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# ANNUAL REPORT OF UNIDO 1986

Industrial Development Board  
Third session, 1987





UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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## ABBREVIATIONS

ACC	Administrative Committee on Co-ordination
ACT	Analysis of Technological Complexity
ADC	Andean Development Corporation
AIDO	Arab Industrial Development Organization
APCTT	Asia and Pacific Centre for Technology Transfer
ARCT	African Regional Centre for Technology
ASEAN	Association of South-East Asian Nations
CCAQ	Consultative Committee on Administrative Questions
CID ACP-EEC	Centre for Development of the Industry of the EEC - African, Caribbean and Pacific Group of States
CMEA	Council for Mutual Economic Assistance
COMFAR	Computer Model for Feasibility Analysis and Reporting
CORIS	Computerized Registry Information System
COSERA	Consultative Group on Solar Energy Research and Applications
CPC	Committee for Programme and Co-operation
ECA	Economic Commission for Africa
ECCAS	Economic Community of Central African States
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ECOWAS	Economic Community of West African States
EEC	European Economic Community
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
HASIDA	Handicraft and Small Industry Development Agency
IAEA	International Atomic Energy Agency
ICGEB	International Centre for Genetic Engineering and Biotechnology
ICSC	International Civil Service Commission
IDDA	Industrial Development Decade for Africa
IDF	Industrial Development Fund
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
ILO	International Labour Organisation
INPRIS	Investment Promotion Information System
INTIB	Industrial and Technological Information Bank
IPF	Indicative planning figure
IPS	Investment Promotion Service
ITC	International Trade Centre UNCTAD/GATT
ITU	International Telecommunication Union



JPO	Junior Professional Officer
JUNAC	Commission of the Cartagena Agreement
LES	Licensing Executive Society
MEPS	Methodology for assessing and programming production/consumption systems
OAU	Organization for African Unity
OECD	Organisation for Economic Co-operation and Development
OLADE	Latin American Energy Organization
OLDEPESCA	Latin American Organization for the Development of Fisheries
PAC	Purchase and Contract Service
PER	Project Evaluation Report
PROPSPIN	Project Profile Screening and Pre-Appraisal Information System
PTA	Preferential Trade Area for Eastern and Southern African States
R + D	Research and development
REMLAC	Regional Network for Micro-electronics for Latin America and the Caribbean
SADCC	Southern African Development Co-ordination Conference
SELA	Latin American Economic System
SIDFA	Senior Industrial Development Field Adviser
SIS	Special Industrial Services
TCDC	Technical co-operation among developing countries
TF	Trust funds
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
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFDAC	United Nations Fund for Drug Abuse Control
UNOV	United Nations Office at Vienna
UNV	United Nations Volunteers
WEPZA	World Export-Processing Zone Association
WHO	World Health Organization
ZISCOSTEEL	Zimbabwe Iron and Steel Company

## PREFACE

The year covered in this report was a fateful year in the history of UNIDO. It witnessed the formal conversion of the Organization into a specialized agency and saw the emergence of a financial crisis of unprecedented proportions.

At the outset of the year, the activities of UNIDO assumed a new orientation. Human resource development, small- and medium-scale industries, industrial rehabilitation and the promotion of closer co-operation between enterprises received renewed emphasis in the programmes of the Organization. A more integrated approach to industrial development became a guiding principle in the formulation of technical co-operation programmes and projects. Throughout the year, measures were taken to increase the operational flexibility of the Organization and its capacity for change and innovation. UNIDO was restructured: a clear country focus was set and closer links were established between the component parts of the Organization to enhance co-ordination and minimize duplication. This and other measures designed to increase the transparency of the activities of the Organization are described in the body of the report.

The onset of a severe financial crisis constrained the capacity of the Organization to achieve fully its programme of revitalization and innovation. The financial crisis is rooted in the fact that the budget of UNIDO is based on the United States dollar which depreciated markedly in value against the Austrian schilling. Shortfalls in contributions as a result of national legislation, withholdings and delayed payments were another major contributory factor. By the end of 1986, it was estimated that losses on both counts would constitute a sizeable portion of the total budget of the Organization for the biennium.

Despite these financial constraints and the economies that had to be made, UNIDO did its utmost to maintain its technical viability and financial integrity. Thanks to the commitment of its staff, UNIDO increased its implementation of technical co-operation programmes and promoted industrial investment, while continuing to conserve its limited resources. As against \$94.5 million in 1985, some \$99.6 million of technical co-operation projects were implemented in 1986: some \$265.3 million worth of industrial investment projects were promoted over the same period.

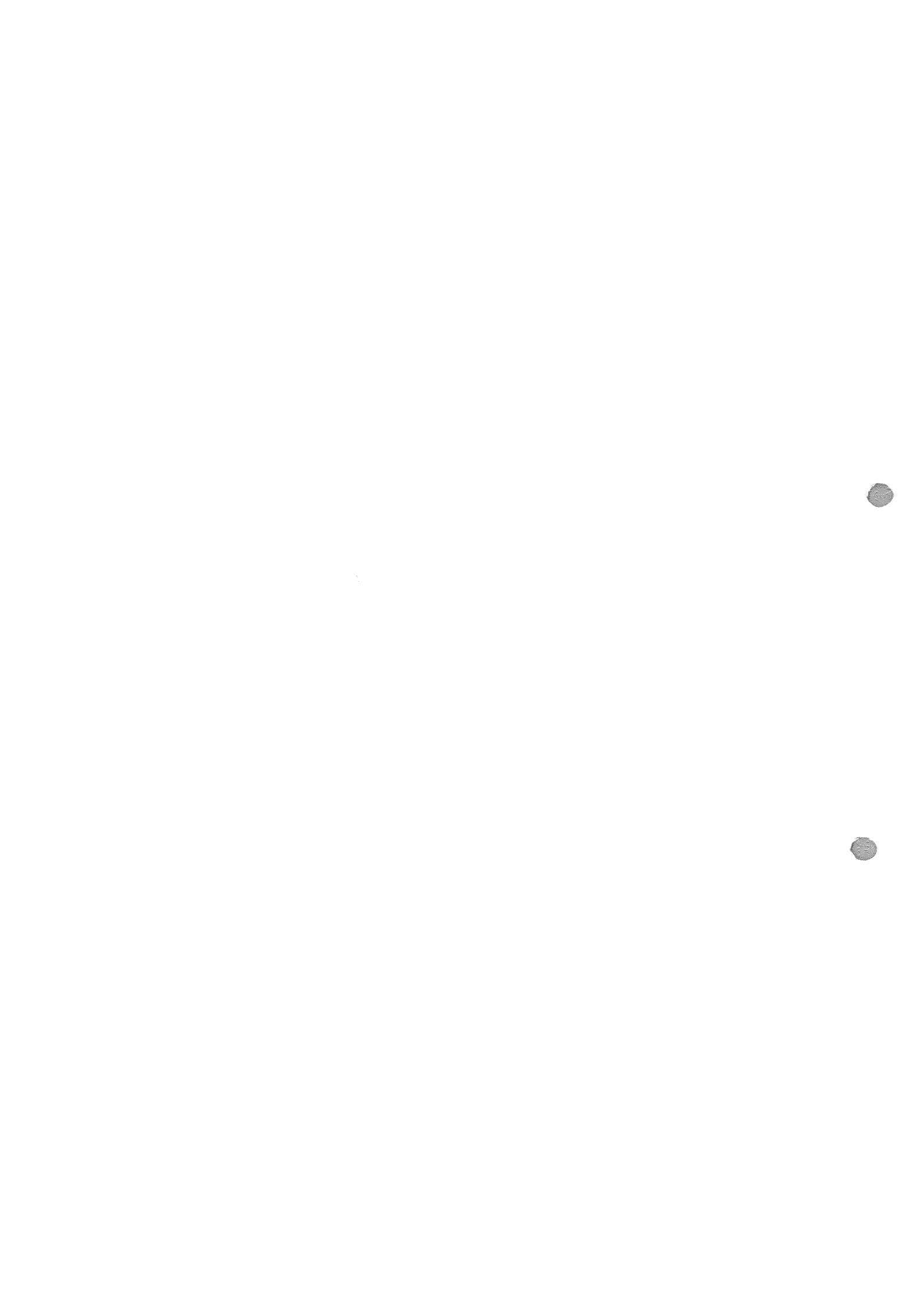
A concerted effort, including extensive missions by the Director-General, was made to mobilize increased contributions to the Industrial Development Fund. As a result, not only did the level of contributions rise, but UNIDO also received contributions from an ever-widening range of donors.

This increased interest in and support for the activities of UNIDO, as evidenced by the growth in contributions to the Industrial Development Fund, reflect a growing recognition of the key role that UNIDO can play in promoting industrial development. Moreover, the approach adopted by UNIDO in promoting industrial co-operation between developed and developing countries and among the developing countries themselves has gained considerable support. Support of this kind augurs well for the future of UNIDO.

As in previous years, the Annual Report presents an overview of the activities of the Organization. This year, however, a conscious attempt has been made to reduce its length. Extensive use has been made of summary tables, and briefer descriptions have been given of the achievements of the past year. It is hoped that in its more concise form, the Annual Report will none the less present a comprehensive picture of UNIDO and its attempts to play an effective catalytic role in the process of industrial development.

DOMINGO L. SIAZON, Jr.

Director-General





## CHAPTER I. POLICY ISSUES

1. On 1 January 1986 UNIDO became the sixteenth specialized agency of the United Nations system. This event was the culmination of lengthy negotiations among the Member States of the United Nations and was a reflection of the belief of those States that an independent international organization can more efficiently help to promote and accelerate industrial development in developing countries. It also signified a shared perception on the part of the Member States that the United Nations system can make an important contribution to co-operation between developed and developing countries in accelerating world industrial development.

