collaboration with the Shanghai Institute for Building Science assistance was provided to China on research and development for fly ash utilization. The project aims at producing cheap building materials which, at the same time, protect the environment.

264. In terms of employment and social impact, the brickmaking industry is among the most important in Africa with production units spread across the continent. The scope of activities was widened through the introduction of the concept of a mobile mechanized brickmaking plant. A mechanized brick-making unit with a capacity of 1,000 to 1,500 bricks per hour will be based in the United Republic of Tanzania, but mounted on a trailer to permit its easy transfer to areas where there is a short-term requirement for a larger amount of high-quality bricks. The concept of a mobile plant could have considerable impact in several African countries and the experience gained in the United Republic of Tanzania will be made available to other interested Governments in the region.

265. Efforts continued in 1984 to consolidate the operations of the newly established brick plant in the Gambia.<sup>84</sup> In Cameroon, a programme of assistance was formulated for the development of the local building industry, including the rehabilitation of a brick plant which had been idle for years. Advice was given in 1984 to the brickmaking company SONICERAM in Niger on ways of utilizing an old production line for the manufacture of unfired bricks with or without lime stabilization.

266. The project for the establishment of a central ceramic research and development laboratory in Sri Lanka,<sup>85</sup> which is being financed under UNIDF, reached its culmination in September 1984 with the official opening of the laboratory by the Minister of Industry. The Government is prepared to make its services available to potential users outside Sri Lanka through both technical seminars and twinning arrangements with similar institutions.

267. A manual on the manufacture of rice husk ash cement was published in 1984 in an effort to promote rice husk ash cement as a high quality building material. In view of the widespread availability of hitherto unused rice husks

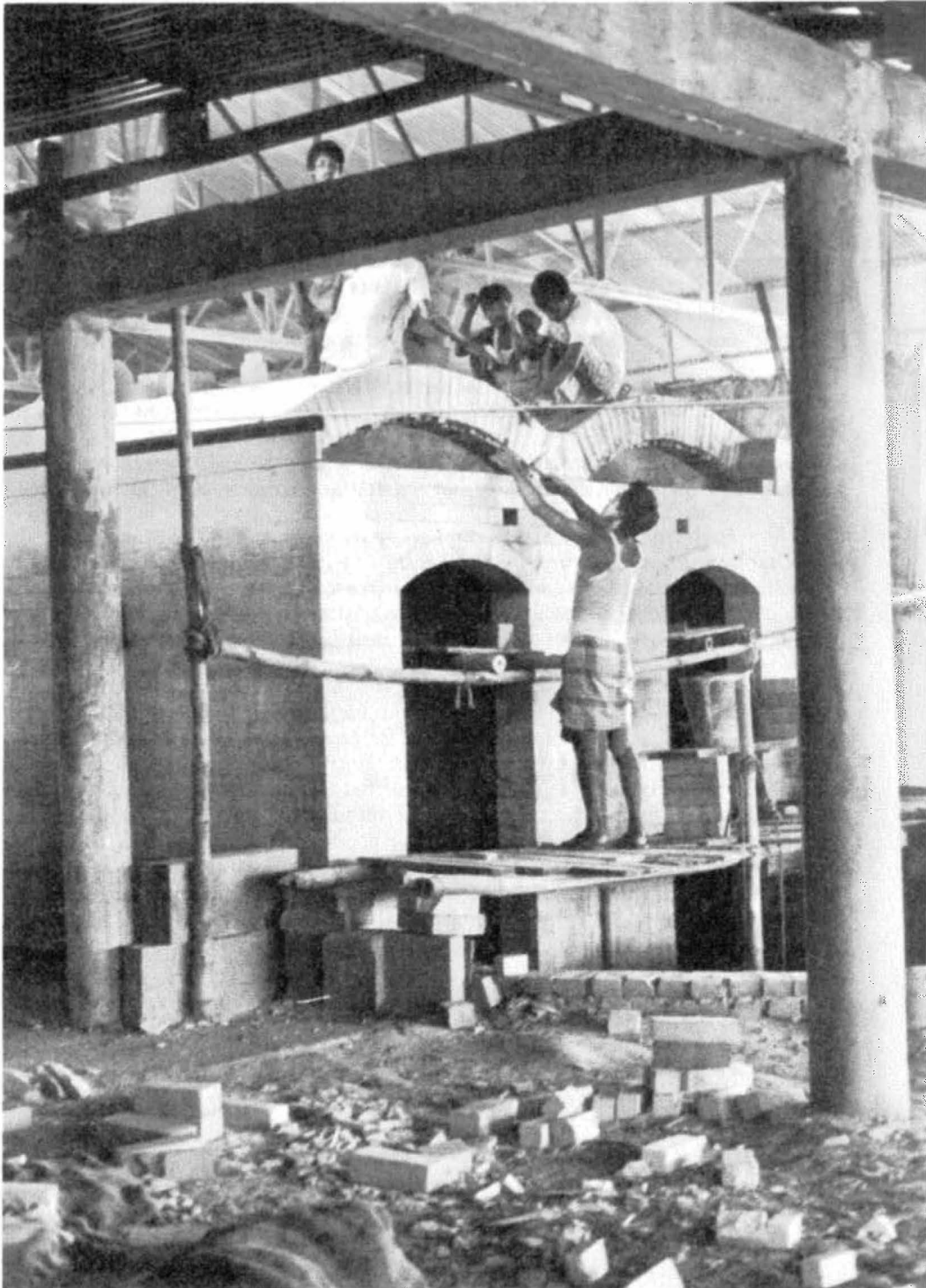
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<sup>82</sup>ID/B/300, chap. III, para. 256.

<sup>83</sup>ID/B/320, chap. III, para. 295.

<sup>84</sup>*Ibid.*, para. 289.

<sup>85</sup>*Ibid.*, para. 293.



*The final touches to a UNIDO-designed glass furnace at the Al-Hamra Glass Industries Ltd., Dacca (Bangladesh)*



### *Chapter III*

and the relatively simple and energy-conserving production technology, rice husk ash cement would appear to have a promising future in most of the world's rice-growing nations. It is intended to follow up the theoretical presentation of the subject matter with a practical demonstration of the technology in a suitable Asian country.

268. In 1983, a special programme was undertaken with the Joint UNIDO/Czechoslovakia Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Mineral-based Industries for the promotion of hydrophobic expanded perlite as an agent for removal of waste hydrocarbons from water.<sup>86</sup> As a result, UNIDO was invited to participate in an international conference on the impact of oil spills in the Gulf held in Teheran (Islamic Republic of Iran) in May 1984, and a presentation was made by the Joint Programme of the technology concerned.

269. In the area of glass manufacturing, UNIDO experts in Bangladesh helped improve the operation of glass furnaces for the container industry. A sheet glass factory in Nowshera (Pakistan) continued to receive UNIDO assistance including expert advice to solve problems related to the preparation of raw materials, quality of the product and repair and maintenance of the furnace.

270. Assistance to the marble and stone industry in Ethiopia focused on the rehabilitation of existing marble industries. The impact of the project's achievements can be measured by the increased demand for processed marble and mosaic floor tiles which has in turn encouraged the Government to take steps to open new marble quarries in the near future.

271. Particular support was given to the African cement industry in 1984. Technical assistance concentrated on the further development of the concept trust-fund project financing to improve industrial capacity utilization. Projects of this type (financed by the recipient country) are under implementation in Libyan Arab Jamahiriya (three projects) and Egypt (one project) while similar projects are under discussion with a number of developing countries. A regional workshop on mini plants for the production of cement was held in late 1984 in China. In Botswana, UNIDO assisted in the establishment of a small-scale pilot unit to produce low-cost cement using local materials and imported Portland clinker. In Egypt, technical assistance was given to the Suez cement company.

272. Assistance and advice were given to the Economic Community of West African States (ECOWAS) in analysing the status of a large-scale Portland clinker factory in the West African region. A study tour was organized for members of the cement manufacturers' association CIMA FRIQUE to increase co-operation among French-speaking African countries in the training of personnel and in the possible development of special methods for testing of cement for use in tropical climates.

273. Much of the work of UNIDO in the chemical industries sector deals with the implementation of projects for the pesticides and fertilizer industries as well as assistance in the production of biofuels and synthetic fuels aimed at the increased and more efficient use of indigenous energy sources.

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<sup>86</sup>*Ibid.*, para. 280.



274. In response to the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy, UNIDO intensified its efforts in 1984 in the field of biofuels including charcoal production, gasification and pyrolysis of agricultural residues and production of biogas. In addition to work on ongoing projects in China (biogas), the Philippines (energy production from biomass), Somalia (charcoal production),<sup>87</sup> and the Sudan (gasification of agricultural residues),<sup>87</sup> UNIDO assisted the National Energy Committee of Ethiopia in the identification of projects in the aforementioned fields. Special attention was given to the application of technological advances and new process technologies were proposed at the same time as existing and traditional technologies were upgraded.

275. A study on the development of uses for natural gas in the Province of Neuquén (Argentina) was completed in 1984. The study included a master plan for the use of natural gas resources as a base for the petrochemical industry and to study its impact on the socio-economic development of the Province. The technical co-operation work in the area of biotechnology also continued. In addition to the three ongoing large-scale projects in Brazil (liquid fuels from biomass), India (bioscience and engineering) and the Philippines (sucro-based chemicals), a new project was initiated in 1984 in Romania, where UNIDO assisted the Government in a programme for the development of technologies for chemical industries based on biomass. Extensive discussions were held during 1984 with representatives of various French institutions to formulate a programme on energy production from agro-industrial by-products and wastes.

276. In order to promote solid waste utilization, assistance was provided to the Environmental Sanitation Research Institute, Beijing (China), to determine the precise requirements for the installation of a plant for composting municipal waste with or without the addition of night soil. Based on the results achieved, a second phase of the project is being implemented by UNIDO to design, construct and operate a pilot plant. The pilot plant is expected to develop a process which can subsequently be applied to other cities in China.

277. The particular importance attached by developing countries to the utilization of coal for energy generation and the related development of new process technologies is demonstrated by the approval of two new projects in China and the Republic of Korea. The second phase of a project was initiated in Poland to establish a process development unit for coal liquefaction.<sup>88</sup> Preparations were under way in India for a techno-economic feasibility study for the production of diesel and kerosene from non-coking coals and lignites.

278. For the last few years, UNIDO has been involved in activities related to petroleum refining industries. A regional project to establish a Petroleum Training Centre in Angola<sup>89</sup> was approved early in 1984 and a mission was undertaken to countries of the region in order to select trainees for the 1984/1985 biennium (see chap. II, para. 12). Workshops were organized in 1984 on petroleum processing, production planning, energy management and

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<sup>87</sup> *Ibid.*, para. 288.

<sup>88</sup> *Ibid.*, para. 92.

<sup>89</sup> *Ibid.*, para. 287.

maintenance and plant inspection in petroleum refineries.<sup>90</sup> The last topic is of particular importance to refineries in developing countries where many old plant installations are still in use.

279. In the field of pesticides, R + D activities in developing countries were given particular importance in 1984. In China, the first phase of a project financed by UNDP and UNIDF was successfully completed, whereby with UNIDO assistance, the toxicological department of the Shenyang Research Institute of Chemical Industry was modernized. The second phase of the project has been approved and research work on pesticides has commenced. A new project is under way in the Republic of Korea to strengthen the technical capacity of the Toxicology Research Centre of the Korean Research Institute of Chemical Technology. Assistance continued to the Hindustan Insecticide Laboratories in India in the development of formulae for pesticides, while in Hungary, similar assistance was extended to the Plant Protection Institute of the Academy of Sciences.

280. The regional network for the production, marketing and control of pesticides for Asia and the Pacific<sup>91</sup> established with UNIDO assistance in the Philippines, continued to contribute to the concept of technical co-operation among developing countries (TCDC) and successfully organized two expert group meetings in 1984 on quality control of pesticides in Dacca (Bangladesh) and trade and tariff considerations in Colombo (Sri Lanka). The network encouraged a fruitful exchange of expertise and arranged study tours.

281. During 1984 a survey of possible ways to promote co-operation in the production of phosphate fertilizer was undertaken in member countries of OCAM. The survey included an evaluation of the technical, natural and economic conditions of each country in the field of fertilizer production.

282. Two projects on the development of new methods of using low-grade raw materials for fertilizer production in India were completed in 1984<sup>92</sup> with promising results. In one case, technologies and processes were identified for the production of sulphur and sulphuric acid from low-grade pyrites and for the processing of low-grade phosphate rock into conventional chemical fertilizers as well as for the production of non-conventional fertilizers. The second project resulted in the production of elemental sulphur and sulphuric acid from Amjhore Pyrite deposits and could lead to the large-scale commercial production of the above-mentioned products.

283. UNIDO activities in the petrochemical subsector concentrated on the development of polymer industries—plastics, rubbers, synthetic fibres—in developing countries as well as on the manufacture of basic petrochemicals essential to processing industries. Work was initiated in 1984 on a new project of assistance to the Indian Petrochemical Corporation in the development of petrochemical industries for the public sector. Simulator training facilities were provided as well as the software for different technological processes, and expert advice was given on the inspection and optimization of petrochemical

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<sup>90</sup>*Ibid.*, para. 285.

<sup>91</sup>*Ibid.*, para. 297.

<sup>92</sup>*Ibid.*, para. 298.

plants. Industrial research and development programmes started in the Democratic People's Republic of Korea and Yugoslavia to develop their own capability in terms of petrochemical production.

284. Technical co-operation projects relating to the plastics industry in 1984 were concerned primarily with the strengthening of plastics technology, testing and application centres. Co-operation among and within these plastics projects was organized through the provision of information exchange, training and expertise. For example, experts from the Central Institute of Plastics Engineering and Tools (CIPET) established in India with UNIDO assistance were sent by UNIDO to Bangladesh, Democratic Yemen and Romania to assist, respectively, in mould design, plastic testing and plastic processing technology. Training programmes for candidates from Bangladesh were also provided by CIPET. A special effort was made to strengthen links between established national plastic centres through advisory services, the development and introduction of new plastics materials, training of candidates from plants and companies, testing and quality control.

285. In connection with the International Drinking Water Supply and Sanitation Decade, preparations began for the establishment of pilot plants to produce plastics pipes in developing countries. In Bhutan, a feasibility study was carried out with a view to establishing a high-density polyethylene pipe pilot plant. A number of project concepts for polyvinyl chloride (PVC) pipe production were prepared for Bangladesh, Burma and Morocco.

286. A Symposium on the Petrochemical Industry took place in three cities—Riyadh, Damman and Jeddah (Saudi Arabia)—to encourage entrepreneurs and industrialists to set up down-stream processing industries for plastics, rubbers and synthetic fibres using the raw materials that are currently being produced or that will be produced in the near future, by their petrochemical industry. The project was financed on a one-hundred-per-cent cost-sharing basis and organized in co-operation with the Saudi Arabian National Council for Science and Technology, the Saudi Arabian Basic Industries Corporation and the Chamber of Commerce and Industry of the three cities. UNIDO provided international experts who lectured on the importance of the processing industries.

287. A Regional Symposium on Plastics in Agriculture took place from 27 October to 1 November 1984 in Alexandria (Egypt) in support of the Industrial Development Decade for Africa. The objective of the Symposium was to demonstrate to participants of African countries what plastics development could do for the well-being of the African community. The Egyptian Government was also able to demonstrate ways in which it could co-operate with other African countries in their efforts towards self-sufficiency in related areas.

288. An *Ad Hoc* Expert Group Meeting of Internationally Renowned Polymer Scientists and Technologists was held in Vienna in September 1984. Participants indicated their willingness to support, through their institutes the setting up of an institute for research, development and application of polymers to serve developing countries.

### Chapter III

289. Following an international conference on carbon fibre application held in December 1983 in Brazil,<sup>93</sup> UNIDO initiated a project for the development of carbon fibres in China. Within this project, China and Brazil will exchange experience.

290. A project on the development of liquid natural rubber which started in March 1983, introduced a totally new technology for the preparation of liquid natural rubber. The project which was initiated in the Ivory Coast, was financed by a special-purpose contribution to UNIDF. The liquid natural rubber allows simple methods of fabrication thereby saving labour and energy and reducing the complexity of operations and equipment. A number of natural rubber producing countries are already benefiting from the new technology.

291. An interregional project on the development of industrial composite materials based on natural rubber started in January 1984. A breakthrough has already been achieved in laboratory work for the production of rubber composites with outstanding physical and chemical properties, especially as structural components for engineering and automotive parts and as specialized building components.

292. Activities undertaken by UNIDO in 1984 in the pharmaceutical industries sector aimed at increasing the production of pharmaceuticals in developing countries for the maintenance of their health care programmes. This was accomplished through: (a) the use of indigenous resources such as medicinal plants and petrochemical by-products; (b) the adaptation of technology for local production of pharmaceutical chemicals; (c) the enhancement of preventive measures by promoting production of biologicals; and (d) the strengthening of capabilities of national institutions to sustain R + D efforts. All activities were carried out in accordance with specifications laid down by the World Health Organization.

293. UNIDO projects on the industrial utilization of medicinal and aromatic plants continued to receive particular attention, and implementation continued on projects in Afghanistan, Burkina Faso, Cameroon, Mali, Rwanda, Thailand, Turkey and United Republic of Tanzania.<sup>94</sup> New projects of an exploratory nature were initiated in Burundi, Guatemala and Madagascar in order to determine the scope of future activities. In Nepal, UNIDO helped build up local R + D competence in a variety of areas crucial to the production of pharmaceuticals from medicinal plants. Installation of pilot plants in Rwanda and the United Republic of Tanzania are under way and expected to be functioning in 1985.

294. At the end of 1984, the installation of equipment at a multipurpose plant for the bulk production of essential synthetic drugs in Cuba was nearing completion.<sup>95</sup> The plant is scheduled for inauguration in March 1985. Similar projects are under implementation in Brazil<sup>96</sup> and the Islamic Republic of Iran.

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<sup>93</sup>*Ibid.*, para. 282.

<sup>94</sup>*Ibid.*, para. 303.

<sup>95</sup>*Ibid.*, para. 306.

<sup>96</sup>ID/B/300, chap. III, para. 270.

Both projects aim to enhance R + D capability and develop technology for the production of essential drugs. Work on the expansion of facilities for the manufacture of the anti-malarial drug chloroquine disphosphate in India was completed in 1984.<sup>96</sup> In Guinea, a project for the formulation and packaging of pharmaceuticals was also completed,<sup>97</sup> while a project on primary health care in Nepal implemented jointly with WHO was in its final stage at the end of 1984.<sup>98</sup> A project for the local production of oral rehydration salts was initiated in 1984 in Zambia. Following a UNIDO-financed survey on possibilities of producing oral rehydration salts in least developed countries in Africa,<sup>99</sup> the Government of the United Republic of Tanzania requested UNIDO to set up a production unit.

295. A new development in the pharmaceutical sector was in the area of the production of biologicals. In order to guide a newly established UNIDO programme on industrial production of biologicals, an advisory panel on preventive medicine was set up, composed of high-level representatives from industry, government and United Nations bodies such as WHO and the United Nations Children's Fund. The first and second meetings of the Panel were held in Vienna (Austria) and Bogota (Colombia) in February and November 1984 respectively. In co-operation with the National Institute of Public Health and Environmental Hygiene of the Netherlands, a model programme for the production of vaccines in developing countries was prepared to assist the panel in formulating a plan of action for the production of vaccines in developing countries. Under the UNIDO/Hungary Joint Programme for Co-operation, a programme for the rehabilitation and expansion of existing vaccine production in the African region was carried out in 1984.<sup>100</sup>

296. As a follow-up of the intergovernmental meeting on biotechnology held in Argentina early in 1984,<sup>101</sup> a Latin American biotechnology network was initiated through a joint effort made by UNIDO, UNDP, and the United Nations Educational, Cultural and Scientific Organization (UNESCO). The purpose of the network is to make fullest possible use of the scientific and industrial capabilities of Latin American countries in the area of biotechnology. A project for the establishment of a regional R + D centre for biotechnology and genetic engineering in Mexico<sup>102</sup> was approved for financing from UNDP and a contribution of \$2 million in kind by the Government of Mexico. The project is expected to start in 1985.

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<sup>97</sup>*Ibid.*, para. 269.

<sup>98</sup>ID/B/320, chap. III, para. 304.

<sup>99</sup>*Ibid.*, para. 305.

<sup>100</sup>*Ibid.*, para. 307.

<sup>101</sup>*Ibid.*, para. 308.

<sup>102</sup>ID/B/300, chap. III, para. 271.



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## Chapter IV

# INDUSTRIAL STUDIES

1. Through its industrial studies and research programme, whose activities are closely interrelated at the global, regional, country and sectoral levels, UNIDO aims at striking a balance between the need to examine in detail the whole range of problems related to accelerating the process of industrialization in the developing countries and the need to provide conceptual, empirical and statistical background for use by decision makers and in the technical co-operation programmes of the organization. Research findings as well as the assessments made provide a background against which, *inter alia*, technical co-operation projects can be designed and industrial policies formulated. Thus, the studies and research undertaken by UNIDO are an essential component in an integrated approach to promoting the industrial development of the developing countries.

## GLOBAL AND CONCEPTUAL STUDIES

2. In the year under review, UNIDO continued to examine the impact of developments in the world economy on the process of industrialization in developing countries, including the constraints which high debt-servicing costs imposed on the balance of payments and hence on the pace of industrialization in selected developing countries. The extent of increased protectionism and its negative influence on the growth of the developing countries' manufactured exports were considered and a preliminary assessment made of the impact of the protectionist policies of the European Economic Community (UNIDO/IS.475). An empirical study of the foreign-exchange benefits and costs of exporting manufactured goods was initiated. The above-mentioned studies are aimed at assisting policy makers to adapt industrial policy in their respective countries to the less favourable international economic situation likely to prevail in the coming years.

3. The way in which the adverse external environment has changed the prospects for rapid industrialization in developing countries was examined in greater detail during 1984 and up-to-date estimates and short-term forecasts of the growth of economic and industrial output were prepared on a country, regional and global basis. The impact of the deceleration in the industrial growth on the countries of Latin America and sub-Saharan Africa was examined, focusing on the slow-down in new investments in industries producing capital and intermediate goods.

#### Chapter IV

4. The improved information gained was used to quantify the ongoing process of world industrial restructuring and in particular the impact which future developments in South-South and North-South trade and financial co-operation could bear on that process. Other studies concerned with world-wide industrial restructuring included assessments of: (a) the impact on developing countries of recent changes in the automotive industry (UNIDO/IS.472); (b) the implications for developing countries of the structural changes taking place in the European member countries of the Council for Mutual Economic Assistance (CMEA) (UNIDO/IS.436); and (c) industrial policies in developing countries induced by the increasingly uncertain external environment (to be issued in 1985).

5. The main results of the above research will be presented in the first issue of the UNIDO *Global Report on Industry and Development* to be published in 1985. The *Global Report* provides an assessment of the impact of the international environment on industrial development and considers policy measures conducive to accelerated industrialization in developing countries. In the first issue, particular emphasis is given to the potential benefits of South-South co-operation.

6. The papers presented to the High-Level Expert Group Meeting on Industrial Development Strategies and Policies for Developing Countries, held in 1983, were issued in 1984, together with an overview of possible industrial policy guidelines for the 1980s, in document UNIDO/IS.431 and Add.1. Preparations are being made for an expert group meeting, to be held in 1985, to discuss the regulations introduced by developing countries to reduce the import content of local manufactures.

7. Global models continued to be applied in analysing the international industrial restructuring process.<sup>1</sup> A new simulation model—Trade Impact Analysis Model (TIMOD)—was developed to measure the interrelated impact of various export growth scenarios on income, production and imports in 12 regions of the world. It is planned to publish the findings early in 1985. Following the issuance in 1983 of a user's handbook for the IDIOM model (UNIDO/IS.378)—a generalized software package for constructing policy planning models of national economies—a simplified version of the handbook directed towards the needs of the least developed countries was completed in 1984 to be issued in 1985.

8. In co-operation with the International Institute for Applied Systems Analysis (IIASA), an analysis was made of the role of the energy sector in alternative industrialization scenarios for the year 2000 and the research findings will be issued at a later date. Co-operation continued with the Food and Agriculture Organization of the United Nations (FAO) on research into agro-industrial linkages.

9. The proceedings of the Seventh International Conference on Input-Output Techniques (ID/288) were published in 1984 and the first of two volumes of country input-output tables (ID/325) was prepared for joint publication with the United Nations Statistical Office in 1985. Preparations

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<sup>1</sup>ID/B/320, chap. IV, para. 6.



continued for the Eighth International Conference on Input-Output Techniques to be held in 1985 for which UNIDO will provide substantive support and servicing facilities. A preparatory meeting of conference chairmen was held in November 1984.

10. A series of special and conceptual studies were undertaken in response to requests and recommendations—emanating from the Fourth General Conference of UNIDO, the Industrial Development Board and other United Nations and related bodies—on energy, the least developed countries, social aspects of industrialization, the role of women in industrialization, resource utilization and the industrial processing of raw materials traded internationally. In 1984, three studies were published which examine the relationship between energy and industrial development: regional energy implications of the Lima target (UNIDO/IS.435), capital goods for energy development (UNIDO/IS.457), and energy-intensive industrialization in the Middle East (UNIDO/IS.482). Studies covering least developed countries centred on topics related to the Industrial Development Decade for Africa. In addition to a study on industrial restructuring and the process of socio-economic development in Africa, within the particular reference to the least developed countries (UNIDO/IS.488), a study was completed on the mineral trade potential of the least developed countries in that region (to be issued in 1985). A study is being carried out of complementarities in resources and production among three groups of countries, embracing member countries of the Organization of Petroleum Exporting Countries, developing countries with developed manufacturing sectors, and least developed countries.

11. In accordance with the priorities established by the Board at its fourteenth session, studies on the social aspects of industrialization were continued. In compliance with paragraph 5 of conclusion 1983/2 adopted by the Board at its seventeenth session,<sup>2</sup> a report summarizing the work of UNIDO on that topic will be submitted to the Board at its nineteenth session. A study (UNIDO/IS.441) on the relationship between social development and industrialization over the two decades 1960-1980 was issued, and another study investigating the causal linkages within the socio-economic development process is under completion, scheduled to be issued in 1985. A study (UNIDO/IS.488; see para. 10 above) covering, *inter alia*, the interrelationship between industrial development patterns and the process of socio-economic development in Africa was also published in 1984 and another initiated on the interaction of industrialization, social development and technology in the developing countries in the post-1973 period. A desk survey of available data and literature on the role of women in industry (UNIDO/IS.484) was prepared and will be issued in 1985 as a contribution to the world survey on the role of women in development for submission to the 1985 World Conference to Review and Appraise the Achievements of the United Nations Decade for Women.

12. Three surveys on conceptual topics were published in 1984: utilization of capital in the developing countries (UNIDO/IS.469), industrial and manufacturing activities in the informal sector in developing countries (UNIDO/IS.470), and the Lima target and the South-South co-operation (UNIDO/IS.468).

<sup>2</sup>Official Records of the General Assembly, Thirty-eighth Session, Supplement No. 16 (A/38/16), para. 67.

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Work continued on the use of cost-benefit techniques for policy assessment in developing countries, on the linkages between industry and services and on an analysis of the structure of production and trade in the Pacific Basin countries.

13. Work continued on monitoring initiatives taken by individual Governments towards accelerating industrialization in the developing countries. A compendium of replies supplied by 73 countries and 16 international organizations during the third survey (1981-1982) was published (UNIDO/IS.499), and a consolidated analysis of the results and experience gained from the first three surveys is under preparation for publication at a later date. The analysis should serve as a basis for improving the monitoring exercise.

14. The journal *Industry and Development*—a sales publication issued in English, French and Spanish—continued to focus on the potential applications of economic analysis to industrialization problems and issues in the developing countries. Drawing on contributions from all Branches within the Division for Industrial Studies, topics covered by the journal in 1984 included project evaluation, input-output analysis for China, advanced technological innovations, East-South co-operation, the attitudes of Northern firms towards investment in developing countries, dynamic benefits of manufacturing, industrial development of Malawi, and implications of the Lima target. A special issue for the Fourth General Conference contained eight articles prepared by a group of eminent development economists and focused on policy issues relevant to the Conference.

### REGIONAL AND COUNTRY STUDIES

15. In its economic research on the medium- and long-term prospects of industrialization in the developing world, UNIDO assessed the resource potential and current industrial structures of individual countries and developing regions. Conceived as a contribution to ascertaining industrial development prospects and formulating appropriate strategies and policies, the studies, some of which were carried out in co-operation with the Governments or country groupings concerned, were primarily adjusted to the requirements of national policy makers as well as regional and subregional authorities. At the same time, given the close linkage with UNIDO technical co-operation programmes, studies were undertaken in support of the operational activities of UNIDO. Work also continued in support of the Fourth General Conference.

16. Studies at the regional and subregional level focused on openings for industrial co-operation, underscoring factors of particular significance to country groupings such as linkages between large- and small-scale industries and selected subsectoral developments. At the request of the Organization of the Islamic Conference (OIC), an assessment was made of the role of small- and medium-scale industries, including the establishment of industrial estates, in OIC member States (UNIDO/IS.487). The study was presented to the Second OIC Ministerial Conference on Industrial Co-operation held in Istanbul (Turkey) in November 1984. In response to a request from the Arab Fund for Economic and Social Development, a survey was made of installed and

planned production capacities, consumption, imports and exports of manufacturing industries and electricity in Arab countries (UNIDO/IS.466). In the series of subregional studies on industrial co-operation among member countries of the Association of South-East Asian Nations and among Andean Group countries initiated in the previous year,<sup>3</sup> analyses were made of the implications for both country groupings of current international trends in the automotive and textile industries. These analyses are intended to assist the respective groupings in the formulation of relevant policies and strategies and the identification of optimal forms of co-operation.

17. In co-operation with IIASA, a programme analysing structural change in the automotive industry in the centrally planned economies of Europe was initiated, on the basis of which emerging production patterns and industrial co-operation trends will be identified. A review was also made of policies pursued in selected developed market economy countries to strengthen the informatics industry as part of those countries' restructuring programmes. The information obtained on those policies and probable developments in that rapidly growing sector was provided to selected Latin American countries to guide them in the formulation of national policies. Using information supplied by the secretariat of the United Nations Conference on Trade and Development (UNCTAD), barriers to trade in informatics equipment were also investigated.

18. The industrial restructuring process has aggravated regional disparities of industry in many countries. In this connection, trends and possible policy counter measures were discussed at the Symposium on Regional Development Processes and Policies and the Changing International Division of Labour held in Vienna in August 1984. The Symposium was organized jointly with the Interdisciplinary Institute for Urban and Regional Studies, the University of Economics, Vienna, and the Austrian Federal Chancellery. UNIDO inputs to the Symposium included presentations on regional aspects of development in the national context. A consolidated report containing the major presentations and findings is being prepared for issuance in 1985.

19. A number of in-depth analyses designed to provide a basis for policy-making were carried out in individual developing countries. The study initiated in 1983 on industrial development prospects in Indonesia was completed.<sup>4</sup> The three-volume study (UNIDO/IS.479 and Add.1 and 2) analyses the long-term industrial development potential of that country and describes the prospects for establishing capital goods industries to process key agricultural products. It was presented to the Indonesian Department of Industry at a national seminar organized by UNIDO in Jakarta in May 1984. A similar approach was adopted in respect of a study on industrial restructuring requirements in Peru. The completed study will be handed over officially at a national workshop on industrial restructuring to be held in Lima in early 1985. The study includes an analysis of the textile, mining equipment and electric power generating industries and discusses adjustment policies in the light of new technologies and shifts in domestic and external markets over the next decade. UNIDO, through its Division of Industrial Operations, will provide the Government of Peru with the requisite technical assistance in that field.

<sup>3</sup>ID/B/320, chap. IV, para. 16.

<sup>4</sup>*Ibid.*, para. 18.

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20. Within the context of research on industrial structural adjustment, policy-oriented studies were undertaken in co-operation with a number of developing countries. Subsequent to a national seminar on industrial restructuring in the engineering industry sector in Thailand, research findings on specific aspects of industrial restructuring in Argentina were presented to a workshop convened jointly with the Government of Argentina. Papers submitted to both the seminar and the workshop describe current sectoral trends and policies in industrial restructuring and spell out their implications for the respective countries. A paper was also issued outlining industrialization prospects for Latin America in view of current trends towards structural change in the manufacturing industry of the United States of America (UNIDO/IS.473). An updated study analysing structural changes in the leather and leather products industry in the Federal Republic of Germany (UNIDO/IS.429), prepared in 1983, was published early in 1984.

21. Special attention continued to be given to the least developed countries which had been the subject of concern at the Fourth General Conference. An in-depth analysis of resource-based industrial development in Lesotho is under completion, and data for similar studies on the Gambia and Guinea-Bissau were compiled. The analyses are designed to assist Governments of least developed countries in the utilization of their endogenous resources and to provide guidance on the adoption of relevant policies. As regards Nepal, a study (UNIDO/IS.465) was completed analysing the potential for resource-based industrial development in that country. In co-operation with the Haitian Ministry of Commerce and Industry, a preliminary analysis was completed on the long-term prospects for development and restructuring of the manufacturing sector in Haiti.

22. In response to a request from the Ministry of Commerce, Industry and Tourism of Morocco, a mission was undertaken to analyse the policy framework for national and foreign investments in industry. The analysis, currently under preparation, examines a range of possible changes in investment policy, institutions and infrastructure in the context of international trends and proposes new approaches.

23. The series of country industrial development reviews became an established feature of the regional and country studies and research programme. Providing a condensed, regularly updated overview of the industrial sector in individual developing countries, including industrial training and financial requirements, they are designed to support both the technical co-operation and project formulation activities of UNIDO. To the extent possible, the series is being synchronized with the country programming cycles of the United Nations Development Programme (UNDP). In 1984, reviews were completed on Algeria, Argentina (UNIDO/IS.460), Bangladesh, India, Indonesia (UNIDO/IS.458), Kenya (UNIDO/IS.459), Malaysia, Paraguay (UNIDO/IS.461), Peru, Philippines, Sri Lanka, Sudan, Thailand, United Republic of Tanzania and Uruguay (UNIDO/IS.462). Additional reviews were under preparation for: Bahrain, China, Congo, Costa Rica, Cuba, Egypt, Kuwait, Malawi, Mexico, Nepal, Pakistan, Swaziland, Syrian Arab Republic and Zimbabwe.

24. The analyses of the industrialization prospects of Arab countries undertaken in co-operation with the Arab Industrial Development Organization



*First Vice-President of Sierra Leone, H. E. S. I. Koroma, is shown the equipment at the Sayenu Garment Industries, Freetown, where a UNIDO expert assisted in installing new automatic machines and training the operators*

were presented to the Sixth Industrial Development Conference of Arab States, held in Damascus (Syrian Arab Republic) in October 1984.<sup>5</sup>

25. A number of research activities were undertaken in 1984 related to the Industrial Development Decade for Africa. At the request of the Government of Madagascar and as a follow-up to an in-depth study undertaken in 1982, analyses were undertaken of industrial pricing patterns, fiscal policies and industrial sector statistics in Madagascar; the findings will serve as inputs to the revision and adjustment of legal, administrative and fiscal practices in that country.

26. As the UNIDO input to a comprehensive document under preparation by the United Nations Institute for Namibia (UNIN), a study assessing the resource potential and outlining industrial policy options for the future independent government was completed. The UNIN project is designed to prepare the groundwork for accelerated industrial and technological development of the country in the post-independence period. Preparations were also

<sup>5</sup>*Ibid.*, para. 20.

made for a field investigation of the manufacturing sector in Zimbabwe. In close co-operation with the local authorities, particular emphasis will be placed on rationalizing and integrating production, generating domestic and sub-regional demand for higher value-added products and enhancing intra- and inter-sectoral linkages with a view to providing policy makers with a basic overview of the country's industrial structure and its development.

27. In response to a request from the Southern African Development Co-ordination Conference (SADCC), a supplement to the preliminary study on co-operation within SADCC<sup>6</sup> submitted in 1984 provides new data and consolidates the initial analysis of industrial co-operation prospects in the subregion. Analysing the potential for and constraints upon co-operation in the manufacturing sector, the study puts forward proposals for enhanced industrial co-operation.

28. Close co-operation continued between UNIDO and the regional commissions; outposted staff members, regional advisers and associate experts attached to the joint industry divisions participated in analytical studies and provided direct policy guidance to countries and subregional and regional bodies in the respective regions. Particular attention was given to activities related to the Fourth General Conference, including the provision of inputs to and participation in regional preparatory meetings. UNIDO staff in the joint industry divisions participated in activities organized by national institutes and regional commissions, such as a workshop on core metallurgical industries for African developing countries and other training courses organized by the Economic Commission for Africa (ECA), UNIDO and the African Regional Centre for Engineering Design and Manufacturing. In the Asia and Pacific region a joint research programme on the role of small-scale industries was initiated with the Economic Commission for Asia and the Pacific (ESCAP), while a joint meeting with the Economic Commission for Latin America and the Caribbean (ECLAC) examined the need for continuous surveillance of industrial restructuring by the countries of the region.

## SECTORAL STUDIES

29. The research activities of the Sectoral Studies Branch continued in keeping with the established three-stage approach: analytical appraisals of current and future trends in the respective sectors, the elaboration of alternative sectoral strategies, and the practical application of research findings. Studies undertaken in 1984 responded to the needs of the different principal users at all three stages. The analytical appraisals are widely disseminated to decision makers, research institutions and sectoral experts as an important source of factual information and reference material; they also serve as background information for the System of Consultations. Studies outlining alternative sectoral strategies are mainly used as inputs to the Consultation meetings. The practical application of research findings is achieved in close co-operation with the industrial operations and policy co-ordination programmes as reflected in the technical co-operation programmes and projects developed by UNIDO.

<sup>6</sup>*Ibid.*, para. 22.

30. In preparation for the Second Consultation on the Food-processing Industry held in Copenhagen (Denmark) in October 1984, a study was completed on the vegetable oils and fats industry (UNIDO/IS.477 and Add.1). Including a statistical digest, it assesses the contribution of developing countries to that sector, analyses the utilization of installed capacity at the country level, and discusses various possibilities of increasing capacity utilization in developing countries. Work continued on the methodology for assessing and programming integrated agro-industrial foods systems. Developed by the Board of the Cartagena Agreement in co-operation with UNIDO, the methodology will be applied to the integrated development of the vegetable oils and fats industry in Peru and on a manual for the management of such systems in keeping with national and subregional development objectives. These decision-making tools for government planning and management of integrated agro-industrial foods systems can also be applied to other developing countries.

31. Work started on a preliminary regional survey of the fisheries industry for the Consultation on that topic to be held during the 1986-1987 biennium. Aimed at identifying techno-economic constraints upon the fisheries industry in selected African and Latin American countries and openings for international co-operation, the survey will serve as a basis for the development of that industry in developing countries.

32. Two studies—one on the present situation in the leather and leather products industry (UNIDO/IS.442 and Add.1) and the other on strategies for increasing the production of tanning chemicals (UNIDO/IS.448)—were presented to the Third Consultation on the Leather and Leather Products Industry held in Innsbruck (Austria) in April 1984. In view of the need for developing countries to achieve optimal returns from their manufacturing sector, discussions centred on ways to ensure better utilization of installed capacities by improving raw material supplies and manufacturing standards with the assistance of partners from other countries on mutually beneficial terms. As a follow-up to that Consultation, a study will be undertaken on regional co-operation among developing countries in the production of tanning chemicals.

33. A study was initiated on the effects of ocean shipping costs on the location of wood-processing facilities. It aims to demonstrate how the main shipping cost determinants constrain the expansion of wood-processing industries in timber-producing developing countries, and will analyse ways of enhancing the sector's contribution to the economic development of those countries. As part of a series of studies on development opportunities in the ESCAP region, a study is being prepared on the wood-processing sector.

34. A techno-economic appraisal of the manufacture of chloroquine phosphate and its chemical intermediates was also completed in 1984, to be issued at a later date; it identifies possibilities of producing specific fine chemicals in developing countries. Research was also initiated on the elaboration of a model for the selection of pharmaceutical substances and their intermediates for production in developing countries by means of organic chemical synthesis. A sectoral data base was established so that trends and prospects in the pharmaceutical industry could be assessed and monitored in respect of 11 regions covered by the UNITAD model (a joint UNIDO/UNCTAD

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modelling project). Work was completed on the North American region and will continue in respect of the Middle East, North Africa and sub-Saharan Africa.

35. Following the Fourth Consultation on the Fertilizer Industry held in New Delhi (India) in January 1984, work continued on the preparation of guidelines for capital cost control in developing country fertilizer plants. To be completed in 1985, the guidelines will cover the salient features of plant construction from concept formulation to commercial operation. Research related to mini-plants for fertilizer production will continue with an in-depth study of selected African countries, in the course of which the possibility of establishing such plants in those countries will be analysed.

36. A study on pesticides and plant protection agents was initiated in the year under review. Designed for use by policy makers and entrepreneurs in developing countries, it will assess the potential for the production of active materials as well as formulated and mixed pesticides in those countries.

37. A global review of the petrochemical industry and the emerging role of new developing country producers was initiated in 1984 for submission to the third Consultation on that sector to be held in 1985. Two of the inputs to this study were finalized in 1984: co-operation in the petrochemical industry between the European CMEA countries and the developing countries (UNIDO/IS.485), and the development of the chemical and petrochemical industries in the European CMEA countries (UNIDO/IS.486). Both studies enter into details of compensatory arrangements, product specialization and barter trade in the petrochemical industry.

38. Research started on the chemical and petrochemical industries in the ESCAP region. Comparable research on the development of the petrochemical industry in Latin America, identifying areas and policies for co-operation, was also initiated in 1984 for completion in 1985. A paper on the petrochemical industry and South-South and North-South co-operation was submitted to the Expert Group Meeting on International Co-operation in Petrochemicals held at Vienna in September 1984. It will be used as an input into the global review described above.

39. In co-operation with the Economic Commission for Western Asia and the Gulf Organization for Industrial Consulting, a petrochemical plant cost evaluation programme was developed to facilitate operational and planning decisions relating to production and competitiveness in different markets. Potentially applicable to other sectors and regions, the project is of direct use to producers in developing countries.

40. Work on a study of the building materials industry was completed; the study will be submitted to the first Consultation on that sector to be held in 1985. It examines the utilization by developing countries of local materials to meet domestic demand, and proposes appropriate financial, technological and institutional measures, as well as the possible development of small-scale, labour-intensive production units.



41. A study of the lime industry, initiated in co-operation with the Division of Industrial Operations, will contribute to the establishment of a global computerized information system which will be made available to planners and decision makers in developing countries. Special emphasis will be given to evaluating alternative technologies appropriate to developing countries.

42. Work continued on updating the 1990 regional and global scenarios on the iron and steel industry for submission to a fourth Consultation on that sector. An internal research paper on steel consumption in ASEAN and neighbouring countries was completed. It demonstrates possibilities for establishing or expanding production capacities and recommends regional co-operation for the implementation of such projects. A similar study was initiated in respect of Latin America. Data on specific iron and steel consumption in selected developing countries were submitted to the Economic Commission for Europe for use in a major study on the subject. A study, establishing a method for determining the personnel and training requirements in the production of iron and steel, was completed and will be issued at a later date. The method will be field tested in co-operation with the Division of Industrial Operations.

43. A typology of developing countries manufacturing electric power equipment was drawn up in preparation for the second Consultation on the capital goods industry to be held in Stockholm (Sweden) in June 1985, which will concentrate on energy-related technology and equipment. A series of case studies covering the different groups within that typology were undertaken in Algeria, Bolivia, Cameroon, Colombia, Egypt, India, Indonesia, Mexico, Pakistan, Republic of Korea and United Republic of Tanzania. A synthesis of these country case studies, to be issued in 1985, was completed as an aid to formulating development strategies for the electric power equipment industry in countries at different levels of industrialization. An assessment of the capital goods sector in Africa was finalized (UNIDO/IS.502); a similar assessment for the ESCAP region has been initiated. These regional analyses serve as inputs into the second world-wide study on that sector which was also under preparation during the year under review.

44. Work continued on monitoring the current fundamental restructuring of the agricultural machinery industry in industrialized countries. A survey of the industry in North America revealed that the sector had undergone extensive reorganization, thus allowing it to achieve a break-even point at far lower levels of output. This survey, together with a survey of the industry in Western Europe, was issued as a working paper (UNIDO/IS.503). Together with ongoing studies on developing regions, it will be distributed to institutions dealing with the problems of the agricultural machinery sector and also used in preparation of the third Consultation on that sector.

45. Research continued into the energy-related aspects of selected industrial sectors, the findings of which are incorporated into studies for Consultation meetings, disseminated to developing countries, and used by other programmes of UNIDO. Work also continued on a study on energy conservation and initial drafts were discussed at the Expert Group Meeting on Energy Use and Conservation in Selected Industrial Sectors held in Vienna in August 1984.

46. The Methodology Unit continued its supporting role, providing the sectoral research activities with econometric and statistical analyses, forecasts and data in tabular and graphic form. A method for generating computerized reports on trade data was developed, which permits direct creation of statistical tables in final form, thus reducing costs and eliminating transcription errors. Use was made of the enhanced computer graphics introduced by UNIDO. The software for the routine deflation of trade flows in current values was upgraded to handle large data files. The Unit also redirected its work towards the utilization of microcomputers to reduce costs and permit the application of software in the developing countries. Special digests containing detailed sectoral information were also developed as complementary volumes to major sectoral studies.

## OTHER ACTIVITIES

### Statistics and related empirical research

47. The orientation of the Statistics and Survey Unit is twofold: emphasis is placed on both the development of industrial statistics and the related field of empirical research. During the year under review, the Unit continued to pursue long-term goals in connection with its research and statistical programmes. A major feature of its statistical responsibilities is the industrial data base which serves as a central reference point for the general statistical requirements of UNIDO. The present orientation of work is determined by the need for international data which are not only consistent and comparable, but concern all general aspects of industry such as production, employment, wages and salaries, and value added. As these goals are gradually realized, the statistical programme will embark upon extending both the level of detail and country coverage in the on-line system. These advances, in turn, should facilitate research on various aspects of industry, including studies relating to technical co-operation.

48. In 1984, UNIDO's statistical activities included efforts: (a) to standardize the valuation concepts used by different countries in reporting their industrial statistics; and (b) to enhance the scope and coverage of the data base with particular attention to statistics on small-scale establishments. In conjunction with this work, the data base was redesigned to facilitate the incorporation of both national and international statistical sources and enable statisticians to make optimum use of those sources in a consistent fashion. In that connection, "The UNIDO data base: primary sources and data base design" (UNIDO/IS.463) was published in 1984 in order to familiarize users, both within UNIDO and without, with the basic structure of the UNIDO data base and the related statistical methodologies employed.

49. The Unit continued to fulfil its role as a major supplier of industrial data to users. Dissemination to users outside the organization takes several forms. First, statistical data and/or computer tapes are supplied to a number of



Shop-floor view of the carbon-fibre production line, Centro Técnico Aeroespacial, São José dos Campos (Brazil)

organizations which in 1984 included the United Nations Office for Development Research and Policy Analysis, ESCAP, ECLAC, FAO, the World Bank, the Statistical Office of the European Communities, the Statistical, Economic and Social Research and Training Centre for Islamic Countries, the Institute of Developing Economies in Japan, and the Centre d'études prospectives et d'informations internationales at Paris (France). The Unit also provides the industrial indicators published annually by the World Bank in the *World Development Report*. Second, circulation and sales of the regular statistical publications issued by the Unit have been steadily expanding. Among these, the biennial issue of the *Handbook of Industrial Statistics* (ID/328) was completed in 1984 and preparations begun for the forthcoming annual issue of a statistical review of the world industrial situation.

50. As part of the Unit's contribution to the Industrial Development Decade for Africa, the first volume in a statistical series, "L'industrie africaine en chiffres" (UNIDO/IS.474), was issued in 1984, providing industrial data compiled through field work on two African countries—Burundi and Mali—for which systematic information was not previously available. A set of industrial statistics was also prepared for issuance in 1985 relating specifically to the African region and derived from the *Handbook of Industrial Statistics*.

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51. In 1984, the Unit initiated a new programme to provide copies of its data base in machine-readable form to users outside the international community. Efforts were also made to facilitate the use of the data base by users within UNIDO, including the development of computer software for use by non-programmers, improvements in the on-line system maintained by the Unit and the production of statistical briefs designed to provide a wide range of industrial indicators of relevance to UNIDO staff concerned with research or technical co-operation activities.

52. In the first half of 1984 the programme of quantitative research was closely associated with preparations for the Fourth General Conference and included a special issue of the *Industrial Development Survey* for the Conference, entitled *Industry in a Changing World (ID/304)*<sup>7</sup> and "A statistical review of the world industrial situation, 1983" (UNIDO/IS.433). In the second half of the year, preparatory research was undertaken for the tenth edition of the *Industrial Development Survey*, which will examine the role of the least developed countries in the context of world industry and provide an evaluation of trends pertaining to labour intensity and human capital requirements in the manufacturing sector. It will also include a study of changing patterns of comparative advantage in key industries as well as a survey of recent trends in manufacturing value added, employment and trade at the global level. Nearing completion is the research dealing with the changing patterns of comparative advantage and structural change in specific industries, along with some of the major determinants of these changes. The findings will appear in 1985 as a sales publication.

53. The impact and usefulness of the industrial statistics and empirical research programmes of UNIDO can be gauged by the distribution of the research results. For documents produced in 1982 and 1983 the number of copies disseminated—through sales and non-sales channels, depending upon the type of document—was substantial. The distribution of recent sales publications has consistently exceeded several thousand copies and readership is continually growing.

#### Environmental and related studies

54. The year under review saw a continuation of work on industrial emergency contingency planning, as well as research on environmental protection within the context of industrial development and industrial water use and treatment practices.

55. A background document on contingency planning for industrial emergencies for the West and Central African region (UNIDO/IS.425) was presented to the Workshop on the Institution and Co-ordination of National Contingency Plans for Emergencies Associated with Industrial Installations in the West and Central African Region, organized jointly by UNIDO, the Office of the United Nations Disaster Relief Co-ordinator, the World Health Organization and the United Nations Environment Programme (UNEP), which took place in Dakar (Senegal) in February 1984. Held in co-operation with the

<sup>7</sup>United Nations publication, Sales No. E.83.II.B.6.

Regional Seas Programme Activity Centre of UNEP, the workshop was attended by participants from 15 countries and steps were taken to introduce contingency planning for industrial emergencies in the region. The study on industrial water use and treatment practices, originally scheduled for publication in 1984,<sup>8</sup> will be issued by a commercial publisher early in 1985.

56. Following the recommendations of the Fourth Consultation on the Fertilizer Industry held in New Delhi (India) in January 1984, a study was completed on the utilization of phosphogypsum produced in the fertilizer industry, as a contribution to reducing pollution in that sector.

57. In August 1984 a series of lectures based on UNIDO environmental studies, as well as an introductory talk on UNIDO activities, was delivered to participants in a training programme on environmental assessment and management in industry, held at the University of Ghent (Belgium).

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<sup>8</sup>ID/B/320, chap. IV, para. 52.



## Chapter V

# SPECIAL PROGRAMMES

1. Seven of the programmes undertaken by UNIDO have been singled out for special attention in the present *Report*. A description is given below of the activities carried out by the organization under these programmes in 1984.

### INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA

2. Activities devoted to the Industrial Development Decade for Africa increased throughout 1984 as endeavours to heighten general awareness of the importance of the Decade bore fruit. Emphasis was placed on projects related to technical advisory services, the development of pilot and demonstration plants, industrial manpower development, industrial institutional infrastructure and public information activities.

3. The importance of elaborating a comprehensive technical co-operation programme for the implementation phase (1985-1990) of the programme for the Decade was also underscored at the Seventh Conference of African Ministers of Industry held in Addis Ababa (Ethiopia) in March 1984. In response to an appeal by that Conference to the Executive Director of UNIDO a proposed programme of assistance for that phase (ID/CONF.5/33) was presented to the Fourth General Conference of UNIDO, involving an estimated total expenditure of \$209.3 million. The proposed programme, which had been structured to reflect a co-ordinated planning process, was derived from: (a) requests received by UNIDO from African countries and intergovernmental organizations; (b) the initial integrated industrial promotion programme at the subregional level developed at four subregional meetings on the promotion of intra-African industrial co-operation; and (c) proposals prepared by the secretariat on the basis of its experience in carrying out technical co-operation and support activities in developing countries in general and African countries in particular. In paragraph 5 of resolution 8 on the Industrial Development Decade for Africa—review of progress and proposals on ways and means to attain its objectives—the Fourth General Conference took note with appreciation of the proposed programme and requested the secretariat to proceed with the elaboration and improvement of selected project proposals suitable for presentation to potential sources of finance and industrial co-operation so that they might reach the stage of implementation and investment as soon as possible.

4. After the meetings held in late 1983 for the Eastern and Southern African subregion in Addis Ababa (Ethiopia) and the West African subregion in Abidjan (Ivory Coast) on the promotion of intra-African industrial co-operation within the framework of the Industrial Development Decade for Africa,<sup>1</sup> two similar meetings were held in February 1984 in Bangui (Central African Republic) for Central Africa and in March 1984 in Tunis (Tunisia) for North Africa. The proposals accepted at the four meetings were presented in a composite document (ID/CONF.5/CRP.1) which centred on the potential in the region for developing inter-country projects in priority industrial subsectors and support areas. Containing 96 strategic core projects and 47 multinational support projects, that initial integrated industrial promotion programme is the first step in a continuous planning process to which both Governments and intergovernmental organizations in the subregion may continue to submit proposals for inclusion during subsequent programming stages. Endorsed by the African Ministers of Industry at their Seventh Conference and welcomed by the Fourth General Conference of UNIDO, the projects contained in the four subregional programmes are to be integrated still further as requested by the Fourth General Conference in paragraph 9 (a) of resolution 8.

5. The Seventh Conference of African Ministers of Industry also submitted a plea to the General Assembly to increase the allocation to UNIDO from the regular budget for the Industrial Development Decade for Africa to a minimum annual level of \$5 million. The Fourth General Conference of UNIDO, in paragraph 7 of resolution 8, invited the General Assembly to consider that appeal. Subsequently the General Assembly at its thirty-ninth session by resolution 39/233 of 18 December 1984 made an allocation of \$5 million. Additional funds were allocated under the United Nations Industrial Development Fund (UNIDF) to a number of national and subregional projects, as well as to a support programme<sup>2</sup> designed to assist African countries and regional and subregional organizations in planning and programming projects related to the Decade.

6. The securing of funds from outside sources was also a main concern throughout 1984. The Government of Egypt announced a contribution of \$1 million towards the cost of sending national experts to assist other African countries in implementing projects related to the Decade and indicated its readiness to make a similar contribution for training experts from African countries.<sup>3</sup> Further to that announcement, UNIDO continued to explore ways and means of tapping such sources as the African Industrial Development Fund, the funds earmarked for industry by the African Development Bank and other bilateral and multilateral sources.

7. Those endeavours were matched by measures on the part of the UNIDO secretariat to promote the Decade both within Africa and without as urged by the African Ministers of Industry at their Seventh Conference. UNIDO co-operated in the preparation and holding of a workshop on industrialization in Africa in the United Kingdom in April 1984 under the aegis of the Centre for World Development Education, attended by British industrialists, executives

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<sup>1</sup>ID/B/320, chap. V, paras. 141-142.

<sup>2</sup>*Ibid.*, para. 146.

<sup>3</sup>ID/CONF.5/46, para. 157.



and journalists, and a presentation was made to a round-table conference on the industrialization of African countries organized in June 1984 by the Liaison Committee of Engineers, Supervisory and Managerial Staffs and Technicians. Other bodies addressed were the Second International Forum on Africa-Europe organized by the Association Technique Africaine in May 1984, and the Tenth General Assembly of the Association of African Development Finance Institutions in the same month. In March 1984, the *Africa Economic Digest* also ran a special eight-page supplement on the Decade and UNIDO issued the first poster publicizing the Decade.

8. UNIDO also participated in an Africa Day organized by the Hungarian Chamber of Commerce in December 1984 with a view to intensifying co-operation between UNIDO and Hungary and mobilizing Hungarian technical expertise for the implementation of the programme for the Decade. It also provided an opportunity to discuss the potential contribution that could be made by the Hungarian business community.

9. As requested by the Seventh Conference of African Ministers of Industry, UNIDO initiated the organization of meetings between African countries and organizations and those from other developing regions and subregions, within the context of economic and technical co-operation among developing countries activities (ECDC/TCDC), similar to the First International Latin American/African Symposium<sup>4</sup> held in Brazil in August 1983. These initiatives were welcomed during the debate on the Decade at the Fourth General Conference of UNIDO.<sup>5</sup>

10. Within the framework of the System of Consultations, activities were also undertaken to promote co-operation between African and other developing countries. In this connection, guidelines for setting up mini-steel plants in developing countries were elaborated and will be presented to a meeting on co-operation between developing countries to be convened in 1985. As a result of the First Regional Consultation on the Agricultural Machinery Industry in Africa, held in Addis Ababa (Ethiopia) in 1982, a 10-year mechanization plan is currently being elaborated for Cameroon and a framework of reference designed for the simultaneous development of multi-purpose facilities in the agricultural machinery and capital goods sectors in Algeria.

11. As in previous years, care was taken to ensure the full briefing of senior government officials, members of intergovernmental organizations, Resident Representatives of the United Nations Development Programme (UNDP), Senior Industrial Development Field Advisers (SIDFAs), senior project personnel and Junior Professional Officers (JPOs) on the aims and objectives of the Decade, on the occasion of their visits to UNIDO headquarters. Steps were taken to produce a film on the Decade which, together with a judiciously programmed publicity campaign, should heighten the impact of the Decade-related activities of UNIDO.

12. Within the organization, the Co-ordination Unit for the Industrial Development Decade for Africa continues to assist the Executive Director,

<sup>4</sup>ID/B/320, chap. V, para. 143.

<sup>5</sup>ID/CONF.5/46, para. 158.

together with the Task Force on the Decade, in providing overall policy guidance and direction. It also assists the substantive Divisions in the formulation and implementation of their Decade-related projects and activities which encompass a broad gamut of activities ranging from the development of new country-based technical co-operation programmes through the development of such factor inputs as human resources, energy and technology to investment promotion. At the same time, UNIDO, through the Co-ordination Unit, retains close links with the Organization of African Unity (OAU) and the Economic Commission for Africa (ECA) so that the joint committee of the three secretariats can co-ordinate effectively their activities in a common endeavour to monitor the implementation of the programme for the Decade within the framework of the Lagos Plan of Action for the Implementation of the Monrovia Strategy for the Economic Development of Africa.<sup>6</sup>

### SYSTEM OF CONSULTATIONS

13. The Industrial Development Board began an appraisal of the System of Consultations at its eighteenth session in May 1984 and decided to continue the appraisal at its nineteenth session. In that connection, the Board, in conclusion 1984/4, invited member States to transmit to the Executive Director their views on achievements and possible improvements of the System.<sup>7</sup> A compilation of those views as well as the views expressed at the eighteenth session of the Board will be the subject of a report to be submitted to the Board at its nineteenth session under item 9 of the provisional agenda.

14. Although no accurate prognosis could yet be made of the results of the appraisal, some beneficial consequences of the exercise were already evident at the end of 1984. The secretariat has begun a critical examination of the gamut of implementation of the recommendations made by the various Consultation meetings, to discover areas of strength and weakness, and to consider possible corrective measures. Problems involved in co-ordination both within and outside UNIDO have come to light and possibilities have been identified for greater inter-action between member States and the secretariat, thereby enhancing the possibility of positive follow-up to recommendations of Consultation meetings.

15. The System of Consultations was not conceived as a project-generating mechanism *per se* but rather as a unique means of fostering international industrial co-operation between developed and developing countries.<sup>8</sup> Every attempt is thus being made, through carefully focused technical issue papers, to encourage the emergence of action-oriented recommendations. The three sectoral Consultations held during 1984 thus resulted in recommendations which could lead to concrete technical co-operation activities and bear witness to UNIDO's success in this endeavour.

<sup>6</sup>A/S-11/14, annex I.

<sup>7</sup>*Official Records of the General Assembly, Thirty-ninth Session, Supplement No. 16 (A/39/16)*, para. 84.

<sup>8</sup>"The System of Consultations" (PI/84, paras. 1-5).

16. The Fourth Consultation on the Fertilizer Industry (see paras. 28-29 below) recommended that UNIDO should (a) identify additional countries willing to host training programmes; (b) establish information networks; and (c) promote co-operation between potential partners for the establishment of mini fertilizer plants.<sup>9</sup> The Third Consultation on the Leather and Leather Products Industry (see para. 23 below) recommended that UNIDO assist in providing technical services, management and marketing know-how, and training of personnel to the developing countries, and examine practical ways of establishing regional training centres or strengthening existing training centres.<sup>10</sup> The Second Consultation on the Food-Processing Industry with Special Emphasis on Vegetable Oils and Fats (see para. 24 below) requested UNIDO to undertake a technical co-operation project to illustrate the application of the integrated approach to food-processing and thereby to promote the production of edible oils and fats in suitable developing countries.<sup>11</sup> Thus the System of Consultations has, within the parameters of its mandate, been used as a mechanism for identifying possible areas for technical co-operation. The ability to transform those possibilities into operational projects is the function of agents and circumstances—particularly financial—outside its domain.

17. On the basis of a draft resolution forwarded by the President of the Fourth General Conference of UNIDO, the General Assembly at its thirty-ninth session adopted resolution 39/235 on world industrial restructuring and redeployment. The resolution recommends that the System of Consultations should cover industrial sectors of particular interest to developing countries; hold more regional Consultation meetings, in particular in relation to the Industrial Development Decade for Africa; seek to identify specific areas and forms of co-operation; and explore means and practical measures for the promotion of industrial co-operation at subregional, regional and international levels.

18. The Fourth General Conference also called for (a) the use of the System to facilitate negotiations among interested parties at their request, at the same time or after Consultations in order to strengthen scientific and technological capacities for industrial development in developing countries;<sup>12</sup> (b) a more effective utilization of the System of Consultations in the domestic processing of raw materials;<sup>13</sup> and (c) the holding of more regional Consultations, in particular in relation to the Industrial Development Decade for Africa, within the agreed framework for the System of Consultations.<sup>14</sup> The secretariat is currently preparing its inputs to the general implementation of these mandates.

19. Requests for improvements continue to be met in the preparations for, and conduct of, Consultation meetings. At the last Consultation held in 1984 the time spent on organizational matters and on introducing issues was pared

<sup>9</sup>For report of the Fourth Consultation on the Fertilizer Industry, see ID/314.

<sup>10</sup>For report of the Third Consultation on the Leather and Leather Products Industry, see ID/318.

<sup>11</sup>For report of the Second Consultation on the Food-Processing Industry with Special Emphasis on Vegetable Oils and Fats, see ID/329.

<sup>12</sup>ID/CONF.5/46, chap. II, sect. B (ID/CONF.5/RES.2, para. 9).

<sup>13</sup>*Ibid.* (ID/CONF.5/RES.4, para. 6(e)).

<sup>14</sup>*Ibid.* (ID/CONF.5/RES.8, para. 10(d)).

to a minimum. In order to encourage an unconstrained flow of information and exchange of ideas, informal contacts took place in an unstructured setting with minimal secretariat presence. While the more efficient use of meeting time and the markedly improved quality of documentation, in terms of preparation, substance and distribution, have elicited public and private comments of appreciation from the participants, the secretariat is fully aware of the need to introduce further improvements wherever necessary and feasible.

20. In addition to the three Consultations held in 1984, namely the Fourth Consultation on the Fertilizer Industry, the Third Consultation on the Leather and Leather Products Industry and the Second Consultation on the Food-Processing Industry with Special Emphasis on Vegetable Oils and Fats, preparatory and follow-up activities were undertaken in all sectors and topics covered by the System of Consultations.

### **Main activities by sector and topic**

#### *The agro-based industries*

##### *Wood and wood products industry*

21. The First Consultation on the Wood and Wood Products Industry was held in Helsinki (Finland) in 1983.<sup>15</sup> In conclusion 1984/4 adopted at its eighteenth session in May 1984, the Board took note of the conclusions and recommendations of that Consultation.

22. UNIDO has undertaken follow-up activities on recommendations of the First Consultation concerning the development of an internationally acceptable strength-grouping system for tropical timber; co-operation among specialized research and development institutions in developed and developing countries; dissemination of information on existing and new uses of wood in construction; and establishment of a data base for the wood products industry. These activities are being co-ordinated within UNIDO as well as with the appropriate international organizations.

##### *Leather and leather products industry*

23. The Third Consultation on the Leather and Leather Products Industry was held in Innsbruck (Austria) from 16 to 19 April 1984. It adopted by consensus a number of conclusions and recommendations which, *inter alia*, dealt with measures for developing countries to maximize the potential of the leather and leather products industry, facilitate the production and acquisition of tanning chemicals and footwear auxiliaries, and promote regional co-operation. In accordance with "The System of Consultations" (PI/84, paras. 8 and 49), the report of the Third Consultation on the Leather and Leather Products Industry (ID/318) will be submitted to the Board at its nineteenth session for decision and guidance on follow-up action. In the meantime, inter-divisional meetings have taken place in the secretariat to analyse practical ways

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<sup>15</sup>For report of the First Consultation on the Wood and Wood Products Industry, see ID/306.

of implementing the recommendations of the Consultation, and preliminary contacts have been established to explore the possibility of organizing an expert group meeting in Cairo (Egypt) for the African region. The membership of the Leather and Leather Products Industry Panel has been reconstituted and its first meeting under the new membership is scheduled to take place in 1985.

*Food-processing industry, with special emphasis on vegetable oils and fats*

24. The Second Consultation on the Food-Processing Industry with Special Emphasis on Vegetable Oils and Fats was held in Copenhagen (Denmark) from 15 to 19 October 1984. Preparations for the Consultation included the holding in Vienna of an expert group meeting on downstream processing<sup>16</sup> and the completion of issue and background papers as well as studies on the two main topics envisaged for the Consultation. Although the emphasis of the Consultation was on vegetable oils and fats, the interlinkages of that sector with animal feed, meat processing (white and red meat) and dairy products also received careful consideration. Within this framework the Consultation discussed an integrated approach to food-processing and the role of co-operatives and small- and medium-scale enterprises in the food-processing industry. The report of the Consultation (ID/329) will be submitted to the Board at its nineteenth session for decision and guidance on appropriate follow-up action.

*Fisheries industry*

25. Subject to final approval by the Board, the first Consultation on the fisheries industry will probably be held during the 1986-1987 biennium; preparatory activities within and outside UNIDO are progressing. Case studies were undertaken in Chile and Peru to better understand the nature of problems faced by the developing countries in the fisheries sector. A small group of experts met in Vienna in February 1984 to identify priority areas in which international co-operation was both possible and desirable. Areas identified included harvesting techniques and equipment manufacture, shipbuilding, technology, training, market research, research in packaging, freezing, processing, storage and transport. An outline of two surveys to be carried out in Africa and Latin America was also completed. Co-ordination was maintained with the Food and Agriculture Organization of the United Nations (FAO), with the participation of UNIDO in the Informal *Ad Hoc* Inter-agency Meeting and the *Ad Hoc* Consultation of Government Experts in preparation of the FAO World Conference on Fisheries Management and Development.

*Building materials industry*

26. The first Consultation on the building materials industry, to be held in Athens (Greece) from 26 to 30 March 1985, will be co-sponsored by UNIDO

<sup>16</sup>For Report of the Expert Group Meeting on Downstream Processing Activities in the Vegetable Oils and Fats Industry, see UNIDO/PC.97.

and the United Nations Centre for Human Settlements (HABITAT). An agreement to that effect was signed by UNIDO and HABITAT in February 1984 and approved by the Board at its eighteenth session. The Global Preparatory Meeting for the First Consultation on the Building Materials Industry was held in Vienna from 24 to 28 September 1984. Discussion papers for that meeting were prepared by the secretariat on: long-term forecasting and planning of the construction and building materials industries; measures and actions to increase the production of indigenous building materials in the context of enhanced import substitution; outline of a policy for expertise and technological selection in capital goods for cement and brick manufacturing, as well as co-operation between developing countries in those industries; suggestions for issues related to industrial financing of the building materials industry; research priorities for the building materials industries in developing countries; and small-scale building materials production in the context of the informal economy.

27. The Global Preparatory Meeting recommended the following issues for discussion at the first Consultation:

(a) Development of the building materials industry, including financing, planning and programming methods, emphasizing alternative scale plants, particularly in the cement industry;

(b) Measures to strengthen indigenous technological capabilities in the production and use of building materials related *inter alia* to the appropriate choice of products, selection, adaptation and transfer of technology, training, organization of production, design and production of capital goods, and research and development;

(c) Measures required to develop building materials production in the informal economy, including research and development, information, training, quality improvement and standardization.

Issue papers are being prepared accordingly and will be ready early in 1985.

### *Chemical industries*

#### *Fertilizer industry*

28. The Fourth Consultation on the Fertilizer Industry was held in New Delhi (India) from 23 to 27 January 1984.<sup>17</sup> In conclusion 1984/4 adopted at its eighteenth session in May 1984, the Board took note of the conclusions and recommendations of that Consultation.

29. The Consultation recommended that two model forms of contract presented by the secretariat for the construction of a fertilizer plant—the semi-turnkey and the licensing and engineering services agreement—should be finalized by two international expert groups. It also formulated specific recommendations aimed at enhancing the programme of co-operation between developing countries, for example through additional training programmes and the study of joint venture arrangements. It requested UNIDO to report on the implementation of that programme to a subsequent Consultation on the

<sup>17</sup>For report of the Fourth Consultation on the Fertilizer Industry, see ID/314.

fertilizer industry and to meetings of the enlarged bureau, set up at the Third Consultation.<sup>18</sup> Among the recommendations on capital costs for fertilizer plants was a request that UNIDO prepare a pre-contracting manual for the fertilizer industry in developing countries as well as comprehensive guidelines for project management and capital cost control. With regard to mini fertilizer plants, the Consultation recommended that UNIDO continue to promote co-operation between potential contractors and engineering companies from both developed and developing countries and buyers from developing countries and identify situations where mini plants would be desirable. The Consultation also considered the new issues which had been proposed by UNIDO. While recognizing the importance of the pesticides industry to developing countries, the Consultation referred the issue of pesticides to the Board. Finally, the Consultation recommended that UNIDO, in co-operation with other international organizations, undertake work on the industrial aspects of new technologies and environmental pollution.

30. As a part of the implementation of the recommendations of the Fourth Consultation, two meetings of international groups of experts convened in July 1984 in Vienna and agreed on the final draft of the semi-turnkey contract and the licensing and engineering services agreement. The two model contracts are currently being published. To further the programme for strengthening co-operation among developing countries, a project proposal to hold three regional meetings on the exchange of experience in the construction and operation of fertilizer plants in developing countries was approved by the UNIDO Project Review Committee and the necessary preparations are under way. The "Draft directory of technological capabilities of the developing countries related to the fertilizer industry" (first issued in January 1984 as document UNIDO/PC.89 and Corr.1) is currently being updated and revised. Efforts are also being made to organize the first training course for maintenance and operation engineers.

31. As requested by the Fourth Consultation, a detailed outline of a pre-contracting manual for the fertilizer industry (see para. 29 above) is under preparation. The guidelines for project management and capital cost control are also being worked out and are scheduled for completion in the first quarter of 1985.

32. Work started in 1984 on a draft guide on mini fertilizer plants. A series of case studies will also be initiated in 1985 to ascertain the commercial viability of mini fertilizer plants. Related to the fertilizer industry is also the important role played by new technologies aimed at improving the effectiveness of fertilizer application thus increasing the crop yield. The subject merits further investigation and will be raised with other international organizations. Similarly, work is planned on environmental pollution caused by fertilizer plants.

### *Petrochemical industry*

33. Preparations continued for the third Consultation on the petrochemical industry scheduled to take place in the final quarter of 1985, as approved by

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<sup>18</sup>ID/260, para. 12.

the Board in conclusion 1983/4.<sup>19</sup> At the same time work continued on implementation of recommendations of previous Consultations on that sector. During the year under review, a UNIDO manual for the establishment of joint venture agreements in the petrochemical industry, including clauses pertaining to the training of industrial manpower, was prepared in preliminary draft form, and regional field surveys have been, or are being, completed. The "UNIDO model form of agreement for licensing of patents and know-how in the petrochemical industry" (UNIDO/PC.50/Rev.1) was completed by a meeting of international experts and distributed.

34. Other activities concerning contractual arrangements commenced before the end of 1984 have a more specific focus and relate to financing, marketing, access to technology and supply of raw materials. A data base for 25 petrochemicals was established by the secretariat to ascertain world supply and demand for petrochemicals. That data is now being rechecked through a survey in both developed and developing countries. An analysis of the restructuring of the petrochemical industry in developed countries was also initiated. The OPEC/UNIDO/OPEC Fund for International Development Seminar on Co-operation among Developing Countries in Petrochemical Industries held in Vienna in 1983<sup>20</sup> and two meetings of the Advisory Panel on Petrochemicals also held in Vienna in October 1983 and September 1984 helped to prepare a work programme for South-South co-operation in petrochemicals, which is currently under implementation. Recommendations for North-South co-operation were formulated by the first Expert Group Meeting on International Co-operation on Petrochemicals held in Vienna in September 1984. A work programme is being prepared, based on those recommendations.

#### *Pharmaceutical industry*

35. In accordance with the recommendations of the Second Consultation on the Pharmaceutical Industry,<sup>21</sup> held in Budapest (Hungary) in 1983, the following documents are being revised:

"Items which could be incorporated in contractual agreements for the transfer of technology for the manufacture of those bulk drugs/intermediates included in UNIDO's illustrative list" (ID/WG.393/1);

"Items which could be included in licensing arrangements for the transfer of technology for the formulation of pharmaceutical dosage forms" (ID/WG.393/3 and Corr.1);

"Items which could be included in contractual arrangements for the setting up of a plant for the production of bulk drugs (or intermediates) included in UNIDO's illustrative list" (ID/WG.393/4).

After revision—expected to be completed in early 1985—the documents will be finalized by the *Ad Hoc* Panel of Experts during the first half of 1985. The Consultation also recommended that UNIDO should prepare documents on (a) items that could be included in contractual arrangements for the setting up

<sup>19</sup>Official Records of the General Assembly, Thirty-eighth Session, Supplement No. 16 (A/38/16), para. 76.

<sup>20</sup>ID/B/320, chap. V, para. 179.

<sup>21</sup>For report of the Second Consultation on the Pharmaceutical Industry, see ID/311.



of turn-key plants for the production of bulk drugs or intermediates and (b) arrangements for technical assistance for the formulation of pharmaceutical forms. As requested, UNIDO prepared outlines for these two documents, which will also be referred to the meeting of the *Ad Hoc* Panel of Experts and after finalization submitted to the third Consultation.

36. The directory of the sources of supply of 26 essential bulk drugs, their chemical intermediates and some raw materials<sup>22</sup> was revised and updated during 1984 for distribution in early 1985. The progressive enlargement of the directory is being undertaken to cover the entire World Health Organization (WHO) list of drugs. Other ongoing activities to implement recommendations on the issue of availability, pricing and transfer of technology include the preparation of guidelines for improving management skills for the procurement of chemicals, transfer of know-how for the production of pharmaceutical chemicals and pharmaceutical formulations, survey of national industrial drug policies, establishment of a process and research development centre and co-ordination with other United Nations agencies. Work began on a directory of drugs based on medicinal plants. Efforts are also being made to develop a programme of genetic improvement on medicinal plants.

37. Two meetings of the Advisory Panel of Experts on Biologicals were convened in February and November 1984 respectively to advise and guide UNIDO in its programme for the industrial production of biologicals, which—in response to a recommendation of the Second Consultation—will include effective assimilation of technology and control procedures. Preparatory work on implementation of the programme is nearing completion.

### *Basic industries*

#### *Agricultural machinery industry*

38. In line with a recommendation of the Second Consultation on the Agricultural Machinery Industry held in Vienna in 1983,<sup>23</sup> an expert group meeting was convened in November 1984 in Guangzhou (China) to promote the manufacture of agricultural machinery and rural and food-related equipment in developing countries through the development of multi-purpose plants, making full use of local experience. The programme of action agreed upon at the expert group meeting will be launched in 1985.\* Work was simultaneously started by the secretariat to investigate globally and in selected countries factors relevant to the elaboration of a framework for industrial co-operation in this field. Also as a follow-up of the Second Consultation, contacts were initiated for the convening of a group of experts in 1985 whose findings will be used to elaborate a framework for a new type of industrial co-operation for the development of design, production and maintenance of agricultural machinery and rural equipment, taking into account, in particular, the contribution of small- and medium-scale enterprises.

39. The reactions of participants to the Second Consultation with regard to guidelines for the import, assembly and manufacture of agricultural machinery

<sup>22</sup>ID/B/320, chap. V, para. 182.

<sup>23</sup>For report of the Second Consultation on the Agricultural Machinery Industry, see ID/307.

and training, and for the elaboration of master agreements were compiled, and UNIDO will start preparing the guidelines, which are expected to be finalized early in 1985.

40. As a follow-up of the Regional Consultation on Agricultural Machinery Industry held in Ethiopia in 1982 and within the framework of the programme of the Industrial Development Decade for Africa, a joint UNIDO/FAO mission, including two experts financed by the Government of Cameroon, was fielded in January 1984 to finalize a proposed 10-year mechanization plan for Cameroon. A preliminary mission was also sent to Algeria at the request of the Government, to establish a basic framework of reference for the development of multi-purpose facilities, which will eventually promote the simultaneous development of agricultural machinery and capital goods.

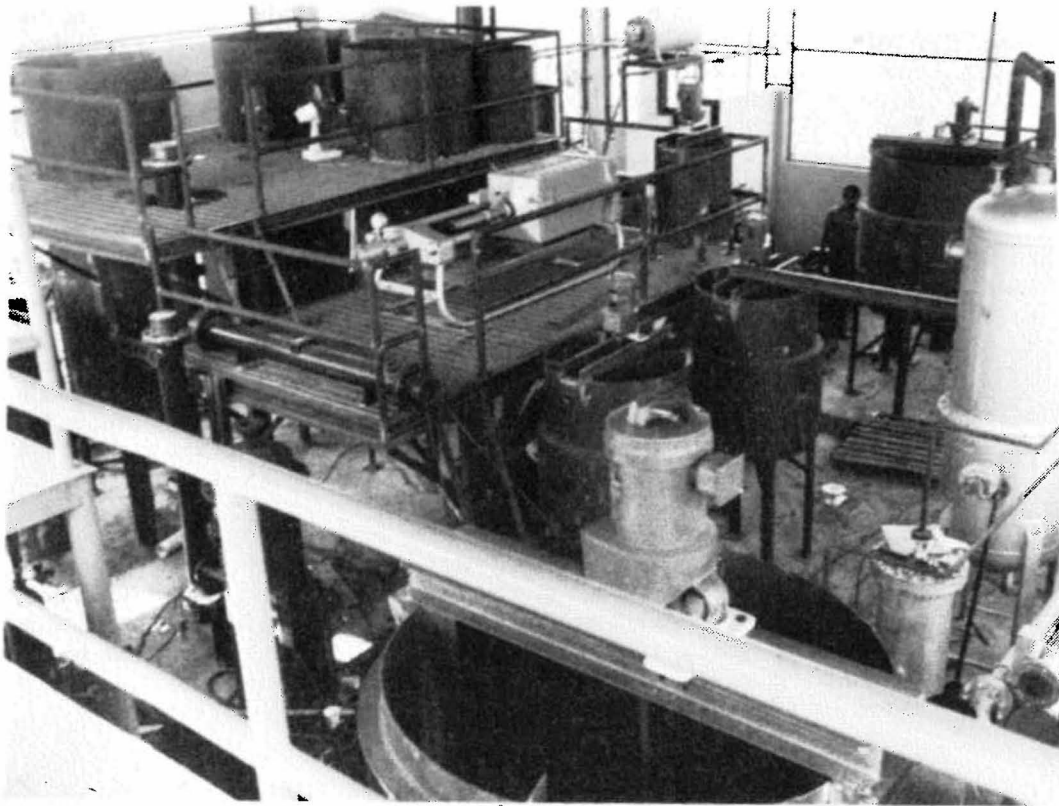
#### *Iron and steel industry*

41. Work during 1984 concentrated on the analysis of the crisis in the iron and steel industry and the consequent implications for its future development in developing countries. Also examined was the linkage between the iron and steel and capital goods sectors, as well as the possibilities of financing infrastructure and training in iron and steel projects. At the same time, work began on a normative methodology for industrial training in the iron and steel sector designed to permit the mastering of technology by developing countries. For that purpose, the different degrees of technological complexity in the iron and steel industry and the skills required to master that technology are being defined.

42. An international seminar on iron and steel was convened in Karachi (Pakistan) in May 1984 *inter alia* to discuss an integrated approach to the iron and steel, capital goods, construction and other sectors; to evaluate mini steel plants as a feasible route for newcomer countries; and to identify new perspectives for the financing of project infrastructure and training. A research study was initiated on the integrated planning and development of the iron and steel industry and other industrial sectors. Guidelines for the setting-up of mini steel plants in developing countries will be formulated and tested at a meeting on economic co-operation between developing countries to be convened in 1985. The crisis currently facing the iron and steel industry and the sectoral restructuring process will be examined. Preparations have begun for the convening in October/November 1985 of an expert group meeting on training methodology with emphasis on newcomer countries.

#### *Capital goods industry, with special emphasis on energy-related technology and equipment*

43. The second Consultation on the capital goods industry to take place in Stockholm (Sweden) in June 1985, will lay emphasis on energy-related technology and equipment. Preparations now under way for the Consultation include activities related to the classification of capital goods and the elaboration of a typology of developing countries according to their potential in order to help identify capital goods which could be manufactured by them.



*General view of the pilot plant at the Jamaica Bauxite Institute, Kingston (Jamaica)*

Special attention will be given to ways of manufacturing capital goods in developing countries, and to the selection of those industries where manufacture in developing countries is likely to be of mutual benefit to both developed and developing countries. This approach is being applied specifically to energy-related equipment and technology, partly through the preparation of country case studies.

44. The above-mentioned preparatory activities and the Expert Group Meeting on Energy-related Equipment and Technology held in Vienna in December 1983 and the Expert Group Meeting on the Electric Power Equipment Industry also held in Vienna in November 1984, suggest that the Consultation might usefully be organized around two main subjects, namely the analysis of strategies for the entry of newcomer countries and strategies for the unpackaging of technologies in the electric power equipment sector.

#### *Non-ferrous metals industry*

45. Subject to final approval by the Board, the first Consultation on the non-ferrous metals industry is provisionally scheduled for the 1986-1987 biennium, and preparations are being made by the Negotiations Branch on the basis of available data, information and analyses. Following a preliminary

study in 1983, activities currently focus on an in-depth analysis of the information and of the trends in each component of the industry (aluminium, zinc, copper, nickel, lead, tin) and on the identification of the main actors involved. Some of these activities are carried out jointly with the United Nations Centre on Transnational Corporations (UNCTC). A programme of collaboration with the secretariat of the Andean Pact is being prepared with regard to aluminium, copper and tin. Account has been taken of the relevant work carried out by the United Nations Conference on Trade and Development (UNCTAD).

46. Other activities during 1984 included an analysis of energy requirements and their impact on the increase in industrial processing of selected non-ferrous metals in developing countries; a joint UNIDO/UNCTC work programme to analyse the strategies of Governments and transnational corporations in the non-ferrous metals industry; and an in-house study on the development and restructuring of the non-ferrous metals industry (part I completed during 1984, parts II and III to be concluded during the first half of 1985).

47. Preparatory work was started on a typology of countries as well as a set of scenarios and medium- and long-term forecasting in order to determine broad strategies for the further processing of non-ferrous metals in developing countries. An expert group meeting on the non-ferrous metals industry will be convened in 1985 to discuss the background information compiled by the secretariat. Its conclusions and recommendations will provide the final inputs to the first Consultation on the non-ferrous metals industry.

### *Topics common to all sectors of industry*

#### *Industrial financing*

48. The Board at its eighteenth session in conclusion 1984/4 decided that work on industrial financing should be pursued with regard to each sector in respect of which Consultations had been scheduled. Moreover, the Board requested that the documentation submitted to Consultations should focus more narrowly on practical and well-defined subjects directly related to furthering progress in the industrialization of developing countries. In pursuance of these decisions, priority was given in 1984 to examining the impact of financial flows and constraints on investment possibilities in specific industrial sectors in developing countries, selected on the basis of the Consultations scheduled for 1985. In this connection, analyses were made of patterns of finance flowing to the cement industry in order to prepare a study as a possible input to the first Consultation on the building materials industry to be held in Athens (Greece) in March 1985. Similar approaches are being adopted in preparing the forthcoming second Consultation on the capital goods industry and the third Consultation on the petrochemical industry. In addition, an analytical paper (UNIDO/PC.104) was prepared on sectoral trends in multilateral lending to industry.

49. Within the context of work being undertaken to strengthen links between industrial training and new plant construction, the policies of major trading countries towards financing training are being examined, as is the extent to which the financing of training could benefit from conditions similar to those

applied to physical infrastructure. As another aspect of this exercise, attention is being directed towards investment in industrial training considered as a component of social infrastructure; in this connection, the methodology used will consist of case studies built around structured interviews.

### *Training of industrial manpower*

50. Work carried out by UNIDO through its Negotiations Branch in the field of industrial training developed at three complementary levels: internal, sectoral and global. The first is concerned with the work of the UNIDO Task Force on the Training of Industrial Manpower aimed at better co-ordinating the activities of UNIDO and contributing to the gradual formulation of a UNIDO policy and strategy in this field. At the request of the Task Force, an internal survey carried out by the Negotiations Branch presented the various activities related to training carried out within the organization and analysed the structure, effectiveness, priorities, problems and limits of training offered through UNIDO. The study provides a basis to improve response to the priority needs of developing countries in human resource development. In this way it could contribute to the progressive development of a long-term UNIDO policy and strategy in the field of human resources thus responding to the conclusions and recommendations of the Fourth General Conference.

51. In view of the recognized need to consider manpower and training requirements in relation to different levels of technology, an operational approach is being developed for training in the iron and steel sector with testing envisaged in selected African countries. In the capital goods sector, a project funded by UNIDF in Tunisia is applying the same approach to the development of the engineering industries with the objective of progressively mastering technology in that area.

52. At the global level, work continued during 1984 on some of the key recommendations of the First Consultation in preparation of the convening of the second global Consultation during the biennium 1986-1987. In this connection there is a focus on the financing of training (see para. 49 above), the linkages between industrial training at the global, sectoral and enterprise levels, and the drawing up of a check-list for training associated with the purchase of plant equipment. Preparations for the second Consultation will be based on the conclusions and recommendations of the Fourth General Conference as well as the results of the internal survey. Preparations will also concentrate on the identification of specific training needs of the various representative groups of developing countries, the development of local training capabilities and institutions, and the improvement of the linkage between the vocational training system and training within industry, with attention given to the development of entrepreneurship for small- and medium-size enterprises, in particular those linked with rural development.

### *Trade and trade-related aspects of industrial collaboration arrangements*

53. The subject of trade and trade-related aspects of industrial collaboration arrangements—although a subject of concern to both UNCTAD and UNIDO

since 1979—is not a topic of specific Consultations.<sup>24</sup> A report issued early in 1984 on industrial collaboration at enterprise level<sup>25</sup> reviewed the main characteristics of industrial collaboration and the factors that are conducive to its further development. Taking as an illustration the concept of “co-development”, the report suggested that the scope for new, flexible, governmental frames to increase the benefits of enterprise level co-operation needed to be further studied.

54. During the year under review work on trade and trade-related aspects of industrial collaboration was conducted in relation and as a complement to activities carried out in implementing recommendations of sectoral Consultations. Those activities relating to contractual arrangements between enterprises included the preparation of check-lists, guidelines and model forms of agreements for the fertilizer, petrochemical, pharmaceutical, agricultural machinery, leather and leather products and food-processing industries as well as training. Consideration was also given to work undertaken by other international institutions. An exchange of information took place with the Institute of International Business Law and Practice of the International Chamber of Commerce and the Development Centre of the Organisation for Economic Co-operation and Development as regards its work in similarly relevant areas.

## ASSISTANCE TO THE LEAST DEVELOPED COUNTRIES

55. The economic performance of the least developed countries in recent years was discussed at the Fourth General Conference of UNIDO. Serious concern was expressed at the continuing deterioration of the economic and social situation, the low level of industrialization and the slow growth in manufacturing value-added in those countries. There are at the time of writing no indications that the situation will improve in the near future. On the contrary, many least developed countries—in particular those located in Africa—are facing food and water shortages, loss of livestock, increasing malnutrition and other health risks, in addition to an acute shortage of foreign exchange which in turn has caused a substantial curtailment of imports, including raw materials and spare parts for the industrial sector. Most of those countries are also drought-stricken, which has meant that not only have locally produced raw materials been unavailable for the industrial sector but the struggle for daily subsistence has been so intense that it takes priority over everything else. Recurrent budgetary problems have led to a situation in which Governments have been unable to maintain essential services—roads, water and electricity—in a manner that would enable them to cater adequately for the industrial sector and the rest of the economy. The report issued 23 October 1984 by the Secretary-General on the critical economic situation in Africa<sup>26</sup> has identified emergency situations in 36 countries out of which 22 are least developed. It is no longer a matter of expanding the industrial sector in the least developed countries but merely trying to ensure that what has already

<sup>24</sup>ID/B/320, chap. V, para. 217.

<sup>25</sup>UNIDO/PC.101.

<sup>26</sup>A/39/594.

been established remains. Under such circumstances, the economic transformation of the least developed countries, which is the main objective of the Substantial New Programme of Action for the 1980s for the Least Developed Countries<sup>27</sup> seems to have receded into the even more distant future.

56. The critical situation of the least developed countries—an essentially structural weakness—is often aggravated by the occurrence of natural catastrophes whose negative impact is multiplied by the inadequacy of available resources to combat them. The emergency assistance granted by the international community in times of catastrophe—sometimes generous and effective, sometimes less generous and slow—while always welcomed, tends to divert attention from the urgent need to solve the structural problems of the least developed countries. Through vigorous and sustained international action, they should be encouraged to achieve self-reliance and self-sustained and long-term development. While it is up to each nation to take steps to improve its own domestic economic performance, development assistance is also essential in addressing many of the problems the least developed countries are confronted with. A substantial increase in concessional flows of funds is required to secure development momentum and enable those countries to make whatever progress is possible in the years ahead.

57. UNIDO pursued its efforts in 1984 to assist least developed countries with the main thrust of technical co-operation programmes continuing to focus on industrial planning and programming (including the preparation of pre-feasibility and feasibility studies), industrial manpower development, industrial infrastructure, agro-based industries, promotion of small- and medium-scale as well as rural industries based on the utilization of local resources.

58. Although the overall resource conditions remained the same, there was a significant increase in new project approvals in 1984 compared to 1983. Considerable improvement was noticed with regard to the UNDP-financed projects, in spite of the fact that UNDP resources continued to cover only 55 per cent of the indicative planning figures (IPFs) originally established for the current programming cycle. It should be noted, however, that some of the projects approved in 1984 for UNDP financing were originally developed in 1983 or earlier but financial constraints had deferred their approval. An increase was also recorded in project approvals to be financed from other sources available to UNIDO, in particular the regular programme. Altogether the total value of project approvals in 1984 (which included revisions to ongoing projects), under all sources of funds exceeded by approximately 80 per cent the level attained in 1983.

59. This positive development, however, does not imply that the resource limitation is over and that an upward trend has been established. UNIDO, as executing agency for technical co-operation activities, is still facing financial constraints in the face of considerable expansion in the demand for technical assistance and other services to the least developed countries. In fact, reduced project approvals in 1983, among other factors, contributed to a further decline in delivery of technical assistance to the least developed countries in 1984, a

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<sup>27</sup>*Report of the United Nations Conference on the Least Developed Countries, Paris, 1-14 September 1981* (United Nations publication, Sales No. E.82.I.8), part one, section A.

downward trend which will probably continue in future years if there is no increase in financial resources made available to UNIDO, in particular under UNDP and UNIDF. Statistics for 1984 project approvals and expenditures by country and source of funds are given in appendix O.

60. Taking into account current financial constraints, UNIDO continued in 1984 its efforts to strengthen co-operation with other United Nations agencies and financial institutions including the United Nations Capital Development Fund (UNCDF), the World Bank and regional organizations with a view to mobilizing additional resources and achieving a better co-ordination in providing technical assistance to the least developed countries. Co-operation with UNCDF led to the development of additional projects to be executed by UNIDO and funded jointly by UNCDF and UNDP, two of which were approved in 1984. Provided UNIDO can arrange funding for the technical co-operation component of the projects for which the equipment component is financed by UNCDF, there are good prospects for strengthening co-operation between the two organizations in the future. A number of projects developed in co-operation with the World Bank are under implementation.

61. Negotiations continued with representatives of the least developed countries as well as with UNDP in an attempt to expedite finalization and approval of projects, in particular those being financed by UNDP. Resident Representatives from nine least developed countries visited UNIDO headquarters and consultations with representatives from most of those countries took place on the occasion of a workshop on industrialization of the least developed countries held immediately prior to the Fourth General Conference which offered the secretariat and participants an opportunity to discuss the various problems confronting least developed countries in their efforts towards industrial development. The workshop also identified ways and means to strengthen further UNIDO's co-operation with those countries, bearing in mind the relevant recommendations of the Substantial New Programme of Action and the recent trends in the international economic situation. UNIDO fielded seven programme review and six project formulation missions in a number of least developed countries during the reporting period, and in the course of round table conferences reviewed its activities in several least developed countries.

62. Assistance continued to the least developed countries in 1984 under other special programmes of UNIDO. Financial support was provided to enable the representatives of least developed countries to participate at the Consultation meetings organized in 1984 on fertilizers, leather and leather products and food processing. Those Consultation meetings enabled, *inter alia*, participants to acquire up-to-date knowledge of the latest developments in the areas covered by the System of Consultations.

63. Effective participation of 35, out of a total of 36, least developed countries in the Fourth General Conference of UNIDO was made possible through generous pledges by Austria, China, Finland, France, Greece, the Netherlands, Norway, Portugal and the Republic of Korea as well as the Arab Industrial Development Organization (AIDO).

64. As part of UNIDO's promotional and advisory services, an investment promotion meeting was organized in Nepal in June 1984. A portfolio of



Substantial New Programme of Action for the 1980s and subsequently submitted to the Director-General for Development and International Economic Co-operation the third progress report containing information on the actions and measures initiated, or envisaged to be undertaken, by UNIDO towards the implementation of the Substantial New Programme of Action.

## ENERGY

69. Energy was the subject of an agenda item at the Fourth General Conference of UNIDO. Discussions on the item revealed widespread recognition of energy as one of the major factors in the industrialization of developing countries. The principal objectives of developing countries in the field of energy and industrialization, as identified by the Conference, currently form the basis of UNIDO's energy and industrialization programme, namely:

(a) The development of integrated national industrial and energy policies and plans;

(b) The development and strengthening of the energy resource base of developing countries by exploring indigenous sources of energy in order to increase their self-sufficiency in energy and thus sustain their industrialization process;

(c) The enhancement of capital goods manufacture in support of the energy sector where technically and economically feasible in accordance with plans and priorities defined by the developing countries themselves;

(d) Adequate maintenance and repair activities which would extend the life and improve the performance of energy-related capital equipment;

(e) The improvement of industrial energy efficiency through measures aimed at a rational use of energy, taking into account the particular conditions of developing countries and their need for a sustained industrialization process.

70. During 1984, approximately 90 projects were executed in the field of energy with an estimated expenditure for the year of \$8.4 million, representing approximately 9 per cent of the total estimated amount spent on technical assistance.

71. Once again, special attention was devoted to new and renewable sources of energy with particular focus on small hydropower, biomass and solar energy. New activities related to hydropower included the preparation of a six-volume manual in co-operation with the Latin American Energy Organization (OLADE) to cover the design of Pelton, cross flow, and axial turbines, regulators and control systems. The manual will be particularly useful to those developing countries which wish to manufacture equipment and machinery for small hydropower stations. Another new project involved a techno-economic assessment of the possible establishment of a small hydro electric plant in Mali including the identification of electrical and mechanical equipment which could be manufactured locally.

72. In addition to the manual developed with OLADE and the hydropower project in Mali, efforts to assist the developing countries in manufacturing the

projects was prepared and distributed to financial institutions and private investors attending the meeting. Assistance was also extended to three participants from least developed countries to participate in training programmes implemented by the UNIDO Investment Promotion Service in Paris (France). Within the context of the economic co-operation among developing countries programme, two solidarity meetings were organized in Rwanda and Yemen, thus bringing the total number of solidarity meetings in least developed countries to 10. Within its energy programme, UNIDO provided technical assistance to the Department of Energy of the Ministry of Industries in Niger in developing improved cooking stoves. A similar request from Samoa was approved for implementation in future years to be financed from UNIDO's own resources. Two studies were carried out in 1984 for the establishment of a mini hydroelectric plant and a unit for the promotion of solar equipment in Mali. Preparatory work was also initiated to develop mini hydroelectric plants for rural areas in selected least developed countries in Africa.

65. In the area of manpower development, UNIDO continued to accord high priority to group training programmes and seminars especially designed for the needs of the least developed countries, which in 1984 covered such fields as small-scale foundry operations, energy conservation, medicinal plants, project preparation and evaluation and management of small-scale industries. A seminar for women entrepreneurs in the United Republic of Tanzania was held.

66. In continuation of its efforts to assist least developed countries facing special difficulties, UNIDO was able to start implementation of several projects in the Sudano-Sahelian zone in fields such as water management, production of small agricultural implements and energy. As part of the rehabilitation programme in Chad, UNIDO initiated two projects in the field of building materials and formulated a further project for direct assistance to the small- and medium-scale enterprises, currently under consideration for UNDP financing.

67. Within the framework of the joint UNIDO/Yugoslavia Centre for International Co-operation in the Development of Agro-Industries in the Developing Countries, the first phase of the long-term programme of co-operation in the development of agro-industries in selected African least developed countries was completed and preparatory work initiated for the second phase.

68. As its contribution to the review of the implementation of the Substantial New Programme of Action at the country level, UNIDO continued in 1984 to undertake studies on resource-based industries. Three studies were completed, bringing the total to 11, while the preparation of two others will be finalized in 1985. Two country industrial development reviews were completed in 1984 and another was under preparation at the end of the year. The "Statistical review of the world industrial situation 1984" also provides useful data on present and future trends of the manufacturing sector in the least developed countries and thus contributes to the global monitoring of the Substantial New Programme of Action. UNIDO's contribution to the global mid-term review of the Substantial New Programme of Action, scheduled for September 1985 in Geneva, was under preparation during the reporting period. UNIDO attended the Third Inter-Agency Consultation on Follow-up of the

capital goods required to support the energy sector included a new project in Colombia concerned with the development of the capital goods industry, in particular energy equipment. Preparations continued for the Consultation on capital goods with special emphasis on energy-related equipment and technology to be held in 1985.

73. In the area of biomass, new initiatives included: an interregional project for the use of fermentation ethanol as fuel and chemical feedstock; a bio-fuels demonstration programme in Ethiopia; improvements in industrial charcoal production in Somalia; a pilot plant for the production of alcohol from cellulosic raw material in the Philippines; assistance in the manufacture of efficient wood-burning stoves in Samoa; the industrial use of cane sugar by-products in Colombia; and—in co-operation with the French Government—a consultative meeting on energy production from agro-industrial by-products and wastes. New projects initiated in 1984 in the solar energy area included: assistance in establishing a salt industry in the Solomon Islands; construction of a prototype solar timber drying kiln in Guyana; a fact-finding mission in the Maldiv Islands for the manufacture and application of solar collectors; and a programme of research and development on renewable energy in Madagascar.

74. During the year under review, UNIDO expanded its activities to foster improved industrial energy efficiency. Interregional seminars, workshops, and training programmes were carried out on energy conservation techniques for industrial applications and energy savings in the cement industry, glass industry, beet sugar industry and in petroleum refineries. Assistance was provided to Sri Lanka to launch a national industrial energy conservation programme and establish a new energy management unit at the national Engineering Research and Development Centre. A new regional project was initiated in 1984 on energy conservation in the energy-intensive industrial sectors of European developing countries. Plans were also developed for new initiatives at the policy-making level to supplement the extensive activities currently in progress at the technical and plant levels.

75. UNIDO continued to play an active role in the follow-up to the Nairobi Programme of Action for the Development and Utilization of New and Renewable Sources of Energy<sup>28</sup> and contributed to the second session of the intergovernmental Committee on the Development and Utilization of New and Renewable Sources of Energy, held in New York in April 1984. In co-operation with the Special Co-ordinator for New and Renewable Sources of Energy<sup>29</sup> specific proposals were prepared for a global consultative meeting on new and renewable sources of energy scheduled for early 1985. UNIDO also submitted a number of proposals to the regional consultative meeting on New and Renewable Sources of Energy organized by the Economic and Social Commission for Asia and the Pacific (ESCAP) and undertook the appropriate follow-up activities. The Inter-agency Group on New and Renewable Sources of Energy established by the Administrative Committee on Co-ordination met in April to discuss co-ordination of proposals for the global and regional consultative meetings and mechanisms for co-ordinating new programmes and

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<sup>28</sup>*Report of the United Nations Conference on New and Renewable Sources of Energy, Nairobi, 10 to 21 August 1981* (United Nations publication, Sales No. E.81.I.24).

<sup>29</sup>ID/B/320, chap. V, para. 11.

projects. The meeting, which involved the active participation of UNIDO, also reviewed a compendium of activities related to New and Renewable Sources of Energy currently being conducted within the United Nations system.

76. Energy-related topics other than new and renewable sources of energy were also the subject of discussions and meetings with a number of agencies including the International Labour Organisation, FAO and the United Nations Educational, Scientific and Cultural Organization (UNESCO), within the framework of standing joint committees. A new and highly substantive interaction was developed with the Department of Technical Co-operation for Development thus giving fresh impetus to co-operation in the field of energy. Liaison was maintained with other agencies and organizations including the United Nations Institute for Training and Research, the International Atomic Energy Agency and international financial institutions.

### TECHNOLOGY PROGRAMME

77. The work of the Technology Programme in 1984 continued to be directed towards two interrelated goals: (a) to encourage appropriate policy responses by developing countries to the changing technological scene as well as a corresponding strengthening of their technological capabilities; and (b) to implement a broad-based programme to help developing countries in the selection, acquisition and development of technology. The basic thrust of the Programme remained the same, namely, that the policy approaches of developing countries and their capabilities should be commensurate with the tasks of industrial development in the 1980s and beyond.

78. During 1984 the results of work achieved over the past few years under the programme of technological advances were brought together and presented in their transsectoral aspects to the Fourth General Conference of UNIDO.<sup>30</sup> In particular, stress was laid on the need for an informed policy response to technological change and for the development, at the national level, of a framework for action suitable for the 1980s. Resolution 2, adopted by the Fourth General Conference, confirms the major conclusions presented in the secretariat documentation and affirms that high priority should be given to industrial technology in the activities of UNIDO.

79. A number of specific actions were spelt out for future UNIDO activities by the Fourth General Conference in the field of technology. First, UNIDO was asked to assist developing countries in the setting up of national groups to monitor and assess technological trends and technical groups or institutions in selected technological advances; to continue to monitor world technology trends and the changing international technology market; and to set up international training in technology including emerging technologies and help developing countries in projects in new technological opportunities. Second, UNIDO was asked to promote an international referral system for the identification of high-level scientists and technologists. Third—following the presentation by the secretariat of a concept and programme concerning

<sup>30</sup>See ID/CONF.5/4 and ID/CONF.5/5.

“technologies for humanity”—UNIDO was requested to assist developing countries, at their request, in identifying areas where needs of clear urgency to mankind could be met through the application of appropriate technologies and encourage international co-operation in this regard. Fourth, UNIDO was requested to assist countries, on request, in making studies of ways and means for more efficient institutional linkages in selected technologies, so that interested countries might identify any gaps in existing arrangements with a view to considering the setting up, where necessary, of national, regional and international centres for selected technologies.

80. The UNIDO secretariat was also specifically asked to continue and strengthen certain activities, including the identification and promotion of energy-related technologies and the kinds of equipment required; the identification and upgrading of traditional technologies and assistance in the establishment of pilot and demonstration plants, with particular reference to Africa; the strengthening of negotiating capabilities in technology acquisition; the introduction of new initiatives for technological co-operation between developing countries; and the promotion of technological co-operation between small- and medium-size enterprises in developing and developed countries including the high technology areas and giving particular attention to the needs of the least developed countries. There was a call for a strengthening of the activities of the Industrial and Technological Information Bank (INTIB), both in the resolution on technology and in those on energy and co-operation among developing countries, which also requested UNIDO to strengthen the Technological Information Exchange System (TIES).

81. Follow-up of the recommendations of the Fourth General Conference will largely depend on the availability of additional resources in the biennium 1986-1987.

### Technological advances

82. Work continued in the transsectoral aspects of technological advances presented to the Fourth General Conference with specific attention given to integrating technological advances in the mainstream of industrial production and correspondingly integrating industrial and technology policies. Different approaches were adopted in work relating to specific technological advances, depending on the nature of the technological advances and the requirements of the developing countries.

83. As requested by the Ministerial-level Plenipotentiary Meeting on the Establishment of the International Centre for Genetic Engineering and Biotechnology (ICGEB) held in 1983, the secretariat continued its efforts to promote the establishment of the Centre. It serviced five sessions of the Preparatory Committee on the establishment of the Centre as well as a reconvened plenipotentiary meeting in April 1984. At that meeting a decision was taken to locate the Centre in two components, namely in Trieste (Italy) and New Delhi (India). Considerable progress in the preparatory work was achieved at the September session of the Preparatory Committee and a panel of scientific advisers was constituted to advise on preparations. By the end of the year, 14 distinguished scientists, including three Nobel Prize winners, had

agreed to serve on the panel. A project leader was also selected. The initial financing for the preparatory activities including the above was pledged by the Government of Italy under a technical co-operation trust fund agreement. Special high-level missions will be undertaken to identify potential additional sources of financing.