2. At the beginning of 1986, UNIDO was faced with a number of important tasks while at the same time it had to ensure its smooth transition from an organ of the General Assembly to a specialized agency. Within the framework of its Constitution, the new agency undertook to formulate an integrated, comprehensive, global and dynamic approach to development and industrialization in the developing countries. Integrated in the sense that attention is given to inter-sectoral linkages with industry, as well as to linkages between agriculture and industry and between industry and the service sectors. Comprehensive in the sense that it encompasses not only the industrial, but also the technological, training, social, institutional and environmental aspects of overall development. Global in that it stresses co-operation between North and South, within the South, and between East and West, and dynamic in that it is oriented towards increasing the long-term adaptability of the developing countries' economies.

3. UNIDO as a specialized agency also has a clear mandate to assist and co-operate with the private sector. Consequently, the activities of the Organization took on a new dimension as programmes were gradually reoriented to intensify co-operation through UNIDO at the enterprise level, through greater direct foreign investment in the developing countries and through the transfer of appropriate technology.

4. UNIDO launched new initiatives for international co-operation, and special working relationships were established with several well-known industrial enterprises that provided their expert services free of charge or under favourable conditions. As a result, the Organization enjoyed closer interaction with industry than heretofore, while the developing countries benefited

from state-of-the-art advice on a broad range of subjects ranging from plant and equipment rehabilitation, management, technology, and marketing to financing. On their part, the participating enterprises enhanced their knowledge of new markets and countries.

5. The new forms of co-operation came about as a result of trust-fund arrangements established by UNIDO through its extensive network of international contacts; the arrangements enabled the Organization to draw upon a broad range of supplies and services at a most reasonable cost. Basic stand-by agreements that ensure rapid access to high-level expertise were thus concluded or were under active consideration during 1986 with a number of major international enterprises. The first such agreement was signed in September 1986 with the Bechtel Corporation of the United States of America, while similar agreements were under active consideration with the Mexican Petroleum Institute, Ishikawajima-Harima Heavy Industries Co. Ltd. of Japan, Energoprojekt of Yugoslavia and the Westinghouse Corporation of the United States of America.

6. As part of its new approach, UNIDO also encouraged enterprises to make direct foreign investments and to enter into mutually beneficial joint venture agreements in the appropriate sectors in the developing countries. Particular emphasis was placed on promoting direct foreign investment and portfolio investment which, in the context of long-term industrial projects, are generally considered to be better financing alternatives than short-term commercial loans. Self-financing arrangements were also established for projects to be implemented by UNIDO. The countries involved were Egypt, Nigeria and Yemen, while similar arrangements were under negotiation with enterprises in India, Iran (Islamic Republic of), Mexico and Saudi Arabia.

7. An extended series of missions to Member States of UNIDO by the Director-General lent added impetus to the new initiatives described above. By entering into a direct dialogue, UNIDO was able to establish closer relations with industries and enterprises in both the public and private sectors, as well as with chambers of commerce and industry in many countries. Greater understanding for the aims and objectives of the Organization was thus generated. The broad support shown for the efforts of UNIDO reflects a general acceptance of the fact that greater complementarity between the public and private

sectors and enterprise-to-enterprise co-operation can contribute measurably to the industrial development of the developing countries.

8. The new approach is predicated upon greater operational flexibility and an enhanced capacity for change and innovation on the part of the Secretariat. To that end, the Secretariat was restructured with the aim of improving overall efficiency. A key feature of the reorganization was a clearer country focus in UNIDO operations. This was achieved by integrating the functions of area programming and project development into one organizational component and consolidating the activities related to technical co-operation at the country level. A closer relationship was also established between studies and programme development, and a more effective mechanism for reviewing and appraising projects was introduced to enhance the overall quality of UNIDO programmes and projects.

9. In an effort to improve the system of policy formulation and co-ordination, the Director-General constituted an Executive Management Committee. The Committee, composed of the Deputy Directors-General and other senior staff, met regularly to consider policy and management issues. High-level advice on the programmes and activities of the Organization is also provided by a Special Advisory Group of eminent experts whose first meeting was to be convened by the Director-General in early 1987. Drawn from different industrial fields and all regions, the experts were to discuss new concepts and approaches to industrial development and consider the medium-term plan of UNIDO for 1990-1995.

10. At the operational level, new guidelines concerning country programming missions were drawn up to ensure greater responsiveness to the needs of developing countries. Work was also begun on guidelines related to the project development cycle that will clearly set out the sequence of steps to be followed in the formulation, appraisal and approval of projects. The terms of reference of the Project Review Committee were also re-drafted to facilitate the process of project review and approval. In concert with the efforts to achieve increased effectiveness and efficiency in technical co-operation activities, new management measures and procedures were introduced to effect economies at the operational level. Stricter control of expenditures brought about appreciable savings. These economies took on particular importance in the light of the financial crisis that cast its shadow over most of the activities of the Organization throughout 1986. Despite the consensus among Member States that conversion to specialized agency status should not result in disruption of ongoing

programmes during and immediately after the transition period, UNIDO was compelled to take measures in that period in an endeavour to ease the adverse effects of a serious cash-flow problem that was not of its making.

11. The difficulties that faced UNIDO throughout 1986 arose primarily because the budget of the Organization is based on the United States dollar. At the end of 1986, it was estimated that solely as a result of the depreciation of the dollar, UNIDO would incur a loss of \$23.2 million for the 1986-1987 biennium assuming a rate of US\$1 : 12 Austrian schillings. The cash-flow problem was exacerbated by the delayed receipt and withholding of assessed contributions by Member States that were estimated to amount to a further \$27.3 million. The cumulative shortfall thus totalled no less than \$50.5 million.

12. Among the measures designed to alleviate the current serious financial situation, the Member States agreed, at the second session of the Board in October 1986, to increase the Working Capital Fund of UNIDO from \$6 million to \$9 million. They also agreed that the Director-General negotiate with the Secretary-General of the United Nations deferral of the repayment of the loan it had received from the United Nations in the amount of \$16 million for the biennium. Moreover, within the Organization, major portions of certain programmes had to be delayed. Allocations for travel, consultancy and expert group meetings were markedly reduced and the filling of vacant posts held in abeyance. In toto, reduction in expenditures is expected to amount to \$13.7 million for the biennium.

13. In the last two months of the year, the Secretariat undertook a management audit. Its basic aims were (a) to ensure that the available staff resources were so deployed that UNIDO could carry out the activities projected for the remainder of the biennium in the most effective and efficient way; (b) to evaluate the basis and measure of the potential for an increase in the implementation of technical co-operation project activities in 1987; and (c) to provide a consolidated financial and staff management report to the Director-General which could serve as a basis for the formulation of a 1987 operational plan. The results of the audit were taken into account in preparing the 1988-1989 programme budget estimates for submission to the policy-making organs of UNIDO.

14. Despite all these measures, which will seriously affect UNIDO programmes and projects in the current and next bienniums and hinder an increase in technical assistance delivery, the Organization still expects to face a cash deficit throughout 1987.

Intergovernmental organs

15. In 1986, the Industrial Development Board held its second regular session in October; this provided the first opportunity for the Board of UNIDO to discuss items of a substantive nature. The Board also met in special session in May to approve the appointment of the Deputy Directors-General. 1/ The regular session of the Board was preceded by the second session of the Programme and Budget Committee, held in May and October. 2/

16. In various resolutions adopted at its first and second regular sessions of 1986, the United Nations Economic and Social Council called for action or contributions by specialized agencies in a number of fields. The Economic and Social Council also adopted resolution 1986/70 and decision 1986/131 concerning the draft annex to the Convention on the Privileges

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1/ For the reports of the Industrial Development Board on the work of its first special session and of its second session see documents GC.2/1 and GC.2/2, respectively.

2/ For the report of the Programme and Budget Committee on the work of its second session see documents IDB.2/2 and Add.1.

and Immunities of the Specialized Agencies relating to UNIDO. Also of relevance to UNIDO are various decisions adopted by the Governing Council of the United Nations Development Programme, at its special session on preparations for the fourth programming cycle and at its thirty-third regular session. 3/

17. At its thirteenth special session, the United Nations General Assembly adopted the United Nations Programme of Action for African Economic Recovery and Development 1986-1990. Other decisions and resolutions adopted by the Assembly at its forty-first regular session are also of interest to, or call for action by, UNIDO. 3/ Of primary concern are resolution 41/20<sup>9</sup> dealing with the loan of the United Nations to UNIDO and decision 41/443 transmitting to UNIDO the draft resolution on mobilization of financial resources for industrial development, originally referred to the General Assembly by the President of the Fourth General Conference of UNIDO as an organ of the General Assembly.

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3/ A list of the resolutions and decisions of the United Nations General Assembly, the Economic and Social Council and the United Nations Development Programme Governing Council of relevance to UNIDO will be made available to the Board in a conference room paper.



## CHAPTER II. INDUSTRIAL STRATEGIES AND OPERATIONS

### A. INDUSTRIAL POLICIES AND PERSPECTIVES

#### Introduction

1. As a result of the reorganization of the Secretariat, the subprogramme Studies and Research became a Division within the Department for Programme and Project Development and a re-direction of work took place that aims at providing a sharper country focus. The new approach includes the building up of a repository of information on industrial policies and perspectives of crucial importance to the programme development activities of UNIDO. The Division suffered a reduction in resources in the course of 1986, but endeavoured to retain most of the important programme elements in reshaped or reconsolidated forms. Towards the last quarter of 1986, the Studies and Research Division assumed a co-ordinating role in the work of the internal task force on new concepts and approaches for co-operation in industrial development (implementation of Article 2 (c) of the Constitution), and contributed to other inter-departmental policy studies concerning the Senior Industrial Development Field Adviser programme, and the programme for integration of women into industrial development.