84. Proposals for the work programme of the two-component Centre were under preparation in 1984. It was envisaged that the Italian component would be concerned with energy, industrial microbiology including scaling-up facilities, and protein engineering; the Indian component would work on agriculture, human health and animal health and productivity. Activities in provisional facilities are expected to begin by mid-1985.

85. At the end of 1984, 36 countries had signed the statutes of the Centre, namely: Afghanistan, Algeria, Argentina, Bhutan, Bolivia, Bulgaria, Chile, China, Congo, Cuba, Ecuador, Egypt, Greece, India, Indonesia, Iraq, Italy, Kuwait, Mauritania, Mauritius, Mexico, Morocco, Nigeria, Pakistan, Panama, Peru, Senegal, Spain, Sudan, Thailand, Trinidad and Tobago, Tunisia, Venezuela, Viet Nam, Yugoslavia and Zaire. Documented proposals to affiliate their national institutions and networks with the Centre had been submitted by Argentina, Bulgaria, China, Egypt, Greece, Venezuela and Yugoslavia, while the Governments of Algeria, Cuba, Chile, Indonesia, Mexico and Zaire had expressed interest in affiliating their national institutions and networks with the Centre.

86. In addition to assisting in the establishment of the Centre, the secretariat continued work on other programmes in the field of genetic engineering and biotechnology. A symposium on the importance of lactic acid fermentation, held in Mexico in November 1984, assessed the state of the art in the application of modern technologies of genetic engineering and biotechnology to fermented foods. It sought to identify the needs of developing countries and ways of upgrading present techniques to increase the nutritional value of traditional fermented foods in those countries. It became clear that the applications of genetic engineering and biotechnology could vastly improve the characteristics of fermented foods and consequently could result in the development of local industries where new and traditional technologies could be merged without affecting the eating habits of consumers. During the annual meeting of the American Association for the Establishment of Science in May 1984, a symposium was organized by the secretariat on capability-building of biotechnology by developing countries. The activities of UNIDO were described and numerous contacts established. UNIDO also co-sponsored the seventh International Biotechnology Symposium held in New Delhi (India) in February 1984 when a paper on the transfer of biotechnology was presented to one of the panel sessions.

87. Co-operative research and development programmes in biotechnology were promoted during 1984. One of those programmes involved pilot studies and joint research between the Centre for Biotechnology in Lorena (Brazil) and the University of Munich (Federal Republic of Germany) on the cloning of cellulosic genes. The University of Dublin (Ireland) and the University of Punjab (Pakistan) co-operated on the subject of high cellulose-producing yeast species. Under another project, funded under a special-purpose contribution by



*Casting spare parts in a pilot demonstration foundry, Kathmandu (Nepal)*



the Government of Kuwait, joint research will be undertaken by the Kuwait Institute of Scientific Research and the University of Illinois (United States of America) on the enhanced production of single-cell protein using genetic engineering techniques. The project is expected to become operational at the beginning of 1985.

88. Three important lines of action were initiated in 1984 with regard to microelectronics. Firstly, a meeting of selected institutions was convened by the secretariat in March 1984 in Vienna to promote the application of information technology for development. Information was exchanged on current activities and possible areas for joint action were identified. UNIDO was asked to prepare a directory of groups and organizations engaged in information technology for development and to establish the feasibility of creating an inventory/library of software packages applicable to specific developing countries' needs. The meeting also agreed that information technology was one of the central technologies falling into the category of "technologies for humanity" and recognized the need to evolve guidelines for licensing and procurement negotiations for information technology products and services supplied to developing countries. The meeting recommended that UNIDO establish a consultative group on information technology which would meet periodically to exchange experience, discuss programmes and explore possibilities for consultations, co-operation and co-ordination in the planning of new programmes, particularly those related to industrial development. Representatives of interested United Nations organizations as well as groups and institutions active in the field of information technology would be invited.

89. Secondly, emphasis was given in 1984 to the concept of software as an industry. A report entitled "Guidelines for software development in developing countries" (UNIDO/IS.439) dealt with the policy approach to the subject while another report entitled "Guidelines for software production in developing countries" (UNIDO/IS.440) outlined a step-by-step approach to establishing a competence in this field. A survey of software engineering—a new trend in development of software—was also published in 1984 (UNIDO/IS.446).

90. At the regional level, efforts to promote a regional microelectronics network in Latin America continued in 1984; in this connection, a potential regional node was identified in Venezuela. A meeting to establish a regional network is scheduled for the first half of 1985. A meeting on microelectronics for the Economic Commission for Western Asia (ECWA) region was organized jointly by ECWA and UNIDO in March 1984 in Kuwait. The meeting recommended, *inter alia*, the establishment of a regional network, a training programme in computer-aided design (CAD) and computer-aided manufacturing (CAM) and a silicon foundry for the region. It also recommended that the feasibility of promoting microelectronics applications be investigated. Another recommendation related to the adaptation of computers for the Arabic language. Discussions were held with the ECWA secretariat on follow-up action to the recommendations of this meeting; UNIDO inputs will mainly concern microelectronics applications and the establishment of a silicon foundry. Following a request by the International Symposium on Microelectronics for Productivity, held in New Delhi (India) in 1983, to establish an Asian Centre for Electronics, preliminary proposals were elaborated during the year under review for an Asian microelectronics network.



91. Studies were initiated in 1984 on the state of the art in microelectronics in specific developing countries, with a view to identifying the needs of developing countries in general and the forms of co-operation most suitable to them. State-of-the-art reports were prepared for Bangladesh, India, Pakistan, Republic of Korea and Venezuela. A study entitled "Overview of the microelectronic industry in selected developing countries" (UNIDO/IS.500) was also published assessing the findings of the country reports with a view to examining alternative strategies for countries at different levels of development. A study on potential microelectronics applications in sugar cane processing was completed in co-operation with the Group of Latin American and Caribbean Sugar Exporting Countries (GEPLACEA).

92. The subject of new materials received considerable attention during the year. A study was completed on developments in optical fibre technology and their implications for developing countries. The *Advances in Materials Technology Monitor*—initiated in 1983 and designed to contain experts' state-of-the-art reviews with regard to specific materials—covered in its second issue the subject of high-temperature ceramics. It included information on the extent to which the developing countries could avail themselves of the new technology. It also contained a contribution by the UNIDO/Czechoslovak Joint Programme for International Co-operation in the field of Ceramics, Building Materials and Non-Metallic Mineral-based Industries on the upgrading of existing ceramics techniques. The next issue of the monitor, which was under preparation at the end of 1984, relates to optical fibres. The quarterlies *Microelectronics Monitor* and *Genetic Engineering and Biotechnology Monitor* continued to arouse considerable interest among readers.

93. A study on the telecommunications industry in Brazil was completed in 1984 while another study on technological advances in the industry and their implications for developing countries was in progress. A preliminary study on aspects of marine industrial technology of relevance to developing countries was completed by the end of the year.

94. Assistance to the Government of Mexico in setting up a national team to monitor technology perspectives was completed. A review of the results, jointly undertaken by the Mexican Government, the United Nations Financing System for Science and Technology for Development which financed the project and the UNIDO secretariat, showed a positive outcome of the project. The newly drafted national programme for industrial promotion and foreign trade specifically incorporates the dimension of technological change. The fields of technology identified include applied electronics, biotechnology, materials, marine technologies, non-conventional energy and transport systems. The project also provided useful inputs for policy formulation in the field of microelectronics, biotechnology and materials. Government officials concerned with industrial promotion were also assigned technology monitoring functions. UNIDO was requested to assist the Mexican Government in a possible second phase of the project. Arrangements were made for assistance to the Government of Guatemala in developing an approach to technology policy formulation and for advisory services to the Government of Sri Lanka in an expert workshop on science and technology policies.

## Industrial technology in Africa

95. The activities of the Technology Programme in Africa were highlighted during the year by the organization of an expert group meeting on the implications of new technologies in the implementation of the Lagos Plan of Action and the Programme of the Industrial Development Decade for Africa in Mbabane (Swaziland) (for report of the meeting, see UNIDO/OED.137). The meeting which was jointly organized with the Co-ordination Unit for the Industrial Development Decade for Africa in co-operation with OAU, ECA and the United Nations Conference on Science and Technology for Development, brought together some 70 African and 20 international experts to examine recent technological developments in such fields as microelectronics, biotechnology and genetic engineering and materials technology, as well as their likely implications for industrial and technological development in Africa. Particular attention was paid to the socio-economic implications of new technologies as well as to technological capacity and human resource development in the African countries, with a view to the application of known technological innovations in the selected fields.

96. Emphasis continued to be placed on co-operation between UNIDO and regional organizations in Africa, notably the African Regional Centre for Technology. Discussions centred on the development of a joint project to promote technological co-operation among selected African countries. The project will involve the development of an information exchange network to cover ongoing R+D activities, technology transfer arrangements, training courses as well as technological and consultancy services that may be of benefit to other countries of the region. The information exchange network will be established in 1985, and will initially involve Algeria, Cameroon, Egypt, Ethiopia, Ivory Coast, Kenya, Nigeria, Sudan, Tunisia and Zimbabwe.

97. As an example of interregional co-operation, UNIDO was involved in promoting co-operation between Kenya and Brazil in 1984 in the development and transfer of technology for small-scale power alcohol distilleries. The project is at present entering its second phase which will involve the design, local manufacture and test operation of two power alcohol microdistilleries in Kenya with the technical support of Brazilian experts.

98. Certain activities at the national level in Africa are mentioned in paragraphs 102 and 105 below.

## Technology acquisition

99. Activities in the field of technology acquisition were marked during the reporting period by further assistance to developing countries, mainly in Africa, in strengthening their negotiating capabilities. This included assistance in the establishment of new and the reinforcement of existing government institutions in Ethiopia, Ivory Coast, Senegal and Sudan, to evaluate technology imports through transfer of technology contracts and to acquire technological and contractual information. A seminar was organized in November 1984 in Venezuela to deal with problems of negotiating and concluding technology

agreements. A similar programme, under preparation for Greece, will be carried out for other individual countries upon request.

100. Under the technological advisory services programme, assistance was given to the Government of Niger on the acquisition of know-how for the production of fruit juice and to the Government of Fiji on royalty payments for technology transfer agreements. Advice was also given on negotiations at plant-level in connection with various co-operation projects executed by the Technology Programme (see para. 106 below).

101. A draft manual on guarantee and warranty clauses in technology contracts<sup>31</sup> was further improved in co-operation with the International Centre for Public Enterprises in Developing Countries, Ljubljana (Yugoslavia) and with the participation of the United Nations Commission on International Trade Law. The manual is expected to be finalized in 1985. Preparations were made with ESCAP to publish the proceedings of the Symposium on Contracts for the Construction of Oil and Gas Pipelines, co-sponsored by UNIDO and ESCAP and held in Jakarta (Indonesia) in 1983.

102. In 1984, TIES continued to expand its activities in the area of information exchange among technology transfer registries, with particular attention to the promotion of TIES in a regional framework and the establishment of linkages with other information systems. First steps were taken towards an information exchange system on technology transfer among African countries. A special meeting was organized in Madrid in October 1984 to examine the possibilities of closer co-operation between TIES and existing Latin American technological information systems such as Red Internacional de Tecnología para Latino América and Sistema Andino de Información Tecnológica. Efforts continued in 1984 to harmonize the information recording procedures of registry information systems. In this connection, advisory missions were carried out to member countries of the Andean Common Market and the Association of South-East Asian Nations as well as Ethiopia, India and Nigeria. A model computerized information system including a manual, is currently being prepared in co-operation with the Foreign Trade Data Centre of Poland. In co-operation with the United Nations Centre on Transnational Corporations (UNCTC) the updated UNCTC company code file is being introduced into TIES. Studies on acquisition of software, payment evaluation and concerning the sector of food processing were prepared by the secretariat with the assistance of TIES members.

103. The ninth Meeting of Heads of Technology Transfer Registries, held in Beijing (China) in October 1984, was attended by 26 participants from 19 countries and, in addition, by 10 observers. It outlined the further development of TIES at the regional level and discussed a co-operative training programme on the evaluation of technology transfer agreements. UNIDO's computerized registry information system (CORIS) was assessed as extremely helpful and the further development of CORIS was recommended to meet individual country's needs. The Meeting also endorsed fully the co-operation projects among Latin American TIES members. Preparations are under way to enlist three new members of TIES, namely: Brazil, Greece and Nigeria.

<sup>31</sup>ID/B/320, chap. V, para. 91.

### Technology development and adaptation

104. A workshop on the commercialization of technologies was held in Bangkok (Thailand) in October 1984 in co-operation with ESCAP. It requested UNIDO to undertake case studies on policy and institutional arrangements that had led to the successful transfer of R+D results to industry. It also requested UNIDO to study in detail the possibility of implementing joint projects involving R+D institutions from developing countries in the ESCAP region and to promote a network for that purpose. Recommendations of the workshop related to the Industrial and Technological Information Bank (INTIB) are reported in paragraph 109 below. As stated in paragraph 97 above, a project on the design and development of microdistilleries in Kenya is being implemented with the co-operation of Brazil.

105. Studies were initiated in co-operation with the International Institute for Applied Systems Analysis on innovations in the electrical industry. A revised directory of research institutes engaged in solar energy research was published (UNIDO/IS.341/Rev.1). Promotional work on small hydropower was continued in close co-operation with the Division of Industrial Operations. The total sub-component of small hydropower activities of the Regional Energy Development Programme of ESCAP was subcontracted to UNIDO as the principal implementing agency. The regional network for small hydropower continued to be promoted. A workshop on hydrology was organized in September 1984<sup>32</sup> as was a consultative mission of officials for the Hangzhou Regional Centre for Research and Training in Small Hydropower. An agreement was reached with OLADE for the preparation of a set of six technical manuals covering technological information for the production of small hydropower in developing countries. As a follow up to requests for assistance received by UNIDO from a number of African countries to set up an African regional network for small hydropower,<sup>33</sup> similar to the ESCAP regional network, plans were being developed in 1984 to organize a small group of experts selected from those African countries already implementing small hydropower projects.

### Technological co-operation in small-scale industries

106. The project on plant-level co-operation for the transfer of technology to small- and medium-scale enterprises with particular reference to light engineering and metallurgical industry showed positive results in 1984.<sup>34</sup> So far, project activities have yielded one completed agreement between Sweden and India; in two other cases, partners have entered into detailed negotiations for joint venture agreements and are carrying out market studies; one agreement has been signed and is awaiting government clearance; four other cases are still under negotiation. In the process of finalizing the agreements, UNIDO inputs were provided on request. The project is scheduled to be completed by the end of 1985.

107. A second project involved co-operation in the food-processing industry between the Netherlands, on the one hand, and China, Mexico, Sudan and

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<sup>32</sup>*Ibid.*, para. 97.

<sup>33</sup>*Ibid.*, para. 96.

<sup>34</sup>*Ibid.*, para. 100.

Thailand, on the other. During the year under review, the task of identifying potential partnerships proceeded, with a number of partners already identified and proposals for co-operation drawn up. Both projects met with considerable enthusiasm from both developed and developing countries. A third project was promoted in the field of engineering industries involving Italy, on the one hand, and Cameroon, Colombia, Peru and Tunisia, on the other. Advisory services were provided to the Government of Peru to set up a technological services delivery system.

108. Following an expert meeting on technology exports from developing countries, held in Vienna in December 1983, the concept of an International Technological Information Exchange Mechanism was worked out with the objective of promoting and facilitating technology exports from developing countries. It was agreed that the collection and dissemination of information would be organized through focal points nominated by Governments of selected countries, maximum use being made of existing national technological information systems and networks. Information will be disseminated both on request and through the publication of bulletins on technologies from developing countries. During the year, focal points for the above activities were identified in Yugoslavia and Sri Lanka.

### **Industrial and Technological Information Bank**

109. The activities of INTIB during the year under review were directed at strengthening contacts with sources of information and end-users and processing and disseminating industrial and technological information. The achievement of improved communication between R+D institutions and small- and medium-scale industries (see para. 104 above) in the ESCAP region was discussed at the UNIDO/ESCAP workshop on the commercialization of technologies and the national consultations on the commercialization of research results held in Bangkok (Thailand), 15-19 October 1984, which called for support from national technology policies in this respect. The workshop requested UNIDO to establish strong linkages with the end-users of R+D results through INTIB.

110. Following a proposal for a regional industrial information network among small- and medium-scale industries in the ESCAP region, Governments of the Philippines, the Republic of Korea, Singapore and Thailand expressed interest in joining the network. The Arab Industrial Information Bank of AIDO also expressed interest in joining the INTIB network. In order to further expand INTIB networks to other regions, particularly in Africa, the secretariat sent out a questionnaire to identify potential INTIB focal points and has been exchanging memoranda of understanding for co-operation between INTIB and national focal points. In October 1984, the secretariat participated in a seminar on industrial information for enterprises organized in Bordeaux (France) by the Agency for Cultural and Technical Co-operation.

111. A staff member visited a number of industrial and technological information data bases in developed countries in order to strengthen INTIB linkages with them so as to enable INTIB to provide better service to developing countries. Another INTIB staff member provided assistance in the

establishment and improvement of industrial information organizations of Malaysia as part of the programme of INTIB to strengthen national information services. A trainee from the United Republic of Tanzania received on-the-job training with INTIB staff at UNIDO headquarters.

112. As in previous years, the number of substantive inquiries received during 1984 was approximately 1,300. Of these, 28 per cent were from industrial enterprises, 16 per cent from information centres, 14 per cent from United Nations organizations, 9 per cent from R+D institutions, 8 per cent from engineering and consulting firms, 7 per cent from government decision makers, 7 per cent from universities, 6 per cent from professional organizations, 2 per cent from development banks and 3 per cent from others. By subject, 29 per cent of the inquiries dealt with industrial chemicals/petrochemicals/pharmaceuticals, 26 per cent with agro-industries and food processing, 18 per cent with capital goods and fabricated metal products, 7 per cent with non-metallic minerals, 5 per cent with basic metal industries, 5 per cent with textile and leather goods, 4 per cent with pulp and paper, 2 per cent with wood and wood processing and 4 per cent with others. By region, 25 per cent of the inquiries came from Africa, 21 per cent from Asia and the Pacific, 17 per cent from North America, 14 per cent from Latin America, 6 per cent from Europe, 3 per cent from the Caribbean, 3 per cent from Central America, 3 per cent from the Arab region, and 8 per cent from others. With regard to the type of inquiry, 43 per cent were related to manufacturing processes and know-how, 33 per cent to equipment and machinery suppliers, 6 per cent to research activities and 18 per cent to others.

113. Technological information profiles were completed on multipurpose food- and vegetable-processing and on management for small- and medium-scale industries. An information profile on fundamentals of packaging with special reference to developing countries, which had been prepared in 1983, was published in 1984. The profiles present a comparison of industrial and technological data on technological alternatives. Studies undertaken during the year included one on guidelines for the establishment or redesign of industrial and technological information service systems, including the selection of appropriate software and hardware (UNIDO/IS.439). Another study aimed at establishing guidelines for the formulation and integration of national industrial information policies. A number of information packages on technology choices in priority sectors were under preparation in 1984, drawing on material available in UNIDO. During the year, increased attention was given to the information needs of small enterprises, and a series of information guidelines for the small- and medium-scale industries of developing countries was completed.

114. The *Industrial Development Abstracts* data base now includes some 14,000 entries and work continued in 1984 on a consolidated edition, including a cumulative index of the first 10,000 abstracts. Work also continued on the revision and expansion of sources of industrial information and directories within the framework of the On-Line-Information Key (LINK) data base; a directory of institutions engaged in solar energy research was issued.

115. The monthly *UNIDO Newsletter* continued to be published in five languages (Chinese, English, French, Russian and Spanish). Time spent on pro-

cessing the English edition was reduced considerably by the use of word-processor facilities. The *Newsletter* carried three special bulletins relating to the Fourth General Conference of UNIDO. An internal current awareness bulletin was introduced. The mailing list for the *UNIDO Newsletter* (35,000 addresses) and the number of requested documents (115,000) supplied in response to 11,000 external requests remained approximately at the same level as the previous year.

### **Co-operation with other United Nations agencies and organizations**

116. The UNIDO secretariat continued to participate in the Task Force on Science and Technology for Development of the Administrative Committee on Co-ordination, in particular in the implementation of those activities related to the three approved projects for which UNIDO was to act as lead agency.<sup>35</sup> Owing to a shortage of funds from the United Nations Financing System for Science and Technology for Development, each lead agency was responsible for putting its projects into operation by utilizing its own available funds and staff resources. UNIDO also ensured the appropriate industrial development inputs to several projects undertaken by other United Nations organizations as a member of a joint management team or as a participating agency.

117. Within the framework of the follow-up to the United Nations Conference on Science and Technology for Development and the Vienna Programme of Action on Science and Technology for Development, UNIDO continued to participate in the deliberations and activities of the United Nations Advisory Committee on Science and Technology for Development. Representatives of the secretariat attended the expert group meeting on Pioneer Projects on the Integration of Emerging and Traditional Technologies, organized in Tokyo (Japan) in April 1984, and the fifth panel on indicators of measurement of impact of science and technology on socio-economic development objectives, held in Graz (Austria) in May 1984. UNIDO was invited to present the concept of the Technology Services Delivery System as well as implementation results to the fourth *ad hoc* panel on Reinforcement of Linkages between Research and Development Activities and the Production System, held in Lima (Peru) in October 1984. The secretariat also presented a discussion paper on long-term possibilities of biotechnology for sustained economic development at a meeting of the Economic Commission for Europe, held in Geneva in June 1984, in preparation for the Symposium on the Importance of Biotechnology for Economic Development, to be held in June 1985 in Hungary.

118. Further information on co-operation with other agencies is contained in the report on co-ordination submitted to the Permanent Committee at its twenty-first session.<sup>36</sup> UNIDO continued to co-operate with other United Nations bodies and organizations in the dissemination of information. Co-operation with UNESCO, WHO and the United Nations University continued to be maintained in the activities relating to biotechnology and in particular the

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<sup>35</sup>*Ibid.*, para. 113.

<sup>36</sup>ID/B/C.3/132, paras. 94, 95 and 97.

International Centre for Genetic Engineering and Biotechnology (ICGEB) and the regional network for biotechnology for Latin America. Other instances of co-operation with United Nations bodies and intergovernmental organizations are referred to in paragraphs 91, 94, 104 and 105 above and in chapter VII, paragraphs 1-17.

## INVESTMENT CO-OPERATIVE PROGRAMME

119. Despite a substantial increase in the demand for conventional promotional activities during 1984 the Investment Co-operative Programme (ICP) was unable to implement several innovative ideas owing to a lack of resources. In previous years the limited number and inadequate formulation of industrial investment project proposals proved a handicap to investment promotion activities. Latterly, the flow of project proposals has increased, and their quality generally improved. One of the major problems which still hampers ICP's efforts in bringing project proposals to fruition is the limited response from project sponsors in developing countries to enquiries received from UNIDO headquarters, Investment Promotion Services and potential partners in industrialized countries.

120. A particular constraint continues to be the financing of small industrial investment projects as well as projects in those developing countries where the risk involved is a deterrent to foreign participation. In its investment promotion activities UNIDO attempts to act as an honest broker between project sponsors in developing countries and foreign partners. It also attempts to offer technical assistance so as to safeguard the interests of the developing countries when appraising the relative financial, economic and social merits of an industrial investment project. In this context, the systematic analysis of any given industrial investment project at an early stage of preparation has helped elicit concrete proposals for investment. Thus neither Governments nor UNIDO are obliged to devote large amounts of time and money for comprehensive studies in cases where a simple project analysis would suffice. Full feasibility studies are generally undertaken only after agreement has been reached and source of finance identified.

121. Work continued on the generation and promotion of investment in specific industrial branches.<sup>37</sup> This new approach seeks to bring together industrialists from developed and developing countries engaged in specific subsectors. Preparatory discussions took place between Italy and a number of developing countries on a programme—scheduled for implementation in 1985—for the identification and promotion of industrial investment projects in the field of new and renewable energy sources. Extensive discussions were held during 1984 with representatives of various French institutions to formulate a programme on energy production from agro-industrial by-products and wastes. It is planned to extend this approach to other industrial subsectors.

122. In view of the obvious interrelationship between the System of Consultations and investment promotion activities, a programme linking the

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<sup>37</sup>ID/B/320, chap. V, paras. 24-28



two activities was prepared for selected sectors and approved by the Project Review Committee.

123. ICP continued to explore innovative investment-related arrangements including multilateral buy-back and leasing mechanisms. The staff of the Programme participated actively in a number of international conferences concerned with investment promotion.

124. Work is under way, jointly with the Technology Programme, on the preparation of a manual covering a wide range of industrial partnerships such as joint ventures, joint operations, subcontracting, compensation trade and buy-back arrangements. The manual will include case studies and model agreements for a number of industrial sectors. It is planned to organize seminars on international partnership arrangements, using the manual as a textbook.

### **Industrial investment projects**

125. During 1984, a total of 21 missions to 49 developing countries were carried out by staff members and consultants. The purpose of those missions was to assist governmental promotion agencies, development banks and other private and public institutions to identify and prepare industrial investment project proposals that require foreign long-term collaboration. As a result, 622 new industrial investment projects were identified, bringing the UNIDO portfolio to 1,335 active and pipeline projects in 69 countries. Of these, 440 are in Africa, 539 in Asia and the Pacific, 343 in Latin America and the Caribbean and 13 in other parts of the world. Most of the projects are in the food sector (246), in the fabricated metal product and machinery sector (221) and in the chemical sector (192).

126. The number of projects whose promotion was concluded in 1984 came to 47 (see appendix D) against 68 in 1983. Of those projects, 44 had a known total investment value of approximately \$165 million. Although it would be too early to judge, the decrease in the total number of projects successfully concluded may indicate an increased reluctance among potential partners to participate in industrial projects in developing countries. The average investment value per project—about \$4 million—also decreased due to a larger number of smaller projects. Projects are tending to be smaller since greater attention is deliberately being given to the promotional needs of a larger number of small developing countries, where project costs rarely exceed \$1 million.

127. Jointly with the Feasibility Studies Section, ICP has initiated an evaluation for its promotional efforts in a number of countries with a view to improving future pre-investment work in general. An investigation in those countries will cover: the outcome of industrial investment projects reported as promoted in the past years; the outcome of UNIDO feasibility studies and investment-related technical co-operation activities; and the methodology used in successful industrial investment projects promoted by organizations other than UNIDO.

128. Two issues of the List of Industrial Investment Project Proposals<sup>38</sup> were published during the year, containing between them detailed summaries of 548 industrial investment projects being actively promoted by UNIDO. The wide distribution of these lists resulted in nearly 2,000 requests for further information on the projects promoted. Additional lists covering 639 projects were prepared for each of the five investment promotion meetings held during the year.

### Information systems

129. The computerized Investment Promotion Information System (INPRIS)<sup>39</sup> was expanded to five data banks. In addition to the Project File<sup>39</sup> and the Investor File,<sup>40</sup> INPRIS was expanded to include the Bank File, the Institution File and the Sponsor File. The computer network, initiated with Cologne in 1983, was extended.<sup>41</sup> During 1984, the microcomputer located in the Investment Promotion Service in New York was linked via an international communication network to the mainframe computer in Vienna and searches for information through INPRIS can now successfully be made from that Service.

130. At the end of 1984, the Project File contained information on over 1,100 industrial investment project proposals. The file is being refined so that follow-up action can take place more systematically and promotional activity can be more closely monitored. Individual printouts are produced from the file in response to specific requests from potential partners for information on industrial investment projects in particular sectors or countries.

131. Information is currently contained in the Investor File on 2,900 public and private enterprises in some 40 industrialized and developing countries that are willing to participate in industrial investment projects in developing countries. The file is intended to supplement, rather than duplicate, similar information stored in data bases in each of the Investment Promotion Services. During 1984, surveys to identify potential partners were made among public and private enterprises in India, the Netherlands, New Zealand, the Republic of Korea, and the United Kingdom. Numerous requests continued to flow in from various sources in developing countries for searches for suitable potential partners from the Investor File.

132. The Bank File currently consists of information on nearly 600 international, regional and national development finance institutions that may be willing to provide finance for industrial investment projects. The data contained on each development finance institution includes the maximum and minimum lending limits of the institution, the maturity range of its loans, its geographical area of activity, and whether it will provide finance for the study or preparation of projects, equity investment in projects and for projects in the private sector. The information in the Bank File, much of which was extracted

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<sup>38</sup> *Ibid.*, para. 23.

<sup>39</sup> *Ibid.*, para. 29.

<sup>40</sup> *Ibid.*, para. 30.

<sup>41</sup> *Ibid.*, para. 32.



*Clay tests at the Geological Survey Department, Zomba (Malawi), which are essential to the development of the country's brick and tile industry*

from the Financial Resources for Industrial Projects in Developing Countries,<sup>42</sup> can currently be updated easily in its computerized form.

133. The Institution File, which at the end of the year contained some 1,000 records, is a directory of governmental and non-governmental institutions, such as ministries of industry, development corporations, investment promotion agencies, manufacturers' associations and chambers of commerce, that are, or could be, sources of industrial investment projects in developing countries. The basic information provided in each record includes a classification of the institution according to type as well as the name of the officer responsible for investment promotion activities.

134. The Sponsor File, which has already exceeded 1,000 records, is essentially a listing of firms in developing countries that may be receptive to the redeployment of operational plants from industrialized countries. A compilation of data on redeployment possibilities from countries in which UNIDO has an Investment Promotion Service has been initiated for transmission to firms listed in the Sponsor File.

<sup>42</sup>PI/61/Rev.2; see also ID/B/320, chap. V, para. 49.

135. The current year saw the development of the Project Profile Screening and Pre-Appraisal Information System (PROPSPIN)—a simple yet powerful project evaluation tool based on widely used electronic spreadsheet software—operating on inexpensive microcomputers. So far, PROPSPIN has been mainly used within UNIDO to improve the quality of information on industrial investment project proposals and speed up the preparation of project profiles for promotion. It should be underlined that the system is not suitable for feasibility analysis for which COMFAR, the UNIDO Computer Model for Feasibility Analysis and Reporting, provides the proper tool.<sup>43</sup> Nevertheless, strong interest has been expressed by organizations in the public and private sectors of both industrialized and developing countries in its possible use.

136. ICP prepares, in co-operation with the Technology Programme, a number of technical publications for use as promotional tools. These consist of industrial investment country profiles, industrial partnership proposals and plant profiles. The Country Industrial Investment Profiles<sup>44</sup> now cover about 100 developing countries. The format of these profiles has recently been revised and the storage of data on word processors has led to easier updating. The profiles are used widely in the course of project promotion.

137. During 1984, the seventh issue of Industrial Partnership Proposals (formerly called Roster of Resources)<sup>45</sup> was published and distributed to some 700 development corporations, investment promotion agencies, ministries of industry, manufacturers' associations, chambers of commerce and other similar public and private industrial development institutions in developing countries. The publication lists some 4,000 products, the manufacture of which may be undertaken in developing countries in co-operation with potential partners included in the INPRIS Investor File.

138. The second volume of the publication *How to Start Manufacturing Industries—Technological and Investment Perspectives*<sup>46</sup> was distributed in 1984. This volume contains a further 82 industrial plant profiles, mainly in the chemical sector, bringing the total to 180. In addition to the 1,350 copies of the second volume distributed to relevant institutions in developing countries, the total number of copies of the first volume distributed reached 1,800. During the year 39 inquiries for additional information on plant profiles were received from potential project sponsors in 20 developing countries.

### Investment Promotion Services

139. The network of UNIDO Investment Promotion Services was established in 1976;<sup>47</sup> these Services, which are almost exclusively supported by host country contributions, make it possible for developing countries to have direct access to technological, managerial and financial sources in industrialized countries. UNIDO currently has Services in Cologne, New York, Paris, Tokyo,

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<sup>43</sup>ID/B/320, chap. III, para. 180.

<sup>44</sup>*Ibid.*, chap. V, para. 46.

<sup>45</sup>*Ibid.*, para. 47.

<sup>46</sup>*Ibid.*, para. 48.

<sup>47</sup>ID/B/180, chap. IV, para. 21.

Vienna, Warsaw and Zurich. During 1984, the Belgian Government decided not to extend, for the time being, the Brussels Service, which was phased out at the end of October. During its eight years of operation, the Brussels Service concluded the promotion of 156 projects with an investment value of at least \$2,745 million. Advanced negotiations are under way for a Service to be opened in Milan (Italy) in 1985, as well as in Seoul (Republic of Korea). The Tokyo Service has again been extended for two years, to 30 June 1986, bringing its lifetime up to six years. In 1984, both the Zurich Service, which has been operating for seven years, and the Vienna Service, in operation since 1980, have been evaluated.

140. It is planned to include a number of developing countries in this network, thereby widening the possibilities for further industrial co-operation among developing countries in the form of technology transfer and creation of new joint venture projects. Discussions are currently under way with Brazil, India, Mexico and countries of the Gulf region.

141. One of the primary activities of the Investment Promotion Services is to develop, provide and follow up contacts between sponsors of industrial projects in developing countries and potential partners in industrialized countries. As mentioned in paragraph 126 above, these Services have succeeded in launching 47 industrial projects in 26 developing countries with a known total investment value of about \$165 million (see appendix D). As in the past the exact quantification of such an activity is difficult, and in all probability, many more projects were launched.<sup>48</sup> The 47 projects reported as concluded by the Services are the result of a wide range of intensive promotional activity, including assisting in project formulation and presentation, seeking potential partners, and providing access to small- and medium-sized enterprises, arranging meetings in both industrialized and developing countries, and providing information and assistance in preparing the financial package. In order to carry out these activities, the Services have expanded their computerized data banks of potential partners and are making use of external data banks which contain useful investment promotion and marketing information. The latest promotional activities are communicated to UNIDO headquarters, where they are entered in the INPRIS Project File and can be obtained by all concerned. Thus the up-to-date character of information is secured.

142. Another activity of major importance is to make potential foreign partners—especially the small- and medium-sized enterprises—aware of what developing countries have to offer. Besides providing regular information through the mail and through personal contact, the Services organize country presentation meetings, whereby representatives of the developing countries meet groups of industrialists, financiers and members of professional and government institutions and inform them about their countries' material and human resources, laws relating to investment in their countries as well as potential sectors and projects for investment. In 1984, the Services organized 16 meetings for the following developing countries: Cameroon, the Caribbean countries, Chile, China, Nepal, Senegal, Sri Lanka, the South Pacific countries and Uruguay. The country presentation meetings are often a prelude to investment promotion meetings. The Services make a major contribution to the

<sup>48</sup>ID/B/320, chap. V, para. 35.

success of the country presentation meetings and mobilize the participation of potential partners at the investment promotion meetings which are held in the respective countries.

143. In 1984 the Services continued to carry out a number of activities—often innovative in nature—geared to the particular situation of the countries in which they are located. The Pre-Investment Facility established by the Zurich Investment Promotion Service provided initial assistance to small- and medium-sized Swiss companies, enabling them to complete pre-investment activities before entering into partnerships with developing countries. The Zurich Service arranged for 14 executives of public and private institutions from developing countries to receive training in Swiss industries, research and management institutions and universities. The Paris Service expanded its programmes of co-operation with regional organizations in France, thereby making optimum use of the multiplier effect for promoting investment for developing countries. The New York Service, in support of the second year of the programme for Caribbean countries held supplementary seminars both on a sectoral and on a broad promotional basis. The Project Profile Screening and Pre-Appraisal Information System was demonstrated to Caribbean groups in Barbados and the Bahamas and to representatives of UNDP and the Department of Technical Co-operation for Development at United Nations headquarters. The New York Service is also compiling information to facilitate the relocation to developing countries of plants operational in North America. A survey was made in selected cities in North America to determine the potential of satellite teleconferencing as an investment promotion tool.<sup>49</sup>

144. UNIDO has always attached great importance to instructing interested developing countries on the techniques of investment promotion so that they might adjust this activity to suit the needs of their countries. In 1978<sup>50</sup> a programme was initiated by the New York Service to provide on-the-job orientation and guidance on investment promotion activities to officials from developing countries. Since then, the New York Service has continued to make facilities and staff guidance available to the developing countries at a minimum cost and helped them launch their own country and project promotion. In view of the positive results achieved so far, other Services have embarked on similar programmes, thus building a direct link between the project sponsors in developing countries and potential partners in industrial nations. The largest programmes are in the Paris and New York Services, with the New York Service having established a special programme for the Caribbean. The Tokyo Investment Promotion Service has expanded its programme to host officials from three countries. Officials from Sri Lanka and Colombia have completed their programmes with the Zurich Service. These programmes are financed by the host countries, UNDP, the World Bank, UNIDO, bilateral organizations or the developing countries themselves. In 1984, the programmes were attended by a total of 32 officials from 24 developing countries: Angola, Antigua and Barbuda, Bahamas, Belize, China, Colombia, Congo, Dominica, Dominican Republic, Ecuador, Guinea, Haiti, Indonesia, Ivory Coast, Jordan, Malawi, Mexico, Paraguay, Philippines, Rwanda, Saint Christopher and Nevis, Senegal, Somalia and Sri Lanka.

<sup>49</sup>*Ibid.*, para. 39.

<sup>50</sup>ID/B/220, chap. III, para. 38.

### Investment promotion meetings

145. Despite the difficult economic conditions prevailing in most developing countries, there has been a substantial increase in participation at investment promotion meetings. Requests are under consideration from Governments of countries in Africa, Asia and Latin America to organize a total of 18 country or regional meetings. Owing to staffing constraints, these requests can only be met after long delays or by replacing some of these meetings by country promotion tours of developing country officials in Europe, Japan and North America. The organization of such tours, however, is also a strain on staff resources.

146. Investment promotion meetings are generally financed jointly by the Governments of the countries concerned, UNIDO and UNDP. Financing for regional meetings is also obtained from the European Economic Community, the Commonwealth Secretariat, ESCAP and other international and regional institutions. The meetings not only strengthen the possibilities of North-South co-operation, but provide opportunities for South-South co-operation, in the case, for instance, of attendance by participants from Brazil and a number of Asian developing countries. Increased interest in investment promotion meetings has been shown by participants from countries with centrally planned economies.

147. During the year five investment promotion meetings were held. The Investment Promotion Meeting for Nepal took place in Kathmandu in June 1984. The meeting was attended by 80 local entrepreneurs and 70 participants from 50 companies in 17 countries, including India, Indonesia, Pakistan, the Republic of Korea and Singapore. A total of 51 industrial investment project proposals were discussed at the meeting, which resulted in the signing of 16 letters of intent. A follow-up mission revealed that one factory is already under construction and that financing appears to have been secured for the realization of three other projects. An Investors' Forum was held in Bogota (Colombia) in July 1984. During this meeting, 97 industrial investment project proposals were the subject of more than 1,000 individual discussions between 256 foreign participants from 211 companies in 27 countries, and 245 local participants representing 175 business firms.

148. Barbados was the venue of the Investment Promotion Meeting for the Caribbean, which took place in October 1984. Fourteen countries from the region submitted 177 industrial investment project proposals together with more than 100 project opportunities. The meeting attracted 111 participants from 75 foreign companies and 150 Caribbean project sponsors and representatives of regional institutions. The meeting gave rise to 632 individual discussions between local and foreign participants. At least 15 letters of intent were signed at the meeting.

149. In November 1984, an Investors' Forum for eight countries of the South Pacific Region was held in Suva (Fiji) in the course of which 109 industrial investment project proposals were promoted with a total value of approximately \$600 million. Despite the long distance involved, participants from 15 foreign countries attended the meeting. They were met by more than 150 local sponsors and other participants. By the end of the Forum, some 30 letters of intent had been signed.

150. The last meeting held in 1984 was the Sixth Industrial Forum for West Africa convened in Dakar (Senegal) at which 15 of the member States of the Economic Community of West African States promoted 103 industrial investment project proposals with a total investment value of \$271 million. An additional 52 regional projects, identified by the Industrial Development Decade for Africa, were presented at the meeting. African participants totalled 252 while the number of foreign participants came to 273. Over 1,000 meetings between project sponsors and potential partners were arranged.

151. One constraint faced in the preparatory work of the investment promotion meetings is the late submission of project proposals, which not only prevents the secretariat from improving their presentation, but also excludes them from publicity campaigns organized prior to the meetings.

### **Mobilization of external financial resources**

152. In July 1983 UNIDO was designated lead agency within the United Nations system for co-operation with the Organization of the Islamic Conference (OIC) in the area of investment mechanisms and joint ventures.<sup>51</sup> The Investment Co-operative Programme was in turn selected as the focal point for this work within UNIDO, and a UNIDO Task Force established in February 1984 to co-ordinate activities. A great deal of substantive and co-ordination work was devoted to this activity. Three papers were prepared and some fifteen broad areas of work for UNIDO and other United Nations agencies were identified. A programme was designed outlining a practical methodology for promoting industrial co-operation and facilitating the mobilization of financial resources between OIC member States through the generation and promotion of national and multinational industrial investment projects. Several meetings were held with OIC specialized institutions. At the end of 1984, a discussion paper was under preparation for a meeting to be held early in 1985 between UNIDO, OIC and several interested United Nations agencies.

153. ICP continued to maintain close links with national, regional and international financing and promotion institutions and contributed to the annual meetings of the Association of Development Finance Institutions in Asia and the Pacific, the Islamic Development Bank, the Arab Fund for Economic and Social Development and the Arab Bank for Economic Development in Africa. Staff of ICP attended national workshops on project financing and promotion in Democratic Yemen and Somalia. Working relations were maintained with the World Bank (see paras. 155-159 below) as well as with the African, Inter-American and Islamic Development Banks, with a view to developing joint operational activities. Although some technical co-operation projects financed by the Islamic Development Bank were executed by UNIDO, staff constraints have limited further co-operation.

154. During 1984, ICP sought to ensure that UNIDO headquarters and field staff were more fully informed of industrial financing available to developing countries through the internal distribution of a new publication called

<sup>51</sup>A/38/500 and General Assembly resolution 38/4; see also present *Report*, chap. VII, para. 18.



*Industrial Finance News.* Efforts were made to enable the Investment Co-operative Programme to improve the depth of coverage of financing, including terms and conditions offered by financing institutions appearing in the INPRIS Bank File. Advisory services continued to project sponsors on sources, terms and conditions of financing. Preparations are under way to hold a workshop in 1985 in co-operation with the International Association of Islamic Banks to discuss risk capital provision through Islamic banking and industrial investment strategy for Islamic banks.

### **World Bank/UNIDO Co-operative Programme**

155. After a period of constraint in the work of the World Bank/UNIDO Co-operative Programme<sup>52</sup> a new basis seemed to have been found towards the end of 1984 for a return to more operational rather than liaison functions. The flow of information between the two organizations was further strengthened and streamlined as a result of intensive efforts of staff members both in Washington and in Vienna. Co-operation will take place in 1985 in a number of selected developing countries. UNIDO is planning to carry out in-depth sectoral analyses in those countries which could then lead to World Bank lending for industrial restructuring, improvement of public sector plant operations and other purposes. This could constitute the basis for renewed operational work thus offering the opportunity for expanding the Co-operative Programme in 1985.

156. In line with current World Bank policies of co-financing and cost-sharing, the Co-operative Programme initiated a number of technical assistance proposals which the World Bank, UNDP and UNIDO could finance on a cost-sharing basis. Agreement has already been reached to co-finance a project in Liberia for the promotion of small- and medium-scale enterprises. Of the total technical assistance cost of about \$1 million, just over a quarter is being funded through a World Bank loan while the balance will be provided from UNDP sources. It is expected that this project will help in accelerating the process of implementation of a credit of SDR 3.2 million funded by the International Development Association (IDA) in Liberia. In the Comoros, UNIDO provided an expert on small- and medium-scale project promotion for one year, which was followed by an IDA credit to finance his prolonged stay. Similarly in Cape Verde, a UNDP/UNIDO technical assistance project on industrial planning and development is under preparation in consultation with the World Bank, which is also expected to finance part of the project. Close co-operation was established between UNDP, UNIDO and the World Bank to assist the Government of Guinea in the formulation of a new industrial policy. It is expected that this will result in the preparation of a follow-up technical co-operation programme to be financed jointly. In Senegal, the World Bank and UNIDO agreed to co-operate in assisting the Government in the revision of its industrial strategy.

157. Training programmes were organized by the UNIDO Training Branch and the World Bank Economic Development Institute in development banking in the Ivory Coast and in small-scale industry in Senegal and the United

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<sup>52</sup>ID/B/320, chap. V, paras. 52 and 53.

Republic of Tanzania. A preparatory field project carried out by UNIDO led the Government of the Sudan and the World Bank to earmark \$5.3 million for the establishment of a sugar training centre to support a rehabilitation programme for the sugar industry. This training centre is now a component of a \$30 million credit by the World Bank to the Sudan. The Industrial Training and Development Centre in Turkey, which UNIDO helped to establish, has become eligible for a World Bank loan for the expansion of its training programme and the development of specialized training in consultancy services. Co-operation has also taken place between the Regional and Country Studies Branch of UNIDO and different units of the World Bank, mostly in the form of joint subsectoral work at the country level.

158. Proposals for closer co-operation between UNIDO and the World Bank through the exchange of information and annual contact meetings are being seriously pursued. Co-operative Programme staff have established personal contact with the newly created African Affairs Department in the World Bank for closer co-operation between the Bank and UNIDO in activities related to the Industrial Development Decade for Africa.

159. Collaboration with the International Finance Corporation (IFC) during the year proved fruitful and IFC has asked to use UNIDO channels to reach and inform prospective investors in the industrialized countries about the IFC objectives and activities. The UNIDO Investment Promotion Meetings have now become an important source for the identification of investment projects for IFC. Senior IFC staff members attending the Colombian Investment Promotion Meeting identified a number of projects for possible IFC financing. IFC participated in the Investment Promotion Meeting for the Caribbean, the Investors' Forum for the South Pacific region and the Sixth Industrial Forum for West Africa.

### INDUSTRIAL CO-OPERATION AMONG DEVELOPING COUNTRIES

160. The activities of UNIDO to promote economic and technical co-operation among developing countries (ECDC/TCDC) during 1984 once again focused on the following mutually supporting components: (a) organization of solidarity ministerial meetings in least developed countries and round-table ministerial meetings in order to bring together developing countries for the promotion of industrial development; (b) follow-up to the decisions and agreements reached at such meetings; (c) development of joint programmes for specific industrial subsectors; (d) implementation of recommendations relating to ECDC/TCDC reached at Consultation meetings organized under the UNIDO System of Consultations; and (e) development of a coherent programme based upon recommendations of the Caracas Programme of Action adopted by the High-level Conference on Economic Co-operation among Developing Countries in May 1981.<sup>53</sup> Particular emphasis was placed on activities in support of the Industrial Development Decade for Africa.

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<sup>53</sup>A/36/333, annex.

161. The Fourth General Conference of UNIDO accorded high priority to industrial co-operation among developing countries and called for the intensification of UNIDO activities in that area.<sup>54</sup> As far as available resources permit, the requests and recommendations of the Conference have been taken into account in the draft work programme for 1986-1987 submitted to the Permanent Committee at its twenty-first session, December 1984.

162. Experience has shown that the two main prerequisites for successful implementation of agreements reached during solidarity ministerial meetings are (a) immediate and effective follow-up at the government level, and (b) financial assistance from organizations within the United Nations system or development financing institutions. A systematic in-depth review of the follow-up of solidarity meetings continued in 1984.<sup>55</sup> The review made so far shows that positive results of these meetings are facilitated by two main features, namely the attendance by decision makers or their experts and the discussion of concrete project proposals which have been circulated to the participating countries for their examination prior to the meetings.

163. In 1984 solidarity ministerial meetings were organized in Rwanda and Yemen. Sixteen States and eight international organizations and institutions participated in the solidarity ministerial meeting in Yemen from 25 to 30 March 1984. Offers of assistance included a grant from Oman amounting to \$400,000 to be utilized to finance specific projects; the equivalent of \$400,000 from Algeria for specific projects; a pledge of training and expertise from India for 14 projects; expert services from China to maintain and refit the equipment of cotton ginning and cotton shelling; and an offer by Yugoslavia to undertake a techno-economic feasibility study on the tannery industry. Representatives from 10 developing countries and three international development financing institutions attended the solidarity meeting held in Rwanda from 5 to 8 June 1984 and offers of assistance were received for virtually all the projects presented to the meeting. These included assistance in pre-investment and feasibility studies, training and the provision of equipment, such as the offer by China to carry out a study on the production of cement bags and the offer by Yugoslavia to provide non-reimbursable assistance towards the establishment of industrial estates. A further two countries which, for technical reasons, could not be represented at the meeting are taking an active part in follow-up discussions and have made offers of co-operation.

164. Two solidarity ministerial meetings planned for Burundi and Democratic Yemen, originally scheduled for 1983 and 1984 respectively, should take place in 1985.<sup>56</sup> Preparatory work for the Burundi meeting, including the identification of projects, was completed during 1984, while preparations for the meeting in Democratic Yemen started the same year.

165. In 1984, efforts were concentrated on follow-up and implementation of agreements reached at previous solidarity ministerial meetings. Three follow-up projects which emanated from the Haiti solidarity meeting held in 1979 were

<sup>54</sup>ID/CONF.5/46, chap. II, sect. B (ID/CONF.5/RES.7).

<sup>55</sup>ID/B/320, chap. V, para. 120.

<sup>56</sup>ID/B/300, chap. V, para. 147.

concluded.<sup>57</sup> As a result of the Sudan solidarity meeting held in 1981,<sup>58</sup> the Government of Algeria provided workshop equipment for the manufacture of spare parts to the value of \$400,000 and offered to train five Sudanese on the maintenance and operation of the equipment. Two senior government officials from the Sudan visited selected Gulf countries to seek investment financing for industrial projects.

166. A tripartite meeting between UNIDO and representatives of the Governments of Turkey and the United Republic of Tanzania was organized in Ankara (Turkey) in October-November 1984, to elaborate terms of reference for implementing the Turkish commitment which was made during the solidarity ministerial meeting held in the United Republic of Tanzania in 1979.<sup>59</sup> Measures were also taken to fulfil commitments made at the Lesotho solidarity ministerial meeting in 1982.<sup>60</sup> A project on the construction of hammer mills as well as the training of operators was implemented in co-operation with the Government of Yugoslavia and with UNIDO support. An agreement was also reached with the Government of Algeria to complete the establishment of rural tanning units in Lesotho.

167. While the importance and effectiveness of solidarity ministerial meetings for least developed countries is recognized, there is an understanding among developing countries that solidarity meetings should be accompanied by round-table ministerial meetings in specific industrial sectors, on the basis of mutual benefit of co-operating countries. The industrial sectors currently selected for such meetings include agricultural machinery industry and building material and food-processing industries. Preparatory activities were carried out in 1984 for the first meeting of this kind—a round-table ministerial meeting on co-operation among developing countries in food-processing industries, to be held in Yugoslavia in May 1985. The meeting will consider not only concrete projects; the establishment of linkages and long-term co-operation including the exchange of information and experience is also envisaged. A meeting of the same type in the field of agricultural machinery is scheduled to be held in China in 1986. Both meetings are expected to contribute substantially to the development of joint programmes among developing countries in specific sectors.

168. In co-operation with ESCAP a Seminar for Promoting Economic and Technical Co-operation among Developing Countries in the Asia and Pacific Region in the Field of Manufacturing and Popularization of Agricultural Machinery, Tools and Equipment was held in China from 8 to 25 May 1984. Field visits to factories, research institutes and technical colleges, as well as demonstrations of agricultural machinery, provided participants with an opportunity to exchange experience and information with the host country and among themselves. Twenty-eight concrete project concepts for co-operation were identified, which matched ECDC/TCDC needs and capabilities.

169. During the fifty-first International Agricultural Fair, held in Novi Sad (Yugoslavia) in May 1984, a joint UNIDO/Yugoslavia programme was

<sup>57</sup>*Ibid.*, para. 152.

<sup>58</sup>ID/B/280, chap. IV, para. 131.

<sup>59</sup>ID/B/240, chap. III, paras. 101-102; ID/B/280, chap. III, para. 104; ID/B/320, chap. V, para. 126.

<sup>60</sup>ID/B/300, chap. V, para. 144.

elaborated to promote co-operation among developing countries in the development of agro-industries with special emphasis on food-processing industries. In addition to the round-table ministerial meeting mentioned in paragraph 167 above, a number of projects were selected for bilateral and multilateral follow-up action. Plans were made for a high-level intergovernmental meeting on agro-industrial development to be held in June 1985 in Brazil, to develop possible co-operation programmes with special emphasis on the Latin American and Caribbean region.

170. Orientation visits and exchange of experience between developing countries continued to form part of the ECDC/TCDC programme of UNIDO. Two Ethiopian experts on non-metallic ores and building materials visited Yugoslavia in April to become acquainted with Yugoslav experience in marble processing industries. The Secretary General of the Senegalese Industrial Free Zone visited the Industrial Free Zone in Mauritius to study the latter's experience in the promotion of foreign investments and export-oriented industries. A three-month training in standardization was organized in Brazil for the Director of the Zambian Institute of Standardization. The training of eight Somali technicians in the field of mechanical industries and foundry operations has been arranged in Egypt and Pakistan.