#### The Global Report and related studies

2. The major emphasis of the work of the Global Studies Branch during 1986 was on an assessment of the short-term outlook for world industry. Research focused on the impact of changing external conditions on the industrialization process in different developing countries and regions, and the implications such changes bore for industrial policy and strategy requirements. The principal findings were incorporated in Industry and Development: Global Report 1986 (ID/343), which also included a review of recent developments in 28 industrial sectors in each of the developing regions. As a special feature, the Global Report 1986 analysed in detail the impact of trade in manufactures with developing countries on employment in six industrialized market economies. During the latter part of 1986, work was also started on the Global Report 1987, with emphasis on the ongoing structural adjustment efforts of the developing countries and their implications for international industrial co-operation policy. Background studies undertaken in 1986 in conjunction with the preparation of these annual surveys included: (a) a policy analysis of local content regulations in

developing countries (UNIDO/IS.606); (b) an analysis of the sources of change in manufacturing value added over the period 1963-1980 (UNIDO/IS.591); (c) an examination of data needs for the study of structural changes in the manufacturing sector (UNIDO/IS.601); and (d) an analysis of the energy sector in relation to industrialization scenarios for the year 2000 (UNIDO/IS.594).

3. In 1986 the Branch contributed to the preparation of the report of the Director-General to the Industrial Development Board on restructuring and redeployment (IDB.2/13). It also prepared UNIDO contributions to governing bodies of other United Nations organizations and specialized agencies. The Branch continued to collect and publish, on a quarterly basis, suitable technical articles for inclusion in the journal Industry and Development (ID/SER.M/16-19). As part of its work in fostering the development of quantitative methods for industrial planning in the developing countries, UNIDO organized the eighth International Input-output Conference held at Sapporo (Japan) in July/August. A publication based on the papers presented at the Conference was under preparation.

#### Country- and region-specific studies and programme support activities

4. The work undertaken by the Regional and Country Studies Branch was further integrated with the technical assistance programming activities of the Organization. An increased part of the work constituted research related to technical assistance programming in the form of preparation of country reviews, country analyses of overall technical assistance requirements, participation in programming missions and substantive inputs to the activities of the area programmes. During 1986, 13 country reviews were issued for this purpose. They were also used by an increasing number of clients outside the Organization, such as Governments, aid agencies, financial organizations and industrial companies.

5. In support of technical assistance programming, in 1986 staff of the Branch participated in missions to nine developing countries where they carried out economic analyses of the industrial sector. For instance, a study on Democratic Yemen entailed an overall assessment of the current performance and of further prospects of the industrial sector in view of emerging challenges and the need for a consistent framework of technical co-operation. Another study on the Philippines aimed at providing a direct linkage between external inputs and

the new national strategies and policies for medium-term industrial development. In a study made preparatory to technical assistance programming in Turkey, emphasis was placed on supporting measures that sustain the country's industrial exports in the face of increasing competition in the international markets. As inputs to a number of other missions, the Branch provided economic background materials and analyses covering more than 30 countries.

6. The Branch continued economic research on specific policy problems of individual developing countries: many of these studies were funded through extrabudgetary resources. As in the cases of Guinea-Bissau, Mozambique and Zimbabwe, the research frequently focused on industrial strategies and identification of development prospects for the manufacturing sector. A study financed under the Special Industrial Services programme provided policy advice to Mexico on decentralization and regional development. The study also led to first contacts for international co-operation in one selected region in Mexico.

7. A series of studies focused on key issues in some countries and regions such as the linkage of export-processing zones with the domestic economy, the policy of restructuring of the textile industry, and small and rural industries. The studies on small-scale industries carried out in various developed and developing countries showed that the prospects for this dynamic sector can be greatly enhanced through the establishment of common business services for such industries and sub-delivery arrangements with large industries. The results of the studies indicated that in national and international support programmes for small-scale industries attempts could be made to combine more closely both capital assistance and technical co-operation with promotional services. The research findings were used in the preparation of the reports by the Director-General to the Industrial Development Board on UNIDO activities related to industrial policies and strategies (IDB.2/18) and to development trends in small-scale industries (IDB.2/16).

8. Through missions that covered more than 30 countries during 1986, the four Regional Advisers provided technical advice on overall industrial strategies, policies and investment project assessment, monitoring of technology and market trends in the country-specific context, and identification of institutional support measures. The Advisers also provided substantive inputs into local training courses and professional workshops. In Africa, the Regional Adviser rendered advice to six countries on the development of core engineering industries, and undertook advisory missions to six other countries within the framework of a project for the manufacture of machine tools executed jointly by UNIDO, the Economic Commission

for Africa (ECA) and the Preferential Trade Area for Eastern and Southern African States (PTA).

#### Sectoral studies and related programme support activities

9. The ongoing reorientation of the sectoral studies aims at strengthening support to technical co-operation activities, to open up new areas for assistance and to contribute to all UNIDO activities for the industrialization of developing countries. During 1986 the work has been pursued according to a three-stage research approach; <sup>1/</sup> the results have found many uses by decision makers in developing countries, researchers and universities, other organizations within the United Nations system and UNIDO programmes, including the System of Consultations.

10. In the food-related sectors, studies concentrated on promoting a systems approach to programming. The documentation of a special methodology for assessing and programming integrated production/consumption systems (MEPS) was completed and its practical application to specific food sectors was begun in co-operation with the Andean Group, e.g. a full-scale programming exercise relating to the fisheries industries in Peru. A study on development strategies for the fisheries industrial systems (FIS) that covers 64 developing countries was completed in co-operation with FAO. Strategies and actions for the Government and the private sector in these countries have been suggested and concrete projects can be formulated on the basis of the work. The Sectoral Studies Branch also contributed to the report by the Director-General to the Industrial Development Board on development trends in agro-industries (IDB.2/17).

11. The work of the Sectoral Studies Branch in 1986 also focused on capital goods and agricultural machinery. In Latin America, studies and expert meetings promoted regional co-operation and the use of the public sector purchasing power as a stimulus for the development of domestic industries. Priority sectors, such as the electric power equipment industry, were identified through a joint UNIDO/Economic Commission for Latin America and the Caribbean (ECLAC) regional project and through country case studies. Another line of work aims at drawing up a work programme for the Andean Pact countries to identify technical co-operation projects for the use of micro-electronics in capital goods industries. During 1986, the work in South-East Asia concentrated on transforming the conventional machine-tool industry to cope with the increasing spread

<sup>1/</sup> ID/B/340, chap. IV, para. 29; IDB.2/10, chap. IV, para. 17.

of microelectronics-based technologies. In that context, a workshop held in Singapore in November showed how the experience of some developing countries could be applied to other countries in the region in achieving such a transformation. Eleven national and two subregional project proposals emerged at the workshop for which funding will be sought.

12. In the iron and steel sector, studies were issued on training methods, environmental problems, regional surveys and a review of the planned capacity development which still by far surpasses reasonable demand projections. In the chemical industries, work focused on priority areas for new drug research and pharmaceutical chemical process development and on production of drugs from medicinal plants. Studies on the fertilizer, pesticide and petrochemical industries continued in 1986.

13. Special papers that analysed the role and activities of UNIDO in the iron and steel and agro-food industries were prepared for the Economic Commission for Europe (ECE) and International Labour Organisation (ILO). The paper for ECE contained an analysis of the conditions for participation of East and West enterprises in food security programmes and for possible tripartite co-operation arrangements. Several technical co-operation projects - financed by the Industrial Development Fund (IDF) and other special contributions - were carried out that aimed at the integrated development of food sectors in Latin America and the capital goods development in Asia. Owing to a reduction in funds, a promising project on mini-fertilizer plant development in four African countries, a study programme for leather industries and several studies on chemical industries had to be discontinued.

#### Industrial statistics and related programme support activities

14. Developments in this domain have focused on extensions and improvements in the UNIDO data base that were specifically designed to meet more efficiently the data needs of users both within and outside UNIDO. Although such work is primarily concerned with industrial statistics, all types of data within the data base are receiving attention including national accounts, commodity trade, finance, population and other related fields essential to industrial planning and policy evaluation. The recurrent statistical needs of UNIDO are for data which are internationally consistent, comparable across countries and industries and easily accessible throughout the Organization. The work of the Industrial Statistics and Industrial Development Survey Section is intended to meet these needs in the most efficient manner possible.

15. While the Section's work with regard to data collection, data improvement, estimations and standardization represents a

primary objective, a related goal is the development of industrial data at a level of greater detail and specificity which is required.

16. General improvements in availability and quality have been supplemented by the collection of industrial statistics that were not previously available for specific countries. One result of this work was the publication in October of "Africa in Figures, 1986" (PPD/2), which draws upon previously unpublished data and provides a series of indicators on industrial performance and structural change in the African region.

17. With regard to methods of data dissemination, the Section served users within UNIDO through several means in 1986. These included provision of extracts from the data base according to standardized formats, support for specific data requests and the maintenance of a system of on-line access and data processing. With regard to dissemination outside UNIDO, machine-readable copies of the UNIDO data base have been made available to international organizations, research institutions and universities. UNIDO also continued to supply specific types of industrial data for use in recurrent publications of other international organizations, notably the World Development Report of the World Bank and the United Nations Conference on Trade and Development (UNCTAD) Handbook of International Trade and Development Statistics. The 1986 version of the Handbook of Industrial Statistics (ID/342), which was issued early in 1987 provides a large volume of international data on structural change, industrial performance and productivity trends and represents a set of industrial indicators that are not available elsewhere. Other efforts to facilitate and ensure effective and widespread use of the UNIDO data base included preparation of various technical documents describing methods of measuring key indicators such as structural change and comparative advantage, long-term trends in patterns of world industry and related information that details the contents of the UNIDO data base.

18. The accumulated experience of UNIDO in the development of industrial statistics along with the related activities of data processing is utilized in activities that also have direct application in developing countries. In 1986, statistical field work was completed that was financed by a grant from the Ministry of International Trade and Industry of Japan. The results of that project are expected to lead to further improvements in data collection and standardization in several key areas of industrial statistics. Discussions began on a new division of labour with the United Nations Statistical Office in the field of industrial statistics with a view to improving the usefulness of industrial data for planning and project development at both the national and international level.