171. Co-operation was strengthened with the Special Unit for Technical Co-operation among Developing Countries of UNDP. A report on the progress made in implementing tasks entrusted to the United Nations system by the Buenos Aires Plan of Action for Promoting and Implementing Technical Co-operation among Developing Countries 1982-1984 was submitted to UNDP, and possible joint projects on action-oriented TCDC activities were discussed.

172. A regional workshop on the Integration of Women in the Industrial Planning and Development Process was organized in Harare (Zimbabwe) in April 1984. Participants from eight member States of the Southern African Development Co-ordination Conference discussed co-operation possibilities including plans of action for joint activities, an improved flow of information and possible joint information networks. Similar workshops were organized in Georgetown (Guyana) in May 1984 and in Bangkok (Thailand) in July 1984.

173. A new approach studied was co-operation between two or more countries in programmes and projects financed under trust-fund arrangements. As the first of its kind, an agreement was concluded between China and the Libyan Arab Jamahiriya in December 1984, whereby Chinese manufacturing enterprises would provide directly, or through UNIDO, plant operational personnel, particularly in the field of iron and steel and petrochemical industries. Exchanges of experts and trainees as well as joint venture projects are also envisaged.

174. Follow-up activities to Consultations organized under the System of Consultations continue to provide an excellent opportunity for co-operation among developing countries. In line with the recommendations of the Second Consultation on the Petrochemical Industry held in 1981,<sup>61</sup> a meeting on co-operation among the developing countries of the Middle East and North Africa

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<sup>61</sup> For report of the Second Consultation on the Petrochemical Industry, see ID/273.

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in the field of petrochemical industries was organized in Turkey from 15 to 19 October, in co-operation with the Government of Turkey; a co-operation programme is planned as follow-up to the meeting. Following the Third Consultation on Iron and Steel Industry held in 1982, preparations have been made for an expert group meeting to advise on the development of practical guidelines for the establishment and operation of mini steel plants to be held early in 1985.

175. Since the adoption of the Caracas Programme of Action, special emphasis has been given to measures in support of its implementation. All UNIDO activities related to economic and technical co-operation among developing countries and described above are, in fact, closely linked to the relevant recommendations and requirements of the Caracas Programme of Action. Other relevant ECDC/TCDC activities are described in the present chapter particularly under the sections on the Industrial Development Decade for Africa and the technology programme as well as in chapter III—Industrial Operations—particularly under the section on training. An updated version of the comprehensive paper entitled “UNIDO’s support measures to the Caracas Programme of Action” (UNIDO/PC.100) was submitted to the Third Meeting of the Intergovernmental Follow-up and Co-ordination Committee of the Group of 77, held in Cartagena (Colombia) in September 1984.

176. Also in support of the recommendations of the Caracas Programme of Action an important new programme was developed in 1984 related to enterprise-to-enterprise co-operation among developing countries. Activities in 1984 included the preparation of a study on enterprise-to-enterprise co-operation which will also serve as a background paper for an expert meeting on the subject to be held in 1985. Activities have been undertaken to strengthen the inter-enterprise co-operation and joint venture programme of the Islamic Chamber of Commerce, Industry and Commodity Exchange in Pakistan.<sup>62</sup> With a financial contribution from the United States Agency for International Development a project was initiated for the exchange of entrepreneurial expertise in developing countries, through on-site consultations and the training of key project personnel.

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<sup>62</sup>ID/B/320, chap. V, para. 136.

## Chapter VI

# REVIEWS AND EVALUATION

1. In addition to the directors' meetings convened by the Executive Director, the principal mechanism for reviewing the work of the organization as a whole in 1984 was, as in previous years, the implementation review meeting of senior officers, held twice a year. One of the aims of these meetings is to ensure—by reviewing immediate past experience—co-ordination within the organization in order to avoid overlap of activities and to optimize utilization of available resources. In April, the meeting focused on UNIDO's implementation during 1983, based on the final statistics for that year. It also reviewed technical co-operation approval and implementation targets for 1984 and considered other aspects of the 1984 UNIDO work programme. In October, a work programme for the biennium 1986-1987 was finalized as a result of an extensive joint programming effort within the UNIDO secretariat. Based on the work programme, the proposals for the programme budget for that biennium were prepared and submitted to the Secretary-General. In November, the meeting concentrated, *inter alia*, on the rate of implementation in 1984, and established overall target figures for 1985 in the light of experience gained.

2. Concerning the evaluation of the UNDP-financed technical co-operation activities of UNIDO, the secretariat, on the basis of the comments and observations made by the Permanent Committee at its twentieth session, provided an important input to the comprehensive report on the subject submitted by the Secretary-General to the Committee for Programme and Co-ordination (CPC).<sup>1</sup> In response to the CPC report on its twenty-fourth session,<sup>2</sup> the Economic and Social Council adopted resolution 1984/61 inviting the Governing Council of UNDP and the Industrial Development Board of UNIDO to take specific actions on the recommendations of the Secretary-General. The UNIDO secretariat submitted a note to the Permanent Committee at its twenty-first session,<sup>3</sup> providing information on activities carried out or planned to be carried out which are of relevance to the mandates of the Economic and Social Council resolution.

3. The year under review witnessed an important improvement and expansion of the UNIDO internal evaluation system. An integrated monitoring and evaluation structure continued to be built up. The main objective is to

<sup>1</sup>E/AC.51/1984/7 and Corr.1 and Add.1.

<sup>2</sup>Official Records of the General Assembly, Thirty-ninth Session, Supplement No. 38 (A/39/38).

<sup>3</sup>ID/B/C.3/130.

bring together result-oriented reporting and headquarters feedback with the principal review and decision-making mechanism for field projects, namely, the tripartite review, and to provide improved information to the headquarters implementation reviews.

4. After one year's experience, a detailed assessment was made of the internal evaluation system. This assessment, which involved all tripartite system participants, led to a redesigning of the field and headquarters report formats eliciting more structured and decision-oriented information. The revised system became effective in July 1984 after the distribution of the improved manual (UNIDO/PC.31/Rev.1) on project design and evaluation. A thorough analysis of the status of the project is carried out by project staff approximately two months before a scheduled tripartite review. The Senior Industrial Development Field Adviser (SIDFA) or Junior Professional Officer (JPO) subsequently reviews the analysis and is requested to give his or her views, followed by a headquarters analysis which includes the identification of issues and the formulation of UNIDO recommendations for presentation at the tripartite review. The availability to all the tripartite review participants of a thorough analysis of project performance has improved efficiency and effectiveness in decision-making.

5. In 1982—the first year of operation—52 performance PERs (project self-evaluation reports) were prepared for large-scale ongoing projects during the period May to December, representing an annual equivalent of 78; in the full year 1983, the total was 88. In 1984, as of mid-December, 104 performance PERs were prepared and reviewed. In addition, terminal PERs were prepared for 15 projects during May to December 1982, for 19 in 1983 and for 18 projects during January to mid-December 1984. The gradual increase in compliance, accompanied not only by a very significant improvement in the quality of information received from the field but also by a significant improvement in the speed and quality of headquarters feedback and its subsequent use at tripartite reviews, indicates that the system is becoming well established. In this context, it is interesting to note that average time for headquarters review by backstopping officers was reduced from 67 calendar days in 1982 to 32 in 1984.

6. During 1984, UNIDO headquarters staff participated in a number of such reviews, while at others UNIDO continued to be represented by SIDFAs and JPOs. An interesting feature of the PERs drawn up according to the revised system is that, based on the analysis of the project and problems to be discussed, the Branch Head or Section Chief concerned is requested to indicate if headquarters participation in a subsequent tripartite review is essential or if the review can be handled by field staff. This should improve the efficient utilization of headquarters staff time and project resources.

7. The self-evaluation system was expanded in 1984 to include coverage of group training. A completely new training PER was developed, based on the same principle as the performance PER for field projects: the host training institute carries out a structured analysis of the training results which is then reviewed at UNIDO headquarters from both the training and the technical points of view, and returned to the institute concerned with suggestions and comments. The Project Review Committee will use the results of the exercise to help guide deliberations on requests and proposals for group training activities.



8. The PERs and the tripartite reviews which form the basic structure of the UNIDO evaluation system, are complemented by both scheduled and *ad hoc* tripartite in-depth evaluations. In-depth project evaluations analyse experiences encountered so far and facilitate major decisions concerning the future of the project. In-depth evaluations play a useful role in improving project performance, particularly in respect of those projects experiencing serious problems that cannot be dealt with by the normal management structure. Such situations are increasingly being identified through the PER system.

9. UNIDO headquarters staff participated in six tripartite in-depth project evaluations conducted in Indonesia, Rwanda, Sudan, Turkey, United Republic of Tanzania and Viet Nam. In Indonesia the joint evaluation team analysed three years' experience of a large-scale project assisting the Government in supporting small-scale industries. Based on this experience, as well as government policies and an analysis of the national institutional infrastructure, the mission prepared a concept for further technical assistance. A tripartite in-depth evaluation in Rwanda analysed the progress of an ongoing large-scale project assisting the Bureau de Promotion Industrielle. The evaluation team which included government participation also studied the overall development of small-scale industries and identified technical assistance needs for the future, including a further phase of UNDP/UNIDO assistance. A tripartite evaluation in the Sudan analysed the ongoing second phase of a project to assist public sector industries in improving their efficiency. For the remaining duration of that project, the evaluation team proposed that the Government consider a shift towards the preparation of concrete rehabilitation programmes for the leather, food-processing and textile sectors. An evaluation was also carried out with the Government of Turkey to examine the requirements for further UNDP/UNIDO technical co-operation to the Sumerbank Textile Training and Research Institution in Bursa. A detailed proposal was made for the revitalization of the Institution's programme with the aim of making it an integral part of the planned modernization of the textile sector. The evaluation carried out in co-operation with the Government of the United Republic of Tanzania analysed the results of several UNIDO-executed projects funded from indicative planning figures, the regular programme and the United Nations Industrial Development Fund (UNIDF) on the development of the leather and leather products industry. The evaluation team examined the current situation of this industry and also defined the main elements and requirements for a possible future institution-building project—funded by a donor country through UNIDF—which would strengthen the Tanzania Institute of Leather Technology in Mwanza. In Viet Nam, a UNDP/UNIDO team carried out an evaluation of a project dealing with the improvement of maintenance procedures and production management practices in selected textile factories in the south of the country. The field study analysed project results and suggested a more systematic approach to final development and integration of a dynamic maintenance system.

10. Training in project design and evaluation methodologies for, and their application to, technical co-operation projects has been intensified both at headquarters and in the field. Based on a syllabus first developed in 1982 and tested and improved in 1983, two-day training workshops consisting of lectures, group discussions and case studies drawn from actual UNIDO experiences are

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conducted by the evaluation staff for groups of 10 to 15 participants. Regular bi-monthly workshops are organized for secretariat staff; to date, 65 out of 200 headquarters staff members concerned have participated in workshops and it is hoped that by the end of 1985 the majority will have attended the workshop which is also part of the training course for JPOs. In view of the fact that technical co-operation projects are primarily endeavours of the countries concerned, workshops are also being conducted in countries with relatively large UNIDO programmes. In 1984, workshops were held in Ethiopia, India, Madagascar and the United Republic of Tanzania for 101 government officials, 19 UNIDO field personnel and 56 UNDP and other United Nations agencies staff involved in project planning, formulation, implementation and evaluation. Plans are under way to hold similar workshops in Burma, China, Indonesia and Thailand; to the extent possible, these workshops will be held in the field in conjunction with in-depth project evaluation missions in an effort to save both time and travel funds. Briefings on the methods and requirements of the internal evaluation system are given to chief technical advisers for large-scale projects as well as to SIDFAs during their briefings at UNIDO headquarters. Six SIDFAs also participated in the full training workshops in 1984. Similar briefings are routinely given to UNIDO project advisers, national project coordinators, and UNDP and government officials in the course of evaluation missions. The feedback from training workshops, both at headquarters and in the field, has been very positive and an initial improvement of projects designed by participants has been observed.

11. Recent attempts to revise the UNDP tripartite monitoring evaluation system are likely to affect the UNIDO internal evaluation system. UNIDO has, therefore, been very active in inter-agency consultations to ensure that the system to be introduced by UNDP is responsive to management needs of the specialized agencies.

## *Chapter VII*

# **CO-ORDINATION, FIELD AND LIAISON ACTIVITIES AND PUBLIC INFORMATION**

### **INTER-AGENCY PROGRAMME CO-ORDINATION**

1. A comprehensive report on UNIDO co-ordination activities for the period November 1983 to October 1984 was submitted to the Permanent Committee at its twenty-first session in document ID/B/C.3/132. The following paragraphs briefly summarize the activities described in that document and report on further developments up to the end of 1984, except for activities carried out in conjunction with the United Nations Development Programme (UNDP) and the World Bank which are dealt with elsewhere in the present *Report*.

2. UNIDO continued its efforts to enhance effectively its central co-ordinating role within the United Nations system in the field of industrial development, bearing particularly in mind the cost-effective use of the system-wide resources devoted to industrial development co-operation in favour of the developing countries. In this respect, as in the past, the programmes and activities of UNIDO were designed to complement as far as possible those of other organizations within the United Nations system responsible for different sectors such as health, education, employment, environment, agriculture and trade.

3. Co-ordination between UNIDO and other United Nations organs and organizations is carried out at various levels: at the policy-making level, through participation in the sessions of the General Assembly, the Economic and Social Council and its subsidiary bodies including the Administrative Committee on Co-ordination (ACC) and its sub-organs as well as the intergovernmental Committee for Programme and Co-ordination (CPC), and through attendance at the governing bodies of specialized agencies; at the inter-secretariat level, through regular meetings as provided for in the memoranda of understanding concluded between UNIDO and other United Nations organizations; and at the country level, through the offices of the United Nations resident co-ordinators, the UNDP resident representatives and, in particular, through the Senior Industrial Development Field Advisers (SIDFAs). The UNIDO Liaison Office in New York and the UNIDO representation at Geneva also play an important role in the inter-agency co-ordination activities at those duty stations.

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4. In 1984, UNIDO received 421 invitations to participate in meetings of policy-making bodies, or meetings of a technical nature, organized by other organizations, organs or specialized agencies of the United Nations system. Of this number, only 164 invitations (or 39 per cent) were accepted, while 257 (or 61 per cent) were declined mostly for reasons of budgetary constraint.

5. One of the important considerations in accepting an invitation was that UNIDO's participation in the meeting should involve as little expense as possible, or none at all. Thus, of the 164 meetings attended, 28 were held in Vienna, while 87 others which took place away from Vienna were attended by UNIDO representatives located at, or nearest to, the venue of the meeting. These *in situ* representatives consisted of the staff of the Geneva and the New York liaison offices as well as SIDFAs, Junior Professional Officers (JPOs), outposted UNIDO staff in the joint industry divisions at the economic commissions and regional advisers. In this way, UNIDO's participation in 115 meetings, representing 70 per cent of the invitations accepted, involved very little or no travel expenditure. The remaining 30 per cent of the meetings attended were mainly of a technical nature closely related to UNIDO's high-priority programmes.

6. An essential part of the co-ordination activities is carried out within the framework of the inter-secretariat co-ordinating bodies which provide a forum for reviewing all ongoing and planned joint activities at headquarters and field levels. The following bodies met during 1984:

UNESCO/UNIDO Inter-secretariat Committee on Co-operation (Paris, April)

UNEP/UNIDO Joint Committee on Co-operation (Paris, April)

ITC/UNIDO liaison meeting (Vienna, November)

ILO/UNIDO Joint Working Party (Vienna, January and Geneva, April)

FAO/UNIDO Joint Technical Working Group on Forest and Pulp and Paper Industries (Rome, January)

FAO/UNIDO Joint Technical Working Group on Food and Agricultural Products Conservation and Processing Industries (Vienna, February)

UNIDO/FAO/World Bank Working Group on Fertilizers (London, June)

FAO/UNIDO Joint Technical Working Group on the Fisheries Industry (Vienna, September).

7. In addition to these formal meetings, co-ordination at the working level was pursued in a variety of ways, including the exchange of information between UNIDO and other organizations or agencies on operational as well as research and study programmes; co-operative programme development through exchange of comments on each other's medium-term plans and programme budgets and through joint missions to identify and formulate projects; briefing and debriefing of each other's project personnel; and identification of opportunities for developing complementary projects or, as appropriate, redeploing resources to avoid duplication or overlap.

8. Close co-operation with a number of individual organizations during 1984 produced beneficial results in several areas of common concern. One example was the collaboration between UNIDO and the International Labour Organisation (ILO) in the preparation and publication of a number of technical memoranda designed to offer technical information, guidance and know-how to small-scale enterprise units in developing countries. UNIDO and ILO are also currently examining the possibility of establishing a joint networking system for the exchange of information on a broad range of industry-related topics, including energy. This would involve a pooling of the UNIDO Industrial Information System including its LINK (on-line information key) data base with ILO publications on computer tape, and the linking of these with appropriate external data bases on technology which are of interest to both organizations. In a similar arrangement, the United Nations Educational, Scientific and Cultural Organization (UNESCO) is co-operating with UNIDO by making available its international computerized data base on research projects, studies and courses in science and technology policies. Furthermore, the UNIDO Industrial and Technological Information Bank (INTIB) passes on to the Industry and Environment Office of the United Nations Environment Programme (UNEP) for response, inquiries on environmental aspects of industrial development received from external sources by the UNIDO Industrial Inquiry Service. Through INTIB, the secretariat is also exploring the possibility of an information exchange arrangement with the network of the International Referral System for Sources of Environmental Information (INFOTERRA).

9. Collaboration efforts continued with the World Health Organization (WHO) in a number of specific areas, including the production of oral rehydration salts and bio-medical equipment, the assembly and production of laboratory equipment, the production of reagents and vaccines, the industrial utilization of medicinal plants and the production of essential drugs.

10. Co-operation with the Food and Agriculture Organization of the United Nations (FAO) covered a wide range of activities. UNIDO and FAO are continuing a joint study on the agriculture/industry linkage as well as the elaboration of case studies on the subject with a view to contributing to the development of planning methodologies.

11. Close and fruitful co-operation also continued throughout 1984 with the United Nations Conference on Trade and Development (UNCTAD). UNIDO played an active role at the first special and fifth regular sessions of the UNCTAD Committee on Transfer of Technology, held in February and December 1984 respectively. Consultations between UNIDO and UNCTAD staff on co-operation in the field of technology transfer and development were held in November. The UNCTAD model (joint UNIDO/UNCTAD modelling project) continues to serve as a reliable frame of reference for organizations within the United Nations system in analysing and projecting global and regional economic development in the 1980s and 1990s in such fields as trade, technology and industrial structures. In addition to a number of joint technical co-operation projects successfully implemented by the International Trade Centre UNCTAD/GATT (ITC) and UNIDO, ITC will act as executing agency, and UNIDO and the Economic Commission for Africa as associated agencies, for a project of supply and demand surveys in African countries south of the

Sahara. The implementation of this joint project has so far been held up for lack of previously envisaged UNDP funds.

12. The UNIDO System of Consultations continued to enjoy the active co-operation of other organizations and specialized agencies within the United Nations system, among them ILO, FAO, UNESCO, WHO, UNCTAD, ITC and the World Bank. Apart from participating in specific Consultations of interest to their own work programmes, each of these agencies is a member of at least one of the five multi-agency working groups which have been established to support the work of the System of Consultations in five key areas: fertilizers, food processing, leather and leather products, training of industrial manpower and pharmaceuticals and bio-medical equipment.

13. UNIDO continued to promote projects that lend themselves to inter-agency or multilateral execution. Despite a substantial drop in the flow of technical assistance resources from UNDP during the last few years, the total value of projects involving joint execution by UNIDO and one or more agencies during the reporting period was \$33 million. Of this amount, \$19.6 million represented projects for which UNIDO was the executing agency and another organization or agency acted as associated agency, while \$13.4 million represented projects for which UNIDO was the associated agency. A list of such joint technical co-operation projects is provided in annex II of document ID/B/C.3/132.

## **RELATIONS WITH GOVERNMENTS AND INTERGOVERNMENTAL ORGANIZATIONS**

14. Throughout 1984, as in the previous years, the secretariat continued its policy of strengthening and expanding the network of external relations with Governments of member States and with intergovernmental organizations. This network which was established in the early days of UNIDO has gained increasing relevance as progress is being made towards UNIDO's conversion into a specialized agency. Efforts continued to be made to promote the goals of the organization with the help of Governments and intergovernmental organizations by soliciting their active support in all matters for which that support could be vital to UNIDO. The Fourth General Conference of UNIDO provided a unique occasion for the secretariat to pursue its external relations activities; 139 States were represented at the ministerial, vice-ministerial or senior official level and 29 intergovernmental organizations attended as observers. During the Conference, the Executive Director held over 30 individual meetings with representatives of Governments and intergovernmental organizations to discuss possibilities of co-operation with UNIDO and other matters of common interest.

15. The Executive Director attended a number of international conferences and meetings during 1984 such as the Subregional Meeting on the Promotion of Intra-African Industrial Co-operation within the Framework of the Industrial Decade for Africa in Tunis (Tunisia) which completed the series of such subregional meetings (see chap. V, para. 4); the Economic and Social

Commission for Asia and the Pacific (ESCAP) Preparatory Meeting of Ministers of Industry for the Fourth General Conference of UNIDO in Bangkok (Thailand); the Seventh Conference of African Ministers of Industry in Addis Ababa (Ethiopia); the High-Level Latin American Co-ordination Meeting prior to the Fourth General Conference of UNIDO in Havana (Cuba); and the Second Ministerial Conference on Industrial Co-operation of Ministers of Industry of Islamic Countries in Istanbul (Turkey). The Executive Director took advantage of those occasions to have discussions with senior government officials of the respective host country. He also made high-level contacts during the course of other missions which included a visit to the headquarters of the Organisation for Economic Co-operation and Development (OECD) where he addressed the Council of OECD on preparations for the Fourth General Conference, and visits to India, Nepal, Romania and the Syrian Arab Republic. High-level representatives of 35 States and of 16 intergovernmental organizations were received at UNIDO headquarters throughout 1984.

16. The secretariat continued to co-operate with those countries with whom joint work programmes or similar arrangements have been concluded. The annual meeting of the Joint UNIDO/Hungary Programmes for International Co-operation, held at Vienna in January 1984, provided an occasion for a thorough discussion of present and future joint activities. The seventh session of the Joint UNIDO/Bulgaria Committee for Co-operation, held in Vienna in February, reviewed the current work programme and recommended the establishment of a UNIDO/Bulgaria centre for instruments design, which is now under consideration. The Joint Committee for the Joint UNIDO/Czechoslovakia Programme for International Co-operation in the Field of Ceramics, Building Materials and Non-metallic Minerals-based Industries held its seventh session in Vienna in March, while the Joint UNIDO/Yugoslavia Centre for Industrial Co-operation in the Development of Agro-Industries in the Developing Countries held its seventh session in Belgrade (Yugoslavia) in May. A memorandum of understanding was signed between UNIDO and the Government of Turkey on the Establishment of a Joint Committee for Co-operation. The Committee held its first meeting in Ankara in December 1984 and discussed a programme of co-operation for 1985-1986. A memorandum of understanding was signed with the Government of the Union of Soviet Socialist Republics on co-operation in industrial planning. In addition, agreements of co-operation for the benefit of African countries were signed with the Government of Portugal and the Egyptian Fund for Technical Co-operation for Africa.

17. In June 1984 an agreement of co-operation was signed between UNIDO and the Council for Mutual Economic Assistance (CMEA), which provides, *inter alia*, for an exchange of information, consultations on questions of research and joint efforts in the execution of studies and technical co-operation projects, particularly those related to the transfer of experience of CMEA member countries in the fields of planning and economic management. The details of co-operation between UNIDO and CMEA will be defined during the course of joint work programmes to be established on a periodic basis.

18. With regard to the implementation of already existing co-operation agreements with intergovernmental organizations during 1984, special mention should once again be made of the Arab Industrial Development Organization

(AIDO) which organized, together with the Government of the Syrian Arab Republic and UNIDO, the Sixth Industrial Development Conference for Arab States held in Damascus (Syrian Arab Republic) in October. UNIDO shared the conference costs with the Government of the Syrian Arab Republic and AIDO, and prepared an important part of the conference documentation. On the basis of its co-operation agreement with the Organization of the Islamic Conference (OIC), UNIDO—with the preparation of three working papers—contributed substantially to the Second Ministerial Conference on Industrial Co-operation held in Istanbul (Turkey) in November. Co-operation with OIC also reached a further dimension by virtue of the fact that at the first meeting between the secretariats of the organs, organizations and bodies of the United Nations system and OIC held in Geneva in July 1983, UNIDO had been designated as lead agency for follow-up action on co-operation between the United Nations system and OIC in the area of investment mechanisms and joint ventures. Subsequently, the Executive Director established a task force including representatives of the various secretariat units concerned to co-ordinate that follow-up action. Among the many other intergovernmental organizations linked with UNIDO through co-operation agreements or long-standing working relations, mention should be made of OECD and the Latin American Economic System (SELA) with whom contacts were intensified within the context of the preparations for the Fourth General Conference. The intergovernmental organizations associated with the work of the Industrial Development Board under rule 75 of its rules of procedure amount to 42 (see appendix M, table 1).

19. The secretariat proceeded with its efforts to enhance the role of the National Committees for UNIDO as envisaged by the International Symposium on Industrial Development held in 1967. The third round of discussions with National Committees, organized in May 1984 during the eighteenth session of the Industrial Development Board, provided an in-depth briefing on UNIDO programmes and activities, and allowed participants to exchange views and experiences. Representatives of seven National Committees (Egypt, Honduras, Malaysia, Mauritania, Poland, Tunisia and Uganda) participated in those discussions. Representatives of the permanent missions to UNIDO of Democratic Yemen, Greece, Indonesia, Iran (Islamic Republic of), Thailand, Turkey and Venezuela also attended the meeting. In June 1984, an orientation programme on UNIDO operations—the first of its kind—was organized for 10 members of the Thai National Committee. Also for the first time, a quarterly *News Bulletin* for the National Committees was issued in 1984, which aroused the interest of several Governments in the inherent possibilities of an active National Committee for UNIDO. Finally, several National Committees for UNIDO in Africa assumed the role of National Co-ordinating Committees for the Industrial Development Decade for Africa.

20. Throughout 1984, the secretariat once again sought support for the United Nations Industrial Development Fund (UNIDF) from member States, bearing in mind the overall annual funding target of \$50 million recommended by the General Assembly in resolution 32/166 as well as the needs of the developing countries. In order to focus the attention of donor countries, a leaflet was published in which the achievements of the Fund were presented visually. However, at the Pledging Conference for Development Activities for 1985, held in 1984, the total of pledges announced amounted only to \$12.9 million.



## CO-OPERATION WITH NON-GOVERNMENTAL ORGANIZATIONS AND BUSINESS AND INDUSTRIAL INSTITUTIONS

21. The Non-governmental Organizations Section performs a co-ordinating function between, on the one hand, UNIDO's technical co-operation and promotional programmes and, on the other hand, national and international non-governmental and other organizations, such as professional and manufacturers organizations, chambers of commerce and industry, industrial enterprises, financial institutions, universities, industrial R + D institutes, industrial co-operative organizations and international trade union federations. The activities of the Section are aimed at increasing the flow and the quality of assistance to the developing countries by utilizing the technical, financial, managerial and human resources available within the above organizations in developed as well as in developing countries. Within the framework of existing priority programmes and sectors of UNIDO, such as the Industrial Development Decade for Africa and the System of Consultations, joint programmes and projects are developed with non-governmental organizations, and business and industrial institutions to be implemented mainly in co-operation with the substantive branches and sections of UNIDO.

22. International non-governmental organizations (NGOs) are supporting, through UNIDO, many industrial development activities in developing countries, either directly or by collaborating with NGOs located in those countries. UNIDO's collaboration with NGOs covers technical co-operation and promotional activities. Collaboration with other organizations, such as business and industrial institutions aims primarily at establishing exchange of information and organizational arrangements between UNIDO and these institutions for provision of expertise and facilities required for technical co-operation activities. UNIDO also assists NGOs, institutions and enterprises from developing countries in identifying suitable partners in developed or other developing countries willing to enter into contractual arrangements.

23. In 1984, 17 projects were initiated and developed for joint implementation with NGOs. For some of these projects, however, due to the scarce financial resources available to UNIDO, no financing could be secured. In addition, a programme was developed with several NGOs in order to assist UNIDO in the identification and recruitment of experts and consultants. This programme aims at utilizing the wide range of industrial expertise available within NGOs on flexible and favourable terms, and thus, increasing the efficiency and the flexibility in the implementation of UNIDO's technical co-operation and promotional programmes. A good example of this activity is the co-operation with Echanges et Consultations techniques internationaux, which provided 2,300 names of retired industrial consultants from 50 industrial subsectors, who would be willing to undertake UNIDO field assignments on very favourable terms. Out of these, more than 130 curricula vitae have already been included in the UNIDO roster of experts.

24. In co-operation with the Division of Industrial Operations, the programme for the use of industrial fairs as a vehicle for the transfer of technology to the developing countries,<sup>1</sup> was further developed and implemented. Through special

<sup>1</sup>ID/B/320, chap. VII, para. 37.

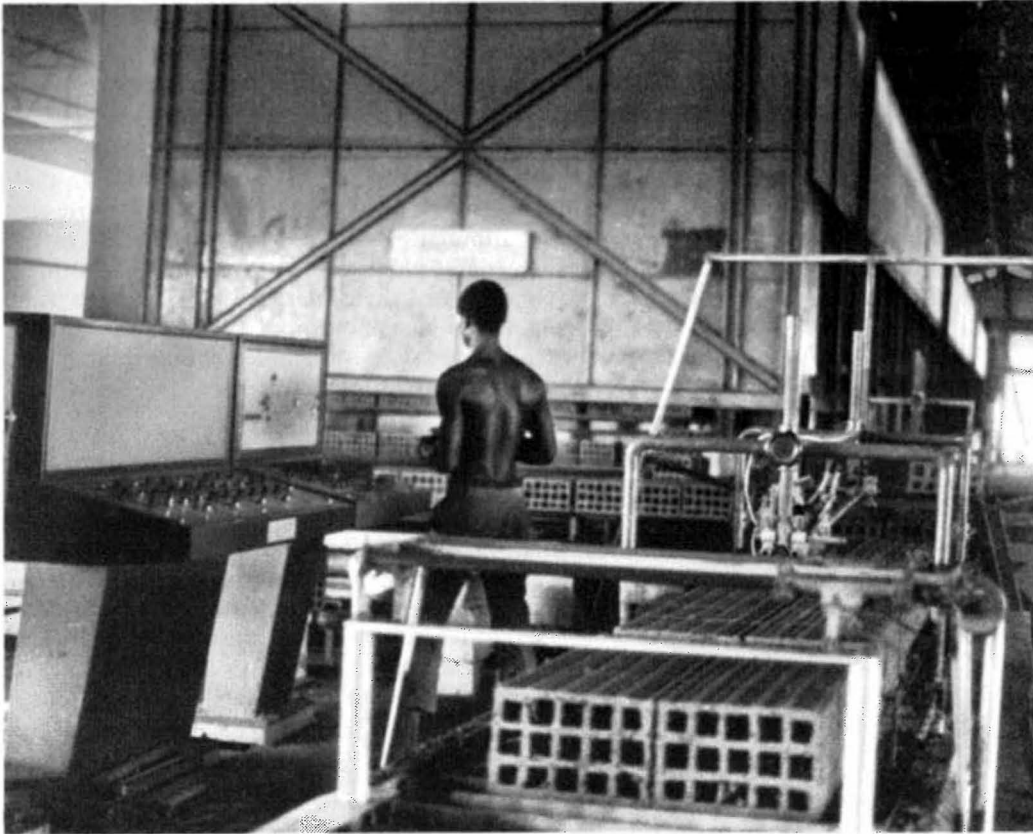
workshops held during selected industrial fairs and subsequent factory visits, nationals from field projects had the opportunity to obtain relevant information on appropriate technology and equipment, and to establish viable contacts with suppliers of the technologies. In 1984, UNIDO participated in the International Foundry Fair "GIFA '84" in Dusseldorf (Federal Republic of Germany), the International Fair in Poznan (Poland) and the twenty-sixth International Engineering Fair in Brno (Czechoslovakia). The practical results achieved and the relatively limited costs involved have prompted the formulation of a long-term programme for UNIDO participation in major industrial fairs.

25. UNIDO also continued its activities related to the promotion of direct co-operation between NGOs in developed and developing countries, and among NGOs in developing countries themselves. These activities include strengthening of university-industry linkages; the promotion of co-operation among industrial enterprises; the promotion of co-operation among industrial co-operative organizations; and the promotion of twinning agreements for co-operation between R + D institutes.

26. In 1984, UNIDO initiated new activities aimed at the establishment of sectoral, regional and interregional associations, such as the creation of an international confederation of engineering industries and regional associations of the pharmaceutical and fertilizer industries. The establishment of such associations enhances the mobilization of indigenous resources and promotes direct technical and industrial co-operation activities among its members, thus facilitating an increased flow of technical co-operation.

27. In the year under review, UNIDO received 115 invitations from NGOs to participate in conferences, congresses, meetings, etc. organized by these organizations. Due to limited financial and staff resources, UNIDO was able to accept only 28 of these invitations and was represented at these meetings by either a staff member from headquarters or a SIDFA.

28. During the year under review, the Non-governmental Organizations Section provided important support to the System of Consultations. On recommendation of the Third Consultation on the Iron and Steel Industry, the Section organized a seminar on iron and steel in Karachi (Pakistan) from 19 to 27 May, in co-operation with the Metallurgical Industries Section and the Negotiations Branch. Nineteen participants from 11 developing countries and eight representatives from suppliers of technology and equipment examined major problems in the iron and steel industry in the developing countries and discussed possible solutions through, *inter alia*, international co-operation. As a follow-up to the Second Consultation on the Pharmaceutical Industry, a project was initiated with the Institute for Developing Countries in Zagreb (Yugoslavia) for the holding of an international meeting on the transfer of technology and know-how among selected developing countries. Following the recommendations of Consultations on the Pharmaceutical Industry and Fertilizer Industry, proposals were made for the creation of regional associations of these industries in Africa. As a follow-up to the recommendations of the First Consultation on the Wood and Wood Products Industry, R + D institutes are being identified in both developed and developing countries which are willing to establish co-operation arrangements. Pursuant to the First Consultation on the Food-Processing Industry, a draft roster of partners for international co-operation in the food-processing industry was prepared.



*Mechanized production of bricks, Brick and Tile Corporation, Accra (Ghana)*

29. In support of the programme for the Industrial Development Decade for Africa, activities were initiated to involve African national and regional NGOs, as well as other interested NGOs, in the implementation of the programme for the Decade, either through direct co-operation among these NGOs or through joint implementation of projects with UNIDO. For this purpose, preparatory activities were undertaken to organize a forum for these NGOs in Abidjan (Ivory Coast) in collaboration with the Association of African Development Finance Institutions. The Forum is scheduled to take place in August 1985.

30. An NGO Forum on the Fourth General Conference of UNIDO was convened on 6 and 7 February 1984 in Vienna to examine selected critical issues of the Conference with representatives of the industrial, scientific, technical, business and labour communities and to encourage them to co-operate closely and effectively with UNIDO. The Forum, which was attended by representatives from 42 international and national NGOs, recommended that these organizations be actively involved in the Conference and in the implementation of its recommendations. The Forum also recommended that a special NGO round-table meeting be convened in connection with the

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conversion of UNIDO into a specialized agency, in order to establish institutional mechanisms for co-operation with the new UNIDO and to reinforce the role of NGOs in promoting UNIDO interests and activities.

31. Representatives from 33 international NGOs in consultative status with UNIDO actively participated in the Fourth General Conference. Besides their substantive contributions during the Conference, these organizations contributed indirectly to the Conference by stimulating and mobilizing interest in the objectives of UNIDO among the general public as well as among government officials. The participating NGOs expressed their interest and willingness to be actively involved in the follow-up and implementation of the recommendations of the Conference, especially by formulating and implementing jointly with UNIDO programmes within their specific fields of competence.

32. The continuous dialogue of UNIDO with international organizations involved in industrial relations, such as trade unions, employers' organizations and consumer unions, ensures the important role for these organizations in the formulation and the implementation of the activities of UNIDO. On the occasion of the Fourth General Conference, a meeting was held among representatives of the three main international trade union federations, ILO and UNIDO and it was agreed to convene a joint meeting on the role of trade union organizations in implementing the recommendations of the Conference, with particular reference to social aspects of industrialization.

33. An ongoing joint programme with the International Organization for Standardization (ISO) for training of officials from national standardization organizations in developing countries was positively evaluated during the annual UNIDO/ISO Joint Committee Meeting. The programme will be continued in the future.

34. At the recommendation of the Permanent Committee at its twentieth session,<sup>2</sup> the Industrial Development Board at its eighteenth session (May 1984), formally granted consultative status to five NGOs, namely the International Council for Building Research, Studies and Documentation, the International Federation for Medical and Biological Engineering, the International Federation of Agricultural Producers, the Society for International Development and the World Federation of Development Financing Institutions. The total number of international NGOs having consultative status with UNIDO is 75 (see appendix M, table 2).

35. A "Directory of international non-governmental organizations in consultative status with UNIDO" (ID/321) was published on the occasion of the Fourth General Conference. The document provides basic information on the structure and activities of each NGO. It is expected that this directory will further encourage and facilitate direct co-operation between these NGOs and developing countries.

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<sup>2</sup>ID/B/309, para. 67; *Official Records of the General Assembly, Thirty-ninth Session, Supplement No. 16 (A/39/16)*, para. 72 (conclusion 1984/1).

## FIELD ADVISER AND JUNIOR PROFESSIONAL OFFICER PROGRAMMES

36. In 1984, the General Assembly, the Permanent Committee of the Industrial Development Board and the Governing Council of UNDP devoted considerable attention to the question of the SIDFA network and its financing.

37. It will be recalled that, in 1983, the Governing Council of UNDP had approved an allocation of \$4.06 million to cover the net cost of SIDFA services during 1984-1985. In June 1984, the Governing Council in decision 84/41 approved an allocation of \$2.03 million, subject to resource availability, to be used in 1986 together with any savings arising from previous years to cover the net costs to UNDP for the SIDFA services (for further details on decision 84/41, see chap. I, para. 10 above).

38. The Industrial Development Board at its eighteenth session decided to include the SIDFA programme in the provisional agenda of the Permanent Committee at its twenty-first session in November 1984. The Permanent Committee at that session re-emphasized the importance of the programme and reiterated the need to strengthen it.<sup>3</sup> The Committee noted that the availability of resources might further decline and agreed to invite the Governing Council of UNDP to finance the maximum number of SIDFAs in 1985 and 1986 and to explore all possible ways of locating additional resources for the programme; to renew the appeal to all member States, particularly developed countries, to provide generous voluntary contributions for the programme; and to request the Executive Director to make concerted efforts for seeking additional resources in 1985. The Committee further stressed that the programme should be maintained in 1985 at its present level of 30 posts and recommended to the General Assembly to consider that question with a view to taking appropriate measures. The Committee recommended that the secretariat increase its efforts to make best use of existing personnel; it noted that close co-operation between UNIDO and UNDP had produced effective services to developing countries and reiterated that integration of the UNIDO Field Services should continue within the UNDP Field Offices; it also reaffirmed that the SIDFA programme should continue to take into account the special needs of the least developed countries.

39. In December 1984 the General Assembly, in section II of resolution 39/232 on industrial development co-operation, appealed to the developed countries to provide maximum voluntary contributions for the SIDFA programme, and decided that in 1985 provision would be made in the regular budget for maintaining the total number of existing posts in that programme, taking into account the allocation from the UNDP budget as well as voluntary funding through UNIDO. Subsequently, the Assembly decided to grant UNIDO for 1985 an additional appropriation of \$1,135,000 from the regular budget to finance nine SIDFA posts and requested the Secretary-General to take appropriate action to that end.

40. Voluntary contributions to the SIDFA programme had been received in the past from Austria, Finland and Japan. In response to the appeal of the

<sup>3</sup>ID/B/327, paras. 123-130.

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General Assembly in resolution 38/192, in 1984 Italy announced a contribution, the details of which are under negotiation. Some developing countries have also contributed to UNDP for the local cost of SIDFA offices; others are indirectly contributing to the SIDFA programme by sharing the overall cost of the UNDP offices.

41. The financing of the SIDFA programme will continue to be a problem in the future despite the additional allocation of \$2,031,000 for 1986 in the UNDP budget. Considering that the average expenditures per post were \$130,000 and that the expenditures may be expected to increase by 5.5 per cent annually, this appropriation would probably allow the financing of only 13 SIDFAs in 1986. It is not yet known if and to which extent UNDP can utilize savings from previous years. In the event no further contributions are received from donor countries and the policy-making organs will not agree to the continued financing from the regular budget, the programme will face drastic curtailment.

42. Twenty-nine SIDFAs and one project manager acting as a SIDFA were on board at the end of 1984. With the appropriation from the United Nations regular budget and the provisions from UNDP it will be possible to maintain 30 SIDFA posts until the end of 1985 including one post financed from voluntary contributions until August 1985 and another for which negotiations are under way with a donor country.

43. Of the 29 SIDFAs on board, 19 are from developing countries, 8 from Group B countries and 2 from Group D countries. In the course of the year, 4 SIDFAs were reassigned to other duty stations. Four new SIDFAs were appointed to fill the posts that became vacant during the year due to retirement or reassignments to other positions.

44. The table below shows the distribution of SIDFA posts for 1985 as compared to 1983 and 1984.

45. A second regional SIDFA meeting for Latin America and the Caribbean was convened in Mexico City (Mexico) from 10 to 15 December 1984. The

### GEOGRAPHICAL DISTRIBUTION OF SIDFA POSTS<sup>a</sup>

(By region and source of funds)

Region	Source of funds									Total		
	UNDP			Regular budget			Voluntary contributions					
	1983	1984	1985	1983	1984	1985	1983	1984	1985	1983	1984	1985
Africa	8	7	7	6	5	5	1	—	—	15	12	12
Asia and the Pacific	9	6	6	2	2	2	1	2	2	12	10	10
Latin America	6	5	5	2	2	2	—	—	—	8	7	7
Arab States	2	1	1	—	—	—	—	—	—	2	1	1
Europe	1	—	—	—	—	—	—	—	—	1	—	—
TOTAL	26	19	19	10	9	9	2	2	2	38	30	30

<sup>a</sup>The distribution for 1984 and 1985 reflects the agreement reached with UNDP in the light of available funds. The distribution might be amended in 1985 subject to additional funding.

meeting analysed the activities of UNIDO in the region and identified ways and means to strengthen the role of UNIDO in the process of the region's industrialization and that of SIDFAs in the promotion and implementation of UNIDO programmes. It discussed *inter alia* the approaches that should be adopted in the formulation of technical co-operation activities; ways and means of assisting in promoting and strengthening economic and technical co-operation among developing countries (ECDC/TCDC); UNIDO's involvement in the UNDP proposal for a human resources facility; and the possible computerization of information on expertise, technological infrastructure and know-how available in the region.

46. In spite of the budgetary constraints faced by most donor countries, the JPOs programme expanded in 1984. At the end of the year the programme was receiving generous support from the Governments of Belgium, Denmark, Finland, Germany, Federal Republic of, Italy, Japan, Netherlands, Norway, Sweden and Switzerland. The Government of the Netherlands also continued to finance JPOs from developing countries. Negotiations were under way to bring new donors into the programme. During 1984, 22 new JPOs were recruited, 2 of whom were from developing countries; the number of JPOs on board was increased to 65 (1983: 55). Appendix G shows the distribution of the JPOs and the corresponding donor countries.

47. One JPO training course, attended by 13 JPOs and several donor country representatives, was held in November 1984. In addition to receiving a comprehensive briefing on UNIDO's activities and on operational projects in the countries of their assignments, the JPOs were trained on project design, formulation and evaluation. Two mid-assignment review meetings were held for a total of 22 JPOs in February and November 1984.

48. As in the past, JPOs continued to provide valuable support to the UNIDO programmes. Particularly in countries where it was not possible to field SIDFAs, JPOs assisted the Resident Representatives in monitoring UNIDO technical co-operation projects. JPOs assisted actively in the preparation of several regional and national meetings organized by UNIDO. They were also instrumental in ensuring UNIDO participation at a number of meetings of interest to the organization, at times when financial constraints prevented headquarters staff from travelling.

49. Information received from the field in the form of annual, quarterly mission and *ad hoc* reports has continued to contribute to the effective exchange of information between the field and headquarters on UNIDO's activities, particularly in relation to the monitoring of technical co-operation projects. Also, through the reporting system, SIDFAs and JPOs have provided up-to-date information on a country and regional basis, pointed out government policies and priorities, and identified areas for UNIDO intervention. It is expected that future reports will be improved further and better meet the information requirements of UNIDO headquarters for formulation of policy, elaboration of programmes and projects, monitoring of ongoing activities, assessment of completed assistance and its relevance to the countries' plans and objectives as well as preparation of studies. The reports will also enable closer monitoring of the SIDFA and JPO programmes.

50. Preliminary work started on the setting up of a computerized system of information for SIDFA offices. In co-operation with the Government of Brazil, an analysis is being conducted of the hardware and software requirements of the SIDFA office in Brasilia. A similar survey will be carried out for other SIDFA offices in Latin America and eventually in other regions. It is anticipated that the system will include information on available expertise, technological services and facilities, ECDC/TCDC opportunities, and will provide a framework for monitoring the programme of technical co-operation. Improved exchange of communication among SIDFA offices of the same region will be a major objective.

51. The Field Reports Monitoring Section plays a co-ordination and liaison role in the preparation of visits of the UNDP senior officials, Resident Representatives and/or Resident Co-ordinators to UNIDO and other organizations located in the Vienna International Centre. These visits increase the efficiency and effectiveness of the channels between UNDP and UNIDO. In 1984 UNDP visits to UNIDO included 48 Resident Representatives, some senior personnel and programme officers. The Section also continued to provide to the SIDFAs and JPOs an information service related to priority programmes and other activities of UNIDO.

## PUBLIC INFORMATION

52. For most of the year, the UNIDO Public Information Section continued to perform a triple function—as a public information service for UNIDO, as an information service for the United Nations Office at Vienna and other United Nations units situated in the Vienna International Centre, and as an information centre on United Nations activities for Austria and the Federal Republic of Germany. In September 1984, the United Nations Information Service was established and took over the latter two functions although the Head of the UNIDO Public Information Section continued to act as Director of the newly established Service.

53. During the year, public information activities relating to UNIDO focused mainly on preparation and coverage of the Fourth General Conference of UNIDO and promotion of the Industrial Development Decade for Africa.

54. Preparations for the Fourth General Conference of UNIDO, which began in 1983, included: press kits in four languages; publication of articles in the international press; radio and TV interviews with the Executive Director of UNIDO; exhibition stands displaying UNIDO activities and its publications; and a documentary film showing UNIDO's work in developing countries.

55. Reflecting a new policy of increased co-operation with news agencies in developing countries and greater emphasis on information material of interest to news media in those countries, Inter Press Service was commissioned to prepare several feature articles on the preparatory meetings to the Conference and on the main issues before the Conference. Special supplements were thus prepared for the *Development Forum*, the *Development Forum Business Edition*



and the *UN Chronicle* (“UNIDO IV: an occasion for hope”; “Putting industry back at centre stage”). The supplements were reprinted for distribution to a wider audience. Organized by the Director of the United Nations Information Centre in Washington, D.C., a mission was also undertaken by the Executive Director and the Acting Director of the UNIDO Public Information Section to Washington, D.C., in connection with the Conference to promote public awareness of issues related to industrial development in developing countries by meeting the press, government officials and the business communities.

56. At the Conference itself arrangements were made to accommodate at the Vienna Hofburg Congress Centre all visiting journalists and the UNIDO/United Nations staff responsible for covering the meeting. Facilities in the press area included video monitors covering the main meeting room; sound equipment giving access to the seven-language translation service; telex, telephone and postal services; a briefing room; a documents centre; wire services; and radio/TV recording facilities. Daily press briefings complemented major press conferences arranged for the President of the Conference, the spokesmen of regional groups, heads of delegations and the Executive Director of UNIDO.

57. As the only North-South meeting of the year in the economic sphere, the Conference attracted considerable media interest. A total of 167 accredited journalists from 26 countries included representatives of 16 national and 6 international news agencies, and 12 radio/TV stations. According to preliminary figures, their output of some 1,200 stories was carried by nearly 300 newspapers and 5 news agencies in more than 65 countries. In addition, an average of three radio or TV interviews a day were organized with heads of delegations and senior UNIDO staff. A number of newspapers also used the event as an opportunity to publicize UNIDO field projects and other activities—to a large extent on the basis of material prepared and distributed by the Public Information Section.

58. As postscripts to the Fourth General Conference of UNIDO, the nineteenth edition of the *World Newspaper Supplement* carried an article on industrialization in the developing countries, and *The Courier* (African-Caribbean-Pacific (ACP)—European Community) ran a series of articles on the Conference and the industrialization problems facing ACP countries. The *Development Forum* also carried articles on UNIDO’s impending change to specialized-agency status and on UNIDO’s work in the area of information technology.

59. The wide coverage of the Conference by the media indicated a significant potential for arousing journalists’ interest in third world industrialization issues, which by nature are normally considered to lack the human and direct interest of some other United Nations activities. The Public Information Section continued to build on this attention by presenting information in an up-to-date, news-oriented style aimed at further increasing public awareness of the organization’s goals and activities.

60. As noted above, the second focus of public information activities for UNIDO in 1984 was the promotion and popularization of the Industrial Development Decade for Africa. Relevant activities included: the preparation

of a special poster (in Arabic, English and French) publicizing the Decade; the preparation of a special supplement, which was reprinted for wider distribution, for the *Africa Economic Digest* which also published several articles on the Decade (“Africa’s challenge in the 1980s”, “The call for the Industrial Development Decade for Africa”, “The promotion of intra-African industrial co-operation”); a mission to the United Kingdom—in which the Executive Director participated—to acquaint representatives of the Government, the press and business communities with issues related to industrial development in Africa particularly in connection with the Decade; and video recordings of a workshop on the Decade held in London in April 1984.

61. In this connection, further impetus was given to the work of the Public Information Section by the General Assembly decision (section II of resolution 38/192) to increase the allocation to UNIDO from the regular budget, *inter alia*, to popularize the Decade. Furthermore, the Fourth General Conference of UNIDO in resolution 8 (subsequently endorsed by the General Assembly in resolution 39/233) recommended that UNIDO, in co-operation with other relevant organizations, promote and publicize the Decade not only within but also outside Africa. One step in that direction was the nineteenth meeting of the Editorial Committee of the *World Newspaper Supplement* (WNS), hosted jointly by the International Atomic Energy Agency (IAEA) and UNIDO in September 1984, on whose agenda the Decade was among the main features. Another is the preparation of a reportage mission for 10 practising journalists, including members of the WNS Editorial Committee, to visit selected African countries in 1985 for three weeks. The mission is an inter-agency project aimed at creating public awareness of the long-term development needs of Africa, particularly in the industrial sector.

62. Regular public information activities for UNIDO again included missions covering UNIDO projects; press conferences and media interviews, briefings for journalists, government officials, UNIDO field representatives and others on the work of the organization; audio-visual activities (see also paras. 69-72 below); preparation, upon request, of features and articles on specific subjects; publications on UNIDO activities; dissemination of information material to Governments, the media and the general public; and maintenance of a reference library. In 1984, existing publications were updated and new ones describing UNIDO work developed, e.g. *Facts about UNIDO*, a pamphlet on the United Nations Industrial Development Fund, “UNIDO in action”—a photo sheet, and an updated collection of success stories.

63. In addition, the Public Information Section provided press release coverage for all major UNIDO meetings during 1984, including the sessions of the Industrial Development Board and its Permanent Committee (Vienna), the preparatory and ministerial meetings (Vienna) on establishing the International Centre for Genetic Engineering and Biotechnology, the Third Consultation on the Leather and Leather Products Industry (Innsbruck), the Second Consultation on Food Processing with Special Emphasis on Vegetable Oils and Fats (Copenhagen), the Regional Workshops on the Integration of Women in the Industrial Planning and Development Process (Guyana, Thailand and Zimbabwe) and UNIDO’s participation in the twenty-sixth International Engineering Fair (Brno).

64. During the year, the Public Information Section produced and distributed UNIDO press releases, publication, biographical and information notes, photo features and feature releases, and copies of the Executive Director's formal statements. The total of 383 releases (1,399 pages) included 159 releases (623 pages) in English, 140 (545 pages) in French, 43 (118 pages) in Spanish, 40 (108 pages) in German and 1 (5 pages) in Arabic. A total of 72 press cables were also issued: 55 in English, 3 in French, 1 in Spanish and 13 in German. The official address of the Executive Director to the Fourth General Conference was issued in 6 languages.

65. In a new initiative aiming at better in-house dissemination of information, the Section is making available to senior staff a periodic review of newspaper articles selected from the world's economic press. The articles are presented as brief summaries grouped according to the main development issues relevant to UNIDO's work. In the initial experimental phase, the service is offered on a weekly basis.

66. To improve dissemination of information outside UNIDO, the Section's computerized mailing list was further enlarged and reviewed to reflect UNIDO's special concerns. Arrangements are also being made for systematic exchange of information with all United Nations Information Centres, SIDFAs, as well as government agencies directly concerned with information activities.

67. UNIDO continued to participate in the system-wide efforts for co-operation in the information services area. Information officers took part in two meetings of the Joint United Nations Information Committee, and made arrangements with *Development Forum* and the United Nations Non-governmental Organizations Liaison Services in Geneva and New York to produce articles and complementary information materials concerning UNIDO's work.

68. At the nineteenth meeting of the WNS Editorial Committee (see para. 61 above), one of the main themes of discussion was the coverage of UNIDO work in general. The discussions revealed the kind of information and feature materials that is sought on UNIDO activities. The meeting emphasized the need for stories with a human interest as well as the need for personal contact between working journalists and the people involved in UNIDO projects. To this end, the Section had already sent information officers on reportage missions to collect new written, film and photographic material on UNIDO technical co-operation work. Several photo features and feature releases resulted from missions to India and Nepal for example.

69. In the audio-visual area, efforts are being made to forge new relations with radio and television networks in both developing and industrialized countries. A selective approach is being adopted with regard to target audiences in third world countries and a special effort is being made to create awareness of UNIDO's goals, policies and activities. Radio programmes and regular features are being produced for distribution to all economic regions and the United Nations Information Centres, with the aim of stimulating the interest of local radio stations.

## Chapter VII

70. In 1984, the audio-visual unit was contacted by some 70 radio and television stations resulting in more than 75 radio interviews and 38 television programmes ranging from interviews with delegates attending meetings to coverage of the Fourth General Conference. Material was provided for broadcasts in Arabic, English, French and Spanish. A 22-minute film was prepared on the occasion of the Fourth General Conference, which also received full film/video coverage. Film documentaries completed or initiated during the year featured industrial information, technology transfer, investment promotion, feasibility studies, the aims of the Industrial Development Decade for Africa and the struggle for industrialization. Sixty-minute films were also made from a 3½-hour "grand débat" on industrialization originally transmitted on Ivory Coast television, and from video recordings of the workshop on the Industrial Development Decade for Africa held in London in April. A film to commemorate UNIDO's eighteenth anniversary and a video/slide show on the organization's field operations were also prepared.

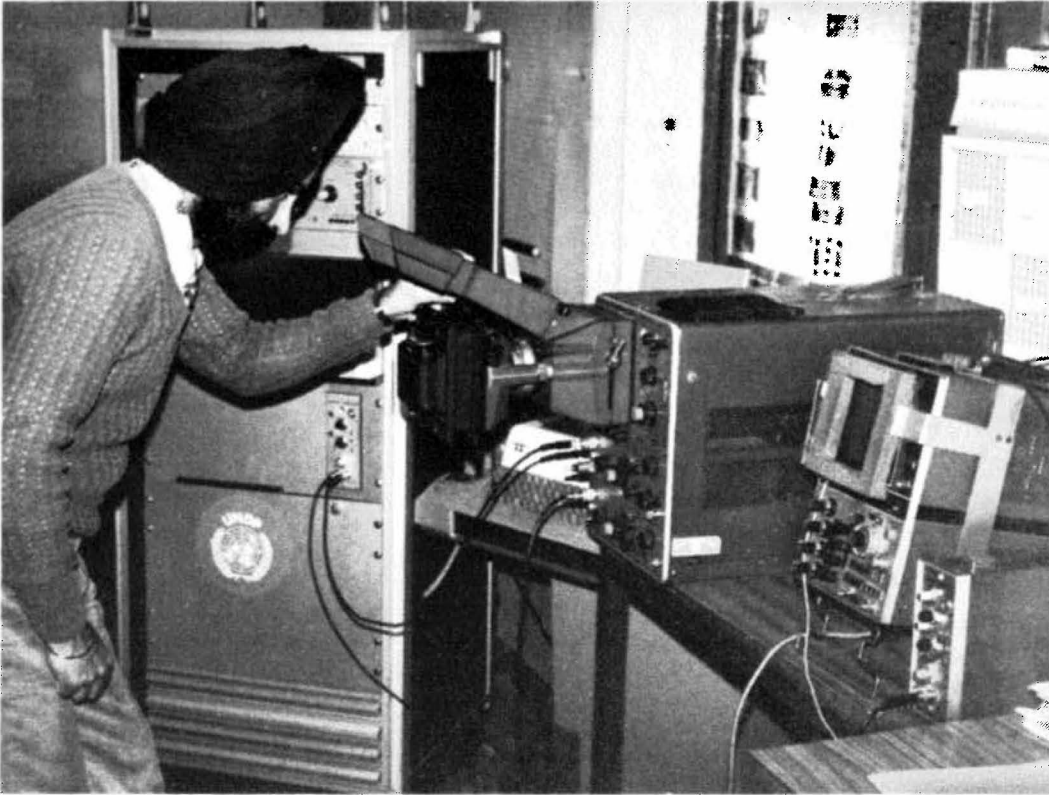
71. Some 800 photographs were distributed to United Nations Information Centres, permanent missions and the international media. Photo coverage was provided for 60 UNIDO-related events. During the year, UNIDO films were loaned to United Nations bodies and other organizations and shown to an audience estimated at 18,000. The contribution of UNIDO to the open-house day, organized by the City of Vienna, on 26 October comprised a display stand featuring technical co-operation and the integration of women in industry.

72. The audio-visual unit continued to provide radio, film, video and photographic services for United Nations conferences and to United Nations units based in Vienna. These activities included coverage of senior officials' visits, presentation of credentials, production of video programmes (for example, a documentary on a North-South round-table sponsored by UNDP) and organization of exhibitions. Production services were provided for three films made for the IAEA on the use of radiation techniques to control the fly population.

### NEW YORK LIAISON

73. In 1984, the UNIDO Liaison Office in New York continued to serve as the major link between UNIDO headquarters at Vienna and the United Nations Headquarters in New York. At the thirty-ninth session of the General Assembly, support and services were provided, particularly with regard to agenda sub-item 80 (d) on industrialization and other items of interest to UNIDO which were allocated to the Second and Fifth Committees.

74. The Liaison Office also provided representation at, coverage of, and reporting on more than 150 intergovernmental and inter-agency meetings that took place in New York or elsewhere, including those of the Economic and Social Council, the Governing Council of UNDP, various technical committees, the Administrative Committee on Co-ordination (ACC) and its subsidiary bodies, the Committee for Programme and Co-ordination (CPC), the Committee for Development Planning, the Committee on the Review and Appraisal of the Implementation of the International Development Strategy, the Commission on Transnational Corporations, the Committee on the Devel-



*Testing the performance of internal combustion engines using methanol as fuel, Indian Institute of Petroleum, Dehra Dun (India)*

opment and Utilization of New and Renewable Sources of Energy, the Preparatory Committee for the International Conference on Population, and the Intergovernmental Committee on Science and Technology for Development.

75. Close co-operation was maintained with the Office of Legal Affairs in New York and with delegations and groups of delegations in regard to the ratification of the Constitution of UNIDO and the implementation of General Assembly resolution 38/193 on the conversion of UNIDO into a specialized agency. Through contacts with permanent missions and United Nations departments concerned, the Liaison Office also participated actively in the organization of the Fourth General Conference of UNIDO and in the follow-up on the decisions it adopted. In accordance with resolution 50 (XIV) adopted by the Industrial Development Board in 1980 on the significance of the launching of the global negotiations, the UNIDO headquarters was kept regularly informed on the status of consultations held in New York on the North/South dialogue.

76. In connection with UNIDF, the Liaison Office was responsible for the follow-up to the United Nations Pledging Conference for Development Activities for 1984. It also represented UNIDO at the Pledging Conference for 1985 held in New York on 7 and 8 November 1984, and provided information to delegations in the course of numerous contacts.

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77. The Liaison Office maintained close co-operation with the Office of the Director-General for Development and International Economic Co-operation and with the Office for Special Political Questions on the implementation by UNIDO of General Assembly resolutions on special economic assistance programmes, relations with the League of Arab States, the Organization of African Unity and the Organization of the Islamic Conference. The Office continued to represent UNIDO at the Inter-agency Working Group on Assistance to Lebanon and meetings organized by the Secretary-General on the critical economic situation in Africa and on special assistance to Bolivia, Ecuador and Peru.

78. Close contacts continued to be developed and maintained with delegations. As in the past, delegations and permanent missions were kept informed of UNIDO's programmes and activities. During 1984, five graduate students from different universities (Ecole des Hautes Etudes Commerciales (Paris), San Francisco State University, Columbia University (New York), New York University) benefited from training programmes on the activities of UNIDO arranged by the Liaison Office.

79. The Liaison Office maintained close contact with UNDP and continued to assist in the development of technical co-operation activities covering formulation and implementation of projects, including recruitment and briefing of experts, placement of fellowship holders, procurement of equipment and organization of study tours. Follow-up action was taken on over 140 project proposals and projects.

80. Assistance was once again rendered to the UNIDO Investment Promotion Service/North America in the provision of on-the-job training in the field of investment promotion to representatives from Antigua and Barbuda, Bahamas, Belize, Colombia, Dominica, Ecuador, Saint Christopher and Nevis, Saint Vincent and the Grenadines, and Somalia.

81. The Liaison Office assisted the Negotiations Branch in the organization of and follow-up on the Expert Group Meeting on International Co-operation on Petrochemicals that took place at UNIDO headquarters in September 1984. Jointly with the Non-governmental Organizations Section, the Liaison Office also helped the Division of Industrial Operations and the Division of Industrial Studies in developing co-operation with NGOs in the United States of America for the promotion of technical assistance to developing countries.

82. The Liaison Office continued to be the focal point for inquiries from North and South America related to industrial development. It provided United Nations departments with technical data related to UNIDO's operational and backstopping activities and co-ordinated a system for exchange of information between the United Nations Statistical Office and the Division for Industrial Studies. It continued to provide information and documentation to permanent missions in New York as well as to industry, libraries, research organizations, government agencies, technical experts and academic institutions. Approximately 4,000 inquiries were received on UNIDO's activities. Items of particular interest during 1984 included the Fourth General Conference, the International Centre for Genetic Engineering and Biotechnology, as well as global studies on pharmaceuticals, petrochemicals, and iron and steel prepared for the Consultation meetings.

## UNIDO REPRESENTATION AT GENEVA

83. In 1984, the UNIDO Representation at Geneva was actively involved in the preparations for the Fourth General Conference. Issues identified for each of the subject areas of the Conference were discussed in depth with various permanent missions to UNIDO based in Geneva which enabled permanent representatives from Geneva attending the Conference to play an active and sometimes crucial role in its deliberations and negotiations. Radio, television, video and press appearances were made by the staff of the Geneva office on the main issues of the Conference. In addition, thematic introductions were delivered to a number of seminars and workshops.

84. During the year under review, the Special Representative of the Executive Director at Geneva was invited by the United Nations Institute for Training and Research (UNITAR) to participate as one of the resource persons in a training seminar for new professionals at permanent missions. He addressed about 100 such professionals on the role of multilateral diplomacy; at the request of UNITAR, the text of that address was widely distributed. The Special Representative was also invited to speak in a lecture series organized by the Vienna Institute for Development introducing the Fourth General Conference; the text of his lecture on UNIDO's role in human resource development was subsequently published.

85. The 1984 meetings of the ILO/UNIDO Working Party at Vienna and Geneva were presided over by the Special Representative and a wide variety of issues for co-ordination and co-operation were discussed. At a meeting between the Assistant Secretary-General of WHO and the Deputy Executive Director of UNIDO with the participation of the Special Representative of the Executive Director at Geneva modalities were prepared for the development of closer co-operation between UNIDO and WHO. Contacts were maintained with UNCTAD, in particular the Advisory Service on Transfer of Technology, to develop closer co-operation and co-ordination in the preparation of the work programme of UNIDO and UNCTAD.

86. As in the past, the Geneva office assisted in the debate and discussions in the Governing Council of UNDP, the Economic and Social Council, the joint sessions of the CPC and the ACC, and in meetings of the ACC and its subsidiary bodies. Staff from UNIDO headquarters who participated in meetings in Geneva, were briefed, assisted and guided by the office, with the aim of ensuring their active and useful participation in those meetings. Close co-ordination continued with the New York Liaison Office, particularly during the sessions of the General Assembly. Developments at United Nations Headquarters are communicated by that Office to the Geneva office which in turn arranges for the dissemination of pertinent information to the permanent missions based at Geneva.

87. In 1984 the Geneva office again covered about 50 meetings and supplied documentation and information material to a large number of inquirers.





## *Chapter VIII*

# **GENERAL ADMINISTRATION**

## **STAFFING**

1. The main activities of the UNIDO Personnel Service concern the recruitment and management of the organization's secretariat staff and staff working in those parts of the common services area of the Vienna International Centre (VIC) for which UNIDO is responsible, as well as the administration of its internationally and locally recruited project personnel. The total number of persons being administered at headquarters and in the field on 31 December 1984 amounted to 2,361, compared to 2,330 on 31 December 1983. Until 11 May 1984, UNIDO also provided personnel services to the staff employed by the United Nations units located in the VIC; the United Nations Office at Vienna (UNOV) then established its own Personnel Service, which took over responsibility for the staff concerned; the total number of UNOV staff amounted to 338 on 31 December 1983 and 326 on 30 April 1984 (see also para. 19 below).

2. On 10 September 1984, the Secretary-General announced a six-month temporary suspension of staff recruitment as one of the measures aimed at reducing costs throughout the Secretariat. The suspension applied to all posts which were vacant on or after 14 September 1984, whether they were funded from the regular budget or from extra-budgetary sources. There is no doubt that the programmes of UNIDO will be affected by this measure, even if some exceptions are introduced in cases where recruitment is essential to carry out the mandates and priority programmes established by UNIDO's legislative organs.

3. Personnel Service participated in the administration and monitoring of the UNIDO staffing table with a view to ensuring the most effective utilization of staff resources and meeting the requirements of priority programmes and actual needs of the various organizational entities. Due to the temporary suspension of secretariat recruitment, urgent needs of the UNIDO work programme had to be met by redeploying staff to those vacant posts which could no longer be filled through outside recruitment. Efforts continued, also in UNIDO, towards the preparation of an integrated career development scheme for the staff of the United Nations Secretariat. In particular, the new format introduced in 1983 for evaluating the performance of staff became fully effective during 1984.

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4. Issues of staff/management relations which have Secretariat-wide implications and matters of personnel policy and staff welfare are regularly discussed in the Staff Management Co-ordination Committee in which the UNIDO Personnel Service and staff representatives actively participate. Personnel Service contributes to the work of the inter-organizational bodies established as subsidiary organs of the Administrative Committee on Co-ordination, particularly the Consultative Committee on Administrative Questions which presents the consolidated views of the organizations of the common system to the International Civil Service Commission (ICSC). During the year under review, Personnel Service prepared detailed and up-to-date figures on the cost of living in Vienna, as a result of which the ICSC finalized the level of post adjustment for Vienna.

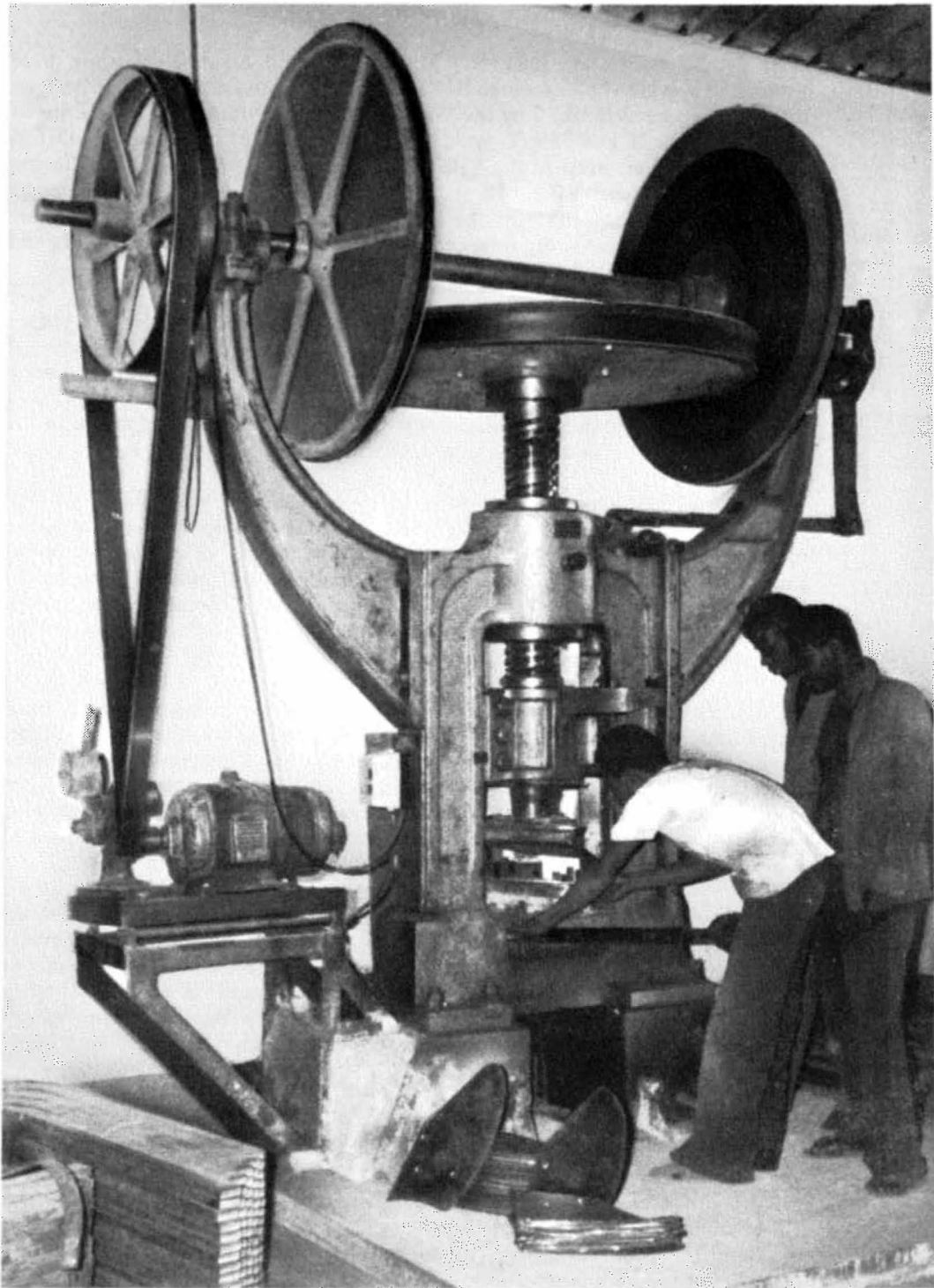
5. The maintenance of staff/management consultations within UNIDO continued to be marked by a spirit of co-operation and effective communication with the staff representatives concerning issues affecting the welfare of the staff such as conditions of work and general living conditions. Communication was conducted mainly through the joint advisory machinery established under the United Nations Staff Regulations and Staff Rules and serviced by Personnel Service. The major joint bodies are the Joint Advisory Committee (JAC), the Appointment and Promotion Committee (APC), the Appointment and Promotion Panel (APP) and the Panel on Discrimination and Other Grievances (whose terms of reference had been broadened in 1983). Contacts with experts in the field were also satisfactory and every effort was made, within the scope of UNIDO's authority, to deal with their problems.

6. The composition of the staff of the UNIDO secretariat up to 31 December 1984, according to category and sex, and with comparable figures for 1982 and 1983, is given in table 1 below.

TABLE 1. COMPOSITION OF THE UNIDO SECRETARIAT<sup>a</sup>

Category	As at 31 December 1982		As at 31 December 1983		As at 31 December 1984	
	Male	Female	Male	Female	Male	Female
P-5 and above	134	3	139	3	140	4
P-1 to P-4	219	64	222	66	239	72
General Service	181	613	191	627	189	644
Manual Worker	121	5	124	5	120	6
Language Teachers	—	—	—	—	2	4
Subtotal	655	685	676	701	690	730
TOTAL	1 340		1 377		1 420	

<sup>a</sup>Figures include interregional advisers and special technical advisers attached to UNIDO headquarters (as at 31 December 1984: 4 interregional advisers and 13 special technical advisers); they do not include short-term staff nor Senior Industrial Development Field Advisers (with the exception of three staff members who are temporarily assigned as SIDFAs). The figures also include staff members filling posts under budget sections 28 and 29.



*Forming mouldboards for ploughs at the agricultural implements factory UPRONA (Unité de production de matériel agricole), Kara (Togo)*

## Recruitment

7. On 31 December 1984, 504 Professional and higher-level posts were authorized for UNIDO of which 369 were financed under the regular budget, 106 from overhead funds, 2 by the World Bank and 27 under the provisions of budget sections 28 and 29 (allocated for services being provided by UNIDO to the United Nations units in the VIC mainly in the conference area and for the maintenance of the VIC). These figures include 9 regular budget posts approved in January 1983 for the SIDFA programme. In addition, 4 inter-regional advisers were being financed from the regular programme of technical co-operation.

8. On 31 December 1984, there were 30 vacant posts under various stages of recruitment, compared with 53 in 1983. Of these 8 were language posts for which recruitment is undertaken in conjunction with the United Nations Headquarters, New York; 1 was in the Economic Commission for Africa and 2 were in the Economic Commission for Latin America and the Caribbean for which recruitment is undertaken in consultation with the economic commissions.

9. As of 31 December 1984, 116 appointments were made in the Professional and higher categories (1983: 113). These appointments included reassignments from other United Nations duty stations as well as successful candidates from external competitive examinations and internal competitive examinations for the promotion of staff from the General Service to the Professional category. During the same period, 69 staff members at the Professional and higher levels left the organization (1983: 59).

10. Personnel Service continued its efforts to achieve a better geographical distribution in the secretariat. Of the 21 staff members offered fixed-term appointments of one year or more against posts subject to geographical distribution, 7 (33.3 per cent) were from under-represented countries, 12 (57.2 per cent) were from countries within their geographical range and 2 (9.5 per cent) were from over-represented countries. Of those staff members 3 (14.2 per cent) were women.

11. During the period under review, 104 fixed-term appointments were made in the General Service and Manual Worker categories and 60 staff members were reassigned within UNIDO or transferred from the United Nations units to UNIDO. In 1983, the total of appointments was 107 and the total of transfers and reassignments was 29. Altogether 86 staff members in these categories left the organization (1983: 91) and 15 staff members transferred to the United Nations units (1983: 5).

12. With the establishment of the UNOV Personnel Service on 11 May 1984, the UNIDO Personnel Service ceased performing a number of personnel functions for the United Nations units in Vienna, including the recruitment of all categories of staff. Up to that date UNIDO processed 30 contracts for Professional staff (including 19 short-term), and recruited 10 General Service staff and 18 consultants. UNIDO continues to recruit conference servicing staff for all conferences and meetings organized not only by UNIDO but also by the United Nations units in Vienna as well as for those organized in Vienna by United Nations Headquarters and other intergovernmental organizations and

for some international conferences organized by the Austrian Government. For all this conference servicing staff, the Personnel Service issued 1,594 contracts (1983: 1,858). In addition, during the same period, 256 short-term contracts were issued for secretariat staff (1983: 418). A breakdown of the short-term contracts issued during the period under review is given in table 2 below.

TABLE 2. SHORT-TERM CONTRACTS ISSUED 1 JANUARY TO 31 DECEMBER 1984

	<i>Conference staff</i>			<i>Secretariat staff</i>	<i>Total</i>
	<i>Translators/ Interpreters (Professionals)</i>	<i>General Service and Manual Worker</i>			
UNIDO	} 777	} 561	234	}	1 594
United Nations			22		
Others	130	126	—		256
TOTAL	907	687	256		1 850

13. For UNIDO, including the World Bank/UNIDO Co-operative Programme, a total of 367 consultants' and individual contractors' contracts were issued for the provision of outside expertise and professional services in the secretariat (1983: 467).

#### *Employment of women*

14. During the year, the total number of women Professionals increased from 69 to 76 or from 16 per cent of all Professional staff to 16.74 per cent. Fifty-four women occupied posts subject to geographical distribution on appointments of one year or more (1983: 52), bringing the representation of women in all such posts to 15.78 per cent (1983: 15.07 per cent).

15. The percentage of applications received from women for Professional posts accounted in 1984 for 16.1 per cent of all such applications (1983: 16.2 per cent). It is significant to note that over one-third (156) of all women applicants (1983: 175) were from countries already over-represented in the secretariat, while very few (5) were from the under-represented developing countries (1983: 8). Locating suitable female candidates for the often specialized and highly technical vacancies in the organization continues to be a serious obstacle. Continuous efforts to circulate vacancy announcements to an increased number of women's organizations as well as approaches to member States to submit qualified female candidates yielded little result. As far as this aspect of recruitment is concerned, national authorities represent in many cases the main source for building up a roster. Therefore, success in increasing the number of female staff requires not only an intensive effort by the secretariat but also the full co-operation and assistance of member States themselves.

16. During the year, 8 women were promoted (including 1 to the P-5 level). Women accounted for 18.6 per cent of all Professional promotions (1983: 20.5 per cent). In addition, 2 women were promoted from the General Service to the Professional category through the system of competitive examinations.

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Of the promotions to the P-4 level, 8.3 per cent were women; while 14.3 per cent were to the P-3 level and 45.5 per cent to the P-1/2 level; 31.6 per cent of the female Professional staff are at the P-4 level, 40.8 per cent at the P-3 level and 22.3 per cent at the P-1/2 level.

17. Important joint bodies such as the APC and the APP continued to be chaired by women. The percentage of women serving on such bodies continued to be higher than the percentage of their male colleagues.<sup>1</sup>

### Personnel management

18. Within the statutory personnel management responsibilities, the personnel administration is concerned with the implementation of the United Nations Staff Regulations and Staff Rules concerning the benefits and entitlements of the staff members as well as their contractual status. These include the extension of fixed-term appointments or their conversion to career appointments and the counselling of staff on career development aspects in general as well as the interpretation of all the relevant rules and procedures applicable to the staff of the secretariat and the technical co-operation personnel in UNIDO field projects.

19. Until 11 May 1984, the UNIDO Personnel Service provided the full range of personnel administration and other related services to the United Nations units located in the VIC, which, as of 30 April 1984, consisted of 326 staff members. Personnel Service disposed of 2 P-3 and 6 General Service posts which had been assigned under budget section 28M to assist in meeting the additional workload resulting from servicing the United Nations units. As announced by the Secretary-General,<sup>2</sup> UNOV was entrusted with the provision of personnel services to the United Nations units. The 2 P-3 and 5 of the General Service posts were redeployed from UNIDO to UNOV in order to establish the new UNOV Personnel Service to which the main functions formerly carried out by UNIDO were transferred. The sixth General Service post remained with UNIDO since it was assigned to language training, a common service undertaken by UNIDO on behalf of all the occupants of the VIC.

20. With effect from 1 September 1984, the Secretary-General delegated to the Heads of Offices away from Headquarters, including UNIDO, additional authority (on an experimental and provisional basis for one year) to review and grant requests for the extension of appointments beyond the age of retirement of staff in the General Service and Manual Workers categories. Early in 1984 UNIDO and United Nations Headquarters initiated consultations, which are still continuing, on the modalities for obtaining additional authority to grant fixed-term appointments, limited to service with UNIDO, up to and including the D-1 level.

21. The preparation of job descriptions for the Professional and higher category mentioned in the 1983 *Report*<sup>3</sup> continued. As of 25 October 1984,

<sup>1</sup>ID/B/320, chap. VIII, para. 19

<sup>2</sup>A/C.5/38/87, para. 14.

<sup>3</sup>ID/B/320, chap. VIII, para. 25.

classification decisions from the Office of Personnel Services at Headquarters, New York, were received for 87 per cent of UNIDO posts in this category. It was not possible, however, to arrange for a United Nations Headquarters Classification Officer to come to Vienna in 1984 to discuss job content with the managers and incumbents.

22. In accordance with a decision of the ICSC, common job classification standards for General Service posts are being developed for the use of all organizations in Vienna. For that purpose a joint working group composed of representatives of the staff and the administrations of UNIDO, UNOV and the International Atomic Energy Agency (IAEA) was established with observers from United Nations Relief and Works Agency for Palestine Refugees in the Near East. It is expected that the joint working group will develop and test classification standards which, after endorsement by the respective JACs, will finally be submitted to the ICSC for approval at its session in the summer of 1985.

23. Several new courses were introduced in the staff training programmes. Emphasis continued to be placed on arranging courses for organizational needs. In that context, in-house capacity is being used by developing skills of staff members with experience in certain fields to enable them to prepare and present courses. The importance of making effective use of automated office equipment to meet increasing workloads and provide up-to-date information for management decision-making requires continued emphasis on basic and advanced user training. Concerning training in the operation of word-processing equipment and personal/mini computers, machines and office space were rented directly from the manufacturers, with UNIDO staff providing the training. In addition, due to the large number of staff requiring such training, it was necessary to supplement the resources of UNIDO by sending some staff members to courses held by the IAEA and outside local institutions.

24. As regards medical care, negotiations are progressing satisfactorily with the responsible Austrian authorities to obtain for UNIDO staff members access to advanced rehabilitation centres. The compilation of statistical data for completion of an actuarial study of a self-administered medical insurance scheme to cover all Vienna-based staff of the international organizations continued throughout 1984.<sup>4</sup>

## PROJECT PERSONNEL

25. As in previous years experts and consultants were the main component of UNIDO technical co-operation projects. Project personnel constituted 48.7 per cent of all expenditures for UNIDO technical co-operation activities (1983: 53.9 per cent). In 1984, the Project Personnel Recruitment Section (PPRS) recruited 1,132 new experts (1983: 1,076) and extended 711 experts in their posts (1983: 582).

26. The overall total of experts services (new appointments, appointments carried forward from previous years and extensions) amounted to 7,701 work-

<sup>4</sup>*Ibid.*, para. 27.

months; the corresponding 1983 figure in work-months was 7,375. The average duration of appointments was 3.67 months (1983: 2.68 months).

27. An interesting development has been the increasing tendency of Governments from certain developing countries to utilize their national human resources in connection with recruitment of project personnel. In 1984 new recruitments under national professional project personnel amounted to 92. During the year, the full responsibility for the recruitment of national professional project personnel was transferred to UNIDO. PPRS has also been participating in inter-agency efforts to develop appropriate procedures and policies for the recruitment of national personnel. In this connection, the experience gathered in applying the criteria and tentative guidelines compiled by the United Nations Development Programme (UNDP) has proved extremely valuable and PPRS thus continues to rely heavily on the assistance of UNDP and SIDFAs in this exercise.

28. Particular efforts were made in 1984 to improve co-operation with firms, institutions, professional associations and other non-governmental as well as governmental organizations as potential sources of candidates. An example of such co-operation is the pilot case of recruitment of the entire personnel for a large-scale project in the Libyan Arab Jamahiriya under a reimbursable loan agreement with one specialized organization<sup>5</sup> which has developed into three projects in the same country employing project personnel under this formula. Starting with 48 experts in 1978 at a cement factory in Benghazi, in 1984 UNIDO employed some 360 experts in the three projects. In seven years a total of 467 experts were recruited for the Libyan Arab Jamahiriya under this scheme. In 1984 UNIDO initiated a similar, although smaller, project in Egypt involving the recruitment of nine experts under a reimbursable loan and foreseeing the employment of some 25 experts in 1985. It can be expected that this non-traditional form of technical co-operation will become more frequent in the future.

29. Major progress has been made in the further automation of the activities of PPRS. The Section has significantly refined the on-line recording of recruitment data thus producing reliable and up-to-date status reports for recruitment and substantive backstopping officers. These measures have allowed some simplification of recruitment procedures and are expected to lead to an integrated computerized system in the near future. This system should relieve PPRS of a considerable part of the secretarial and clerical burden to be taken over by integrated printers; it will speed up recruitment and improve the monitoring and control of PPRS activities.

30. Efforts continued towards improving the effectiveness of the UNIDO expert roster, which is still by far the main source of recruitment, and as a first step reorganizing it to facilitate its use by both recruitment and backstopping officers. To that end PPRS, jointly with the other branches and sections of the organization, undertook a review and updating of the roster contents. Areas and functions which had become obsolete were eliminated, while descriptors for new requirements of the developing countries were added.

31. The improvement in the balance of nationalities and groups of countries as well as in the representation of women among the UNIDO experts on the

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<sup>5</sup>*Ibid.*, para. 36.



roster and in operational projects continued to be a matter of concern. The number of experts from any given country recruited in 1984 is listed in table 1 of appendix J. Table 2 of the same appendix gives the cumulative list of experts according to countries recruited during the period 1971 to 1984. Thirty-four of the 1,132 experts recruited in 1984 were women, while 42 female experts served on projects during 1984. The pattern of recruitment by groups of countries is shown in table 3 below.

TABLE 3. DISTRIBUTION OF EXPERTS BY GROUPS OF COUNTRIES  
(1 January to 31 December 1984)

	Number of experts					
	UNIDO roster	Percentage of roster	Submitted to Government	Selected by Government <sup>a</sup>	Appointed	Percentage of appointments
Developing countries <sup>b</sup>	5 303	36	419	382	258 <sup>c</sup>	22.8
Group B <sup>d</sup>	7 480	52	947	857	644	56.9
Group D <sup>e</sup>	1 691	12	287	249	230	20.3
TOTAL	14 474	100	1 653	1 498	1 132	100.0

<sup>a</sup>Including government nominees.

<sup>b</sup>Groups A and C plus Albania, Cyprus, Greece, Malta, Portugal, Romania and Turkey.

<sup>c</sup>Excluding appointment of 92 national professional experts.

<sup>d</sup>Excluding Cyprus, Greece, Malta, Portugal and Turkey.

<sup>e</sup>Excluding Albania and Romania.

32. The top 10 countries on the UNIDO expert roster at the end of 1984 were: United Kingdom—1,510, India—1,478, United States of America—1,226, France—769, Germany, Federal Republic of—735, USSR—367, Egypt—347, Poland—323, Italy—304, Hungary—293. The roster contained 721 female experts, i.e. 5 per cent.

33. In line with the efforts to accelerate the implementation of the programme for the Industrial Development Decade for Africa and in compliance with the mandates to increase the recruitment of experts from the developing countries, UNIDO in 1984 opened in Cairo (Egypt) an office for technical co-operation recruitment for the African region. It is expected that this measure will enrich the roster with African candidates and thus increase the recruitment of African experts for UNIDO field projects.

## PURCHASE AND CONTRACT SERVICE

34. The implementation of the equipment and subcontract components of technical co-operation projects and, more specifically, the acquisition of project equipment, materials, supplies, spare and replacement parts, and the securing of the services of consulting engineering companies and institutions are the responsibility of the Purchase and Contract Service (PAC) which is part of the Division of Industrial Operations. Another major area of responsibility is the provision of equipment, materials, supplies and contracting services to

UNIDO headquarters, particularly with respect to common services, and the operation, maintenance and repair of the VIC complex. In addition to meeting the equipment and services requirements of the technical co-operation programmes of UNIDO, PAC extended again purchasing and contracting services in 1984 to UNOV, the Department of Narcotic Drugs (DND), the United Nations Fund for Drug Abuse Control (UNFDAC), the International Narcotics Control Board (INCB) and the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). In 1983, the United Nations Capital Development Fund entrusted UNIDO with the execution of a project for the establishment of a rice bran oil extraction plant in Bangladesh at a cost of \$1.7 million.<sup>6</sup> Following the successful implementation of that project, and in keeping with the memorandum of understanding signed between UNIDO and the Office of the United Nations Disaster Relief Co-ordinator (UNDRO),<sup>7</sup> PAC was requested to assume responsibility for the purchase of certain equipment and supplies which UNDRO required in connection with its assistance to the Government of Nicaragua. The services rendered by PAC under that first order were considered so satisfactory and economical that, at the end of 1984, a second request was being prepared for a project to be funded by UNDRO for the benefit of a land-locked country in Africa.

#### Services related to technical assistance

35. During the year under review, the UNDP criteria governing the establishment of obligations related to the procurement of equipment and the securing of consulting services were applied without exception.

36. New requisitions for equipment and services acted upon by PAC led to an increase in the value of total equipment delivery and contract implementation from \$22.5 million in 1983 to \$30.8 million in 1984 (see table 4 below).

TABLE 4. VALUE OF EQUIPMENT PURCHASED AND SERVICES CONTRACTED, 1980-1984

(In millions of US dollars)

Component	1980	1981	1982	1983	1984
Equipment	18.0	19.4	24.4	14.7	18.6
Subcontracts	9.3	15.8	9.2	7.8	12.2
TOTAL	27.3	35.2	33.6	22.5	30.8

37. In 1984, implementation of contracts was boosted considerably by the following major agreements valued at more than \$1 million:

(a) \$1,458,300 for the development of industrial materials based on natural rubber in India, Indonesia, Malaysia, Papua New Guinea, Singapore, Sri Lanka and Thailand;

(b) \$5,108,436 for the provision of services and the supply of equipment and materials to the Petroleum Development Centre in Angola.

<sup>6</sup>*Ibid.*, para. 42.

<sup>7</sup>ID/B/220, appendix A.

It should be noted, however, that the contract implementation figure for 1984 only shows those portions of contracts scheduled for payment during the current year. This means that records kept by Financial Service and PAC show commitments for contracts finalized, yet for which work has still to be done, totalling approximately \$4.5 million for 1985, \$1.6 million for 1986, and \$1.2 million for 1987.

38. Equipment purchases (excluding equipment acquired under contracting arrangements for complete plants) regained momentum and 1,824 purchase orders with a total face value of \$19.9 million were issued. The total number of items procured was larger than that acquired in previous years although, as noted in 1983,<sup>8</sup> the average value of individual requisitions processed and orders placed continued to decrease.

39. Equipment purchases and services contracted for agro-industrial, metallurgical, engineering and chemical projects continued to account for the largest share and represented approximately 84 per cent of the total implementation.

40. Whereas table 4 shows the total amount of payments made to contractors for services performed during the year under review, the total face value of the contracts awarded was \$13.8 million. Of the 128 new contracts awarded in 1984, 47 contracts with a total face value of \$2.9 million (21 per cent) were finalized with consulting engineering organizations and institutions from developing countries. In 1983, out of 111 new contracts finalized amounting to \$7.8 million, 32 contracts at a value of \$2.6 million (33 per cent) went to developing countries.

41. With regard to equipment, out of the 1,824 purchase orders issued in 1984, 171 with a total value of \$1.4 million were placed with vendors in developing countries, as against 144 orders out of 1,865 during 1983, also at a value of \$1.4 million.

42. During the year under review, particular attention was devoted to internal activities and more specifically to processing and settling insurance claims for damages to and/or losses of equipment, Property Survey Board cases and finalizing Transfer of Title documents. Thus (a) against 62 claims filed with the underwriters 61 were settled (of which 55 had been submitted during the previous years) with reimbursements to UNIDO amounting to \$298,974; (b) the Property Survey Board was called to decide upon a total of 97 cases submitted by PAC, of which 16 dated back to 1983; and (c) Transfer of Title documents were finalized for 103 different projects, the total value of the equipment transferred to developing countries exceeding \$8.5 million. Efforts in these areas will continue and performance will improve as PAC's records and inputs from the field are streamlined.

43. PAC also continued to identify and register consulting engineers and equipment manufacturers, particularly those from developing countries. The 3,253 consulting engineering organizations and institutions registered represent 87 countries and the 1,268 equipment manufacturers represent 42 countries. The share of developing countries in both rosters steadily increased during 1984.

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<sup>8</sup>ID/B/320, chap. VIII, para. 43.

## Other services

44. While the above activities relate mainly to the Division of Industrial Operations, PAC continued to provide services to the other divisions in UNIDO which totalled \$0.5 million. PAC was also responsible for the acquisition of equipment, materials and supplies amounting to \$5.5 million and the securing of consulting and technical services for the operation, maintenance and repair of the VIC complex for the UNIDO Division of Administration, UNOV, DND, UNFDAC, INCB and UNSCEAR to a value of \$3.2 million.

## CONFERENCE SERVICES

45. During 1984 UNIDO continued providing conference services to United Nations entities having Vienna as their established headquarters. The General Assembly at its thirty-eighth session approved the establishment of 40 permanent posts (20 in the Professional category and 20 in the General Service category) for the purpose of forming a nucleus of regular conference staff to service non-UNIDO meetings. The new posts were assigned to and administered by UNIDO. The translation and interpretation services provided by the Conference Service for both UNIDO and the United Nations are illustrated by table 5 below.

TABLE 5. TRANSLATION AND INTERPRETATION SERVICES PROVIDED BY THE CONFERENCE SERVICE, 1983 AND 1984

<i>Organization served</i>	<i>1983</i>	<i>1984</i>
<i>A. Translation (by thousands of words translated)</i>		
UNIDO	10 777	12 971 <sup>a</sup>
United Nations <sup>b</sup>	10 307 <sup>c</sup>	11 050
<i>B. Interpretation (interpreter-days)</i>		
UNIDO	1 659	3 081 <sup>d</sup>
United Nations <sup>b</sup>	3 209 <sup>e</sup>	3 119

<sup>a</sup>Includes 3,015,000 words for the Fourth General Conference of UNIDO.

<sup>b</sup>Includes meetings and conferences held in Vienna by United Nations units in the VIC, United Nations Headquarters and other United Nations bodies and organizations.

<sup>c</sup>Includes 1,675,000 words for the United Nations Conference on the Succession of States in Respect of State Property, Archives and Debts.

<sup>d</sup>Includes 1,597 interpreter-days for the Fourth General Conference of UNIDO.

<sup>e</sup>Includes 1,252 interpreter-days for the United Nations Conference on the Succession of States in Respect of State Property, Archives and Debts.

46. Word processing was introduced for the English, French, Spanish and editorial typing pools in 1983. During the year under review the word-processing capacity was increased by the addition of new equipment which resulted in further increase in productivity.

47. During 1984 a total of 1,796 half-day meetings (1,177 for UNIDO and 619 for the United Nations) with and without interpretation were serviced by UNIDO Conference Service (see table 6 below).

TABLE 6. CONFERENCES AND MEETINGS WITH AND WITHOUT INTERPRETATION SERVICED BY UNIDO MEETINGS PLANNING AND SERVICING UNIT

Conferences/ meetings held	Number of half-day meetings					
	UNIDO			United Nations		
	With interpretation	Without interpretation	Total	With interpretation	Without interpretation	Total
In Vienna	287	447	734	325	294	619
Elsewhere	119	324	443	—	—	—
<b>TOTAL</b>	<b>406</b>	<b>771</b>	<b>1 177</b>	<b>325</b>	<b>294</b>	<b>619</b>

Note: UNIDO meetings include 242 meetings held in connection with the Fourth General Conference of UNIDO and relevant pre-conference consultations.

48. As compared to 1983, the workload of the Printing Unit within the Publications Section, in totals of manuscript pages received and printed pages issued, which included forms and other artwork, increased by 4 per cent in 1984. The technological innovation of the connection of a word-processor to a photo-composition machine via an interface, introduced in late 1983, has helped to speed up production of printed material.

49. The Documents Unit within the Publications Section was able to handle 136,497,265 page-impressions during 1984, a more than 30 per cent increase in workload as compared to 1983. This increase in efficiency was due largely to the introduction of a machine capable of inserting documents automatically into envelopes for mailing; a computer terminal to maintain statistics and retrieve information on the status of documentation; and an electronic scale for counting documents. With this equipment it was possible to save two temporary assistance posts. Also during 1984 some of the documentation of the previous sessions of the Industrial Development Board was transferred to microfiche, thus enabling immediate accessibility for reference and reproduction purposes and for better utilization of storage space.

## COMMON SERVICES

50. The "Memorandum of Understanding Concerning the Allocation of Common Services at Donaupark Centre in Vienna", signed by the Secretary-General of the United Nations, the Director General of the IAEA and the Executive Director of UNIDO on 31 March 1977, set down the arrangements for common services at the VIC. In accordance with the Memorandum, UNIDO is, *inter alia*, responsible for buildings management, catering and language training as common services for the whole of the VIC.

51. As of 1 January 1982, as mentioned in previous *Reports*,<sup>9</sup> UNIDO took over the responsibility for the maintenance and operation with in-house staff of several services which previously had been provided for through outside

<sup>9</sup>ID/B/300, chap. VIII, paras. 48-50; ID/B/320, chap. VIII, paras. 61-62.

Chapter VIII

contracts. Some of those activities which involved specific technical expertise required that the number of staff be slightly augmented, but many of the additional functions were absorbed by existing staff, in a few cases after some specialized external training. The takeover resulted in immediate savings in contract cost which, combined with other cost-saving measures initiated during the first four years of full operation at the VIC, led to a constant reduction in the operation and maintenance cost in spite of significant annual increases in the cost basis, i.e. increases in utility cost and other inflationary increases.

52. Table 7 below shows the reduction after 1981—the first year of full operation of the VIC—in the cost for certain utilities, which had annual rate increases averaging 10 per cent.

TABLE 7. REDUCTION OF VIC UTILITY COST, 1982-1984  
(In thousands of Austrian schillings (AS) and percentages; 1981 = 100)

Utility	Cost in base year 1981		Cost reduction					
	AS 000	%	1982		1983		1984	
			AS 000	%	AS 000	%	AS 000	%
Electrical energy	35 130	100	1 340	4	5 493	16	5 800	17
Heating	24 457	100	582	2	2 347	10	2 800	12
Cooling	11 137	100	3 318	30	4 570	41	7 000	63
TOTAL	70 724	100	5 240	7.41	12 410	17.55	15 600	22.6

53. In early 1984, a review of the "Memorandum of Understanding" (see para. 50 above) was initiated by the three organizations concerned under the Chairmanship of the Assistant Secretary-General, General Services, United Nations. In addition, a study of the common services of United Nations organizations at the VIC (JIU/REP/84/10) was prepared by the Joint Inspection Unit. It concluded that the present VIC common services function generally well and that no definitive or substantive changes should be made in existing services before the Constitution of UNIDO as a specialized agency has effectively entered into force. The Joint Inspection Unit recommended that action be intensified to identify other areas which might be suitable for common services; this is being done through inter-agency working groups.

54. In the operation of the Catering Services, it has been possible since 1981 to defer price increases in spite of inflation and increases in wages and prices of raw materials. The operation balanced at the end of the year with a small surplus.

55. The UNIDO-managed common language training programme, for which the General Assembly, at its thirty-eighth session, approved six posts for full-time teachers, provides training in the six official languages of the United Nations and in German to staff members of all organizations in the VIC and their adult dependants. At the beginning of the autumn semester in 1984, the number of persons enrolled in the programme was 931 (including 111 persons in self-financed courses for dependants). In addition to regular language courses in the six official languages and in German at the VIC, courses in



*Reliability- and life-testing laboratory for electronic components, Guangzhou (China)*

English, French and German were organized for the staff at the IAEA laboratory in Seibersdorf. A special course emphasizing oral communication in English was organized for IAEA trainees from developing countries. German language proficiency examinations, which are also used by the Food and Agriculture Organization of the United Nations and the World Health Organization, were prepared. The Language Training Unit continued to administer the United Nations language proficiency examinations and competitive examinations for translators, editors and typists.





## STATISTICAL ANNEX

*This annex provides an overall view, in financial terms, of the headquarters and field activities of UNIDO. Data for 1984 are based on the second run of the accounts for that year, available mid-January 1985. These data have been used in order to meet printing deadlines for the Report. As has been the custom for the past few years, an updated statistical supplement will be prepared if necessary shortly before the Industrial Development Board meets.*

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TABLE 1. EXPENDITURES, 1972 TO 1985  
(In millions of US dollars)

	Actual					Estimated
	1972-1976	1977-1981	1982	1983	1984	1985
Technical co-operation programmes	141.8	334.4	91.9	78.0	87.2	94.4
Regular programme <sup>a</sup>	8.7	15.2	3.1	4.0	3.7 <sup>a</sup>	9.3 <sup>a</sup>
UNDP/IPF and cash counterpart	98.7	229.9	64.2	46.2	54.4	57.3
UNDP/SIS	14.3	17.2	3.1	3.0	1.8	1.8
UNDP/Special programme resources and special measures	3.1	5.3	0.9	1.0	0.5	1.0
UNDP-administered trust funds	—	3.4	3.1	2.7	3.6	1.6
Other trust funds	6.2	17.9	5.3	6.5	7.9	9.6 <sup>b</sup>
UNIDF	10.8	41.9	11.6	13.1	14.6	11.6
UNFDAC <sup>c</sup>	—	—	—	—	0.1	1.2
Non-UNIDO funds	—	3.6	0.6	1.5	0.6	1.0
Headquarters	100.5	202.4	45.4	50.3	47.7	43.7
Regular budget <sup>a</sup>	85.2	160.7	35.6	39.8	37.4 <sup>a</sup>	33.2 <sup>a</sup>
Overheads	15.3	41.7	9.8	10.5	10.3	10.5
Total expenditure	242.3	536.8	137.3	128.3	134.9	138.1
Technical co-operation programmes as percentage of total expenditure	58.5%	62.3%	66.9%	60.8%	64.6%	68.4%

<sup>a</sup>Expenditure of \$1.1 million in 1984 and estimated expenditure of \$5.0 million in 1985 in respect of the Industrial Development Decade for Africa, for which funds are allotted under the regular budget, section 17 (UNIDO), are included under the regular programme.

<sup>b</sup>Figures are tentative only since contributions to trust funds are made on an *ad hoc* basis and cannot be accurately estimated.

<sup>c</sup>United Nations Fund for Drug Abuse Control.

TABLE 2. TECHNICAL CO-OPERATION PROGRAMMES: PROJECT BUDGET APPROVALS AND EXPENDITURES, 1972 TO 1985

(In millions of US dollars)

	<i>Actual</i>					<i>Estimated</i>
	1972-1976	1977-1981	1982	1983	1984	1985
<b>A. All sources of funds</b>						
1. Residual value of projects brought forward	37.4	72.8	136.4	153.7	164.8	181.0
2. Value of project budgets approved in the year (net)	<u>177.2</u>	<u>398.0</u>	<u>109.2</u>	<u>89.1</u>	<u>103.4</u>	<u>102.8</u>
3. Total of approved projects under implementation	214.6	470.8	245.6	242.8	268.2	283.8
4. Expenditures in the year	<u>141.8</u>	<u>334.4</u>	<u>91.9</u>	<u>78.0</u>	<u>87.2</u>	<u>94.4</u>
5. Residual value of approved projects carried forward	72.8	136.4	153.7	164.8	181.0	189.4
<b>B. Regular programme<sup>a</sup></b>						
1. Residual value of projects brought forward	—	—	—	2.7	—	3.5
2. Value of project budgets approved in the year (net)	<u>8.7</u>	<u>15.2</u>	<u>5.8</u>	<u>1.3</u>	<u>7.2</u>	<u>5.8</u>
3. Total of approved projects under implementation	8.7	15.2	5.8	4.0	7.2	9.3
4. Expenditures in the year	<u>8.7</u>	<u>15.2</u>	<u>3.1</u>	<u>4.0</u>	<u>3.7</u>	<u>9.3</u>
5. Residual value of approved projects carried forward	—	—	2.7	—	3.5	—
<b>C. UNDP/IPF and cash counterpart</b>						
1. Residual value of projects brought forward	29.7	59.8	105.8	118.2	115.5	114.9
2. Value of project budgets approved in the year (net)	<u>128.8</u>	<u>275.9</u>	<u>76.6</u>	<u>43.5</u>	<u>53.8</u>	<u>55.0</u>
3. Total of approved projects under implementation	158.5	335.7	182.4	161.7	169.3	169.9
4. Expenditures in the year	<u>98.7</u>	<u>229.9</u>	<u>64.2</u>	<u>46.2</u>	<u>54.4</u>	<u>57.3</u>
5. Residual value of approved projects carried forward	59.8	105.8	118.2	115.5	114.9	112.6

TABLE 2 (continued)

			<i>Actual</i>			<i>Estimated</i>
	<i>1972-1976</i>	<i>1977-1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>
<b>D. UNDP/SIS<sup>b</sup></b>						
1. Residual value of projects brought forward	5.3	5.8	2.8	5.0	2.4	2.8
2. Value of project budgets approved in the year (net)	<u>14.8</u>	<u>14.2</u>	<u>5.3</u>	<u>0.4</u>	<u>2.2</u>	<u>3.5</u>
3. Total of approved projects under implementation	20.1	20.0	8.1	5.4	4.6	6.3
4. Expenditures in the year	<u>14.3</u>	<u>17.2</u>	<u>3.1</u>	<u>3.0</u>	<u>1.8</u>	<u>1.8</u>
5. Residual value of approved projects carried forward	5.8	2.8	5.0	2.4	2.8	4.5
<b>E. UNDP/Special programme resources and special measures</b>						
1. Residual value of projects brought forward	—	1.7	0.9	0.7	1.0	0.6
2. Value of project budgets approved in the year (net)	<u>4.8</u>	<u>4.5</u>	<u>0.7</u>	<u>1.3</u>	<u>0.1</u>	<u>1.0</u>
3. Total of approved projects under implementation	4.8	6.2	1.6	2.0	1.1	1.6
4. Expenditures in the year	<u>3.1</u>	<u>5.3</u>	<u>0.9</u>	<u>1.0</u>	<u>0.5</u>	<u>1.0</u>
5. Residual value of approved projects carried forward	1.7	0.9	0.7	1.0	0.6	0.6
<b>F. UNDP-administered trust funds<sup>c</sup></b>						
1. Residual value of projects brought forward	—	—	4.7	2.9	2.7	6.3
2. Value of project budgets approved in the year (net)	<u>—</u>	<u>8.1</u>	<u>1.3</u>	<u>2.5</u>	<u>7.2</u>	<u>2.5</u>
3. Total of approved projects under implementation	—	8.1	6.0	5.4	9.9	8.8
4. Expenditures in the year	<u>—</u>	<u>3.4</u>	<u>3.1</u>	<u>2.7</u>	<u>3.6</u>	<u>1.6</u>
5. Residual value of approved projects carried forward	—	4.7	2.9	2.7	6.3	7.2
<b>G. Other trust funds<sup>d</sup></b>						
1. Residual value of projects brought forward	0.4	1.3	5.7	5.4	21.9	34.2
2. Value of project budgets approved in the year (net)	<u>7.1</u>	<u>22.3</u>	<u>5.0</u>	<u>23.0</u>	<u>20.2</u>	<u>19.0</u>
3. Total of approved projects under implementation	7.5	23.6	10.7	28.4	42.1	53.2
4. Expenditures in the year	<u>6.2</u>	<u>17.9</u>	<u>5.3</u>	<u>6.5</u>	<u>7.9</u>	<u>9.6</u>
5. Residual value of approved projects carried forward	1.3	5.7	5.4	21.9	34.2	43.6

**H. UNIDF<sup>e</sup>**

1. Residual value of projects brought forward	2.0	4.2	14.6	17.1	19.4	16.0
2. Value of project budgets approved in the year (net)	<u>13.0</u>	<u>52.3</u>	<u>14.1</u>	<u>15.4</u>	<u>11.2</u>	<u>14.0</u>
3. Total of approved projects under implementation	15.0	56.5	28.7	32.5	30.6	30.0
4. Expenditures in the year	<u>10.8</u>	<u>41.9</u>	<u>11.6</u>	<u>13.1</u>	<u>14.6</u>	<u>11.6</u>
5. Residual value of approved projects carried forward	4.2	14.6	17.1	19.4	16.0	18.4

**I. UNFDAC**

1. Residual value of projects brought forward	—	—	—	—	—	0.6
2. Value of project budgets approved in the year (net)	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>0.7</u>	<u>1.0</u>
3. Total of approved projects under implementation	—	—	—	—	0.7	1.6
4. Expenditures in the year	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>0.1</u>	<u>1.2</u>
5. Residual value of approved projects carried forward	—	—	—	—	0.6	0.4

**J. Non-UNIDO funds<sup>f</sup>**

1. Residual value of projects brought forward	—	—	1.9	1.7	1.9	2.1
2. Value of project budgets approved in the year (net)	<u>—</u>	<u>5.5</u>	<u>0.4</u>	<u>1.7</u>	<u>0.8</u>	<u>1.0</u>
3. Total of approved projects under implementation	—	5.5	2.3	3.4	2.7	3.1
4. Expenditures in the year	<u>—</u>	<u>3.6</u>	<u>0.6</u>	<u>1.5</u>	<u>0.6</u>	<u>1.0</u>
5. Residual value of approved projects carried forward	—	1.9	1.7	1.9	2.1	2.1

<sup>e</sup>Excludes the value of projects approved but not implemented within the year (prior to 1978) or within the biennium (after 1977), as appropriate. For 1984 and 1985 see table 1, footnote a.