## B. INDUSTRIAL OPERATIONS

### I. Implementation overall in 1986

19. As in previous years, by far the largest portion of technical co-operation activities was financed from the United Nations Development Programme (UNDP). Although the authorized budget levels of UNDP continued to be maintained at 55 per cent of the illustrative indicative planning figures (IPF) for the third cycle (1982-1986), the funds made available for industrialization under this source increased by \$7.8 million. However, the funds available under all sources for 1986 were slightly lower than in 1985. There was nevertheless an overall increase in delivery of technical co-operation projects by \$5.1 million. During the year, due to budgetary constraints, the implementation of projects financed from the regular programme and the allocations for the programme for the Industrial Development Decade for Africa (IDDA) was sharply reduced. Had this not occurred, the overall level of implementation by UNIDO would have been several million dollars higher.

20. A total of 1,693 projects were implemented or under implementation in 1986, comprising 155 projects larger than \$1 million in value, 444 projects larger than \$150,000 in value and 1,094 projects below that value. Tables 1 and 2 below show overall technical co-operation expenditure in 1986, by source of funds and project component.

21. A breakdown of technical assistance delivery, by source of funds and project component, is given below for Africa (tables 3 and 4), for the Americas (tables 5 and 6), for the Arab States (tables 7 and 8), for Asia and the Pacific (tables 9 and 10), and for Europe (tables 11 and 12).

22. The value of projects executed by UNIDO in Africa in 1986 amounted to \$35.7 million (including \$8.5 million for African Arab States), which constituted a decrease of \$1.5 million or 4 per cent (\$0.6 million or 6.6 per cent decrease for African Arab States) over technical assistance delivery for Africa in 1985. Although the technical assistance delivery for Africa that was financed from UNDP resources increased from \$19.6 million in 1985 to \$24.8 million in 1986, there was a decrease in the overall delivery for the region, resulting from constraints under the regular programme and under the programme for IDDA. Another factor leading to the decline was the decrease of trust funds allocated for activities in the African Arab States. The value of projects executed by UNIDO in the Americas in 1986 amounted to \$10.6 million, resulting in a decrease of \$1.4 million or

11.7 per cent over technical assistance delivery for that region in 1985. The lower level of implementation in the Americas as compared to 1985 can be explained by the decrease of UNDP resources made available for implementation in 1986 and by the temporary drop in activities under the United Nations Fund for Drug Abuse Control. The value of projects executed by UNIDO in the Arab States in 1986 amounted to \$11.9 million (including \$8.5 million for African Arab States), a decrease of \$0.1 million or 0.8 per cent over the total figure for 1985 (a decrease of \$0.6 million or 6.6 per cent for African Arab States). The value of projects executed by UNIDO in Asia and the Pacific in 1986 amounted to \$37.0 million, increasing by \$6.6 million or 21.7 per cent as compared to technical assistance delivery for the region in 1985. The reason for the increase of technical assistance delivery for Asia and the Pacific in 1986 lies in the fact that many States in the region - particularly China, India, and Viet Nam - continued to allocate a greater share of their IPF to industrialization. Furthermore, a higher rate of implementation could be achieved during the year. The increase of delivery in 1986 under the Industrial Development Fund in this region was a result of the recovery from the low level, prevailing in 1985, of the volume of activities financed under special-purpose contributions. The value of UNIDO technical assistance delivery to Europe in 1986 amounted to \$3.2 million, constituting an increase of \$0.1 million or 3.2 per cent over the figure for 1985.

23. The technical assistance provided by individual branches in the Department of Industrial Operations in 1986 is treated in the paragraphs that follow. As many 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 Department of Industrial Operations, but of UNIDO as a whole. Thus, individual branches or sections of the Department provide inputs to and benefit from the various activities of the Department of Industrial Promotion, Consultations and Technology and, of course, the Department for Programme and Project Development.

24. Technical co-operation projects under implementation in 1986 and the regional distribution of technical assistance delivery during the year by field of activity are listed in tables 13 and 14 below.

Table 1  
Technical co-operation expenditure,  
by source of fund

Source of funds	1 9 8 6	
	\$ thousand	%
UNIDO regular budget <u>a/</u>	3,753	3.8
UNDP		
IPF and cash counterpart	67,842	68.1
SIS	3,888	3.9
Special programme resources and special measures	371	0.4
Subtotal	72,101	72.4
UNDP-administered trust funds	1,602	1.6
Other funds		
Other trust funds	6,692	6.7
Industrial development fund	13,203	13.3
UNFDAC	619	0.6
Non-UNIDO funds	1,630	1.6
Subtotal	22,144	22.2
T O T A L	99,600	100.0

a/ UNIDO regular budget covers regular programme expenditures for technical co-operation and expenditures for the Industrial Development Decade for Africa.

Table 2  
Technical co-operation expenditure,  
by project component

Project component	1 9 8 6	
	\$ thousand	%
Project personnel	42,880	43.1
Subcontracts	12,135	12.1
Fellowships and training	14,577	14.7
Equipment	27,506	27.6
Miscellaneous	2,502	2.5
T O T A L	99,600	100.0

Table 3  
Technical co-operation expenditure in Africa, a/  
by source of fund

Source of funds	1 9 8 6	
	\$ thousand	%
UNIDO regular budget <u>b/</u>	2,763	7.7
UNDP		
IPF and cash counterpart	23,090	64.6
SIS	1,391	3.9
Special programme resources and special measures	292	0.8
Subtotal	24,773	69.3
UNDP-administered trust funds	1,355	3.8
Other funds		
Other trust funds	4,235	11.9
Industrial development fund	2,160	6.0
UNFDAC	0	0.0
Non-UNIDO funds	457	1.3
Subtotal	6,852	19.2
T O T A L	35,743	100.0

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

b/ UNIDO regular budget covers regular programme expenditures for technical co-operation and expenditures for the Industrial Development Decade for Africa.

Table 4  
Technical co-operation expenditure in Africa, a/  
by project component

Project component	1 9 8 6	
	\$ thousand	%
Project personnel	20,309	56.8
Subcontracts	3,563	10.0
Fellowships and training	2,655	7.4
Equipment	8,192	22.9
Miscellaneous	1,024	2.9
T O T A L	35,743	100.0

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

Table 5  
Technical co-operation expenditure in the Americas,  
by source of fund

Source of funds	1 9 8 6	
	\$ thousand	%
UNIDO regular budget <u>a/</u>	89	0.9
UNDP		
IPF and cash counterpart	6,498	61.6
SIS	1,016	9.6
Special programme resources and special measures	0	0.0
Subtotal	7,514	71.2
UNDP-administered trust funds	34	0.3
Other funds		
Other trust funds	1,048	9.9
Industrial development fund	827	7.8
UNFDAC	619	5.9
Non-UNIDO funds	419	4.0
Subtotal	2,913	27.6
T O T A L	10,550	100.0

a/ UNIDO regular budget covers regular programme expenditures for technical co-operation and expenditures for the Industrial Development Decade for Africa.

Table 6  
Technical co-operation expenditure in the Americas,  
by project component

Project component	1 9 8 6	
	\$ thousand	%
Project personnel	5,445	51.6
Subcontracts	865	8.2
Fellowships and training	1,360	12.9
Equipment	2,502	23.7
Miscellaneous	378	3.6
T O T A L	10,550	100.0



Table 7  
Technical co-operation expenditure in Arab States,  
by source of fund

Source of funds	1 9 8 6 <u>a/</u>		1 9 8 6 <u>b/</u>	
	\$ thousand	%	\$ thousand	%
UNIDO regular budget <u>c/</u>	286	2.4	258	3.0
UNDP				
IPF and cash counterpart	6,278	52.8	3,978	46.8
SIS	636	5.4	372	4.4
Special programme resources and special measures	0	0.0	0	0.0
Subtotal	6,914	58.2	4,350	51.2
UNDP-administered trust funds	23	0.2	23	0.3
Other funds				
Other trust funds	4,011	33.8	3,717	43.7
Industrial development fund	502	4.2	157	1.8
UNFDAC	0	0.0	0	0.0
Non-UNIDO funds	148	1.2	0	0.0
Subtotal	4,661	39.2	3,874	45.5
T O T A L	11,884	100.0	8,505	100.0

a/ Including African Arab States: Algeria, Djibouti, Egypt, Libyan Arab Jamahiriya, Morocco, Somalia, Sudan, Tunisia.

b/ African Arab States only.

c/ UNIDO regular budget covers regular programme expenditures for technical co-operation and expenditures for the Industrial Development Decade for Africa.

Table 8  
Technical co-operation expenditure in Arab States,  
by project component

Project component	1 9 8 6 <u>a/</u>		1 9 8 6 <u>b/</u>	
	\$ thousand	%	\$ thousand	%
Project personnel	8,478	71.3	6,033	70.9
Subcontracts	127	1.1	114	1.4
Fellowships and training	585	4.9	252	3.0
Equipment	2,515	21.2	2,001	23.5
Miscellaneous	179	1.5	105	1.2
T O T A L	11,884	100.0	8,505	100.0

a/ Including African Arab States: Algeria, Djibouti, Egypt, Libyan Arab Jamahiriya, Morocco, Somalia, Sudan, Tunisia.

b/ African Arab States only.

Table 9  
Technical co-operation expenditure in Asia and the Pacific,  
by source of fund

Source of funds	1 9 8 6	
	\$ thousand	%
UNIDO regular budget <u>a/</u>	211	0.6
UNDP		
IPF and cash counterpart	33,128	89.3
SIS	875	2.4
Special programme resources and special measures	68	0.2
Subtotal	34,071	91.9
UNDP-administered trust funds	34	0.1
Other funds		
Other trust funds	526	1.4
Industrial development fund	1,627	4.4
UNFDAC	0	0.0
Non-UNIDO funds	604	1.6
Subtotal	2,757	7.4
T O T A L	37,073	100.0

a/ UNIDO regular budget covers regular programme expenditures for technical co-operation and expenditures for the Industrial Development Decade for Africa.