<sup>b</sup>Includes SIS Trust Funds prior to 1973.

<sup>c</sup>Include United Nations Trust Fund for Sudano-Sahelian Activities; United Nations Financing System for Science and Technology for Development; UNDP trust fund for projects financed by the Voluntary Fund for the United Nations Decade for Women; United Nations Capital Development Fund; third-party trust funds.

<sup>d</sup>Include special-purpose trust funds financed by third parties; special-purpose trust funds financed by recipient Governments; SIS Trust Funds; government cash counterpart contribution paid to UNIDO; United Nations Fund for Population Activities; projects financed from World Bank loans.

<sup>e</sup>Includes UNIDO General Trust Fund.

<sup>f</sup>Include projects executed by other agencies for which UNIDO is the associated agency.

TABLE 3A. TECHNICAL CO-OPERATION ACTIVITIES: PROJECTS APPROVED IN 1983 AND 1984, BY SOURCE OF FUNDS

Source of funds	New projects approved			Existing projects revised			Total net value of approvals/revisions (\$000)
	Number of projects	Net value of approvals (\$000)	Average value of approvals (\$000)	Number of projects	Net value of revisions (\$000)	Average value of revisions (\$000)	
	<b>1983</b>						
Regular programme	78	2 219	28	138	(160)	(1)	2 059 <sup>a</sup>
UNDP/IPF and cash counterpart	119	33 872	285	618	9 629	16	43 501
UNDP/SIS	42	1 096	26	356	(675)	(2)	421
UNDP/Special programme resources and special measures	5	916	183	16	354	22	1 270
UNDP-administered trust funds	5	2 239	448	12	218	18	2 457
Other trust funds	40	13 021	326	89	9 934	112	22 955
UNIDF	196	15 224	78	276	155	1	15 379
Non-UNIDO funds	24	1 885	79	34	(157)	(5)	1 728
TOTAL	509	70 472	138	1 539	19 298	13	89 770 <sup>a</sup>
	<b>1984</b>						
Regular programme	177	5 144	29	23	2 101	91	7 245
UNDP/IPF and cash counterpart	95	43 692	460	585	10 139	17	53 831
UNDP/SIS	86	2 695	31	174	(507)	(3)	2 188
UNDP/Special programme resources and special measures	5	449	90	18	(334)	(19)	115
UNDP-administered trust funds	8	7 205	901	16	—	—	7 205
Other trust funds	28	1 735	62	88	18 450	210	20 185
UNIDF	226	11 549	51	383	(390)	(1)	11 159
UNFDAC	1	654	654	—	—	—	654
Non-UNIDO funds	7	409	58	31	432	14	841
TOTAL	633	73 532	116	1 318	29 891	23	103 423

<sup>a</sup>From the regular programme, \$731,000 lapsed at the end of the biennium 1982-1983 and were subject to re-approval in 1984-1985.

TABLE 3B. TECHNICAL CO-OPERATION ACTIVITIES: COMPARISON OF THE VALUE OF PROJECTS AS AT 31 DECEMBER 1983 AND AS AT 31 DECEMBER 1984, BY SOURCE OF FUNDS

Source of funds	Number of projects		Total value of projects (\$000)		Average value of projects (\$000)	
	1983	1984	1983	1984	1983	1984
Regular programme	259	200	7 820 <sup>a</sup>	7 245	30	36
UNDP/IPF and cash counterpart	796	753	406 774	423 608	511	563
UNDP/SIS	398	269	13 714	9 671	34	36
UNDP/Special programme resources and special measures	24	27	6 327	5 298	264	196
UNDP-administered trust funds	18	26	10 233	17 438	568	671
Other trust funds	137	126	43 970	61 275	321	486
UNIDF	576	688	57 529	63 526	100	92
UNFDAC	—	1	—	654	—	654
Non-UNIDO funds	65	47	6 911	5 984	106	127
TOTAL <sup>b</sup>	2 273	2 137	553 278 <sup>a</sup>	594 699	243	278

<sup>a</sup>From the regular programme, \$731,000 lapsed at the end of the biennium 1982-1983 and were subject to re-approval in 1984-1985.

<sup>b</sup>The following is a breakdown by status of projects:

	Number of projects		Total value of projects (\$000)	
	1983	1984	1983	1984
New and ongoing	1 283	1 355	414 520	462 028
Operationally completed	251	178	32 134	32 544
Financially completed	739	604	106 624	100 127
TOTAL	2 273	2 137	553 278	594 699

TABLE 4. EXPENDITURES ON TECHNICAL CO-OPERATION ACTIVITIES IN 1983 AND 1984,  
BY SOURCE OF FUNDS AND PROJECT COMPONENT

Source of funds	Project personnel		Subcontracts	Fellowships and training	Equipment	Miscellaneous expenses	Total
	Number of experts' work-months	\$000					
<i>1983-Actual</i>							
Regular programme	242	1 995	99	1 640	124	133	3 991
UNDP/IPF and cash counterpart	3 651	26 561	2 794	5 332	10 200	1 333	46 220
UNDP/SIS	318	1 952	655	98	227	70	3 002
UNDP/Special programme resources and special measures	57	403	455	60	35	30	983
UNDP-administered trust funds	84	625	637	295	1 111	27	2 695
Other trust funds	2 409	5 730	274	92	380	46	6 522
UNIDF	540	4 194	2 847	3 745	1 861	402	13 049
Non-UNIDO funds	74	592	2	155	800	8	1 557
TOTAL	7 375	42 052	7 763	11 417	14 738	2 049	78 019
<i>1984-Actual</i>							
Regular programme	209	1 958	234	1 193	182	98	3 665
UNDP/IPF and cash counterpart	3 316	25 927	5 868	5 108	16 129	1 329	54 361
UNDP/SIS	136	923	546	66	200	47	1 782
UNDP/Special programme resources and special measures	58	455	(47)	39	11	21	479
UNDP-administered trust funds	67	602	2 376	277	372	11	3 638
Other trust funds	3 282	7 186	101	292	319	79	7 977
UNIDF	559	4 900	3 133	4 609	1 371	562	14 575
UNFDAC	4	32	27	—	—	—	59
Non-UNIDO funds	70	495	10	89	45	16	655
TOTAL	7 701	42 478	12 248	11 673	18 629	2 163	87 191



TABLE 5. TECHNICAL CO-OPERATION ACTIVITIES: PROJECT EXPENDITURES, 1977 TO 1985,  
BY PROGRAMME AND PROGRAMME COMPONENT

(In thousands of US dollars)

Programme/Programme component	Actual				Estimated
	1977-1981	1982	1983	1984	1985
Office of the Executive Director	—	39	4	22	—
Division of Policy Co-ordination	3 552	832	578	952	950
Division of Industrial Operations					
Programme formulation and direction	2 917	724	1 150	490	500
Industrial planning	21 343	4 438	4 389	5 794	5 200
Institutional infrastructure	47 559	11 912	10 402	10 407	11 500
Factory establishment and management	15 384	3 728	3 213	2 914	3 900
Training	29 290	6 715	6 060	5 705	6 300
Feasibility studies	14 282	4 812	4 516	4 274	4 800
Agro-industries	40 303	12 181	10 919	9 675	10 100
Metallurgical industries	36 888	9 241	5 682	6 307	6 200
Engineering industries	43 229	13 963	9 544	13 913	13 800
Chemical industries	67 297	18 909	17 115	22 083	26 500
Investment co-operative programme	6 081	2 517	2 774	3 178	3 200
Division for Industrial Studies	6 007	1 639	1 508	1 294	1 300
Division of Conference Services, Public Information and External Relations	178	126	142	207	150
Other	180	103	23	(24)	—
TOTAL	334 490	91 879	78 019	87 191	94 400

TABLE 6. EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES, BY SOURCE OF FUNDS AND PROGRAMME COMPONENT, 1984  
(In thousands of US dollars)

<i>Programme/Programme component</i>	<i>Regular programme</i>	<i>UNDP/IPF and cash counterpart</i>	<i>UNDP/Special programme resources and special measures</i>	<i>UNDP/SIS</i>	<i>UNDP-administered trust funds</i>	<i>Other trust funds</i>	<i>UNIDF</i>	<i>UNFDAC</i>	<i>Non-UNIDO funds</i>	<i>Total</i>
Office of the Executive Director										
Industrial Development Decade for Africa	—	—	—	—	—	—	22	—	—	22
Policy co-ordination										
Programme development and evaluation	—	—	—	—	—	—	—	—	—	—
Negotiations	—	—	—	—	—	—	246	—	—	246
Field reports monitoring	—	—	—	—	—	44	239	—	—	283
Non-governmental organizations	—	—	—	—	—	—	31	—	—	31
Least developed countries	—	—	—	—	—	—	126	—	—	126
Economic co-operation among developing countries	201	2	(1)	—	—	—	64	—	—	266
Subtotal	201	2	(1)	—	—	44	706	—	—	952
Industrial operations										
Investment co-operative programme	65	596	(157)	—	—	632	2 043	—	(1)	3 178
Industrial planning	242	4 614	31	47	—	278	405	—	177	5 794
Institutional infrastructure	112	9 123	317	66	150	330	307	—	2	10 407
Factory establishment and management	82	2 423	145	126	—	37	101	—	—	2 914
Training	1 162	866	—	—	193	—	3 484	—	—	5 705
Feasibility studies	189	3 403	—	—	3	498	176	—	5	4 274
Agro-industries	130	6 279	43	342	624	207	1 832	59	159	9 675
Metallurgical industries	57	4 852	(21)	508	480	22	409	—	—	6 307
Engineering industries	117	12 380	27	213	243	85	821	—	27	13 913
Chemical industries	276	9 666	95	498	1 942	5 727	3 633	—	246	22 083
Programme formulation and direction	385	113	—	—	—	—	(8)	—	—	490
Subtotal	2 817	54 315	480	1 800	3 635	7 816	13 203	59	615	84 740

Industrial studies										
Global and conceptual studies	—	—	—	—	—	—	20	—	—	20
Regional and country studies	446	—	—	—	—	121	275	—	—	842
Sectoral studies	—	—	—	—	—	—	47	—	—	47
Development and transfer of technology	116	38	—	7	3	(4)	117	—	(2)	275
Technological advisory services	—	—	—	—	—	—	16	—	—	16
Industrial information	—	—	—	—	—	—	(1)	—	—	(1)
General industrial information services	—	—	—	—	—	—	—	—	—	—
Programme formulation and direction	—	—	—	—	—	—	53	—	42	95
Subtotal	562	38	—	7	3	117	527	—	40	1 294
Conference services, public information and external relations										
	90	—	—	—	—	—	117	—	—	207
Other										
	(5)	6	—	(25)	—	—	—	—	—	(24)
TOTAL	3 665	54 361	479	1 782	3 638	7 977	14 575	59	655	87 191

TABLE 7. EXPENDITURES ON TECHNICAL CO-OPERATION ACTIVITIES, BY GEOGRAPHICAL AREA, 1979 TO 1985

*(In thousands of US dollars)*

Area	Actual						Estimated
	1979	1980	1981	1982	1983	1984	1985
<b>Africa</b>							
Country projects <sup>a</sup>	21 015	24 106	32 756	29 137	25 683	25 300	29 000
Regional projects	1 372	1 469	1 589	1 828	1 773	4 713	5 500
Subtotal	22 387	25 575	34 345	30 965	27 456	30 013	34 500
<b>The Americas</b>							
Country projects	9 716	8 782	9 477	9 601	9 168	7 987	8 500
Regional projects	445	920	855	1 141	877	1 013	1 000
Subtotal	10 161	9 702	10 332	10 742	10 045	9 000	9 500
<b>Arab States</b>							
Country projects	9 453	9 315	11 355	10 726	11 274	11 807	13 500
Regional projects	346	405	456	997	593	1 104	2 000
	9 799	9 720	11 811	11 723	11 867	12 911	15 500
Country projects (African Arab States) <sup>b</sup>	(6 038)	(5 602)	(6 803)	(6 581)	(7 030)	(8 806)	(11 000)
Subtotal	3 761	4 118	5 008	5 142	4 837	4 105	4 500
<b>Asia and the Pacific</b>							
Country projects	18 288	22 097	27 185	32 658	23 599	29 795	31 000
Regional projects	1 583	1 131	1 539	1 034	1 062	1 437	1 500
Subtotal	19 871	23 228	28 724	33 692	24 661	31 232	32 500
<b>Europe</b>							
Country projects	6 761	5 804	3 487	3 241	2 513	3 609	3 900
Regional projects	22	16	46	410	248	49	100
Subtotal	6 783	5 820	3 533	3 651	2 761	3 658	4 000
<b>Global and interregional projects</b>							
	7 551	7 837	6 701	7 687	8 259	9 183	9 400
TOTAL	70 514	76 280	88 643	91 879	78 019	87 191	94 400

<sup>a</sup>Includes African Arab States.<sup>b</sup>Figures deducted since already included under "Africa".

TABLE 8. TECHNICAL CO-OPERATION ACTIVITIES: PROJECT EXPENDITURE IN 1984

*(In thousands of US dollars)*

	<i>Africa<sup>a</sup></i>	<i>The Americas</i>	<i>Arab States<sup>b</sup></i>		<i>Asia and the Pacific</i>	<i>Europe</i>	<i>Global and interregional</i>	<i>Total</i>
<b>A. By source of funds and geographical area</b>								
Regular programme	1 733	254	260	(70)	365	23	1 100	3 665
UNDP/IPF and cash counterpart	15 226	6 170	6 003	(3 009)	26 587	3 427	(43)	54 361
UNDP/SIS	635	434	209	(43)	463	84	—	1 782
UNDP/Special programme resources and special measures	587	42	—	—	(151)	—	1	479
UNDP-administered trust funds	2 510	212	82	(82)	744	—	172	3 638
Other trust funds	6 031	665	5 948	(5 532)	540	29	296	7 977
UNIDF	3 081	1 109	409	(70)	2 335	96	7 615	14 575
UNFDAC	—	59	—	—	—	—	—	59
Non-UNIDO funds	210	55	—	—	349	(1)	42	655
TOTAL	30 013	9 000	12 911	(8 806)	31 232	3 658	9 183	87 191
<b>B. By project component and geographical area</b>								
Project personnel	19 593	5 671	10 239	(7 262)	11 009	699	2 529	42 478
Subcontracts	4 069	594	447	(154)	5 208	285	1 799	12 248
Fellowships and training	2 279	819	548	(237)	3 689	540	4 035	11 673
Equipment	3 325	1 602	1 393	(1 061)	10 804	2 095	471	18 629
Miscellaneous	747	314	284	(92)	522	39	349	2 163
TOTAL	30 013	9 000	12 911	(8 806)	31 232	3 658	9 183	87 191

<sup>a</sup>Includes figures related to country projects in African Arab States.<sup>b</sup>Figures in parentheses relate to country projects in African Arab States only and are deducted from the end column "Total" since they are already included under "Africa".

Statistical Annex

TABLE 9. EXPENDITURE OF REGULAR BUDGET AND OVERHEAD FUNDS IN 1984,  
BY PROGRAMME COMPONENT AND OBJECT OF EXPENDITURE

(In thousands of US dollars)

Programme/ Programme component	Staff costs	Consul- tants	Expert group meetings	Other	Total
Policy-making organs	1 855	8	—	100	1 963
Executive direction and management <sup>a</sup>	1 371	52	47	136	1 606
Policy co-ordination					
Programme development and evaluation	1 722	—	—	64	1 786
Inter-agency programme co-ordination	460	—	—	24	484
Negotiations	1 559	215	125	131	2 030
Field reports monitoring	384	—	—	344	728
Non-governmental organizations	359	2	—	9	370
Least developed countries	536	—	—	22	558
New York Liaison Office	378	1	—	22	401
Programme formulation and direction	1 049	8	—	136	1 193
Economic co-operation among developing countries	423	6	—	21	450
Subtotal	6 870	232	125	773	8 000
Industrial operations					
Investment co-operative programme	1 154	101	—	72	1 327
Industrial planning	648	30	—	29	707
Institutional infrastructure	1 052	—	—	13	1 065
Factory establishment and management	682	—	—	21	703
Training	1 058	8	—	11	1 077
Feasibility studies	596	19	—	17	632
Agro-industries	1 006	—	—	21	1 027
Metallurgical industries	682	8	1	11	702
Engineering industries	869	21	7	15	912
Chemical industries	1 506	14	—	45	1 565
Project personnel recruitment <sup>b</sup>	1 440	—	—	17	1 457
Purchase and contract	1 147	—	—	8	1 155
Programme formulation and direction	1 022	9	—	29	1 060
Subtotal	12 862	210	8	309	13 389
Industrial studies					
Global and conceptual studies	869	214	9	22	1 114
Regional and country studies	1 354	236	—	36	1 626
Sectoral studies	986	237	6	31	1 260
Development and transfer of technology	784	233	11	36	1 064
Technological advisory services	165	22	23	9	219
Industrial and Technological Information Bank (INTIB)	258	24	—	7	289
Industrial information	459	2	—	64	525
Programme formulation and direction	1 065	11	—	5	1 081
Subtotal	5 940	979	49	210	7 178
Conference services, public information and external relations					
Secretariat of the IDB	263	—	—	3	266
Governments and intergovernmental organizations relations	348	—	—	6	354
Public information	574	1	4	87	666
Programme formulation and direction	229	—	—	13	242
Conference service	5 191	—	—	962	6 153
Subtotal	6 605	1	4	1 071	7 681

<i>Programme/ Programme component</i>	<i>Staff costs</i>	<i>Consul- tants</i>	<i>Expert group meetings</i>	<i>Other</i>	<i>Total</i>
<b>Administrative and common services</b>					
Financial service	2 194	—	—	47	2 241
Personnel service	1 780	—	—	287	2 067
General services	1 567	—	—	1	1 568
Legal service	185	—	—	—	185
Programme direction <sup>c</sup>	839	19	—	997	1 855
Subtotal	6 565	19	—	1 332	7 916
TOTAL	42 068	1 501	233	3 931	47 733

<sup>a</sup>Includes UNIDO representation in Geneva.

<sup>b</sup>Includes Technical Assistance Recruitment Service in Geneva and New York.

<sup>c</sup>Includes Electronic Data Processing.





# Appendices

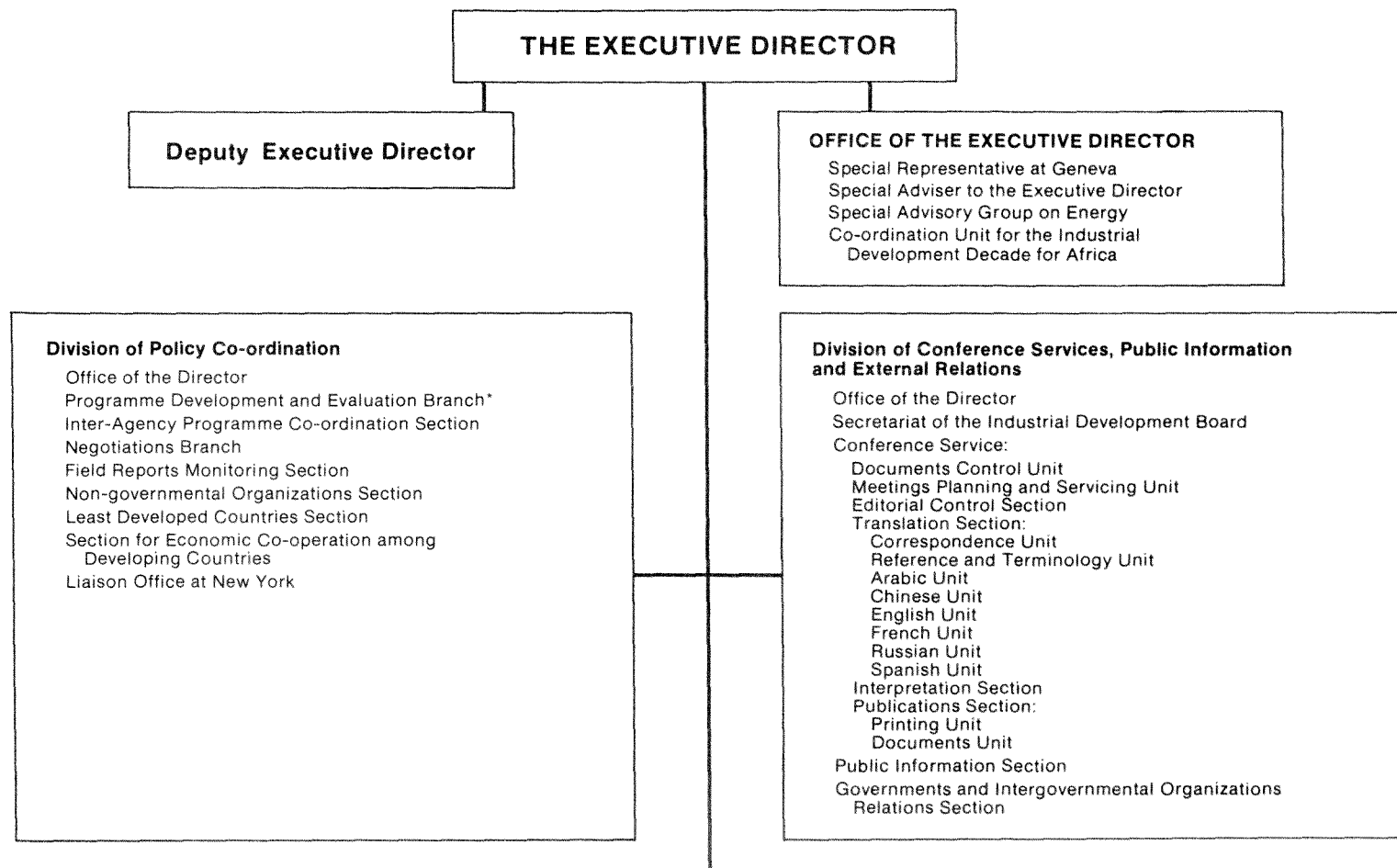
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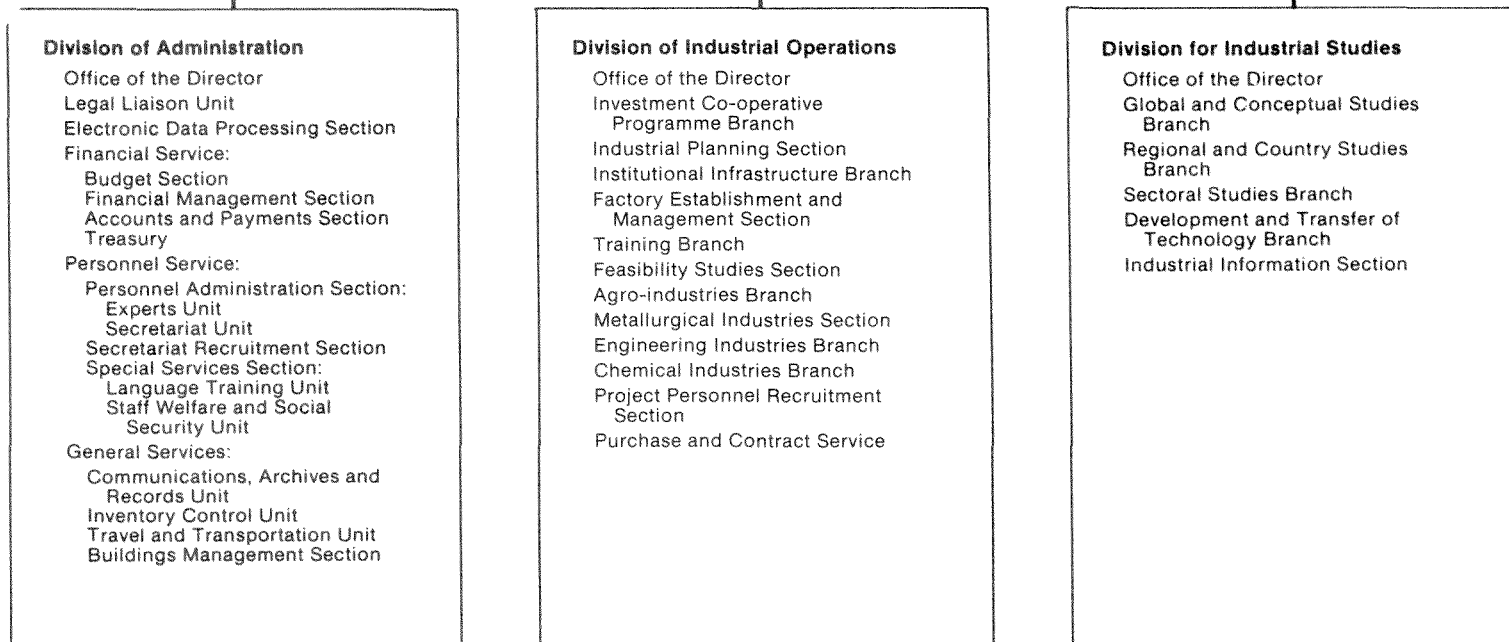
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# APPENDIX A

## UNIDO organization chart

(As of 31 December 1984)





\*Evaluation Unit reports to the Deputy Executive Director.

## APPENDIX B

### List of studies undertaken by the Division for Industrial Studies in 1984

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#### *Global and Conceptual Studies*

##### *International industrial restructuring: global co-operation strategies*

This research activity is aimed at designing alternative global co-operation strategies for international industrial restructuring conducive to achieving a higher share of industrial production for the developing countries, including (a) the development of alternative quantitative industrialization scenarios and (b) the analysis of the restructuring process at the global and regional level.

##### *Studies completed in 1984:*

The international industrial restructuring process: the European CMEA and the developing countries (UNIDO/IS.436)

International industrial restructuring and the international division of labour in the automotive industry (UNIDO/IS.472)

Industrial restructuring and the development potential of the developing countries (to be issued at a later date)

The agony of Africa. Industrial restructuring and the process of socio-economic development in Africa, with particular reference to the least developed countries of Africa (UNIDO/IS.488)

##### *Ongoing studies:*

The patterns of structural change within the manufacturing sector in the developing countries

*Cost in 1984: \$50,000*

##### *Institutional and policy instruments for co-operation*

The purpose of this project is to examine institutional policy instruments needed to implement new strategies of industrial co-operation between the South and the North and between different regions and countries within the South.

##### *Studies completed in 1984:*

Industrial development strategies and policies for developing countries. Papers from the high-level expert group meeting held at Lima in April 1983 preparatory to the Fourth General Conference of UNIDO. Volume I. Introduction, basic and general documentation (UNIDO/IS.431); Volume II. Background documentation on specific issues (UNIDO/IS.431/Add.1)

Industrial development and South-South co-operation (UNIDO/IS.453)

Protectionism in the EEC and its implications for developing countries (UNIDO/IS.475)

Trends, the targets of the Third United Nations Development Decade and the debt crisis (to be issued at a later date)

##### *Ongoing studies:*

The impact of the high external debt servicing costs on the industrial development of developing countries

Industrialization under a foreign exchange constraint

An assessment of the impact of local content legislation on industrialization in the developing countries

*Cost in 1984: \$5,500*

*Global modelling and databank development*

The objective of this research activity is to service studies on industrial development strategies and policies and on international industrial restructuring devoted to the analysis of the implications of the Lima target, and thus to support national and international bodies in formulating goals for common action.

*Studies completed in 1984:*

Proceedings of the Seventh International Conference on Input-Output Techniques (ID/288)

Volume I (of two) of input-output country tables (ID/325) (to be issued at a later date)

IDIOM simplified user's handbook for policy planning in least developed countries (to be issued at a later date)

Analysis of the energy sector in industrialization scenarios for the year 2000 (to be issued at a later date)

A simulation model for describing the impacts of changed bilateral export structure on production and imports: the trade impact analysis model (TIMOD) (to be issued at a later date)

*Ongoing studies:*

The impact of alternative trade patterns on production and imports

Industrial development and South-South co-operation: analysis of the results of scenarios for South-South co-operation

Forecasting GDP and MVA in the developing countries in the long term

*Cost in 1984: \$40,500*

*Conceptual and special studies*

These special studies are undertaken, as requested, on priority issues pertaining to the industrialization of developing countries, and in response to *ad hoc* assignments from the Administrative Committee for Co-ordination, the Committee for Development Planning, the Industrial Development Board and other bodies.

*Studies completed in 1984:*

Regional energy implication of the Lima target: a tentative quantitative assessment (UNIDO/IS.435)

Industrialization and social development, 1960-1980 (UNIDO/IS.441)

Capital goods for energy development (UNIDO/IS.457)

The Lima target and the South-South co-operation: a statistical review (UNIDO/IS.468)

The utilization of capital in developing countries: a survey of empirical estimates (UNIDO/IS.469)

A survey of empirical studies in industrial and manufacturing activities in the informal sector in the developing countries (UNIDO/IS.470)

Energy-intensive industrialization in the Middle East: third world opportunities (UNIDO/IS.482)

The role of women in industry (UNIDO/IS.484) (to be issued in 1985)

The interdependence of industrialization and socio-economic development (to be issued at a later date)

Mineral trade potential of the least developed countries with special reference to Africa (to be issued at a later date)

*Ongoing studies:*

A comparative analysis of the structure of production and trade of the Pacific Basin economies

Policies for better prices: use of cost-benefit techniques for policy assessment in developing countries

## *Appendix B*

A commodity linkage model of foreign trade  
A tripartite resource and production complementation scheme involving OPEC countries, developing countries with developed manufacturing sectors and least developed countries  
Linkages between industry and services  
Measuring the industrialization process  
Social aspects of industrialization: the UNIDO perspective  
Industrialization, technology and social development

*Cost in 1984: \$75,000*

### *Monitoring the Lima target*

The objective of this project is to monitor, and issue reports on, progress towards the attainment of the Lima target and other development goals.

#### *Studies completed in 1984:*

Monitoring progress made in accelerating industrialization in the developing countries.  
Third survey, 1981-1982 (UNIDO/IS.499)  
South-South cooperation in mineral resource-based industries (UNIDO/IS.498)  
*The Global Report* (to be issued at a later date)

#### *Ongoing studies:*

Preparations for next issue of *The Global Report*  
An analysis of the first, second, and third surveys monitoring progress made in accelerating industrialization in the developing countries

*Cost in 1984: \$59,000*

### *Industry and Development*

The journal attempts to provide a link between practitioners and theorists working on economic and related aspects of industrialization. The focus of the journal is on applied economics, particularly in areas emphasized in the Lima and New Delhi Declarations and Plans of Action.

#### *Issues completed in 1984:*

Issues Nos. 10, 11, 12 and 13 of *Industry and Development* were published  
Issues Nos. 14 and 15 of *Industry and Development* were completed for publication in 1985

*Cost in 1984: No consultancy costs*

## *Regional and Country Studies*

### *Regional and subregional studies and analyses*

The objective of this research activity is to keep under review and analyse regional and subregional developments and experiences in respect of industrial co-operation programmes; to provide guidance on, and assist in, the studies and research work of both the UNIDO joint industry divisions located in the regional commissions and other subregional and intergovernmental bodies; and in general to support technical co-operation and other activities of UNIDO through the provision of information and analyses at regional and subregional levels.

#### *Studies completed in 1984:*

Data on installed and planned production capacities, consumption, imports and exports of manufacturing industries and electricity in Arab countries (UNIDO/IS.466)

The role of small- and medium-scale industries in the Organization of the Islamic Conference (OIC) Member States (UNIDO/IS.487)<sup>a</sup>

Governments and informatics: a survey of national policies for international technologies (to be issued at a later date)

Trends and prospects in the international automotive industry and their implications for the ASEAN countries (to be issued at a later date)

The changing role of the public industrial sector in development (UNIDO/IS.386)

*Ongoing studies:*

Regional development processes/policies: consolidated paper from presentations to the Symposium on Regional Development Processes and Policies and the Changing International Division of Labour (20-24 August 1984)

Trends and prospects in the international automotive industry and their implications for countries of the Andean Group

Trends and prospects in the international textile industry and their implications for the ASEAN countries

Trends and prospects in the international textile industry and their implications for the Andean Group of Countries

Cost in 1984: \$24,000

*Country surveys and studies*

The objectives of this research activity are: (a) to carry out analyses of the long-term industrial growth potential of individual developing countries, special attention being devoted to the least developed, landlocked, island and most seriously affected developing countries; (b) to assist developing countries in carrying out policy-oriented studies and analyses of current structures and future development prospects as a basis for long-term industrial strategies and provide national policy makers with information on relevant international developments; and (c) to support the UNIDO programme of technical co-operation to developing countries through the provision of relevant information and analyses.

*Studies completed in 1984:*

Prospects for industrial development and for a capital goods industry in Indonesia. Vol. I—Main report (UNIDO/IS.479); Vol. II—Prospects for industrial development (UNIDO/IS.479/Add.1); Vol. III—Prospects for a selected capital goods industry (UNIDO/IS.479/Add.2)<sup>a</sup>

Industrial restructuring in Thailand—Seminar organized by the Industrial Restructuring Committee (RESCOM) Secretariat and UNIDO, 22-23 October 1983 (UNIDO/IS/R.13)<sup>a</sup>

The potential for resource-based industrial development in the least developed countries: Nepal (UNIDO/IS.465)

Haiti—Long-term prospects for development and restructuring of the manufacturing sector<sup>a</sup> (to be issued at a later date)

Peru—Industrial restructuring requirements and prospects for the 1980s<sup>a</sup> (to be issued at a later date)

Industrial and economic development and prospects in: Algeria, Bahrain, Egypt, Kuwait, Mauritania, Oman, Saudi Arabia and Somalia (prepared for the Sixth Industrial Development Conference of Arab States)

Industrial development review series: Algeria; Argentina (UNIDO/IS.460); Bangladesh; India; Indonesia (UNIDO/IS.458); Kenya (UNIDO/IS.459); Malaysia; Paraguay (UNIDO/IS.461); Peru; Philippines; Sri Lanka; Sudan; Thailand; United Republic of Tanzania; and Uruguay (UNIDO/IS.462)

*Ongoing studies:*

Industrial development review series: Bahrain, China, Congo, Costa Rica, Cuba, Egypt, Kuwait, Malawi, Mexico, Nepal, Pakistan, Swaziland, Syrian Arab Republic and Zimbabwe

<sup>a</sup>Funded from extra-budgetary resources.

## *Appendix B*

Ancillary linkages—their role in industrialization (with special reference to the Indian experience)

The changing role of the small-scale electronics industry as a subcontractor to the engineering industry in the Asia and the Pacific region

Morocco—Industrial investment policy<sup>a</sup>

*Cost in 1984: \$102,500*

### *Industrial redeployment and structural adjustment*

The purpose of this project is to keep under continuous surveillance the industrial restructuring process at the regional and country levels and to examine prospects of and obstacles to redeployment in the changing international division of labour.

#### *Studies completed in 1984:*

Trends in United States of America manufacturing industry and their possible implications for Latin American industrialization (UNIDO/IS.473)

Structural change in the leather and leather products industry in the Federal Republic of Germany (UNIDO/IS.429)

#### *Ongoing studies:*

Further structural changes in the industry of the European CMEA countries

*Cost in 1984: \$20,000*

### *Studies related to the Industrial Development Decade for Africa*

The objective of this research activity is to keep under review, and assist in, the programme of action for the Industrial Development Decade for Africa.

#### *Studies completed in 1984:*

The mineral industry of developing Africa (UNIDO/IS.430)

Madagascar—La gestion des prix industriels: Régime fiscal et développement; Aperçu statistique sur le développement du secteur industriel, 1970-1980<sup>a</sup>

UNIDO input to the UNIN study on perspectives for national reconstruction—development of Namibia

#### *Ongoing studies:*

Industrial development programme for independent Namibia<sup>a</sup>

Resource-based industrial development in the least developed countries: Lesotho

Resource-based industrial development in the least developed countries: the Gambia<sup>a</sup>

Resource-based industrial development in the least developed countries: Guinea-Bissau<sup>a</sup>

Industrial co-operation through the Southern Africa Development Co-ordination Conference (SADCC)

*Cost in 1984: \$29,000*

## *Sectoral Studies*

The industrial sector studies are designed: (a) to analyse the prospects for selected industrial sectors in developing countries over the next 10 to 20 years; (b) to contribute to a restructuring of world industry through industrial redeployment, accelerated industrial development and faster economic growth areas for international industrial co-operation; (c) to assist international and regional organizations in their activities concerning industry; and (d) to support the technical co-operation activities of UNIDO.

<sup>a</sup>Funded from extra-budgetary resources.



*Studies completed in 1984:*

- Proposals for reform of the international financial system: implications for industrial financing (UNIDO/IS.432)
- A case study of fertilizer plant costs in India (UNIDO/IS.434)
- The use of residues for energy production in the mechanical wood-processing industry (UNIDO/IS.437)
- The leather and leather products industry: trends, prospects and strategies for development. Volumes I and II (Statistical digest) (UNIDO/IS.442 and Add.1)
- Strategies for increasing production of tanning chemicals in developing countries (UNIDO/IS.448)
- Arab demand for capital goods in the short, medium and long term (UNIDO/IS.451)
- Optimum scale production in developing countries: a preliminary review of prospects and potentialities in industrial sectors (UNIDO/IS.471)
- The vegetable oils and fats industry in developing countries: outlook and perspectives. Volumes I and II (Statistical digest) (UNIDO/IS.477 and Add.1)
- The capital goods industry in Latin America: present situation and prospects (UNIDO/IS.478)
- World demand for petrochemical products and the Arab petrochemical industry (UNIDO/IS.480)
- System of preventive maintenance of capital goods (UNIDO/IS.481)
- Long-term arrangements in petrochemical developments: co-operation between the European CMEA countries and developing countries (UNIDO/IS.485)
- Development of chemical and petrochemical industries in the European CMEA countries (UNIDO/IS.486)
- A general review of the capital goods industry in Africa and elements for further analysis (UNIDO/IS.502)
- The present situation of the agricultural machinery industry in North America and Western Europe (UNIDO/IS.503)
- Techno-economic analysis of the manufacture of chloroquine phosphate (to be issued at a later date)
- First study on the building materials industry (to be issued at a later date)
- Study on problems of personnel training for the iron and steel industries of developing countries (to be issued at a later date)
- The production of electric power equipment in developing countries—a synthesis (to be issued at a later date)
- Typology of developing countries and common strategies for the development of the capital goods industries (to be issued at a later date)

*Ongoing studies:*

- Methodology for assessment and programming of integrated agro-industrial foods systems, including the vegetable oils and fats industry in Peru
- Manual for the management of the integrated agro-industrial foods systems
- Preliminary regional survey of the fisheries industry in Africa and Latin America
- Factors affecting the location of wood-processing facilities in developing countries
- Development opportunities in the wood-processing sector in the ESCAP region
- Assessment of trends, strategies and prospects for the pharmaceutical industry in developing countries
- Techno-economic studies of the production of essential drugs in developing countries
- Techno-economic evaluation of mini-fertilizer plants in Africa
- Pesticides and plant protection agents
- Guidelines for capital cost control and management of the fertilizer industry
- Global review of the petrochemical industry
- New technological developments in the petrochemical industry
- Plant cost evaluation programme for the petrochemical industry
- Development of the petrochemical industry in the ESCAP region

## Appendix B

Development of the petrochemical industry in Latin America  
Development of the chemical industry in the ESCAP region  
Development and promotion of the lime industry in developing countries  
Development of the iron and steel industry in Latin America  
Regional and global scenarios of the iron and steel industry  
Second world-wide study on capital goods industry  
Assessment of the capital goods sector: survey on the ESCAP region  
Surveys of the agricultural machinery industry in selected regions  
Energy conservation in selected industrial sectors

Cost in 1984: \$260,000

### *Statistics and Survey Unit*

#### *Industrial statistics*

The objectives of this activity are (a) to extend the coverage and detail of the statistics necessary to support industrial research, (b) to facilitate the storage and provision of these data through the development and maintenance of a cost-efficient computerized data base and associated software and (c) to widely disseminate the indicators derived from these data that are not available elsewhere.

#### *Studies completed in 1984:*

*Handbook of Industrial Statistics* (ID/328)

A statistical review of the world industrial situation 1983 (UNIDO/IS.433)

The UNIDO data base: primary sources and data base design (UNIDO/IS.463)

L'industrie africaine en chiffres. Vol. 1—Burundi, Mali (UNIDO/IS.474)

Measuring the relative degree of industrialization (UNIDO/IS.491)

#### *Ongoing studies and related activities:*

A statistical review of the world industrial situation, 1984

Dynamic comparative advantage and structural change in industry

Revision and redesign of the existing data base for industrial statistics in order to facilitate improvements in the coverage of industries, countries and subject areas, with particular emphasis on enhancing the degree of international comparability and consistency.

Cost in 1984: \$43,500

#### *Industrial Development Survey*

The objective of the publication is to provide a survey of current problems and progress in the field of industrial development; to review industrialization policies and strategies; to monitor structural changes in both industrialized and developing countries; and to analyse the significance of the trends for the future course of industrial development.

#### *Ongoing studies:*

Preparations for the tenth issue of the *Industrial Development Survey* were begun with consultant contributions on: long-term trends in the labour requirements in manufacturing, the industrial progress and problems being encountered in the least developed countries, and international trends in competitive abilities of different countries and selected industries.

Cost in 1984: \$44,000

*Other Activities**Environmental and related studies*

The objective of these studies is to undertake research into (a) environmental protection during the process of industrial development, (b) industrial water use and treatment practices, and (c) industrial emergency contingency planning.

*Studies completed in 1984:*

Contingency planning for industrial emergencies for the West and Central African region (UNIDO/IS.425)

Utilization of the phosphogypsum produced in the fertilizer industry

*Ongoing studies:*

Environmental protection in the petrochemical industry

*Cost in 1984: \$13,500*

*Development and Transfer of Technology**Studies completed in 1984:*

Technology and market trends in the production and application of information technology. A review of developments during the years 1982-1983 (UNIDO/IS.438)

Provides a brief outline summary of the changes in technology and market trends which have taken place during these years and tries to identify emerging trends.

Guidelines for software development in developing countries (UNIDO/IS.439)

Presents aspects which should be considered in establishing systematic policy approach in the field of informatics.

Guidelines for software production in developing countries (UNIDO/IS.440)

Shows the way industrial software production should be developed and organized.

A silicon foundry to service developing countries' needs: a preliminary approach (UNIDO/IS.444)

Outlines problems connected with the production of customized integrated circuits.

Software engineering (UNIDO/IS.446)

Presents problems and outlines the way the software engineering field should be entered.

Report on assessment of energy conservation measures at plant level in Malaysia (UNIDO/IS.447)

This survey, part of the ASEAN energy conservation project of UNIDO, was compiled from the results of energy diagnosis of nine factories in Malaysia.

Guidebook for factory engineers on energy conservation diagnosis (UNIDO/IS.449)

A guidebook for plant engineers in charge of energy control in factories, and for use in energy conservation diagnosis.

Biotechnology and the developing countries. Applications for the pharmaceutical industry and agriculture (UNIDO/IS.452)

Discusses the state-of-the-art of biotechnology and genetic engineering with reference to pharmaceuticals and agriculture. The relevance of advances in these fields to developing countries are pointed out, likely future directions of R+D are estimated and suggestions are made for applied R+D that could be performed by researchers in developing countries for achieving results in the short term.

Small-scale weaving. UNIDO/ILO technical memorandum No. 3 (UNIDO/IS.454)

Small-scale oil extraction from groundnuts and copra. UNIDO/ILO technical memorandum No. 4 (UNIDO/IS.455)

## Appendix B

Small-scale brickmaking, UNIDO/ILO technical memorandum No. 5 (UNIDO/IS.456)

Small Hydropower Bulletin No. 1 (UNIDO/IS.467)

Reports on the major activities and accomplishments as well as on the progress of the Asian and Pacific Regional Network for Small Hydropower at national and regional levels regarding the development of small hydropower stations.

Enzymatic conversion of cellulosic materials to sugars and alcohol: the technology and its implications (UNIDO/IS.476)

Deals with the production of sugars and alcohols from cellulosic materials. Covers such key subjects as: potential raw materials; the state-of-the-art of production technologies; the economics of extant processes; and infers implications for developing countries from the foregoing.

State-of-art Series on Microelectronics: No. 1: Venezuela (UNIDO/IS.489); No. 2: India (UNIDO/IS.492); No. 3: The Republic of Korea (UNIDO/IS.490); No. 4: Pakistan (UNIDO/IS.493)

This series is intended to provide a broad evaluation based on the country reports with a view to identifying the type of approaches that developing countries at different stages of development could adopt in building up microelectronics capability.

The potential of biotechnology for the Gulf region and the role of the International Centre for Genetic Engineering and Biotechnology (UNIDO/IS.496)

Newer techniques of biotechnology may find use in the Gulf region (a) to develop plant species which grow well in arid and desert areas, are able to use brackish water and are tolerant to poor soil conditions; (b) to engineer micro-organisms for use in the refining of crude oil through dewaxing and removal of sulphur and metals; and (c) to grow protein-rich single-cell protein from natural gas substrate.

The Brazilian telecommunications industry: accumulation of microelectronic technology in the manufacturing and service sectors (to be issued at a later date)

Discusses the potential for local technological development demonstrated by Brazil. The experience of Brazil in progressing from low-level peripheral and transmission equipment through to sophisticated exchange technology is both relevant and encouraging for other developing countries.

*Basic Technological Disaggregation Models: I. The Petrochemical Industry.* Development and Transfer of Technology Series No. 18 (ID/302)

The disaggregation proposed in this model is designed to be applied continuously, from the time of the first idea for a plant to the time of its start-up. The model can be extended, by analogy, from the petrochemical industry to the chemical industry in general.

### *Ongoing studies:*

Overview of the microelectronics industry in developing countries

State-of-the-art series on microelectronics: No. 5: Bangladesh

Technical manuals for design and fabrication of equipment and machineries for small hydropower stations (six volumes)

Study on marine industrial technology and its significance for developing countries

Technology exports from developing countries in the electric power equipment sector

Silicon foundries—technical outlines

Automation in cane sugar industry

The potential of biotechnology for the Gulf region and the role of the International Centre for Genetic Engineering and Biotechnology

Optical fibre production

Telecommunications industry—developing countries' approach

Training manual on technology licensing

Technology exports from developing countries—the case of Pakistan

Software contract negotiation

*Cost in 1984: \$156,000*

## APPENDIX C

## UNIDO involvement in country programming

TABLE 1. UNIDO SHARE OF UNDP COUNTRY PROGRAMMES APPROVED BY THE GOVERNING COUNCIL OF UNDP, JUNE 1981 TO JUNE 1984

(By geographical region)

Geographical region	Number of countries for which programmes have been approved	Total IPF allocations	Total amount programmed (in millions of US\$)	Allocation for UNIDO projects	UNIDO share of amount programmed (percentage)	Number of projects	
						Ongoing	New
Africa <sup>a</sup>	50	1 694.80	1 213.66	154.23	12.70	77	133
Americas	38	375.03	339.32	53.55	15.78	24	71
Arab States <sup>a</sup>	19	359.50	428.84	47.13	10.99	18	38
(African Arab States) <sup>b</sup>	(8)	(234.75)	(203.42)	(36.02)	(17.70)	(14)	(31)
Asia and the Pacific	30	1 425.29	1 109.39	195.45	17.61	69	101
Europe	12	80.75	72.81	17.83	24.49	15	32
TOTAL	141	3 700.62	2 960.60	432.17	14.60	189	344

<sup>a</sup>Includes African Arab States.<sup>b</sup>Figures deducted since already included under both "Africa" and "Arab States".

TABLE 2. SHARE OF UNIDO IN UNDP COUNTRY PROGRAMMES APPROVED BY THE GOVERNING COUNCIL OF UNDP, JUNE 1981 TO JUNE 1984

(By substantive sections of UNIDO)

UNIDO substantive section	Number of projects		Value of UNDP input (\$000)	Percentage of total value	Distribution of projects by size		
	Ongoing	New			Under \$150 000	\$150 000 to \$1 000 000	Over \$1 000 000
Investment Co-operative Programme	2	5	1 772	0.4	3	4	—
Industrial Planning	14	18	18 660	4.3	5	22	5
Institutional Infrastructure	28	55	62 800	14.5	17	50	16
Factory Establishment and Management	7	25	23 020	5.3	7	17	8
Training	8	5	6 440	1.5	3	8	2
Feasibility Studies	12	27	24 550	5.7	8	25	6
Agro-industries	27	44	46 240	10.7	15	43	13
Metallurgical Industries	20	30	40 920	9.4	13	28	9
Engineering Industries	26	56	107 580	24.9	11	56	15
Chemical Industries	44	79	99 780	23.1	31	74	18
Development and Transfer of Technology	1	—	211	0.1	—	1	—
Unspecified	—	—	200	0.1	—	—	—
TOTAL	189	344	432 173	100.0	113	328	92

Appendix C

TABLE 3. COMPARISON OF APPROVED COUNTRY PROGRAMMES FOR THE THIRD CYCLE (JUNE 1981 TO JUNE 1984) WITH PROGRAMMES OF THE SAME COUNTRIES IN THE SECOND CYCLE (1977-1981)<sup>a</sup>

(By geographical region)

Geographical region (Number of country programmes)	Second cycle (1977-1981)				Third cycle (June 1981-June 1984)			
	IPF	Amount pro- grammed (in millions of US\$)	Total value	Per- centage share of amount pro- grammed	IPF	Amount pro- grammed (in millions of US\$)	Total value	Per- centage share of amount pro- grammed
Africa (42) <sup>b</sup>	674.17	594.10	68.48	11.52	1 427.05	1 037.26	136.68	13.17
Americas (37) <sup>c</sup>	300.62	290.43	39.16	13.48	373.38	338.00	53.55	15.84
Arab States (16) <sup>d</sup> (African Arab States (6)) <sup>e, f</sup>	210.50	277.46	26.66	9.60	285.75	394.34	45.90	11.63
Asia and the Pacific (24) <sup>g</sup>	(109.75)	(118.65)	(17.40)	(14.66)	(171.00)	(176.59)	(34.99)	(19.81)
Europe (9) <sup>h</sup>	567.77	627.03	84.44	13.47	1 393.75	1 088.61	190.91	17.53
TOTAL (122)	66.50	65.72	16.12	24.53	62.00	53.64	15.83	29.51
	1 709.81	1 736.09	217.46	12.52	3 370.93	2 735.26	407.88	14.91

<sup>a</sup>Excluded from the comparison are the following 19 countries:

*Africa:* Congo, Equatorial Guinea, Nigeria and Uganda (no country programmes in the second cycle), Angola and Zimbabwe (first country programmes in the third cycle);

*Americas:* Belize (no country programme in the second cycle);

*Arab States:* Lebanon and Sudan (no country programmes in the second cycle), Djibouti (first country programme in the third cycle);

*Asia and the Pacific:* Cook Islands, Democratic People's Republic of Korea, Kiribati, Tokelau, Tuvalu and Vanuatu (first country programmes in the third cycle);

*Europe:* Albania and Cyprus (no country programmes in the second cycle), Hungary (no formal country programme in the second cycle).