Table 10  
Technical co-operation expenditure in Asia and the Pacific,  
by project component

Project component	1 9 8 6	
	\$ thousand	%
Project personnel	10,654	28.7
Subcontracts	5,488	14.8
Fellowships and training	5,560	15.0
Equipment	14,810	40.0
Miscellaneous	561	1.5
T O T A L	37,073	100.0

Table 11

Technical co-operation expenditure in Europe,  
by source of fund

Source of funds	1 9 8 6	
	\$ thousand	%
UNIDO regular budget <u>a/</u>	51	1.6
UNDP		
IPF and cash counterpart	2,756	85.3
SIS	342	10.6
Special programme resources and special measures	0	0.0
Subtotal	3,098	95.9
UNDP-administered trust funds	0	0.0
Other funds		
Other trust funds	0	0.0
Industrial development fund	81	2.5
UNFDAC	0	0.0
Non-UNIDO funds	0	0.0
Subtotal	81	2.5
T O T A L	3,230	100.0

a/ UNIDO regular budget covers regular programme expenditures for technical co-operation and expenditures for the Industrial Development Decade for Africa.

Table 12

Technical co-operation expenditure in Europe,  
by project component

Project component	1 9 8 6	
	\$ thousand	%
Project personnel	989	30.6
Subcontracts	481	14.9
Fellowships and training	738	22.9
Equipment	950	29.4
Miscellaneous	72	2.2
T O T A L	3,230	100.0

Table 13

Technical co-operation projects under implementation in 1986,  
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	
Institutional infrastructure	83	50	19	152
Factory establishment and management	29	17	8	54
Training	160	18	5	183
Industrial planning	55	24	9	88
Feasibility studies	57	30	7	94
Agro-based industries	129	54	17	200
Metallurgical industries	86	47	17	150
Engineering industries	89	64	31	184
Chemical industries	221	105	38	364
Other <u>a/</u>	185	35	4	224
<b>T O T A L</b>	<b>1,094</b>	<b>444</b>	<b>155</b>	<b>1,693</b>

a/ Not implemented by the Department of Industrial Operations.

Table 14

Regional distribution of technical co-operation expenditure,  
by field of activity

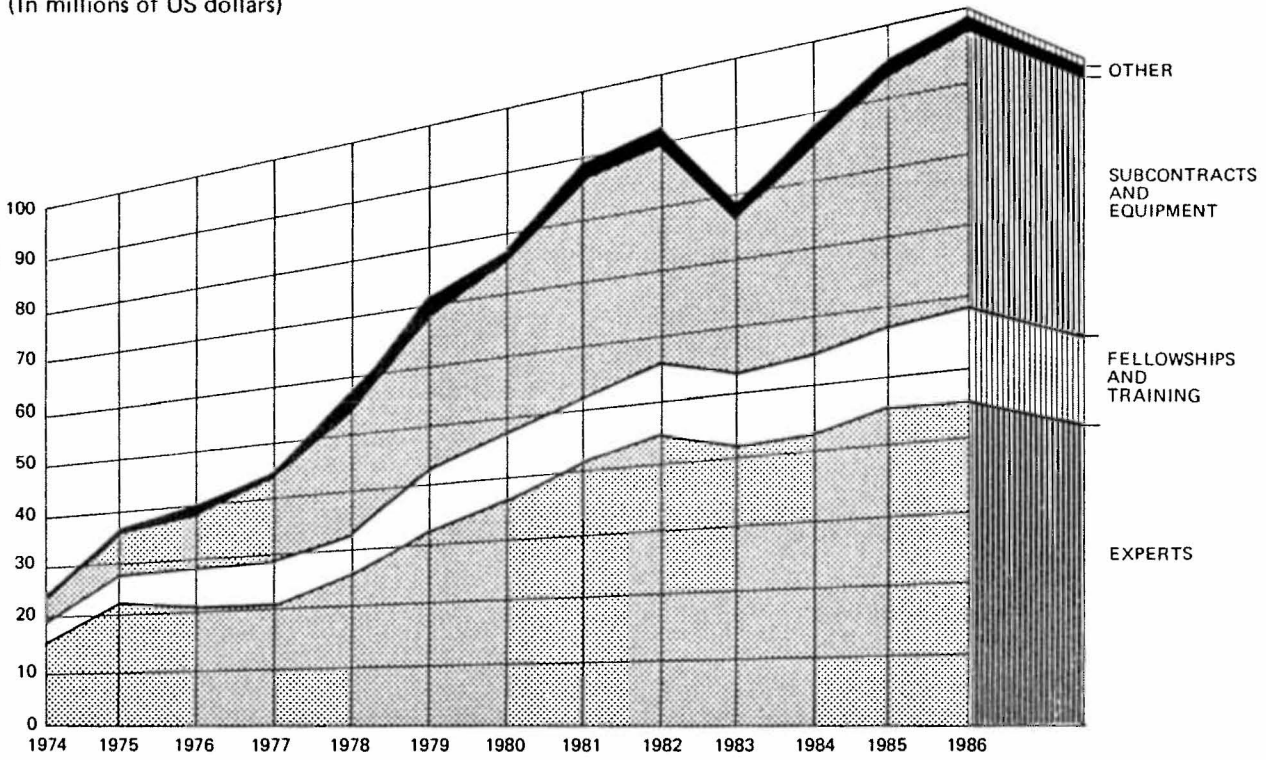
(Percentage)

Field of activity	Africa	The Americas	Arab States <u>a/</u>	Asia & the Pacific	Europe	Inter-regional/ Global	Total
Institutional infrastructure	52.1	13.1	6.8 (5.1)	21.3	4.8	1.9	100.0
Factory establish- ment and management	45.2	3.7	2.4 (11.4)	42.5	4.6	1.6	100.0
Training	29.0	5.3	2.1 (0.4)	3.3	2.5	57.8	100.0
Industrial planning	67.3	19.3	2.5 (5.3)	5.9	2.0	3.0	100.0
Feasibility studies	48.2	4.2	9.9 (1.7)	31.4	0.3	6.0	100.0
Agro-based industries	25.0	29.2	2.3 (7.7)	39.0	2.4	2.1	100.0
Metallurgical industries	36.3	13.2	1.7 (10.0)	46.5	2.1	0.2	100.0
Engineering industries	22.7	5.8	4.0 (3.3)	62.2	4.0	1.3	100.0
Chemical industries	31.8	5.8	1.7 (19.1)	49.2	4.4	7.1	100.0
Other <u>b/</u>	20.3	12.2	2.6 (0.2)	12.8	0.4	51.7	100.0
Total technical co-operation expenditure	35.9	10.6	3.4 (8.5)	37.2	3.2	9.7	100.0

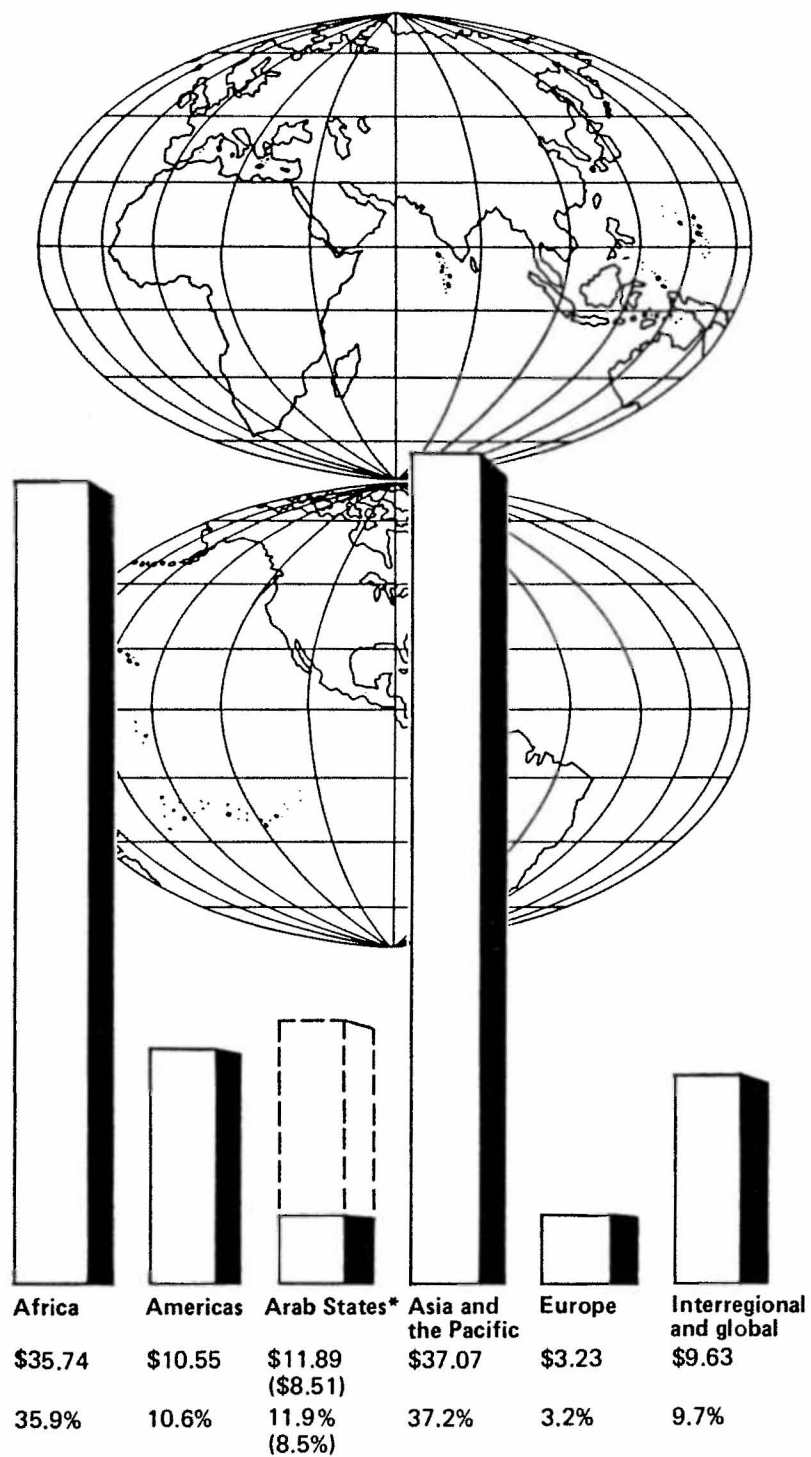
a/ Figures in parentheses relate to African Arab States and are already included under Africa.

b/ Not implemented by the Department of Industrial Operations.

TECHNICAL CO-OPERATION PROJECT EXPENDITURES  
 BY PROJECT COMPONENT, 1974-1986  
 (In millions of US dollars)

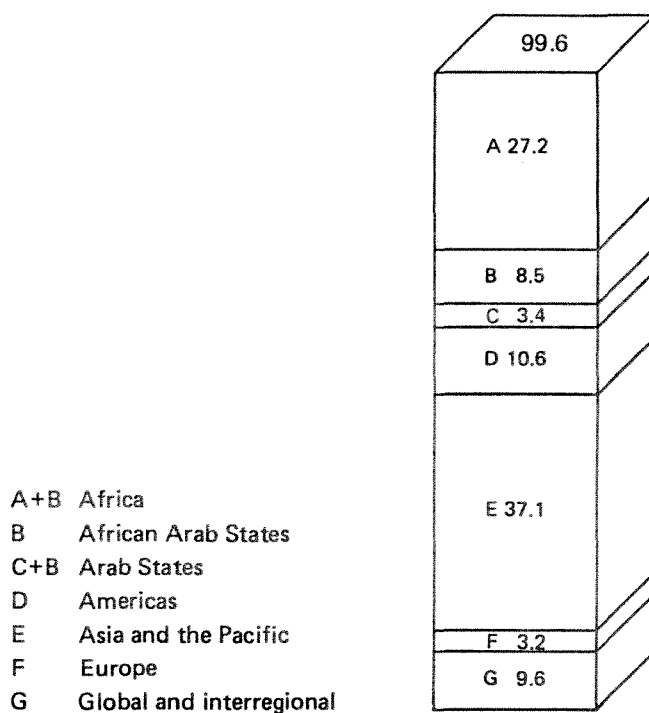


**TECHNICAL ASSISTANCE DELIVERED BY UNIDO IN 1986**  
 (By geographical area, in percentages and millions of United States dollars)

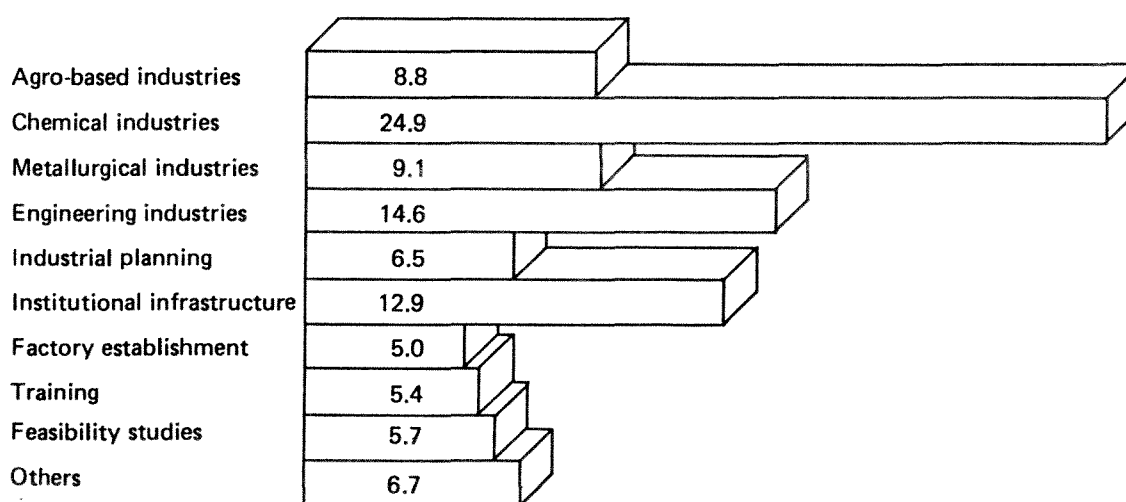


\*Broken lines and figures in parentheses give an indication of the African Arab States which are also included under the column "Africa".

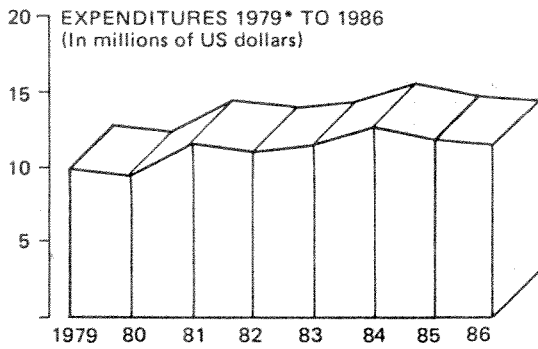
TECHNICAL ASSISTANCE DELIVERED BY UNIDO IN 1986  
(In millions of US dollars)



DISTRIBUTION OF TECHNICAL CO-OPERATION ACTIVITIES IN 1986  
(In millions of US dollars)

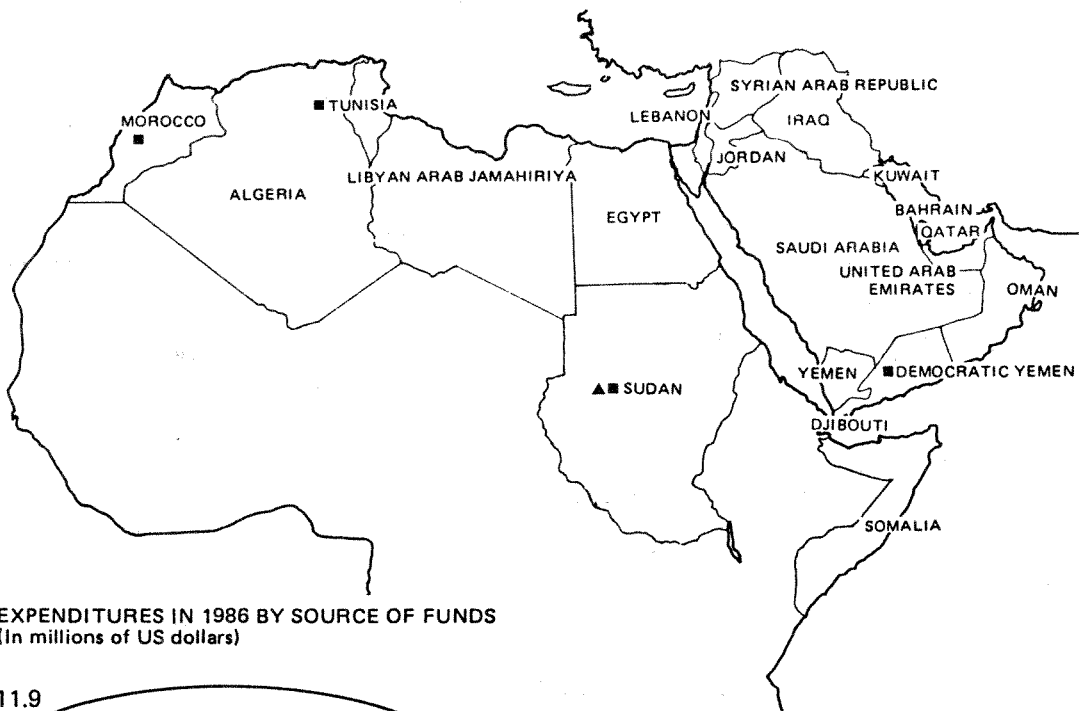
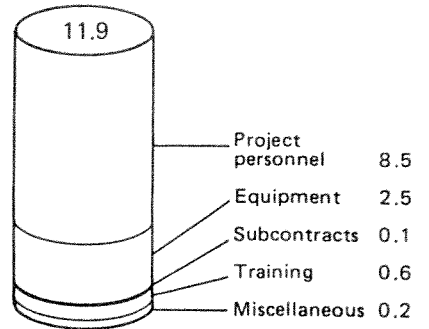




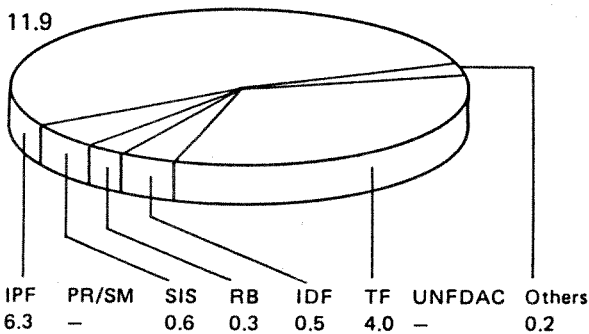


\* For previous years, expenditures related to Arab States were reported partly under Africa and partly under Europe and Western Asia.