<sup>b</sup>The 42 countries in Africa comprise: Algeria, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Egypt, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Libyan Arab Jamahiriya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Niger, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, Swaziland, Togo, Tunisia, United Republic of Tanzania, Zaire, Zambia.

<sup>c</sup>The 37 countries and territories in the Americas comprise: Antigua and Barbuda, Argentina, Bahamas, Barbados, Bermuda, Bolivia, Brazil, British Virgin Islands, Caribbean Multi-Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, Venezuela.

<sup>d</sup>The 16 Arab States comprise: Algeria, Bahrain, Democratic Yemen, Egypt, Iraq, Jordan, Kuwait, Libyan Arab Jamahiriya, Morocco, Oman, Saudi Arabia, Somalia, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen.

<sup>e</sup>The 6 African Arab States comprise: Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Somalia, Tunisia.

<sup>f</sup>The 6 African Arab States and relevant figures are deducted since they are already included under both "Africa" and "Arab States".

<sup>g</sup>The 24 countries in Asia and the Pacific comprise: Bangladesh, Bhutan, Burma, China, Fiji, India, Iran (Islamic Republic of), Lao People's Democratic Republic, Malaysia, Maldives, Mongolia, Nepal, Niue, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Tonga, Viet Nam.

<sup>h</sup>The 9 countries in Europe comprise: Bulgaria, Czechoslovakia, Greece, Malta, Poland, Portugal, Romania, Turkey, Yugoslavia.

## APPENDIX D

Industrial investment projects promoted by UNIDO  
in 1984

<i>Recipient country/short project title</i>	<i>Total project cost (in millions of US dollars)</i>	<i>Recipient country/short project title</i>	<i>Total project cost (in millions of US dollars)</i>
<i>Antigua and Barbuda</i>		<i>Ivory Coast</i>	
Power supplies, magnetic coils	0.5	Banana processing	n.a.
<i>Bahamas</i>		<i>Jamaica</i>	
Children's sportswear	0.1	Plastic containers	0.55
Art linen	0.1	<i>Liberia</i>	
<i>Bangladesh</i>		Rehabilitation of palm oil refineries	3.0
Expansion of production of rickshaws and bicycles	0.5	<i>Nigeria</i>	
<i>Burundi</i>		Particle board	11.7
Vegetable fats	0.7	<i>Pakistan</i>	
<i>Cameroon</i>		Plastic household appliances	1.0
Feedmill	0.7	<i>Peru</i>	
<i>China</i>		T-shirt production (sub-contracting)	0.3
Fan coil air conditioners	3.5	Hotel project	2.4
Clay grinding, coating and treating	15.0	Rolling stock	5.75
Pharmaceuticals	10.0	Intermediate technology tractors	3.0
Chemical products	n.a.	Cold storage house	8.3
Telephone equipment	5.0	<i>Philippines</i>	
Video tape recorders	12.0	Chopsticks	0.015
<i>Dominica</i>		<i>Portugal</i>	
Skin care products	0.6	Manufacture of optical articles	0.4
<i>Gabon</i>		<i>St. Christopher and Nevis</i>	
Palm oil	1.5	Deep-sea fishing and processing	1.9
<i>Greece</i>		Air freight operations	0.5
Multipurpose tractor	33.0	Food processing	0.75
<i>Guinea</i>		<i>Senegal</i>	
Agricultural equipment	0.3	Expansion of cool storage house	0.5
Joinery shop	0.3	Expansion of electrical fixtures and installations	0.6
Joinery and woodworking	0.6	<i>Sri Lanka</i>	
Mineral water	2.0	Tobacco products	0.8
Animal food and fertilizer	3.5	Bicycles	1.8
<i>Ecuador</i>		Electronic devices	0.5
Filters and steel pipes for petroleum production	1.5	Treads for retreading plants	1.6
<i>Egypt</i>		<i>United Republic of Tanzania</i>	
Sanitary irrigation material	10.5	Fire vessels and floating dock	4.0
Paper sacks	9.0	<i>Zambia</i>	
<i>India</i>		Pharmaceuticals manufacture	5.0
Jelly-filled telephone cables	n.a.		

Note: n.a. = information not available.

## APPENDIX E

### Major studies, reports and series publications issued by UNIDO in 1984<sup>a</sup>

<i>Symbol</i>	<i>Title</i>	<i>Language</i>
ID/SER.M/6*	Industry and development No. 6	F
ID/SER.M/7*	Industry and development No. 7	F
ID/SER.M/8*	Industry and development No. 8	E F S
ID/SER.M/9*	Industry and development No. 9	E F S
ID/SER.M/10*	Industry and development No. 10	E F S
ID/SER.M/11*	Industry and development No. 11	E S
ID/SER.M/12*	Industry and development No. 12	E
ID/149*	Guidelines for contracting for industrial projects in developing countries	F
ID/154/Rev.1	Low-cost automation for the furniture and joinery industries	F S
ID/215	Industrialization and rural development	C
ID/216	The effectiveness of industrial estates in developing countries	C
ID/248*	Development banking in the 1980s	F S
ID/250	Development and transfer of technology series No. 13. Fertilizer manual	C
ID/253*	Mineral processing in developing countries	S
ID/257	Development and transfer of technology series No. 14. Case-studies in the acquisition of technology (I)	F S
ID/262	Development and transfer of technology series No. 15. Technological self-reliance of the developing countries: towards operational strategies	F S
ID/271	Development and transfer of technology series No. 16. Metal production development units	F S
ID/284*	Handbook of industrial statistics	F S
ID/288*	Proceedings of the Seventh International Conference on Input-Output Techniques	E
ID/290*	World non-electrical machinery. An empirical study of the machine-tool industry	E
ID/296	Development and transfer of technology series No. 14. Case-studies in the acquisition of technology (II)	E
ID/297*	Formulation of pesticides in developing countries	E
ID/298	Value analysis in the furniture industry	F S
ID/299	Manual on the production of rattan furniture	F
ID/300	Production management for small- and medium- scale furniture manufacturing firms in developing countries	S



<i>Symbol</i>	<i>Title</i>	<i>Language</i>
ID/302	Development and transfer of technology series No. 18. Basic technological disaggregation models. I. The petrochemical industry	E
ID/304* (ID/CONF.5/2)	Industry in a changing world. Special issue of the industrial development survey for the Fourth General Conference of UNIDO	A C E F R S
ID/307 (ID/WG.400/8/Rev.1)	Report of the Second Consultation on the Agricultural Machinery Industry. Vienna, Austria, 17-21 October 1983	A C R
ID/308* (UNIDO/LIB/SER.B/52)	Industrial development abstracts, Nos. 12501-12700	E (F/R/S introduction)
ID/310	A Programme for the Industrial Development Decade for Africa. Guidelines for priority actions during the preparatory phase (1982-1984)	A E F
ID/311 (ID/WG.393/19)	Report of the Second Consultation on the Pharmaceutical Industry. Budapest, Hungary, 21-25 November 1983	C E F R S
ID/313* (UNIDO/LIB/SER.B/53)	Industrial development abstracts, Nos. 12701-13000	E (F/R/S introduction)
ID/314 (ID/WG.406/12)	Report of the Fourth Consultation on the Fertilizer Industry. New Delhi, India, 23-27 January 1984	A C E F R S
ID/315	Manual on documentation and information systems for furniture and joinery plants in developing countries	E
ID/317* (UNIDO/LIB/SER.B/54)	Industrial development abstracts, Nos. 13001-13300	E (F/R/S introduction)
ID/318 (ID/WG.411/14)	Report of the Third Consultation on the Leather and Leather Products Industry. Innsbruck, Austria, 16-19 April 1984	A C E F R S
ID/319 (ID/CONF.5/29)	Special report of the Executive Director for the Fourth General Conference of UNIDO. Vienna, Austria, 2-18 August 1984	A C E F R S
ID/321	Directory of international non-governmental organizations in consultative status with UNIDO	E
ID/322* (UNIDO/LIB/SER.B/55)	Industrial development abstracts, Nos. 13301-13600	E (F/R/S introduction)
ID/323* (UNIDO/LIB/SER.B/56)	Industrial development abstracts, Nos. 13601-13900	E (F/R/S introduction)
ID/329 (ID/WG.427/13)	Report of the Second Consultation on the Food-processing Industry with Special Emphasis on Vegetable Oils and Fats. Copenhagen, Denmark, 15-19 October 1984	A E F R S

<sup>a</sup>Sales publications are indicated by an asterisk in the "Symbol" column.

## APPENDIX F

### Distribution of staff in the Professional and higher category

TABLE 1. DISTRIBUTION OF PROFESSIONAL AND HIGHER CATEGORY STAFF OF UNIDO, INCLUDING STAFF WITH FIXED-TERM CONTRACTS OF LESS THAN ONE YEAR, BY NATIONALITY (AS AT 31 DECEMBER 1984)

<i>Region/country</i>	<i>Occupied posts subject to geographical distribution</i>	<i>Number</i>	<i>Occupied posts not subject to geographical distribution<sup>d</sup></i>	<i>Number</i>	<i>Total</i>
<i>Africa</i>					
Algeria	1 USG, 1 D-2	2	1 P-4	1	3
Angola	1 P-3	1	—	—	1
Burkina Faso	1 P-3, 1 P-2	2	—	—	2
Burundi	1 P-4	1	—	—	1
Cameroon	1 P-5, 1 P-4, 1 P-3	3	—	—	3
Congo	1 D-2	1	—	—	1
Egypt	1 D-1, 1 P-4	2	1 L-7, 2 L-5, 1 L-3, 1 P-4	5	7
Ethiopia	1 D-1, 1 P-4	2	—	—	2
Guinea	1 P-4, 1 P-3	2	—	—	2
Ivory Coast	1 P-3, 1 P-2	2	—	—	2
Kenya	1 P-5	1	—	—	1
Lesotho	1 P-2	1	—	—	1
Libyan Arab Jamahiriya	1 P-4, 1 P-3	2	—	—	2
Madagascar	1 P-4, 1 P-3	2	—	—	2
Mali	1 P-5	1	—	—	1
Morocco	1 P-5, 1 P-4, <sup>b</sup> 1 P-3	3	—	—	3
Niger	1 P-2	1	—	—	1
Nigeria	1 D-1	1	—	—	1
Rwanda	1 P-3	1	—	—	1
Somalia	1 P-5, 1 P-4	2	—	—	2
Sudan	1 D-1, 1 P-5	2	1 P-2	1	3
Togo	1 P-3	1	—	—	1
Tunisia	1 P-5	1	—	—	1
Uganda	1 P-4	1	—	—	1
Zaire	1 P-4	1	—	—	1
Zambia	1 P-2	1	—	—	1
	TOTAL	40		7	47
<i>Asia and the Pacific</i>					
Australia	1 P-5, 2 P-4	3	—	—	3
Bangladesh	1 P-4	1	1 D-1	1	2
Burma	1 P-5, 1 P-4	2	—	—	2
China	1 D-1, 2 P-5, 1 P-4, 1 P-3	5	1 P-5, 3 P-4, 2 P-3, 2 P-2	8	13
India	1 D-2, 1 D-1, 1 P-5, 1 P-2	4	1 L-7, 2 L-6, 3 L-5	6	10
Japan	1 D-1, 2 P-5, 3 P-4, 4 P-3, 3 P-2	13	—	—	13
Malaysia	1 P-4	1	1 P-4	1	2
Nepal	1 P-5	1	—	—	1
New Zealand	1 P-4, 1 P-3	2	—	—	2
Pakistan	1 D-2 <sup>c</sup>	1	1 L-6, 1 L-5	2	3
Philippines	1 P-5, 1 P-4	2	—	—	2
Sri Lanka	—	—	1 L-7, 1 L-5	2	2
	TOTAL	35		20	55

<i>Region/country</i>	<i>Occupied posts subject to geographical distribution</i>	<i>Number</i>	<i>Occupied posts not subject to geographical distribution<sup>a</sup></i>	<i>Number</i>	<i>Total</i>
<i>Eastern Europe</i>					
Bulgaria	2 P-4, 1 P-3	3	—	—	3
Byelorussian SSR	2 P-3	2	—	—	2
Czechoslovakia	1 P-5, 1 P-4, 1 P-2	3	—	—	3
German Democratic Republic	2 P-5, 1 P-4	3	—	—	3
Hungary	1 D-1, 3 P-5, 2 P-4	6	—	—	6
Poland	1 P-5, 1 P-4, 2 P-3	4	1 L-6	1	5
Romania	1 P-5	1	—	—	1
Ukrainian SSR	3 P-4	3	—	—	3
USSR	1 D-2, 1 D-1, 4 P-5, 10 P-4, 10 P-3, 1 P-2	27	1 P-5, 2 P-4, 4 P-3, 1 P-2	8	35
Yugoslavia	1 D-1, 1 P-5, 1 P-4, 2 P-3	5	—	—	5
	TOTAL	57		9	66
<i>Europe (Western)</i>					
Austria	1 D-1, 1 P-5, 7 P-4, 9 P-3, 2 P-2, 1 P-1	21	1 L-4, 1 P-4, 1 P-3	3	24
Belgium	1 P-5, 3 P-4, <sup>d</sup> 2 P-3	6	1 P-5	1	7
Denmark	1 P-5, 3 P-4	4	—	—	4
Finland	2 P-5, 3 P-4, 1 P-2	6	—	—	6
France	1 ASG, 3 P-4, 5 P-3, 1 P-2	10	1 L-6, 5 P-4, 8 P-3	14	24
Germany, Federal Republic of	1 D-1, 7 P-5, 7 P-4, 5 P-3, 4 P-2	24	1 D-2	1	25
Greece	2 P-3, 1 P-2	3	—	—	3
Ireland	1 D-1, 1 P-5, <sup>e</sup> 1 P-4, 1 P-2	4	1 P-4, 1 P-3	2	6
Italy	2 D-1, 2 P-5, 2 P-4, 2 P-3, 3 P-2	11	—	—	11
Malta	1 P-4	1	—	—	1
Netherlands	1 P-4, 2 P-3, 2 P-2	5	—	—	5
Norway	1 D-1, 1 P-4	2	—	—	2
Portugal	2 P-5, 2 P-4, 1 P-3	5	—	—	5
Spain	1 P-5, 2 P-2	3	1 P-5, 2 P-4, 3 P-3	6	9
Sweden	1 D-1, 5 P-5, 2 P-4	8	—	—	8
United Kingdom	1 D-1, 2 P-5, 5 P-4, 3 P-2	11	1 P-5, 2 P-4, <sup>f</sup> 3 P-3, <sup>f</sup> 1 P-2	7	18
	TOTAL	124		34	158
<i>Latin America</i>					
Argentina	2 P-3	2	1 P-3, 2 P-2	3	5
Bolivia	1 P-5	1	1 P-5	1	2
Brazil	2 P-5, 1 P-4, 1 P-2	4	—	—	4
Colombia	2 P-4, 2 P-3	4	1 P-4	1	5
Costa Rica	2 P-3	2	—	—	2
Cuba	2 P-4	2	1 P-2	1	3
Ecuador	1 P-3	1	1 P-5	1	2
El Salvador	2 P-5, 1 P-3	3	—	—	3
Guatemala	1 P-3	1	—	—	1
Haiti	1 D-1	1	—	—	1
Mexico	1 P-5	1	—	—	1
Panama	1 P-3	1	—	—	1
Peru	3 P-4 <sup>g</sup>	3	—	—	3
Venezuela	1 P-5, 1 P-2	2	—	—	2
	TOTAL	28		7	35

TABLE 1 (continued)

Region/country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution <sup>a</sup>	Number	Total
<i>Middle East</i>					
Afghanistan	1 P-4	1	—	—	1
Cyprus	1 P-4	1	—	—	1
Democratic Yemen	2 P-4	2	—	—	2
Iran (Islamic Republic of)	2 P-5, 1 P-4, 1 P-3	4	—	—	4
Iraq	2 P-5, 1 P-4, 1 P-3	4	—	—	4
Lebanon	2 P-5	2	—	—	2
Syrian Arab Republic	2 P-5	2	1 P-4, 1 P-2	2	4
Turkey	1 P-5, 3 P-4, 1 P-3, 1 P-2	6	—	—	6
Yemen	1 P-5	1	—	—	1
	TOTAL	23		2	25
<i>North America and the Caribbean</i>					
Barbados	1 P-3	1	—	—	1
Canada	1 D-1, 2 P-5, 3 P-4, 2 P-3	8	—	—	8
Grenada	1 P-4	1	—	—	1
Guyana	1 P-5, 1 P-3	2	—	—	2
Jamaica	1 P-5	1	—	—	1
Saint Vincent and the Grenadines	1 P-4	1	—	—	1
Trinidad and Tobago	1 P-5	1	—	—	1
United States	1 D-2, 3 D-1, 10 P-5, 15 P-4, <sup>h</sup> 7 P-3, 6 P-2, 1 P-1	43	2 L-6, 1 L-3, 1 P-4, 2 P-3, 1 P-2	7	50
	TOTAL	58		7	65
<i>Non-Member States</i>					
Switzerland	1 P-5, 1 P-2	2	1 P-4	1	3
Stateless	—	—	1 P-3	1	1
	TOTAL	2		2	4
GRAND TOTAL	(95 nationalities)	367	(26 nationalities)	88	455

<sup>a</sup>Consists mainly of staff in posts with special language requirements but also includes 13 special technical advisers and 4 interregional advisers.

<sup>b</sup>Includes 1 P-4 on secondment to UNDP (Kinshasa).

<sup>c</sup>Includes 1 D-2 on assignment to ESCAP (Bangkok).

<sup>d</sup>Includes 1 P-4 on assignment as SIDFA (Madagascar).

<sup>e</sup>Includes 1 P-5 on assignment as SIDFA (Barbados).

<sup>f</sup>Includes 1 P-4 on secondment to UNDP (New York) and 1 P-3 on assignment to United Nations Headquarters.

<sup>g</sup>Includes 1 P-4 on assignment as SIDFA (Honduras).

<sup>h</sup>Includes 1 P-4 on loan to IAEA.

TABLE 2. DISTRIBUTION OF PROFESSIONAL AND HIGHER CATEGORY STAFF OF UNIDO, INCLUDING STAFF WITH FIXED-TERM CONTRACTS OF LESS THAN ONE YEAR, BROKEN DOWN ACCORDING TO THE LISTS OF STATES ELIGIBLE FOR MEMBERSHIP IN THE INDUSTRIAL DEVELOPMENT BOARD (AS AT 31 DECEMBER 1984)

Country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution <sup>a</sup>	Number	Total
<i>Countries included in List A</i>					
Afghanistan	1 P-4	1	—	—	1
Algeria	1 USG, 1 D-2	2	1 P-4	1	3
Angola	1 P-3	1	—	—	1
Bangladesh	1 P-4	1	1 D-1	1	2
Burkina Faso	1 P-3, 1 P-2	2	—	—	2
Burma	1 P-5, 1 P-4	2	—	—	2
Burundi	1 P-4	1	—	—	1
China	1 D-1, 2 P-5, 1 P-4 1 P-3	5	1 P-5, 3 P-4, 2 P-3, 2 P-2	8	13
Cameroon	1 P-5, 1 P-4, 1 P-3	3	—	—	3
Congo	1 D-2	1	—	—	1
Democratic Yemen	2 P-4	2	—	—	2
Egypt	1 D-1, 1 P-4	2	1 L-7, 2 L-5, 1 L-3, 1 P-4	5	7
Ethiopia	1 D-1, 1 P-4	2	—	—	2
Guinea	1 P-4, 1 P-3	2	—	—	2
India	1 D-2, 1 D-1, 1 P-5, 1 P-2	4	1 L-7, 2 L-6, 3 L-5	6	10
Iran (Islamic Republic of)	2 P-5, 1 P-4, 1 P-3	4	—	—	4
Iraq	2 P-5, 1 P-4, 1 P-3	4	—	—	4
Ivory Coast	1 P-3, 1 P-2	2	—	—	2
Kenya	1 P-5	1	—	—	1
Lebanon	2 P-5	2	—	—	2
Lesotho	1 P-2	1	—	—	1
Libyan Arab Jamahiriya	1 P-4, 1 P-3	2	—	—	2
Madagascar	1 P-4, 1 P-3	2	—	—	2
Malaysia	1 P-4	1	1 P-4	1	2
Mali	1 P-5	1	—	—	1
Morocco	1 P-5, 1 P-4, <sup>b</sup> 1 P-3	3	—	—	3
Nepal	1 P-5	1	—	—	1
Niger	1 P-2	1	—	—	1
Nigeria	1 D-1	1	—	—	1
Pakistan	1 D-2 <sup>c</sup>	1	1 L-6, 1 L-5	2	3
Philippines	1 P-5, 1 P-4	2	—	—	2
Rwanda	1 P-3	1	—	—	1
Somalia	1 P-5, 1 P-4	2	—	—	2
Sri Lanka	—	—	1 L-7, 1 L-5	2	2
Sudan	1 D-1, 1 P-5	2	1 P-2	1	3
Syrian Arab Republic	2 P-5	2	1 P-4, 1 P-2	2	4
Togo	1 P-3	1	—	—	1
Tunisia	1 P-5	1	—	—	1
Uganda	1 P-4	1	—	—	1
Yemen	1 P-5	1	—	—	1
Yugoslavia	1 D-1, 1 P-5, 1 P-4, 2 P-3	5	—	—	5
Zaire	1 P-4	1	—	—	1
Zambia	1 P-2	1	—	—	1
	TOTAL	78		29	107
<i>Countries included in List B</i>					
Australia	1 P-5, 2 P-4	3	—	—	3
Austria	1 D-1, 1 P-5, 7 P-4, 9 P-3, 2 P-2, 1 P-1	21	1 L-4, 1 P-4, 1 P-3	3	24

TABLE 2 (continued)

Country	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution <sup>d</sup>	Number	Total
<i>Countries included in List B (continued)</i>					
Belgium	1 P-5, 3 P-4, <sup>d</sup> 2 P-3	6	1 P-5	1	7
Canada	1 D-1, 2 P-5, 3 P-4, 2 P-3	8	—	—	8
Cyprus	1 P-4	1	—	—	1
Denmark	1 P-5, 3 P-4	4	—	—	4
Finland	2 P-5, 3 P-4, 1 P-2	6	—	—	6
France	1 ASG, 3 P-4, 5 P-3, 1 P-2	10	1 L-6, 5 P-4, 8 P-3	14	24
Germany, Federal Republic of	1 D-1, 7 P-5, 7 P-4, 5 P-3, 4 P-2	24	1 D-2	1	25
Greece	2 P-3, 1 P-2	3	—	—	3
Ireland	1 D-1, 1 P-5, <sup>e</sup> 1 P-4, 1 P-2	4	1 P-4, 1 P-3	2	6
Italy	2 D-1, 2 P-5, 2 P-4, 2 P-3, 3 P-2	11	—	—	11
Japan	1 D-1, 2 P-5, 3 P-4, 4 P-3, 3 P-2	13	—	—	13
Malta	1 P-4	1	—	—	1
Netherlands	1 P-4, 2 P-3, 2 P-2	5	—	—	5
New Zealand	1 P-4, 1 P-3	2	—	—	2
Norway	1 D-1, 1 P-4	2	—	—	2
Portugal	2 P-5, 2 P-4, 1 P-3	5	—	—	5
Spain	1 P-5, 2 P-2	3	1 P-5, 2 P-4, 3 P-3	6	9
Sweden	1 D-1, 5 P-5, 2 P-4	8	—	—	8
Switzerland	1 P-5, 1 P-2	2	1 P-4	1	3
Turkey	1 P-5, 3 P-4, 1 P-3, 1 P-2	6	—	—	6
United Kingdom	1 D-1, 2 P-5, 5 P-4, 3 P-2	11	1 P-5, 2 P-4, <sup>f</sup> 3 P-3, <sup>f</sup> 1 P-2	7	18
United States	1 D-2, 3 D-1, 10 P-5, 15 P-4, <sup>g</sup> 7 P-3, 6 P-2, 1 P-1	43	2 L-6, 1 L-3, 1 P-4, 2 P-3, 1 P-2	7	50
	TOTAL	202		42	244
<i>Countries included in List C</i>					
Argentina	2 P-3	2	1 P-3, 2 P-2	3	5
Barbados	1 P-3	1	—	—	1
Bolivia	1 P-5	1	1 P-5	1	2
Brazil	2 P-5, 1 P-4, 1 P-2	4	—	—	4
Colombia	2 P-4, 2 P-3	4	1 P-4	1	5
Costa Rica	2 P-3	2	—	—	2
Cuba	2 P-4	2	1 P-2	1	3
Ecuador	1 P-3	1	1 P-5	1	2
El Salvador	2 P-5, 1 P-3	3	—	—	3
Grenada	1 P-4	1	—	—	1
Guatemala	1 P-3	1	—	—	1
Guyana	1 P-5, 1 P-3	2	—	—	2
Haiti	1 D-1	1	—	—	1
Jamaica	1 P-5	1	—	—	1
Mexico	1 P-5	1	—	—	1
Panama	1 P-3	1	—	—	1
Peru	3 P-4 <sup>h</sup>	3	—	—	3
Saint Vincent and the Grenadines	1 P-4	1	—	—	1
Trinidad and Tobago	1 P-5	1	—	—	1
Venezuela	1 P-5, 1 P-2	2	—	—	2
	TOTAL	35		7	42

<i>Country</i>	<i>Occupied posts subject to geographical distribution</i>	<i>Number</i>	<i>Occupied posts not subject to geographical distribution<sup>a</sup></i>	<i>Number</i>	<i>Total</i>
<i>Countries included in List D</i>					
Bulgaria	2 P-4, 1 P-3	3	—	—	3
Byelorussian SSR	2 P-3	2	—	—	2
Czechoslovakia	1 P-5, 1 P-4, 1 P-2	3	—	—	3
German Democratic Republic	2 P-5, 1 P-4	3	—	—	3
Hungary	1 D-1, 3 P-5, 2 P-4	6	—	—	6
Poland	1 P-5, 1 P-4, 2 P-3	4	1 L-6	1	5
Romania	1 P-5	1	—	—	1
Ukrainian SSR	3 P-4	3	—	—	3
USSR	1 D-2, 1 D-1, 4 P-5, 10 P-4, 10 P-3, 1 P-2	27	1 P-5, 2 P-4, 4 P-3, 1 P-2	8	35
	TOTAL	52		9	61
<i>Other</i>					
Stateless	—	—	1 P-3	1	1
GRAND TOTAL	(95 nationalities)	367	(26 nationalities)	88	455

<sup>a</sup>Consists mainly of staff in posts with special language requirements but also includes 13 special technical advisers and 4 interregional advisers.

<sup>b</sup>Includes 1 P-4 on secondment to UNDP (Kinshasa).

<sup>c</sup>Includes 1 D-2 on assignment to ESCAP (Bangkok).

<sup>d</sup>Includes 1 P-4 on assignment as SIDFA (Madagascar).

<sup>e</sup>Includes 1 P-5 on assignment as SIDFA (Barbados).

<sup>f</sup>Includes 1 P-4 on secondment to UNDP (New York) and 1 P-3 on assignment to United Nations Headquarters.

<sup>g</sup>Includes 1 P-4 on loan to IAEA.

<sup>h</sup>Includes 1 P-4 on assignment as SIDFA (Honduras).

## APPENDIX G

### Distribution of posts of Senior Industrial Development Field Advisers (SIDFAs) and Junior Professional Officers (JPOs) in 1984

TABLE 1. COUNTRIES AND TERRITORIES COVERED BY SIDFAs AND JPOs

<i>SIDFA duty station</i>	<i>Group of countries/ territories covered by each SIDFA</i>	<i>Country covered by JPO</i>	<i>JPO donor country</i>
<i>Africa</i>			
Addis Ababa (Ethiopia)	Ethiopia*	Ethiopia*	Netherlands
Antananarivo (Madagascar)	Comoros* Madagascar Mauritius	Madagascar	Denmark

TABLE 1 (continued)

<i>SIDFA duty station</i>	<i>Group of countries/ territories covered by each SIDFA</i>	<i>Country covered by JPO</i>	<i>JPO donor country</i>
<i>Africa (continued)</i>			
Conakry (Guinea)	Cape Verde* Guinea* Guinea-Bissau*	Guinea*	Netherlands <sup>a, b</sup>
Dakar (Senegal)	Gambia* Mali* Mauritania Senegal	Mali* Mauritania Senegal	Belgium Belgium Belgium
Dar es Salaam (United Republic of Tanzania)	Malawi* Seychelles United Republic of Tanzania*	Malawi*  United Republic of Tanzania*	Finland  Norway
Freetown (Sierra Leone)	Ghana Liberia Sierra Leone*	Liberia Sierra Leone*	Denmark Denmark <sup>b</sup>
Kinshasa (Zaire)	Burundi* Congo Rwanda*  Zaire	Rwanda*	Federal Republic of Germany
Lomé (Togo)	Benin* Burkina Faso* Ivory Coast Niger* Togo*	Burkina Faso* Ivory Coast Niger* Togo*	Netherlands Belgium Netherlands <sup>a</sup> Netherlands <sup>a</sup>
Luanda (Angola)	Angola Sao Tome and Principe*	Angola	Denmark
Lusaka (Zambia)	Botswana* Zambia Zimbabwe	Zambia Zimbabwe	Netherlands/Finland <sup>b</sup> Denmark/Norway <sup>b</sup>
Maputo (Mozambique)	Lesotho* Mozambique Swaziland	Mozambique  Kenya Nigeria	Sweden  Denmark Netherlands
Yaoundé (Cameroon)	Cameroon Central African Republic* Chad* Equatorial Guinea* Gabon	Cameroon  Chad*	Netherlands  Switzerland
<i>The Americas</i>			
Brasília (Brazil)	Brazil  Paraguay	Brazil	Federal Republic of Germany



<i>SIDFA duty station</i>	<i>Group of countries/ territories covered by each SIDFA</i>	<i>Country covered by JPO</i>	<i>JPO donor country</i>
Bridgetown (Barbados)	Antigua and Barbuda Barbados British Virgin Islands Dominica/Montserrat Grenada Guyana Saint Christopher and Nevis Saint Lucia/Saint Vincent and the Grenadines Suriname/ Netherlands Antilles Trinidad and Tobago	Barbados           Trinidad and Tobago	Netherlands           Federal Republic of Germany
Kingston (Jamaica)	Bahamas/Bermuda Cayman Islands Dominican Republic Haiti* Jamaica  Turks and Caicos Islands	    Jamaica	    Belgium/Federal Republic of Germany <sup>b</sup>
La Paz (Bolivia)	Argentina Bolivia Uruguay	Argentina Bolivia	Belgium <sup>b</sup> Italy
Lima (Peru)	Chile Colombia Ecuador Peru	  Ecuador Peru	  Denmark Netherlands
Mexico City (Mexico)	Cuba  Mexico  Venezuela	Cuba  Mexico  Venezuela	Federal Republic of Germany Netherlands/Federal Republic of Germany <sup>b</sup> Netherlands <sup>a</sup>
Tegucigalpa (Honduras)	Belize Costa Rica El Salvador Guatemala  Honduras Nicaragua Panama	 Costa Rica El Salvador Guatemala  Honduras Nicaragua Panama	Switzerland Japan Federal Republic of Germany Netherlands Finland <sup>b</sup> Belgium
<i>Arab States</i>			
Damascus (Syrian Arab Republic) <sup>c</sup>	Syrian Arab Republic		
Khartoum (Sudan)	Sudan*  Yemen*  Democratic Yemen* Tunisia	Sudan*  Yemen*  Democratic Yemen* Tunisia	Federal Republic of Germany/ Netherlands <sup>b</sup> Federal Republic of Germany Netherlands <sup>a</sup> Belgium <sup>b</sup>

## Appendix G

TABLE I (continued)

<i>SIDFA duty station</i>	<i>Group of countries/ territories covered by each SIDFA</i>	<i>Country covered by JPO</i>	<i>JPO donor country</i>
<i>Asia and the Pacific</i>			
Bangkok (Thailand)	Malaysia Thailand	Malaysia Thailand	Denmark Japan
Beijing (China)	China		
Colombo (Sri Lanka)	Maldives* Nepal* <sup>d</sup> Sri Lanka	Nepal* Sri Lanka	Netherlands Sweden
Dacca (Bangladesh)	Bangladesh*	Bangladesh*	Finland/Netherlands <sup>b</sup>
Islamabad (Pakistan)	Pakistan	Pakistan	Netherlands
Jakarta (Indonesia)	Indonesia	Indonesia	Switzerland/Japan <sup>b</sup>
Manila (Philippines) <sup>c</sup>	Philippines	Philippines	Netherlands
New Delhi (India)	Bhutan* <sup>d</sup> India		
Rangoon (Burma)	Burma Lao People's Democratic Republic* <sup>d</sup> Viet Nam		
Seoul (Republic of Korea)	Republic of Korea <sup>e</sup>		
Suva (Fiji)	Cook Islands Fiji Kiribati Nauru Niue Papua New Guinea Samoa* Solomon Islands Tonga Trust Territory of Pacific Islands (Ponape, Kosrae, Truk, Yap) Tuvalu Vanuatu		
<i>Europe</i>			
Ankara (Turkey) <sup>c</sup>	Turkey	Turkey	Federal Republic of Germany

*Note:* An asterisk indicates that the country is included in the list of least developed countries.

<sup>a</sup>JPO from a developing country.

<sup>b</sup>Two consecutive JPOs in course of 1984.

<sup>c</sup>Discontinued during 1984.

<sup>d</sup>Covered on an *ad hoc* basis only.

<sup>e</sup>Acting SIDFA.

TABLE 2. JPO DONOR COUNTRIES

Country	Number of JPOs
Belgium	10
Denmark	9 <sup>a</sup>
Finland	5 <sup>a</sup>
Germany, Federal Republic of	9
Italy	1
Japan	3
Netherlands	21 <sup>a, b</sup>
Norway	2
Sweden	2
Switzerland	3
	TOTAL
	65

<sup>a</sup>1 JPO placed at UNIDO headquarters.

<sup>b</sup>6 JPOs from developing countries.

## APPENDIX H

### Regular programme of technical co-operation, approvals and deliveries, 1984

(In thousands of US dollars)

Component	1984 regular programme		
	Allocations approved by the IDB for the biennium 1984-1985	Additional allocations in 1984	Deliveries in 1984
Training of developing countries' personnel in various industrial fields			
Individual fellowships	600	—	263
Group training programmes	900	—	498
Establishment and strengthening of training facilities in developing countries	700	—	109
Special activities for the least developed among the developing countries	2 220	—	633
Regional advisory services	700	—	446
Short-term advisory services	850	—	385
Co-operation among developing countries	511	—	135
Consultations with Governments	130	—	24
Subtotal	6 611		2 493
Industrial Development Decade for Africa	—	1 000 <sup>a</sup>	1 093
Special allocation in non-convertible currencies	—	507	79
Subtotal		1 507	1 172
TOTAL		7 118	3 665

<sup>a</sup>Allocation from the regular budget, approved by the General Assembly in resolution 38/192.

## APPENDIX I

## United Nations Industrial Development Fund (UNIDF)

TABLE 1. UNIDF STATEMENT OF PLEDGES FOR THE PERIOD 1978-1984 AS AT 31 DECEMBER 1984

(In US dollars)

Appendix I

Country/organization	Total pledges for 1978-1983	Pledges for 1984	Exchange adjustments	Pledges for 1985	Collections during 1978-1984	Total unpaid pledges
<i>General contributions</i>						
Afghanistan	6 500	1 500	—	1 500	8 000	1 500
Algeria	409 000	40 000	—	40 000	409 000	80 000
Angola	60 000	—	—	—	60 000	—
Argentina	246 100	—	—	—	246 100	—
Austria	185 529	54 645	(18 886)	46 512	221 288	46 512
Bahrain	30 000	5 000	—	5 000	35 000	5 000
Bangladesh	20 079	2 200	(50)	2 420	22 053	2 596
Barbados	9 000	2 000	—	2 000	11 000	2 000
Benin	25 428	—	(286)	—	25 142	—
Bhutan	6 066	1 200	—	1 320	6 066	2 520
Bolivia	5 000	1 000	—	1 000	5 000	2 000
Botswana	17 757	4 587	(1 209)	—	17 757	3 378
Brazil	90 000	15 000	—	—	75 000	30 000
Bulgaria	398 623	101 523	(13 744)	101 523	384 879	203 046
Burkina Faso	24 646	2 513	(903)	—	26 256	—
Burma	6 846	1 000	(14)	1 000	7 832	1 000
Burundi	6 339	—	—	—	6 339	—
Cameroon	15 060	—	(879)	—	14 181	—
Cape Verde	2 000	—	—	—	2 000	—
Chad	7 068	—	(2 813)	—	—	4 255
Chile	42 000	10 000	—	10 000	52 000	10 000
China	1 840 968	303 030	(50 697)	115 830	2 093 301	115 830
Colombia	26 417	5 711	—	5 700	32 128	5 700
Congo	13 767	10 000	165	11 000	12 851	22 081
Costa Rica	9 857	7 000	—	12 250	13 443	15 664
Cuba	186 201	24 202	(1 229)	23 333	209 174	23 333
Cyprus	6 985	806	(131)	1 210	6 854	2 016
Czechoslovakia	161 114	—	—	—	161 114	—
Democratic Yemen	13 088	—	—	4 000	13 088	4 000
Djibouti	4 000	—	—	—	4 000	—
Dominica	1 500	1 852	(12)	—	2 340	1 000

Dominican Republic	5 000	—	—	—	5 000	—
Ecuador	13 004	5 000	—	6 500	17 704	6 800
Egypt	405 392	72 492	—	72 492	477 884	72 492
Ethiopia	—	1 122	—	1 111	1 122	1 111
Fiji	6 600	1 050	20	1 000	7 670	1 000
Gabon	10 329	—	—	—	10 329	—
German Democratic Republic	895 129	123 077	1 394	100 662	1 019 600	100 662
Ghana	74 176	—	—	—	74 176	—
Greece	122 000	—	—	36 000	122 000	36 000
Guatemala	25 000	—	—	5 000	25 000	5 000
Guinea	8 145	—	—	—	8 145	—
Guinea-Bissau	395	—	(7)	—	388	—
Guyana	8 584	—	—	706	8 584	706
Holy See	1 000	—	—	—	1 000	—
Honduras	1 000	1 000	—	1 000	2 000	1 000
Hungary	415 999	68 074	(1 629)	56 501	482 444	56 501
India	6 012 595	1 000 000	—	500 000	6 212 595	1 300 000
Indonesia	240 000	50 000	—	50 000	290 000	50 000
Iran (Islamic Republic of)	85 000	—	—	—	85 000	—
Iraq	1 088 983	—	(16 402)	—	750 000	322 581
Ireland	74 130	—	—	—	74 130	—
Ivory Coast	38 230	—	—	—	38 230	—
Jamaica	24 000	4 000	—	4 000	28 000	4 000
Jordan	25 637	—	—	—	25 637	—
Kenya	44 920	19 390	(2 826)	15 252	51 484	25 252
Kuwait	350 000	75 000	—	—	425 000	—
Lao People's Democratic Republic	7 500	1 500	—	1 500	7 500	3 000
Lebanon	2 000	2 000	—	—	2 000	2 000
Lesotho	10 000	2 000	—	—	12 000	—
Liberia	2 500	—	—	—	2 500	—
Libyan Arab Jamahiriya	305 000	—	—	—	305 000	—
Luxembourg	47 919	5 446	(1 491)	4 754	51 874	4 754
Madagascar	32 536	2 733	(1 953)	1 629	31 202	3 743
Malawi	13 039	2 344	23	2 349	15 406	2 349
Malaysia	80 000	20 000	—	20 000	99 550	20 450
Mali	1 767	—	361	—	—	2 128
Malta	8 265	—	(18)	—	8 247	—
Mauritania	4 777	1 431	—	—	6 208	—
Mauritius	6 907	836	(149)	—	7 594	—
Mexico	81 045	15 000	—	—	96 045	—
Mongolia	13 427	2 169	(39)	2 082	15 557	2 082
Morocco	67 151	6 417	(4 877)	—	57 942	10 749
Mozambique	9,026	—	(154)	—	8 872	—
Nepal	3 500	700	—	—	4 200	—
Nicaragua	1 000	—	—	—	1 000	—

TABLE 1 (continued)

Country/organization	Total pledges for 1978-1983	Pledges for 1984	Exchange adjustments	Pledges for 1985	Collections during 1978-1984	Total unpaid pledges
<i>General contributions (continued)</i>						
Nigeria	225 000	50 000	—	50 000	275 000	50 000
Oman	58 000	12 000	—	12 000	70 000	12 000
Pakistan	300 065	75 019	(20 274)	73 684	354 810	73 684
Panama	8 586	2 000	—	2 000	10 586	2 000
Paraguay	24 000	6 000	—	6 000	6 000	30 000
Peru	45 000	20 000	—	20 000	60 000	25 000
Philippines	135 000	13 500	—	1 000	135 686	13 814
Poland	684 876	157 895	—	147 541	842 771	147 541
Portugal	70 977	15 000	(565)	15 000	85 412	15 000
Qatar	145 000	—	—	30 000	145 000	30 000
Republic of Korea	150 000	30 000	—	30 000	180 000	30 000
Romania	161 364	—	—	—	161 364	—
Rwanda	12 000	4 000	—	—	16 000	—
Samoa	300	—	—	—	300	—
Saudi Arabia	6 000 000	1 000 000	—	1 000 000	7 000 000	1 000 000
Senegal	23 000	4 000	—	3 000	—	30 000
Seychelles	4 714	—	—	—	4 714	—
Sierra Leone	7 200	2 000	—	2 000	7 200	4 000
Singapore	4 000	—	—	—	4 000	—
Somalia	4 808	—	—	—	2 341	2 467
Sri Lanka	18 000	3 000	(3)	3 000	20 939	3 058
Sudan	70 000	11 719	—	15 000	15 235	81 484
Suriname	6 000	—	—	2 000	6 000	2 000
Swaziland	7 121	—	(317)	—	6 804	—
Syrian Arab Republic	111 639	—	—	—	111 639	—
Thailand	126 823	23 084	(60)	—	149 847	—
Togo	22 489	1 256	(2 414)	—	18 139	3 192
Trinidad and Tobago	119 701	20 000	—	—	139 701	—
Tunisia	113 166	22 101	(4 464)	19 953	130 804	19 952
Turkey	614 727	—	(60 552)	—	546 254	7 921
Uganda	2 447	—	(109)	—	2 320	18
Union of Soviet Socialist Republics	4 327 630	657 895	(33 795)	586 854	4 951 730	586 854
United Arab Emirates	65 000	—	—	—	65 000	—
United Republic of Tanzania	12 397	1 643	(1 289)	—	12 751	—
Uruguay	49 432	—	—	—	49 432	—
Venezuela	124 000	—	(37)	7 376	123 963	7 376
Viet Nam	4 000	1 000	(139)	1 000	3 861	2 000
Yemen	5 011	—	—	—	2 011	3 000

Yugoslavia	924 988	—	—	—	923 935	1 053
Zaire	15 429	3 000	—	—	15 429	3 000
Zambia	62 411	11 194	(6 458)	9 804	59 494	17 457
Zimbabwe	18 020	11 538	—	8 966	29 558	8 966
Non-governmental organizations	30 000	4 028	—	—	34 028	—
Total general contributions	29 463 866	4 240 422	(248 911)	3 314 314	31 939 063	4 830 628

*Special-purpose contributions*

Argentina	22 400	—	—	—	22 400	—
Australia	765 507	138 889	(68 667)	168 067	835 513	168 283
Austria	2 769 577	553 486	(86 961)	604 651	3 236 102	604 651
Belgium	3 191 946	450 704	(60 460)	393 443	3 582 190	393 443
Brazil	100 108	—	—	—	100 108	—
China	273 648	100 000	—	250 000	373 648	250 000
Czechoslovakia	931 598	155 763	(526)	167 504	1 057 933	196 406
Democratic Yemen	32 000	—	—	—	32 000	—
Denmark	202 684	—	—	—	202 684	—
Egypt	—	142 539	—	—	142 539	—
Finland	1 147 813	429 558	(144 987)	—	1 113 654	318 730
France	2 837 105	1 069 183	(218 077)	904 255	3 688 211	904 255
German Democratic Republic	423 344	384 615	(27 405)	5 298	780 554	5 298
Germany, Federal Republic of	11 391 031	2 377 192	(80 309)	2 317 881	13 687 914	2 317 881
Hungary	259 576	—	—	6 278	259 576	6 278
India	—	—	—	500 000	—	500 000
Italy	8 220 872	2 515 723	(871 817)	2 105 263	7 759 515	4 210 526
Ivory Coast	224 089	152 490	(43 279)	—	247 260	86 040
Japan	2 677 377	1 401 991	—	—	4 079 368	—
Kenya	—	10 000	—	—	10 000	—
Malta	15 920	—	—	—	15 920	—
Mexico	50 707	—	—	—	50 707	—
Netherlands	24 792	—	—	441 176	24 792	441 176
Norway	73 110	—	—	—	73 110	—
Poland	77 841	78 636	(18 838)	78 750	104 278	112 111
Qatar	10 000	—	—	—	10 000	—
Spain	—	27 000	—	—	—	27 000
Sweden	4 820 523	—	(76 255)	—	4 744 268	—
Switzerland	3 090 273	1 056 338	(156 338)	1 056 338	3 090 273	1 956 338
Turkey	258 304	246 522	(89 189)	223 529	415 637	223 529
United Kingdom	2 376 742	—	(320 606)	152 047	2 056 136	152 047
Yugoslavia	124 882	161 435	(74 482)	194 596	211 835	194 596
Non-governmental organizations	29 892	—	—	—	29 892	—
Total special-purpose contributions	46 423 661	11 452 064	(2 338 196)	9 569 076	52 038 017	13 068 588
TOTAL UNIDF	75 887 527	15 692 486	(2 587 107)	12 883 390	83 977 080	17 899 216

Appendix I

TABLE 2. STATUS OF RESOURCES OF UNIDF AS AT 31 DECEMBER 1984

(In thousands of US dollars)

	Convertible		Non-convertible	Total
	General purpose	Special purpose		
<i>Income</i>				
Pledges, 1978 to 1985	21 323	63 590	19 551	104 464
Interest and other income	7 047	(5 187)	(2 479)	(619)
Balance from former General Trust Fund (GTF)	1 967	748	3 000	5 715
<b>TOTAL INCOME</b>	<b>30 337</b>	<b>59 151</b>	<b>20 072</b>	<b>109 560</b>
<i>Approvals</i>				
<i>Projects</i>				
Expenditure, 1978 to 1984	19 952	39 252	14 420	73 624
Commitments, 1985 and future	205	1 696	203	2 104
Not yet implemented	4 299	8 171	1 419	13 889
Subtotal	24 456	49 119	16 042	89 617
<i>Support costs, 1978 to 1984</i>				
General purpose convertible	2 740	—	—	2 740
Special purpose convertible	—	4 664	—	4 664
Non-convertible	1 901 <sup>a</sup>	—	—	1 901
Subtotal	4 641	4 664	—	9 305
<i>Reserve for support costs, 1985 and future</i>				
General purpose convertible	586	—	—	586
Special purpose convertible	—	1 283	—	1 283
Non-convertible	211 <sup>a</sup>	—	—	211
Subtotal	797	1 283	—	2 080
<b>TOTAL APPROVALS</b>	<b>29 894</b>	<b>55 066</b>	<b>16 042</b>	<b>101 002</b>
Programmable balance	443	4 085	4 030	8 558
Operational reserve	498	—	—	498
<b>AVAILABLE FOR FUTURE PROJECTS</b>	<b>(55)</b>	<b>4 085</b>	<b>4 030</b>	<b>8 060</b>
<i>Cash position</i>				
Total income	30 337	59 151	20 072	109 560
Uncollected	3 288	11 637	2 323	17 248
Received	27 049	47 514	17 749	92 312
Disbursements, 1978 to 1984	23 014	41 119	13 044	77 177
<b>CASH BALANCE</b>	<b>4 035</b>	<b>6 395</b>	<b>4 705</b>	<b>15 135</b>
Unliquidated obligations	1 579	2 797	1 376	5 752
Commitments, 1985 and future	205	1 696	203	2 104
Reserve for support costs, 1985 and future	797	1 283	—	2 080
Operational reserve	498	—	—	498
<b>COMMITMENTS</b>	<b>3 079</b>	<b>5 776</b>	<b>1 579</b>	<b>10 434</b>
<b>UNCOMMITTED CASH BALANCE</b>	<b>956</b>	<b>619</b>	<b>3 126</b>	<b>4 701</b>

<sup>a</sup>Support costs for projects financed from non-convertible currencies are charged to the general convertible segment.



TABLE 3. CUMULATIVE LIST OF PROJECTS APPROVED FOR FINANCING UNDER UNIDF, CLASSIFIED ACCORDING TO THE UNIDF PRIORITY AREA, AS AT 31 DECEMBER 1984

UNIDF priority area	Number of projects	Convertible (including overheads) (in US dollars)	Non-convertible US dollar equivalent	Total (in US dollars)	Percentages	
					Desirable allocation <sup>a</sup>	Actual allocation
Special measures for industrial development of the least developed countries	71	5 603 381	2 024 896	7 628 277	10	8
Transfer and adaptation of technology and development of appropriate technology and industrial information	181	15 905 581	789 271	16 694 852	10	19
Economic and technical co-operation among developing countries	66	3 780 931	1 291 784	5 072 715	9	6
Group training and strengthening industrial training institutions in developing countries	311	15 568 404	10 206 266	25 774 670	10	29
Industrial institutional infrastructure	51	3 133 631	427 944	3 561 575	10	4
Industries processing local natural resources including export-oriented industries	73	8 302 068	477 943	8 780 011	12	10
Industries satisfying basic needs and support to rural industries	53	4 859 182	167 743	5 026 925	8	5
Promotional activities	125	14 819 103	618 250	15 437 353	8	17
Other activities	34	1 607 064	104 902	1 711 966	5	2
TOTAL	965	73 579 345	16 108 999	89 688 344	82	100

<sup>a</sup>The key to the resource allocations is as follows:

	Percentages
Resources available to finance projects	82
Programme support and administration	13
Transfer to reserves	5
	<u>100</u>

## APPENDIX J

### Geographical distribution of experts

*(Listed in descending order)*

TABLE I. 1 JANUARY-31 DECEMBER 1984

<i>Country</i>	<i>Number of appointments</i>	<i>Country</i>	<i>Number of appointments</i>
Poland	154	German Democratic Republic	5
United Kingdom	122	Jamaica	5
France	76	Malaysia	5
United States of America	73	New Zealand	5
Germany, Federal Republic of	66	Pakistan	5
India	63	Sri Lanka	5
Austria	56	Bulgaria	4
Netherlands	35	Colombia	3
Belgium	28	Tunisia	3
Hungary	27	Turkey	3
Italy	27	Bangladesh	2
Sweden	26	Bolivia	2
USSR	22	Ecuador	2
Egypt	21	Ethiopia	2
Finland	20	Senegal	2
Australia	17	Stateless	2
Brazil	17	Uruguay	2
Czechoslovakia	16	Cameroon	1
Yugoslavia	15	China	1
Canada	14	Cuba	1
Romania	14	El Salvador	1
Spain	14	Ghana	1
Mexico	13	Greece	1
Japan	12	Iran (Islamic Republic of)	1
Norway	12	Ivory Coast	1
Argentina	11	Madagascar	1
Denmark	11	Mali	1
Switzerland	11	Mauritius	1
Indonesia	10	Nicaragua	1
Ireland	9	Republic of Korea	1
Israel	9	Sierra Leone	1
Algeria	6	Sudan	1
Peru	6	Syrian Arab Republic	1
Philippines	6	Thailand	1
Portugal	6	United Republic of Tanzania	1
Venezuela	6	Zaire	1
Chile	5		
		TOTAL	1 132

TABLE 2. 1971-1984

<i>Country</i>	<i>Number of appointments</i>	<i>Country</i>	<i>Number of appointments</i>
United Kingdom	1 457	Bolivia	15
United States of America	940	Republic of Korea	15
France	797	Stateless	15
Poland	797	Venezuela	15
India	732	Senegal	14
Germany, Federal Republic of	629	China	12
Austria	360	Ecuador	12
Sweden	356	Indonesia	12
Belgium	350	Iraq	12
Italy	293	Jamaica	12
Egypt	285	Greece	10
Netherlands	254	Iran (Islamic Republic of)	10
Yugoslavia	252	Sudan	10
Hungary	230	Malaysia	9
Argentina	208	Haiti	8
Denmark	198	Mauritius	8
Spain	182	Bangladesh	7
USSR	166	El Salvador	7
Canada	158	Nicaragua	6
Switzerland	144	Togo	6
Finland	136	Ghana	5
Romania	125	Lebanon	5
Chile	122	Cameroon	4
Norway	116	Zaire	4
Japan	115	Cuba	3
Czechoslovakia	114	Ethiopia	3
Australia	110	Guatemala	3
Israel	107	Ivory Coast	3
Brazil	81	Jordan	3
Ireland	77	Malta	3
Sri Lanka	68	Barbados	2
Pakistan	66	Benin	2
New Zealand	57	Burma	2
Philippines	55	Byelorussian SSR	2
Peru	52	Madagascar	2
Mexico	51	Niger	2
Bulgaria	47	Paraguay	2
Portugal	32	Thailand	2
Syrian Arab Republic	25	Viet Nam	2
Turkey	25	Costa Rica	1
Colombia	23	Guyana	1
German Democratic Republic	19	Mauritius	1
Uruguay	19	Nepal	1
Mali	18	Sierra Leone	1
Tunisia	18	United Republic of Tanzania	1
Algeria	15	Zimbabwe	1
		TOTAL	10 757

## APPENDIX K

**Expert group meetings, symposia, seminars,  
workshops, courses and other meetings of  
a non-training character held during 1984**

<i>Date</i>		<i>Place</i>
<i>Office of the Executive Director</i>		
18-22 February	Subregional meeting on the promotion of intra-African industrial co-operation within the framework of the Industrial Development Decade for Africa <sup>a</sup>	Bangui Central African Republic
7-10 March	Subregional meeting on the promotion of intra-African industrial co-operation within the framework of the Industrial Development Decade for Africa <sup>a</sup>	Tunis Tunisia
26-28 March	Intergovernmental meeting of experts of the whole <sup>b</sup>	Addis Ababa Ethiopia
2-18 May	Industrial Development Board—eighteenth session	Vienna Austria
2-19 August	Fourth General Conference of UNIDO	Vienna Austria
22-26 October	Expert group meeting on the implications of new technologies in the implementation of the Lagos Plan of Action and the programme for the Industrial Development Decade for Africa <sup>c</sup>	Mbabane Swaziland
19-23 November	Permanent Committee of the Industrial Development Board—twenty-first session	Vienna Austria
<i>Negotiations</i>		
23-27 January	Fourth consultation on the fertilizer industry	New Delhi India
2-3 February	Preparatory meeting for the third consultation on the leather and leather products industry	Vienna Austria
6-8 February	Expert group meeting on downstream processing activities in the vegetable oils and fats industry in developing countries	Vienna Austria
16-19 April	Third consultation on the leather and leather products industry	Innsbruck Austria
17 May	<i>Ad hoc</i> meeting on role of co-operatives in integrated development of food-processing industry in developing countries	Vienna Austria
8 June	<i>Ad hoc</i> expert group meeting on integrated development in the food-processing industry	Vienna Austria
12-15 June	<i>Ad hoc</i> expert group meeting in preparation for the first consultation on building materials industry	Vienna Austria
3-6 July	Expert group meeting on UNIDO model form of semi-turnkey contract for the construction of a fertilizer plant (guidelines and illustrative clauses)	Vienna Austria

<i>Date</i>		<i>Place</i>
9-13 July	Expert group meeting on UNIDO model form of licensing and engineering services agreement for the construction of a fertilizer plant (guidelines and illustrative clauses)	Vienna Austria
17-18 September	Advisory panel on petrochemicals, second meeting	Vienna Austria
19-21 September	Expert group meeting on international co-operation on petrochemicals	Vienna Austria
24-28 September	Global preparatory meeting for the first consultation on the building materials industry	Vienna Austria
15-19 October	Second consultation on the food-processing industry with special emphasis on vegetable oils and fats	Copenhagen Denmark
12-14 November	Expert group meeting on electric power equipment	Vienna Austria
15-18 November	Expert group meeting on the development of multi-purpose agricultural machinery plants	Guangzhou China
10-11 December	<i>Ad hoc</i> expert group meeting on the leather and leather products industry in the African region	Vienna Austria
<i>Non-governmental Organizations</i>		
6-7 February	Non-governmental organizations forum on the Fourth General Conference of UNIDO	Vienna Austria
19-29 May	International seminar on iron and steel	Karachi Pakistan
4 July	Joint UNIDO/International Federation of Automatic Control (IFAC) round-table meeting on automatization in developing countries	Budapest Hungary
<i>Least Developed Countries</i>		
30 July-1 August	Workshop on industrialization of the least developed countries in view of recent developments	Vienna Austria
<i>Economic Co-operation among Developing Countries</i>		
25-30 March	Solidarity ministerial meeting for co-operation in the industrial development of the Yemen Arab Republic	Sana'a Yemen
8-24 May	ESCAP/UNIDO seminar for promoting economic and technical co-operation among developing countries in Asia and the Pacific in the field of manufacture and popularization of agricultural machinery, tools and equipment	Beijing/Shanghai China
5-8 June	Solidarity meeting of ministers of industry for co-operation in the industrial development of the Rwandese Republic	Kigali Rwanda
15-19 October	Meeting on co-operation among the Middle Eastern and North African countries in the petrochemical industries	Aliaga Turkey

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<i>Date</i>		<i>Place</i>
<i>Focal Point for the Integration of Women</i>		
9-17 April	African regional workshop on the integration of women in the industrial planning and development process	Harare Zimbabwe
6-12 May	Caribbean regional workshop on the integration of women in the industrial planning and development process	Georgetown Guyana
5-12 July	Asian regional workshop on the integration of women in the industrial planning and development process	Bangkok Thailand
<i>Global and Conceptual Studies</i>		
7-9 November	Meeting of the chairman of the eighth international conference on input-output techniques	Vienna Austria
<i>Regional and Country Studies</i>		
28-29 May	National seminar on Indonesia industry sector study	Jakarta Indonesia
20-24 August	Symposium on regional development processes/policies and the changing international division of labour	Vienna Austria
5-6 November	National seminar on industrial restructuring in the engineering industry sector	Bangkok Thailand
22-24 November	National workshop on industrial restructuring policies	Buenos Aires Argentina
26-28 November	Joint ECLAC/UNIDO workshop on industrial restructuring policies	Santiago Chile
<i>Sectoral Studies</i>		
20-22 August	Expert group meeting on energy use and conservation in selected industrial sectors	Vienna Austria
<i>Environmental Studies</i>		
20-24 February	UNIDO/UNDRO/WHO/UNEP workshop on the institution and co-ordination of national contingency plans for emergencies associated with industrial installations in the West and Central African region	Dakar Senegal
<i>Development and Transfer of Technology</i>		
24-27 January	Preparatory committee on the establishment of the international centre for genetic engineering and biotechnology, second session	Vienna Austria
4-7 March	ECWA/UNIDO expert group meeting on development of micro-electronics in the ECWA region	Kuwait

<i>Date</i>		<i>Place</i>
21-23 March	Discussion meeting of organizations engaged in the application of information technology for development	Vienna Austria
2-3 April	Preparatory committee on the establishment of the international centre for genetic engineering and biotechnology, third session	Vienna Austria
3-4 April	Plenipotentiary meeting on the establishment of the international centre for genetic engineering and biotechnology	Vienna Austria
26 May	Symposium on capability building in biotechnology and genetic engineering in developing countries (held as part of the annual meeting of the American Association for the Advancement of Sciences)	New York United States of America
3-14 September	Second workshop on hydrology for small hydropower <sup>d</sup>	Hangzhou China
17-19 September	Preparatory committee on the establishment of the international centre for genetic engineering and biotechnology, fourth session	Vienna Austria
1-4 October	Regional meeting of the technological information exchange system (TIES)	Madrid Spain
8-12 October	Ninth meeting of heads of technology transfer registries	Beijing China
27-29 November	Symposium on the importance of lactic acid fermentation in the food industry	Mexico City Mexico
3-5 December	Fifth session of the preparatory committee on the establishment of the ICGEB	Trieste Italy
11-15 December	Technical advisory group of the regional network for small hydropower, first meeting	Hangzhou China
<i>Investment Co-operative Programme</i>		
17-18 January	Workshop on seven years of UNIDO promotion of direct co-operation agreements for the industrialization in developing countries	Brussels Belgium
24 January	China country presentation meeting	Brussels Belgium
25 January	Presentation on activities of the UNIDO Investment Promotion Service in Vienna	Bregenz Austria
8 February	Meeting on the regions of the Caisse centrale de coopération économique and the Société de promotion et de participation pour la coopération économique	Paris France
13 February	Presentation on conditions for transfer of technology within the North-South co-operation	Brussels Belgium
17 February	Presentation on financial guarantees to investment and joint-venture transfer	Brussels Belgium
29 February	Regional meeting—Midi-Pyrénées	Toulouse France
1 March	Regional meeting—Franche-Comté	Besançon France

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<i>Date</i>		<i>Place</i>
2 March	Barbados country presentation meeting	Brussels Belgium
29 March	Senegal country presentation meeting	} Brussels Belgium
	Cameroon country presentation meeting	
21 March- 6 April	Uruguay country presentation meeting	New York United States of America
12 April	Presentation on the Investment Co-operative Programme and the Investment Promotion Services' activities	Brussels Belgium
18-19 April	Meeting on the regions of Agence nationale de valorisation de la recherche and the Banque française du commerce extérieur	Paris France
7 May	Nepal country presentation meeting	Zurich Switzerland
9 May	Nepal country presentation meeting	Tokyo Japan
9-10 May	Regional meeting—Procence-Alpes and Côte d'Azur	Marseille France
22 May	Colombia country presentation meeting	Tokyo Japan
28 May	Colombia country presentation meeting	Cologne Federal Republic of Germany
1 June	Colombia country presentation meeting	Zurich Switzerland
4-7 June	Investment promotion meeting	Kathmandu Nepal
5 June	Presentation on activities of the UNIDO Investment Promotion Service in Vienna	Linz Austria
14 June	Regional meeting—co-operation between Senegal and Nord-Pas de Calais	Lille France
21 June	Information meeting on preparatory activities for the Fourth General Conference of UNIDO to Belgian government officials	Brussels Belgium
2-5 July	Investment forum	Bogota Colombia
10 July	Information meeting on UNIDO activities to the British business community	London United Kingdom
23-24 July	High-level meeting on investment promotion	Antigua
6 September	Seminar on UNIDO activities in the field of technology transfer	Leuven Belgium
6-7 September	Sri Lanka country presentation meeting	Fukuoka Japan
10 September	Sri Lanka country presentation meeting	Nagoya Japan
10-12 September	Sri Lanka country presentation meeting	Tokyo Japan
11 September	Seminar on the role of public agencies in investment promotion	Roseau Dominica



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<i>Date</i>		<i>Place</i>
14 September	Sri Lanka country presentation meeting	Osaka Japan
17-20 September	Presentation on investment promotion activities	Gournay-en-Bray France
18 September	Regional meeting—Franche-Comté	Besançon France
2-19 October	Montserrat country presentation meeting	New York United States of America
9 October	Caribbean countries presentation meeting	Tokyo Japan
19 October	South Pacific countries presentation meeting	Tokyo Japan
22-25 October	Investment promotion meeting for the Caribbean	Bridgetown Barbados
26-27 October	Electronics seminar	Bridgetown Barbados
12-16 November	Colloquium on recycling of waste products and by-products of agro-industries	Lille France
20-21 November	Regional meeting—Provence-Alpes and Côte d'Azur	Marseille France
22 November	Chile country presentation meeting	Zurich Switzerland
26-30 November	Investors' forum for the South Pacific region	Suva Fiji
3-6 December	Sixth industrial forum for West Africa	Dakar Senegal

*Industrial Planning*

21-25 May	Second expert group meeting on industrial planning	Kiev Union of Soviet Socialist Republics
10-13 September	Expert group meeting on the survey of the manufacturing industry in the West Bank and Gaza Strip	Vienna Austria

*Institutional Infrastructure*

15-19 October	Regional UNIDO/ESCAP workshop and national consultations on the commercialization of research results	Bangkok Thailand
28-30 November	Seventh Latin American symposium of small- and medium-scale industry	Mexico D.F. Mexico

*Training*

3-7 December	UNIDO/INSTRAW workshop aimed at designing a modular curriculum for training in industrial management for women entrepreneurs	Vienna Austria
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Date		Place
<i>Metallurgical Industries</i>		
2-6 April	Workshop on tin plate production in the Asia and Pacific region	Jamshedpur India
<i>Engineering Industries</i>		
26-31 March	Expert group meeting on shipbuilding and ship-repair development for the Asia and Pacific region	Jakarta Indonesia
<i>Chemical Industries</i>		
27-28 February	Advisory panel on preventive medicine, first meeting	Vienna Austria
13-17 May	Expert group meeting on quality control of pesticides <sup>e</sup>	Dacca Bangladesh
13-17 August	Expert consultation on pesticide trade and tariff considerations (regional network for the production, marketing and control of pesticides in Asia and the Pacific)	Colombo Sri Lanka
24-25 September	<i>Ad hoc</i> expert group meeting of internationally renowned polymer scientists and technologists	Vienna Austria
24-28 September	Third technical advisory committee meeting of the regional network for the production, marketing and control of pesticides in Asia and the Pacific	Jakarta Indonesia
3-16 October	Symposium on the petrochemical industry	Riyadh Saudi Arabia
27 October- 1 November	Regional symposium on plastics in agriculture for the African people	Alexandria Egypt
12-16 November	Consultative committee meeting for energy production from agro-industrial by-products and wastes	Lille France
22-23 November	Second meeting of advisory panel on preventive medicine	Bogota Colombia

<sup>a</sup>Organized jointly with OAU and ECA, in co-operation with the Industrial Planning Section.

<sup>b</sup>Organized jointly with OAU and ECA in preparation for the Seventh Conference of African Ministers of Industry, 26-28 March 1984.

<sup>c</sup>Organized by the Office of the Executive Director and the Development and Transfer of Technology Branch in co-operation with ECA, OAU, UNCSTD and UNFSSTD.

<sup>d</sup>Organized jointly by UNDP, UNIDO and the Government of China.

<sup>e</sup>Organized jointly by UNIDO and FAO.

## APPENDIX L

### Selected list of studies under preparation or completed in 1984 (other than those prepared by the Division for Industrial Studies)

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#### DIVISION OF INDUSTRIAL OPERATIONS

##### *Feasibility Studies Section*

Teaching material file for training seminars on project preparation, evaluation and financing—  
modules VI and VII (ongoing)

##### *Metallurgical Industries Section*

Design study of an aluminium extrusion and anodizing plant (completed)  
Aluminium production and use in developing countries with special emphasis on the manufacture  
of aluminium semis and finished products (completed)

##### *Chemical Industries Branch*

Gasification of agricultural residues (completed)  
Study on the development and utilization of the natural gas resources of the Province of Neuquén,  
Argentina (ongoing)  
How to establish a pharmaceutical industry in developing countries (completed)  
UNIDO experience in implementing pharmaceutical projects in developing countries (completed)  
UNIDO programme for industrial production of biologicals (completed)  
A study of the pharmaceutical industry in the West Bank and Gaza Strip (completed)  
Population growth and industrialization (ongoing)  
Model programme for the production of vaccines in developing countries (ongoing)  
Glass production technology in developing countries (completed)  
Perlite industrial exploitation (completed)

##### *Engineering Industries Branch*

Existing railway workshops and facilities in selected African countries (completed)  
Strategy for production of rails, sleepers and other steel materials for railways, within the frame of  
development of the iron and steel industry in Africa (completed)

#### DIVISION OF POLICY CO-ORDINATION

##### *Focal Point for the Integration of Women*

UNIDO's contribution to the UNDP study on interorganizational assessment of women's  
participation in development (completed)

## Appendix M

Report on industrialization for the "Review and appraisal of progress achieved and obstacles encountered at the national level in the realization of the goals and objectives of the United Nations Decade for Women: Equality, Development and Peace" (A/CONF.116/5/Add.10) (completed)

### Non-governmental Organizations Section

University-industry linkages (ongoing)

## APPENDIX M

### Intergovernmental and international non-governmental organizations

TABLE 1. INTERGOVERNMENTAL ORGANIZATIONS ASSOCIATED WITH THE WORK OF THE INDUSTRIAL DEVELOPMENT BOARD UNDER RULE 75 OF ITS RULES OF PROCEDURE

(31 December 1984: 42 organizations)

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Application considered (year)</i>	<i>Symbol of document containing application</i>
African Development Bank	ADB	1976	ID/B/164
African Intellectual Property Organization <sup>d</sup>	OAPI	1967	<i>b</i>
African Regional Centre for Technology	ARCT	1982	ID/B/273
African Regional Organization for Standardization	ARSO	1983	ID/B/304
Agency for Cultural and Technical Co-operation	ACCT	1976	ID/B/1164
Arab Fund for Economic and Social Development		1977	ID/B/177
Arab Industrial Development Organization	AIDO	1983	ID/B/304
Arab League Educational, Cultural and Scientific Organization	ALECSO	1978	ID/B/201
Arab Organization for Mineral Resources	OARM	1982	ID/B/273
Arab Organization for Standardization and Metrology	ASMO	1976	ID/B/164
Asian Productivity Organization	APO	1969	ID/B/59
Caribbean Development Bank	CARIBANK	1976	ID/B/164
Central African Customs and Economic Union	UDEAC	1976	ID/B/164
Central African States Development Bank	BDEAC	1981	ID/B/264/Add.1
Common African and Mauritian Organization <sup>e</sup>	OCAM	1968	ID/B/33
Commonwealth Secretariat		1979	ID/B/218
Council of Arab Economic Unity	CAEU	1971	ID/B/86/Add.1
Council for Mutual Economic Assistance	CMEA	1971	ID/B/86/Add.3
European Economic Community	EEC	1967	<i>b</i>
European Investment Bank	EIB	1969	ID/B/59
Gulf Organization for Industrial Consulting	GOIC	1978	ID/B/201
Inter-Arab Investment Guarantee Corporation		1977	ID/B/177/Add.2
Intergovernmental Committee for Migration	ICM	1981	ID/B/264
Intergovernmental Council of Copper Exporting Countries	CIPEC	1971	ID/B/86
International Center for Public Enterprises in Developing Countries	ICPE	1980	ID/B/239

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Application considered (year)</i>	<i>Symbol of document containing application</i>
International Commission for Food Industries <sup>d</sup>	CEIA	1968	ID/B/33
International Institute for Cotton	IIC	1971	ID/B/86
International Olive Oil Council	IOOC	1980	ID/B/239
League of Arab States	LAS	1970	ID/B/73
Mano River Union		1980	ID/B/239
Organization of African Unity	OAU	1970	ID/B/73/Add.1 and Corr. 1
Organization of American States	OAS	1967	<sup>b</sup>
Organization of Arab Petroleum Exporting Countries	OAPEC	1975	ID/B/152
Organization for the Development of the Senegal River <sup>e</sup>	OMVS	1971	ID/B/86/Add.1
Organisation for Economic Co-operation and Development	OECD	1971	ID/B/86/Add.5
Permanent Consultative Committee of the Maghreb	PCCM	1968	ID/B/33
Permanent Secretariat of the General Treaty on Central American Economic Integration	SIECA	1969	ID/B/59/Add.1
Statistical, Economic and Social Research and Training Centre for Islamic Countries	SESRTCIC	1980	ID/B/239/Add.1
Union of African Railways	UAR	1984	ID/B/C.3/124
West Africa Rice Development Association	WARDA	1980	ID/B/239
West African Development Bank	WADB	1978	ID/B/201
West African Economic Community	CEAO	1976	ID/B/164

<sup>a</sup>Formerly African and Malagasy Industrial Property Office (OAMPI).

<sup>b</sup>No mimeographed background information was provided.

<sup>c</sup>Formerly Common Afro-Malagasy Organization.

<sup>d</sup>Formerly International Agriculture and Food Industries Committee (IAFIC).

<sup>e</sup>Before 1972: Organization of Senegal Riparian States (OERS).

TABLE 2. INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS HAVING CONSULTATIVE STATUS WITH UNIDO

(31 December 1984: 75 organizations)

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Consultative status granted (year)</i>	<i>Symbol of document containing application</i>
Afro-Asian Peoples' Solidarity Organization	AAPSO	1978	ID/B/201
Arab Federation for Food Industries	AFFI	1983	ID/B/304
Arab Federation of Chemical Fertilizer Producers	AFCFP	1976	ID/B/164
Arab Iron and Steel Union	AISU	1978	ID/B/201/Add.1
Arab Sugar Federation	ASF	1980	ID/B/239
Association for the Advancement of Agricultural Sciences in Africa	AAASA	1982	ID/B/273/Add.1
Association of African Development Finance Institutions	AADFI	1979	ID/B/218
Association of International Trade Fairs of America	AFIDA	1980	ID/B/239/Add.1
Association of Latin American Industrialists	AILA	1980	ID/B/239/Add.1
Centre d'Etudes de l'Azote	CEA	1978	ID/B/201/Add.1
Club de Dakar		1980	ID/B/239

TABLE 2 (continued)

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Consultative status granted (year)</i>	<i>Symbol of document containing application</i>
European Federation of Management Consultants' Associations	FEACO	1974	ID/B/131
European Federation of National Engineering Associations	FEANI	1979	ID/B/218 and Corr.1
European Federation of National Maintenance Societies	EFNMS	1976	ID/B/164
European Union of Coachbuilders	UEC	1971	ID/B/86/Add.1
European Union of Public Relations	UERP	1976	ID/B/164
International Association for Cereal Chemistry	ICC	1972	ID/B/106
International Association for the Exchange of Students for Technical Experience	IAESTE	1970	ID/B/73
International Association for the Protection of Industrial Property	AIPPI	1968	ID/B/32/Add.1
International Association of Crafts and Small and Medium-Sized Enterprises	IACME	1968	ID/B/32/Add.1
International Chamber of Commerce	ICC	1967	<sup>a</sup>
International Christian Union of Business Executives	UNIAPAC	1968	ID/B/32
International Committee for Plastics in Agriculture	CIPA	1974	ID/B/131
International Confederation of Free Trade Unions	ICFTU	1967	<sup>a</sup>
International Co-operative Alliance	ICA	1971	ID/B/86
International Council for Building Research Studies and Documentation	CIB	1984	ID/B/C.3/124
International Council of Societies of Industrial Design	ICSID	1974	ID/B/131
International Council of Women	ICW	1982	ID/B/273
International Council on Archives	ICA	1982	ID/B/273
International Electrotechnical Commission	IEC	1980	ID/B/239/Add.1
International Federation for Documentation	FID	1970	ID/B/73
International Federation for Medical and Biological Engineering	IFMBE	1984	ID/B/C.3/124
International Federation of Agricultural Producers	IFAP	1984	ID/B/C.3/124
International Federation of Automatic Control	IFAC	1969	ID/B/60
International Federation of Inventors' Associations	IFIA	1977	ID/B/177
International Federation of Pharmaceutical Manufacturers Associations	IFPMA	1977	ID/B/177
International Fertilizer Industry Association <sup>b</sup>	IFA	1974	ID/B/131
International Measurement Confederation	IMEKO	1975	ID/B/152
International Organization for Standardization	ISO	1970	ID/B/73
International Organization of Consumers Unions	IOCU	1971	ID/B/86
International Organization of Employers	IOE	1967	<sup>a</sup>
International Savings Banks Institute	ISBI	1971	ID/B/86
International Union for Conservation of Nature and Natural Resources	IUCN	1971	ID/B/86/Add.1
International Union of Architects	UIA	1969	ID/B/60
International Union of Food Science and Technology	IUFoST	1980	ID/B/239
International Union of Independent Laboratories	UILI	1971	ID/B/86/Add.4

<i>Name of organization</i>	<i>Abbreviation/ acronym</i>	<i>Consultative status granted (year)</i>	<i>Symbol of document containing application</i>
International Union of Leather Technologists and Chemists Societies <sup>c</sup>	IULTCS	1975	ID/B/152
Latin American Association of Development Financing Institutions	ALIDE	1974	ID/B/131
Latin American Association of Pharmaceutical Industries	ALIFAR	1982	ID/B/273
Latin American Federation of the Pharmaceutical Industry	FIFARMA	1979	ID/B/218/Add.1
Latin American Iron and Steel Institute	ILAFA	1972	ID/B/106/Add.1
Latin American Petrochemical Association <sup>d</sup>	APLA	1980	ID/B/239
Latin American Plastics Institute	ILAP	1974	ID/B/131
Licensing Executives Society International	LES (International)	1978	ID/B/201
Mutual Assistance of the Latin American Government Oil Companies	ARPEL	1974	ID/B/131/Add.1
Organization of African Trade Union Unity	OATUU	1983	ID/B/304
Pan American Standards Commission	COPANT	1983	ID/B/304
"Pio Manzu" International Research Centre		1980	ID/B/239
Society For International Development	SID	1984	ID/B/C.3/124
Society of Chemical Industry	SCI	1972	ID/B/106
Third World Foundation for Social and Economic Studies		1982	ID/B/273
Union of Industries of the European Community	UNICE	1969	ID/B/60
Union of International Fairs	UFI	1978	ID/B/201
Union of International Technical Associations <sup>e</sup>	UITA	1970	ID/B/73
Union of Producers, Conveyors and Distributors of Electric Power in Africa	UPDEA	1976	ID/B/164
World Assembly of Small and Medium Enterprises	WASME	1983	ID/B/304
World Association for Element-Building and Prefabrication	WAEP	1981	ID/B/264
World Association of Industrial and Technological Research Organizations	WAITRO	1972	ID/B/106
World Confederation of Labour <sup>f</sup>	WCL	1968	ID/B/32
World Council of Management <sup>g</sup>	CIOS	1967	<sup>a</sup>
World Federation of Development Financing Institutions	WFDFI	1984	ID/B/304 and ID/B/C.3/124
World Federation of Engineering Organizations	WFEO	1969	ID/B/60
World Federation of Trade Unions	WFTU	1967	<sup>a</sup>
World Packaging Organization	WPO	1975	ID/B/152
World Peace Council	WPC	1977	ID/B/177

*Note:* The following four organizations, included in lists of NGOs in consultative status with UNIDO issued to the Board prior to 1984, have ceased to exist: Afro-Asian Organization for Economic Co-operation (AFRASEC), European Centre for International Co-operation (CECI), European Oceanic Association (EUROCEAN), International Centre for Industry and the Environment (ICIE).

<sup>a</sup>Background information on aims and activities circulated informally by the Executive Director to delegates attending first session of the Board (cf. A/6715/Rev.1, para. 312).

<sup>b</sup>Before 1984: International Association of the Phosphate Industry (ISMA).

<sup>c</sup>Before 1984: International Union of Leather Chemists' Societies (IULCS).

<sup>d</sup>Before 1984: Latin American Petrochemical Institute.

<sup>e</sup>Before 1981: Union of International Engineering Organizations (UIEO).

<sup>f</sup>Before October 1968: International Federation of Christian Trade Unions (ICFTU).

<sup>g</sup>Before 1976: International Council for Scientific Management.

## APPENDIX N

## Group training and fellowships in 1984

TABLE 1. IN-PLANT GROUP TRAINING PROGRAMMES IN 1984

Field of study	Host country	Number of participants		
		All developing countries	Least developed countries	Female
Synthetic fibres	Austria	9	4	—
Plastics technology	Austria	25	5	—
Mould design and mould making	Austria	5	1	—
Maintenance—ships	Belgium	17	3	—
Textile industry	Belgium	12	4	1
Maintenance—railway	Belgium	} 11	5	—
	Ivory Coast			
	Burkina Faso			
Management—industrial goods manufacturing	Cameroon	14	8	1
Diesel engines	China	13	6	—
Agricultural machinery	China	13	2	—
Diesel engines	Czechoslovakia	20	4	—
Iron and steel	Egypt	5	—	—
Design—shoe and leather goods	Italy	27	9	2
Production management	Japan	14	2	—
Foundry technologies	Poland	11	8	—
Metal-spraying technique	Romania	12	2	—
Dyes and chemicals	Switzerland	12	2	6
Iron and steel <sup>a</sup>	Turkey	49	2	1
Beet sugar industry	Turkey	10	2	—
Small-scale foundry operations	Turkey	10	6	—
Cement industry <sup>a</sup>	Turkey	25	7	—
Maintenance—railway	United Kingdom	14	6	—
Iron and steel <sup>a</sup>	USSR	38	5	—
Electric welding <sup>a</sup>	USSR	30	9	3
Fertilizer industry	USSR	14	—	1
Industrial information	USSR	24	3	10
Metalworking industry	USSR	14	1	—
Grain milling and storage	USSR	15	2	—
Rice processing	USSR	15	1	—
Management—agro-industrial enterprise	Yugoslavia	19	3	1
Foundry operations	Yugoslavia	14	14	—
TOTAL		511	126	26

<sup>a</sup>Two programmes carried out in 1984.

TABLE 2. OTHER GROUP TRAINING PROGRAMMES IN 1984

Field of study	Host country	Number of participants		
		All developing countries	Least developed countries	Female
Lecturing on COMFAR	Austria	8	—	2
Management—management training	Austria	13	8	1
Metrology	Austria	18	2	1
Fertilizer plant maintenance	Austria	12	4	—



Field of study	Host country	Number of participants		
		All developing countries	Least developed countries	Female
Petroleum refinery maintenance	Austria	14	4	—
Management—air and water pollution	Belgium	25	3	5
Industrial maintenance	Cameroon	18	—	—
Aluminium production	China	32	—	6
Mini cement plants	China	21	2	1
Haematology	Colombia	19	—	6
Timber structures	Costa Rica	16	—	5
Project preparation, evaluation and financing	Cuba	33	—	10
Ceramics	Czechoslovakia	6	—	—
Computer-aided design (CAD)/ computer-aided manufacturing (CAM)	Czechoslovakia	15	—	—
Equipment selection	Czechoslovakia	6	—	1
Maintenance—foundries	Egypt	16	11	—
Plastics in agriculture	Egypt	22	5	1
COMFAR seminar	Ethiopia	8	8	2
Project preparation, evaluation and financing	Ethiopia	31	31	—
Ethanol production	Finland	19	4	2
Industrial maintenance	France	17	9	1
Management—quality control	France	11	—	2
Energy saving—cement industry	France	23	3	—
Industrial information	France	19	14	2
Energy management—iron and steel	France	13	—	—
Pesticide formulation	German Dem. Rep.	19	3	3
Industrial planning	German Dem. Rep.	21	7	8
Printing industry	German Dem. Rep.	20	6	1
Foundry equipment	Germany, Fed. Rep. of	11	3	—
Project preparation, evaluation and financing	Guinea-Bissau	22	22	2
Industrial building	Hungary	12	3	—
Metallurgical and engineering industries	Hungary	20	6	—
Cotton knitwear	India	15	—	—
Pesticides	India	44	3	4
Welding	India	15	1	—
COMFAR seminar	Indonesia	7	—	1
Energy management—glass industry	Italy	20	1	1
Packaging	Italy	19	8	3
Woodworking machinery	Italy	50	7	1
Promotion of export-oriented industries	Japan	16	—	1
Industrial planning	Japan	9	2	1
Industrial planning	Kuwait	19	10	7
COMFAR seminar	Madagascar	6	—	1
Project preparation, evaluation and financing	Madagascar	43	—	10
Management—industrial public enterprises	Madagascar	18	3	—
Mobile unit—development of small and medium industry	Madagascar	10	1	4
Mobile unit—project expansion workshops	Mali Mauritania Niger Senegal	68	25	2
Furniture and joinery industries	Mauritius			

TABLE 2 (continued)

Field of study	Host country	Number of participants		
		All developing countries	Least developed countries	Female
Cotton knitwear	Mexico	15	—	—
Timber engineering	New Zealand	21	—	—
Energy efficiency	Philippines	14	10	2
Project preparation, evaluation and financing	Poland	21	7	1
Medicinal herbs	Romania	16	16	2
Project preparation, evaluation and financing	Sudan	25	25	5
COMFAR seminar	Thailand	23	—	12
Project preparation, evaluation and financing <sup>a</sup>	Togo	55	55	6
Cotton knitwear	United Kingdom	40	—	—
Small industry development (women entrepreneurs)	United Republic of Tanzania	18	18	18
Management—human resources	USSR	17	6	4
Management training—public enterprises	Yugoslavia	15	5	4
COMFAR seminar	Zambia	5	—	—
	TOTAL	1 253 <sup>b</sup>	369 <sup>b</sup>	152 <sup>b</sup>

<sup>a</sup>Two programmes carried out in 1984.

<sup>b</sup>In addition, some 660 individuals (37 from least developed countries and 68 females) received training through group programmes organized locally within the framework of UNIDO-executed field projects.

TABLE 3. NUMBER OF FELLOWSHIPS AND STUDY TOURS STARTED IN 1984, BY NATIONALITY/HOME AREA, COUNTRY OR TERRITORY

Nationality/home area, country or territory	Number of individuals placed			Total
	UNDP	Regular programme	Other programmes	
Afghanistan	2	—	—	2
Albania	2	3	—	5
Algeria	1	—	—	1
Angola	4	—	—	4
Argentina	21	1	—	22
Bangladesh	10	4	—	14
Barbados	—	1	—	1
Benin	2	1	—	3
Bhutan	7	—	—	7
Bolivia	4	—	1	5
Brazil	14	—	4	18
Bulgaria	109	—	52	161
Burkina Faso	—	—	1	1
Burma	9	—	—	9
Burundi	2	1	8	11
Cameroon	2	1	—	3
Chile	1	—	—	1
China	64	6	7	77
Colombia	3	1	—	4
Comoros	—	2	—	2
Costa Rica	—	—	3	3
Cuba	16	—	—	16
Czechoslovakia	54	—	—	54

<i>Nationality/home area, country or territory</i>	<i>Number of individuals placed</i>			<i>Total</i>
	<i>UNDP</i>	<i>Regular programme</i>	<i>Other programmes</i>	
Democratic People's Republic of Korea	19	6	—	25
Democratic Yemen	5	4	3	12
Dominican Republic	1	—	—	1
Ecuador	7	—	7	14
Egypt	50	—	6	56
El Salvador	3	—	—	3
Equatorial Guinea	—	1	—	1
Ethiopia	36	3	—	39
Gabon	—	—	1	1
Gambia	—	2	—	2
Ghana	1	2	—	3
Greece	1	—	—	1
Guinea	2	1	—	3
Guinea-Bissau	—	1	—	1
Guyana	8	—	—	8
Haiti	—	1	—	1
Honduras	7	—	—	7
Hungary	69	—	—	69
India	117	—	—	117
Indonesia	28	2	2	32
Iran (Islamic Republic of)	26	—	—	26
Iraq	11	—	1	12
Ivory Coast	10	1	2	13
Jamaica	3	—	—	3
Jordan	3	—	—	3
Kenya	15	—	—	15
Kiribati	1	—	—	1
Kuwait	2	—	—	2
Lebanon	1	—	—	1
Lesotho	—	1	—	1
Liberia	1	1	—	2
Libyan Arab Jamahiriya	1	—	5	6
Madagascar	8	—	—	8
Malawi	2	3	—	5
Malaysia	7	—	—	7
Mali	5	1	1	7
Mauritius	—	3	—	3
Mexico	9	—	3	12
Mongolia	—	—	2	2
Morocco	6	—	—	6
Mozambique	9	—	5	14
Nepal	7	6	—	13
Niger	3	1	2	6
Nigeria	9	—	3	12
Oman	1	—	—	1
Pakistan	6	1	—	7
Panama	1	1	—	2
Peru	3	1	—	4
Philippines	13	7	—	20
Poland	31	—	—	31
Qatar	1	—	—	1
Republic of Korea	9	—	—	9
Romania	6	—	1	7
Rwanda	2	1	1	4
Saudi Arabia	2	—	—	2
Senegal	1	—	—	1
Somalia	5	2	—	7
Sri Lanka	32	1	—	33
Sudan	2	1	2	5

TABLE 3 (continued)

<i>Nationality/home area, country or territory</i>	<i>Number of individuals placed</i>			<i>Total</i>
	<i>UNDP</i>	<i>Regular programme</i>	<i>Other programmes</i>	
Thailand	15	12	—	27
Togo	—	2	—	2
Tonga	1	—	—	1
Tunisia	8	—	—	8
Turkey	16	2	—	18
Tuvalu	1	—	—	1
Uganda	3	1	—	4
United Arab Emirates	1	—	—	1
United Republic of Tanzania	7	3	3	13
Venezuela	23	—	—	23
Viet Nam	13	—	—	13
Yemen	1	—	—	1
Yugoslavia	12	—	—	12
Zaire	5	—	—	5
Zambia	8	2	—	10
Zimbabwe	—	5	—	5
<b>TOTAL</b>	<b>1 049</b>	<b>103</b>	<b>126</b>	<b>1 278</b>

TABLE 4. FELLOWSHIPS AND STUDY TOURS STARTED IN 1984, BY COUNTRY, GEOGRAPHICAL AREA OR TERRITORY OF STUDY<sup>a</sup>

<i>Country/geographical area/territory of study</i>	<i>Number of individuals placed</i>			<i>Total</i>
	<i>UNDP</i>	<i>Regular programme</i>	<i>Other programmes</i>	
Angola	2	—	—	2
Antigua	—	1	—	1
Argentina	9	—	—	9
Australia	19	—	1	20
Austria <sup>b</sup>	180	33	29	242
Bangladesh	1	—	—	1
Belgium	27	7	4	38
Benin	—	—	2	2
Brazil	42	1	2	45
Bulgaria	9	—	3	12
Burkina Faso	—	—	4	4
Cameroon	1	—	5	6
Canada	33	—	—	33
China	1	—	—	1
Congo	—	—	4	4
Cuba	6	—	—	6
Czechoslovakia	26	4	13	43
Denmark	22	—	—	22
Dominican Republic	2	—	—	2
Egypt	6	—	2	8
Ethiopia	—	1	—	1
Finland	5	2	—	7
France	144	8	38	190
Gabon	—	—	1	1
German Democratic Republic	14	—	—	14
Germany, Federal Republic of	192	8	23	223
Greece	—	—	2	2

Country/geographical area/territory of study	Number of individuals placed			Total
	UNDP	Regular programme	Other programmes	
Guinea	—	—	2	2
Guyana	—	1	—	1
Honduras	—	1	2	3
Hong Kong	6	3	—	9
Hungary	41	1	1	43
India	56	2	5	63
Indonesia	2	—	—	2
Ireland	15	6	—	21
Israel	3	—	—	3
Italy	64	3	7	74
Ivory Coast	—	5	2	7
Jamaica	3	—	—	3
Japan	69	4	7	80
Kenya	7	5	2	14
Luxembourg	2	—	—	2
Madagascar	2	—	—	2
Malaysia	13	3	—	16
Mali	—	—	1	1
Malta	1	—	3	4
Mexico	5	—	—	5
Morocco	34	—	—	34
New Zealand	1	—	—	1
Nepal	—	2	—	2
Netherlands	41	4	5	50
Norway	6	—	—	6
Pakistan	6	—	1	7
Panama	2	—	—	2
Peru	4	1	—	5
Philippines	38	—	—	38
Poland	20	7	2	29
Portugal	10	—	3	13
Republic of Korea	13	5	—	18
Romania	6	—	—	6
Senegal	4	5	2	11
Sierra Leone	—	2	—	2
Singapore	18	3	—	21
Spain	23	3	2	28
Sri Lanka	1	4	—	5
Sweden	41	6	2	49
Switzerland	43	3	13	59
Syrian Arab Republic	—	3	—	3
Thailand	7	6	—	13
Togo	—	—	2	2
Tunisia	3	—	—	3
Turkey	2	—	—	2
Union of Soviet Socialist Republics	18	4	2	24
United Kingdom	230	7	18	255
United Republic of Tanzania	3	7	—	10
United States of America	144	3	6	153
Venezuela	5	—	—	5
Viet Nam	1	—	—	1
Yugoslavia	7	4	2	13
Zaire	—	—	2	2
<b>TOTAL</b>	<b>1 761</b>	<b>178</b>	<b>227</b>	<b>2 166</b>

<sup>a</sup>Where a fellowship/study tour included more than one country/geographical area/territory, it is listed against each one concerned. Thus the totals in table 4 do not correspond to those in table 3.

<sup>b</sup>Including UNIDO headquarters.

## APPENDIX O

**UNIDO technical assistance to the least developed countries,  
1 January to 31 December 1984**

TABLE I. DELIVERY, BY COUNTRY AND SOURCE OF FUNDS<sup>a</sup>  
(In US dollars)

Region/country	Regular programme	UNDP/IPF	SIS	UNDP/Special measures	UNIDF <sup>b</sup>	Other sources <sup>c</sup>	Total
<i>Africa</i>							
Benin	18 936	76 740	4 670	—	—	—	100 346
Botswana	—	6 137	—	—	—	—	6 137
Burkina Faso	—	88 553	(3 111)	—	257 258	(1 531)	341 169
Burundi	81 928	384 412	35 731	—	7 420	129 335	638 826
Cape Verde	49 632	39 102	9 765	—	—	—	98 499
Central African Republic	6 001	—	—	—	—	—	6 001
Chad	—	11 900	—	—	(26)	—	11 874
Comoros	87 367	—	—	—	4 770	2 163	94 300
Djibouti	—	—	—	—	—	—	—
Equatorial Guinea	—	—	—	—	—	—	—
Ethiopia	20 862	1 379 240	52 901	—	97 968	22 712	1 573 683
Gambia	7 309	4 334	1 327	—	88 935	5 086	106 991
Guinea	22 744	662 551	46 008	31 931	—	6 022	769 256
Guinea-Bissau	—	—	—	—	—	33 122	33 122
Lesotho	2 961	8 519	—	—	116 022	—	127 502
Malawi	11 806	(3 522)	(3 276)	144 459	—	—	149 467
Mali	100	507 852	—	—	55 527	{ 2 999 } { (15 607) <sup>d</sup> }	550 871
Niger	11 865	152 661	4 161	284 879	—	—	453 566
Rwanda	161 778	283 938	9 139	16 630	16 120	—	487 605
Sierra Leone	8 213	262 767	90 213	—	—	849	362 042
Somalia	163 597	424 006	51 704	(1 187)	48 631	36 892	723 643
Sao Tome and Principe	2 343	—	—	—	9 368	—	11 711
Sudan	70 001	378 920	27 199	—	18 925	117 273	612 318
Togo	10 094	196 319	(2 296)	27 524	18 422	183 904 <sup>d</sup>	433 967
Uganda	—	14 200	10 116	—	—	—	24 316
United Republic of Tanzania	158 856	721 474	30 003	98 177	260 927	179 720	1 449 157
Subtotal	896 393	5 600 103	364 254	602 413	1 000 267	702 939	9 166 369

<i>Americas</i>							
Haiti	95 499	8 628	—	—	15 727	(77)	119 777
<i>Asia and the Pacific</i>							
Afghanistan	9 000	80 894	5 440	—	—	—	95 334
Bangladesh	22 184	1 447 675	—	(155 609)	227 272	612 120 <sup>d</sup>	2 153 642
Bhutan	—	183 021	—	—	(1 051)	—	181 970
Lao People's Democratic Republic	—	196 611	—	—	—	—	196 611
Maldives	—	—	—	—	—	—	—
Nepal	39 663	524 677	14 377	4 219	(705)	—	582 231
Samoa	—	—	—	—	—	—	—
Subtotal	70 847	2 432 878	19 817	(151 390)	225 516	612 120	3 209 788
<i>Arab States<sup>e</sup></i>							
Democratic Yemen	32 352	276 421	68 906	—	94 176	—	471 855
Yemen	66 350	284 358	—	—	(659)	—	350 049
Subtotal	98 702	560 779	68 906	—	93 517	—	821 904
<i>Regional, interregional and global projects especially designed for LDCs</i>							
	254 143	206 635	—	—	210 506	—	671 284
TOTAL	1 415 584	8 809 023	452 977	451 023	1 545 533	1 314 982	13 989 122

<sup>a</sup>The table does not include regional, interregional and global projects or individual fellowships and group training programmes in which the least developed countries have been involved together with other developing countries and which are usually financed from non-least developed countries funds.

<sup>b</sup>Excluding 14 per cent overhead costs.

<sup>c</sup>Other sources include the United Nations Financing System for Science and Technology for Development, the United Nations Trust Fund for Sudano-Sahelian Activities, trust funds, and accounts receivable.

<sup>d</sup>United Nations Capital Development Fund.

<sup>e</sup>For Djibouti and Sudan see under "Africa".

TABLE 2. NEW PROJECT APPROVALS, BY COUNTRY AND SOURCE OF FUNDS<sup>a</sup>  
(In US dollars)

Region/country	Regular programme	UNDP/IPF	SIS	UNDP/Special measures	UNIDF <sup>b</sup>	Other sources <sup>c</sup>	Total
<i>Africa</i>							
Benin	64 400	—	—	—	—	—	64 400
Botswana	—	89 000	33 275	—	—	—	122 275
Burkina Faso	26 800	—	—	—	—	—	26 800
Burundi	90 224	—	—	—	112 470	—	202 694
Cape Verde	34 650	—	35 000	—	—	—	69 650
Central African Republic	6 276	—	—	—	—	—	6 276
Chad	—	209 800	—	—	—	—	209 800
Comoros	96 100	—	—	—	—	—	96 100
Djibouti	—	80 000	—	—	—	—	80 000
Equatorial Guinea	—	—	—	—	—	—	—
Ethiopia	39 000	4 733 630	49 500	—	64 175	51 185	4 937 490
Gambia	12 685	—	36 000	—	—	38 000	86 685
Guinea	64 020	2 413 950	31 050	53 000	—	{ 2 125 000 <sup>d</sup> } { 78 064 }	4 765 084
Guinea-Bissau	—	—	—	—	—	—	—
Lesotho	4 500	147 100	—	—	—	—	151 600
Malawi	13 559	—	—	—	—	44 803	58 362
Mali	13 050	442 000	—	—	—	—	455 050
Niger	33 425	—	6 005	—	—	—	39 430
Rwanda	176 005	—	69 300	—	—	—	245 305
Sierra Leone	21 632	—	—	—	—	—	21 632
Somalia	382 256	—	—	—	—	—	382 256
Sao Tome and Principe	83 050	—	—	—	—	—	83 050
Sudan	149 620	—	16 000	—	26 000	18 265	209 885
Togo	17 450	390 000	—	—	46 000	431 775 <sup>d</sup>	885 225
Uganda	40 000	—	14 900	—	—	—	54 900
United Republic of Tanzania	404 006	—	53 400	—	12 000	172 950	642 356
Subtotal	1 772 708	8 505 480	344 430	53 000	260 645	2 960 042	13 896 305



<i>Americas</i>							
Haiti	121 793	103 350	—	—	65 000	—	290 143
<i>Asia and the Pacific</i>							
Afghanistan	19 000	189 214	—	—	—	—	208 214
Bangladesh	22 280	2 015 600	—	—	—	—	2 037 880
Bhutan	65 000	1 277 000	—	—	—	—	1 342 000
Lao People's Democratic Republic	—	—	—	—	—	—	—
Maldives	4 500	—	—	—	—	—	4 500
Nepal	42 000	770 100	—	—	—	—	812 100
Samoa	24 000	—	—	—	—	—	24 000
Subtotal	176 780	4 251 914	—	—	—	—	4 428 694
<i>Arab States<sup>e</sup></i>							
Democratic Yemen	150 782	—	10 760	—	12 786	—	174 328
Yemen	99 734	214 700	—	—	—	—	314 434
Subtotal	250 516	214 700	10 760	—	12 786	—	488 762
<i>Regional, interregional and global projects especially designed for LDCs</i>							
	690 261	—	18 000	—	619 483	—	1 327 744
TOTAL	3 012 058 <sup>f</sup>	13 075 444	373 190	53 000	957 914	2 960 042	20 431 648

<sup>a</sup>The table does not include regional, interregional and global projects or individual fellowships and group training programmes in which the least developed countries have been involved together with other developing countries and which are usually financed from non-least developed countries funds.

<sup>b</sup>Excluding 14 per cent overhead costs.

<sup>c</sup>Other sources include trust funds.

<sup>d</sup>United Nations Capital Development Fund.

<sup>e</sup>For Djibouti and Sudan see under "Africa".

<sup>f</sup>Including project approvals under the special allocation for the Industrial Development Decade for Africa.

TABLE 3. TOTAL PROJECT APPROVALS (NEW PROJECTS, PLUS ADDITIONAL ALLOCATIONS TO ONGOING PROJECTS, MINUS CANCELLATIONS)<sup>a</sup>

(In US dollars)

Region/country	Regular programme	UNDP/IPF	SIS	UNDP/Special measures	UNIDF <sup>b</sup>	Other resources <sup>c</sup>	Total
<i>Africa</i>							
Benin	64 400	(29 073)	(2 237)	—	—	—	33 090
Botswana	—	89 000	33 275	—	—	—	122 275
Burkina Faso	26 800	(8 613)	(10 880)	—	(2 194)	—	5 113
Burundi	90 224	—	(9 575)	—	112 470	—	193 119
Cape Verde	51 849	142 096	28 497	—	—	—	222 442
Central African Republic	6 276	—	—	—	—	—	6 276
Chad	—	209 800	(5 154)	—	(109 000)	—	95 646
Comoros	96 100	—	—	—	—	(2 384)	93 716
Djibouti	—	80 000	—	—	—	—	80 000
Equatorial Guinea	—	—	—	—	—	—	—
Ethiopia	39 000	4 813 816	42 716	—	64 175	51 185	5 010 892
Gambia	12 685	—	(25 885)	—	66 666	38 000	91 466
Guinea	64 020	2 478 348	16 875	53 000	—	{ 2 125 000 <sup>d</sup> }	4 810 681
Guinea-Bissau	—	(18 638)	(933)	—	(2 667)	—	22 238
Lesotho	4 500	147 100	—	475	3 415	—	155 490
Malawi	13 559	(9 327)	(4 335)	178 572	—	44 803	223 272
Mali	13 050	407 181	—	—	1 838	—	422 069
Niger	33 425	(428 376)	6 005	(298 880)	—	—	(687 826)
Rwanda	176 005	(373 948)	72 905	(49 945)	(2 448)	—	(177 431)
Sierra Leone	21 632	130 351	7 857	—	—	(23 193)	136 647
Somalia	382 256	(523 165)	(6 386)	—	(42 961)	34 109	(156 147)
Sao Tome and Principe	83 050	—	—	—	1 152	—	84 202
Sudan	149 620	20 640	24 955	—	26 000	18 265	239 480
Togo	17 450	386 109	(6 183)	—	30 324	{ 431 775 <sup>d</sup> }	906 176
Uganda	40 000	2 277	(67 769)	—	—	—	(25 492)
United Republic of Tanzania	404 006	58 249	46 803	26 917	(24 128)	249 559	761 406
Subtotal	1 789 907	7 573 827	140 551	(89 861)	122 642	3 087 258	12 624 324

<i>Americas</i>							
Haiti	121 793	94 144	—	—	65 000	9 587	290 524
<i>Asia and the Pacific</i>							
Afghanistan	19 000	189 214	(2 247)	—	—	—	205 967
Bangladesh	22 280	2 320 904	—	(18 057)	(5 500)	—	2 319 627
Bhutan	65 000	1 324 378	—	—	—	—	1 389 378
Lao People's Democratic Republic	—	43 426	—	—	—	—	43 426
Maldives	4 500	—	(62 764)	(5 845)	—	—	(64 109)
Nepal	42 000	753 789	2 626	—	(21 256)	—	777 159
Samoa	24 000	—	—	—	—	10 838	34 838
Subtotal	176 780	4 631 711	(62 385)	(23 902)	(26 756)	10 838	1 706 286
<i>Arab States<sup>e</sup></i>							
Democratic Yemen	150 782	(3 433)	14 178	—	53 920	—	215 447
Yemen	99 734	234 272	—	—	319	—	334 325
Subtotal	250 516	230 839	14 178	—	54 239	—	549 772
<i>Regional, interregional and global projects especially designed for LDCs</i>							
	690 261	225 507	18 000	—	735 856	—	1 669 624
TOTAL	3 029 257 <sup>f</sup>	12 756 028	110 344	(113 763)	950 981	3 107 683	19 840 530

<sup>a</sup>The table does not include regional, interregional and global projects or individual fellowships and group training programmes in which the least developed countries have been involved together with other developing countries and which are usually financed from non-least developed countries funds.

<sup>b</sup>Excluding 14 per cent overhead costs.

<sup>c</sup>Other sources include trust funds and accounts receivable.

<sup>d</sup>United Nations Capital Development Fund.

<sup>e</sup>For Djibouti and Sudan see under "Africa".

<sup>f</sup>Including project approvals under the special allocation for the Industrial Development Decade for Africa.

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