EXPENDITURES IN 1986 BY PROJECT COMPONENT (In millions of US dollars)



EXPENDITURES IN 1986 BY SOURCE OF FUNDS (In millions of US dollars)

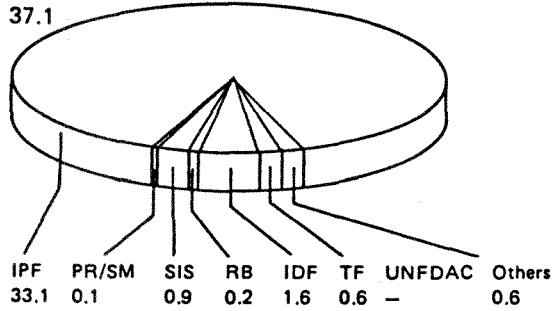


# ARAB STATES

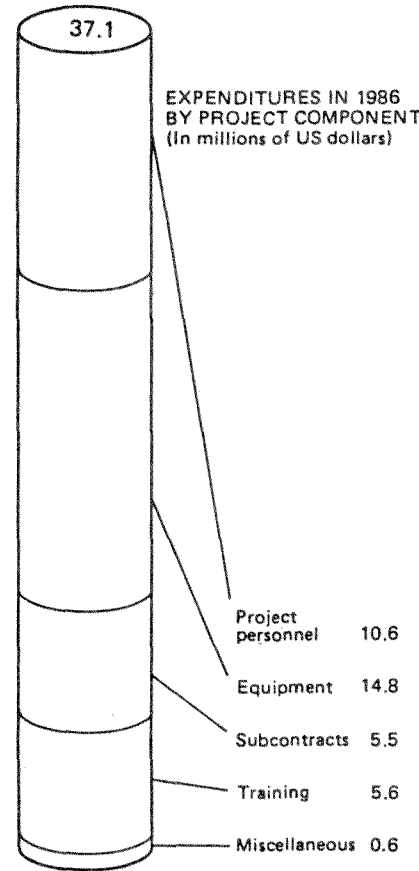
- ▲ SIDFA duty station
- JPO duty station

# ASIA AND THE PACIFIC

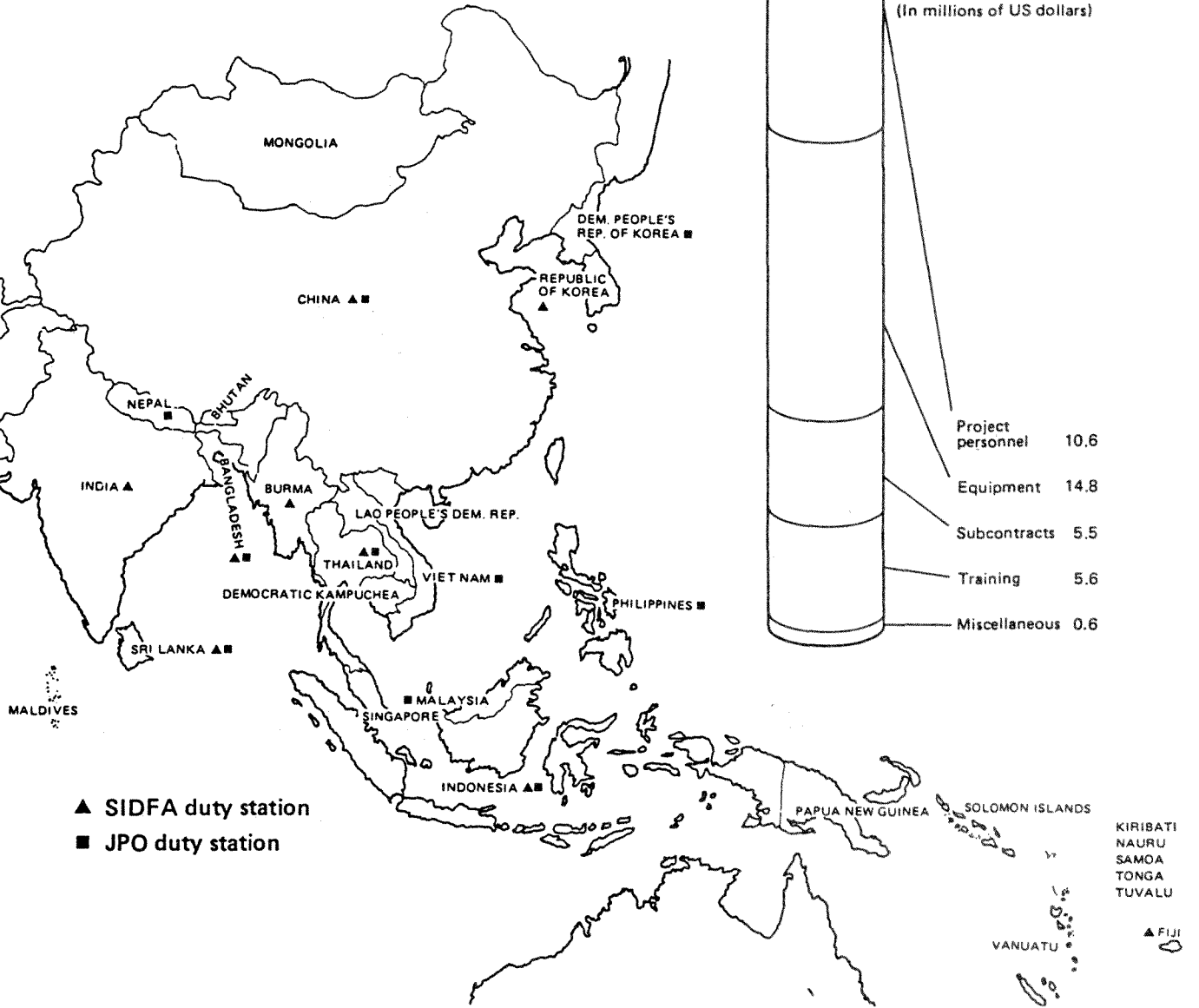
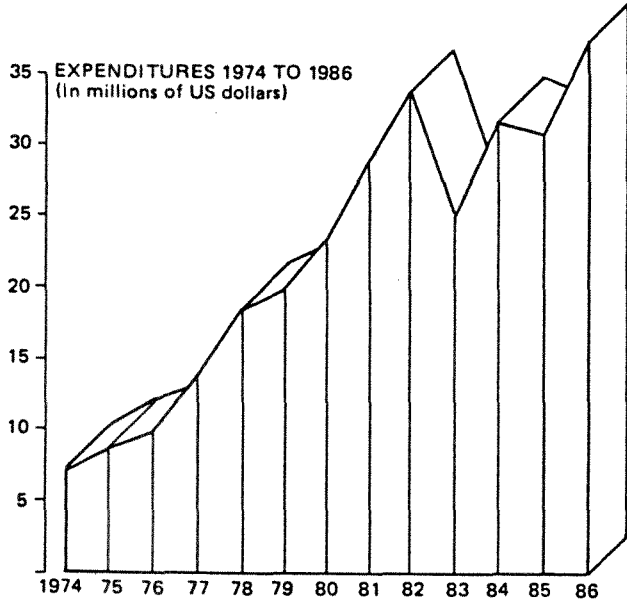
EXPENDITURES IN 1986 BY SOURCE OF FUNDS  
(In millions of US dollars)

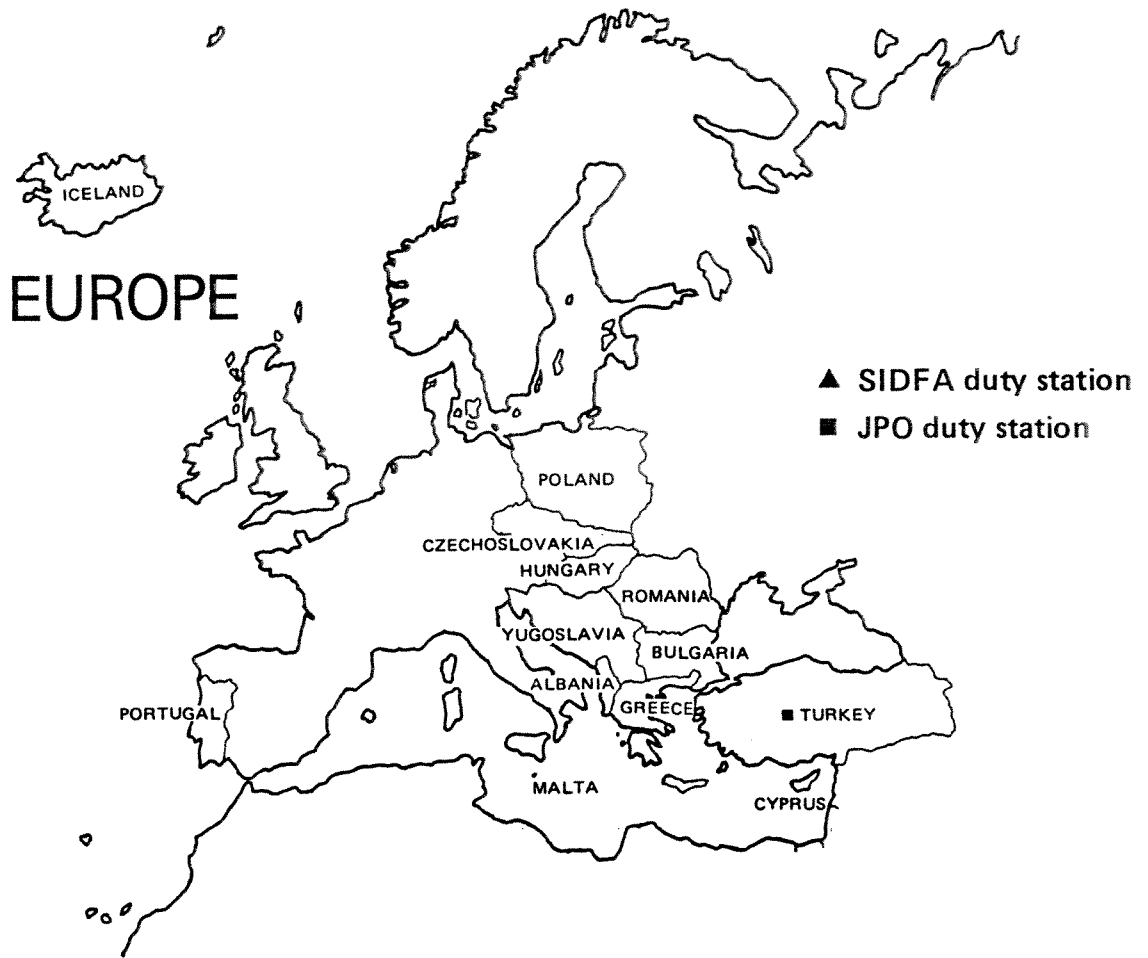


EXPENDITURES IN 1986  
BY PROJECT COMPONENT  
(In millions of US dollars)

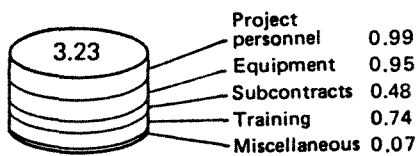


EXPENDITURES 1974 TO 1986  
(In millions of US dollars)

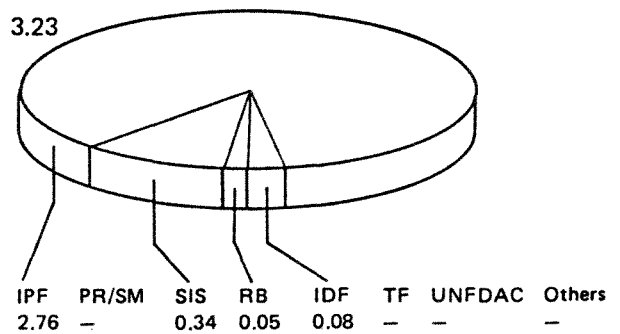




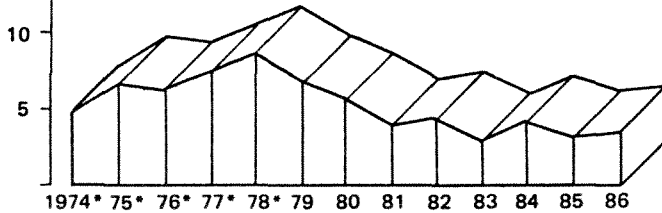
**EXPENDITURES IN 1986  
BY PROJECT COMPONENT**  
(In millions of US dollars)



**EXPENDITURES IN 1986 BY SOURCE OF FUNDS**  
(In millions of US dollars)



**EXPENDITURES 1974 TO 1986**  
(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.

## II. Implementation of Industrial Operations by Field of Activity

### AGRO-INDUSTRIES

25. In 1986 technical co-operation expenditures under the heading of agro-industries amounted to \$8.8 million. Some 60 per cent of the total implementation was financed from UNDP resources. A total of 200 projects were implemented or under implementation.

26. Agro-industries projects covered the following subsectors: wood products and wood processing; textile production and garment making; food processing and packaging; leather and rubber products; agro-based raw materials, by-products and waste utilization.

27. Technical co-operation in the wood-related industries subsector continued to be characterized by a prevalence of small projects. Secondary industries in wood processing in developing countries, which are the responsibility of UNIDO under the "Agreement setting out Guide-lines for Co-operation between FAO and UNIDO in the Field of Industrial Development", <sup>1/</sup> consist of small plants, and therefore the size of technical co-operation projects is limited.

28. The modular wooden bridges system developed by UNIDO continued to arouse interest in developing countries. In 1986, emphasis was placed on improving the basic design and in helping countries to establish production units for bridge components. Lack of funds prevented the implementation and follow-up of recommendations arising from the Expert Group Meeting on Timber Construction held in Vienna in December 1985. <sup>2/</sup> The recommendations covered stress grading trials, preparation of model codes and guidelines, bridge inventories and specific promotional activities. Collaboration continued with the International Trade Centre UNCTAD/GATT in providing lecturers at furniture production and marketing seminars.

29. The textile industry subsector, although a seemingly narrow specialization, actually encompasses a wide spectrum of raw materials, processes and products, many of which were represented in the work

programme for 1986. The activities, which covered cotton, wool, silk, jute, sisal and man-made fibres, ranged from spinning, weaving and knitting to dyeing, finishing and printing and finally, garment manufacture.

30. As in previous years, most technical co-operation in 1986 was in the form of institution-building projects, strengthening existing service and training centres and establishing new ones. Several such large-scale projects were completed during the year. New projects of a similar type were prepared for Bangladesh, China, Egypt, India, Philippines and Sri Lanka. These projects are expected to be operational in 1987. While most of the large-scale institution-building projects were financed from the countries' IPF, SIS and UNIDF funds were used to provide direct assistance to industries. Textile and garment projects continued to serve industries in both the private and public sectors, but some supported exclusively the private sector. Assistance to private textile industries in Bangladesh was the largest of such projects; the others were SIS-financed factory-specific projects.

31. In the food industry subsector, activities were related to: establishing and increasing the capacities of sectoral technical and quality control institutions (e.g. in Afghanistan, Argentina, China, Egypt, Uganda); improving the operation and expansion of manufacturing plants (e.g. in Mozambique, Peru <sup>3/</sup>, Viet Nam); improving agro-industry development in general (e.g. in Bolivia, El Salvador, Mexico); and preparing studies for the establishment, rehabilitation and expansion of industrial plants (e.g. in Angola, Democratic Yemen, Ethiopia, Vanuatu).

32. In the utilization of agricultural raw materials, a potato-processing industry study was carried out for India, a new coconut oil production technology was tested in the Cook Islands, the reactivation of seven palm-oil factories in Sierra Leone was assessed and cassava-processing studies were made for Belize. Product and process research was carried out on Spirulina algae use in Burma, while research work continued on rubber-seed processing under a global project. <sup>4/</sup> A *Balanites aegyptiaca* utilization and trade promotion scheme was started in the Sudan. <sup>5/</sup>

<sup>1/</sup> ID/B/180, appendix A.

<sup>2/</sup> IDB.2/10, chap. III, para. 205.

<sup>3/</sup> *Ibid.*, para. 211.

<sup>4/</sup> *Ibid.*, para. 214.

<sup>5/</sup> ID/B/340, chap. III, para. 195.

33. Large-scale projects in footwear, leather and leather products were continued in Brazil, China, India, and Kenya, 6/ while the implementation of new ones also started in China, Indonesia and the Philippines. Significant co-operation began between the projects in China and the Philippines, which is expected to lead to industrial and trade collaboration between the leather and leather product sectors of the two countries. Major institution-building projects in Costa Rica, Pakistan, and the United Republic of Tanzania 6/ were completed. In the case of the United Republic of Tanzania, funds have been secured for large-scale follow-up assistance.

34. The shoe industry of Argentina received assistance in export development, and footwear technology is being developed in Cuba. Assistance to Sri Lanka continued in the fields of tanning technology, effluent treatment, footwear and the design of leather goods. 7/ Preparatory work was completed for a sectoral meeting for the African region planned for early 1987. During a preparatory mission to Mozambique, possibilities were studied for establishing a tannery in Tete Province. A sectoral study on the state of the hides, skins and leather industry in Somalia was started at the end of the year that will provide guidelines for a large-scale rehabilitation programme financed by the World Bank.

35. In the field of packaging, a project was concluded for the creation of a national food-packaging centre at the Institute of Food Technology in Campinas (Brazil) 8/ consisting of the provision of expertise, training abroad and specialized laboratory equipment. Assistance to the national packaging centres in Cuba and Turkey, with the provision of expertise and quality control equipment as main components, was also concluded. 8/ In Jamaica assistance continued to be provided to the National Packaging Centre and a study was carried out with regard to national infrastructures for the possible establishment of a packaging design centre. Preparatory assistance was provided to the can manufacturing industry in Viet Nam and technical co-operation was extended to the packaging industry in Nicaragua. A regional project of technical assistance to packaging industries in Arab countries was completed in 1986 with the delivery of

expertise requested by specific countries. The project also included a survey aimed at appraising national technological infrastructures for the establishment of an Arab packaging communication and co-operation network. 9/

#### CHEMICAL INDUSTRIES

36. In 1986, technical co-operation expenditures under the heading chemical industries amounted to \$24.9 million with some 63 per cent financed from UNDP resources. A total of 364 projects were implemented or under implementation.

37. The activities of the Chemical Industries Branch concentrated on the following broad subsectors: building materials and construction industries; petrochemical industries and basic chemicals; fertilizers, pesticides; pharmaceutical industries; pulp and paper; biofuels, synthetic fuels and organic chemicals; environmental protection in industry and recycling.

38. In the building materials and construction industries activity focused on the rehabilitation of industry, capacity utilization and performance monitoring. Examples are: a study for the rehabilitation of a cement plant in Nigeria (Calabar Cement) and capacity utilization projects being implemented in the Libyan Arab Jamahiriya and Yemen, or in the planning stage in Nigeria and Saudi Arabia. Preparations were made for a workshop on technical co-operation among developing countries (TCDC) in the development of cement, lime and related industries, which will be held at Bangkok (Thailand).

39. The Branch continued to promote domestic production and integration of a trained labour force - particularly women - into relevant industries in the field of ceramics and glass. Assistance was rendered in the development of porcelain, pigments, fillers and extenders (notably bentonite), wall and floor tiles, slate products, hollow and flat glass, as well as clay brick and tile production. A project which established a fully functioning non-metallic mineral testing and product development laboratory at the Ministry of Mines in Zimbabwe is a good example of activities carried out in 1986 in the field of non-metallic minerals. Staff trained on the job carried out various studies and developed ceramic, electro-porcelain

6/ IDB.2/10, chap. III, para. 215.

7/ ID/B/340, chap. III, para. 199.

8/ IDB.2/10, chap. III, para. 217.

9/ Ibid., para. 218.

refractory materials and products with a high import substitution potential; a desk-type inventory on 36 locally available non-metallic minerals was prepared as a core-information base for mineral processing and user industries; investigations were carried out on magnesite ore located at Kadoma and a laboratory-scale beneficiation technique was developed which is soon to be tested at a semi-industrial level with the aim to define the technological parameters of a new investment project on basic refractory manufacturing. At the same time, the project extended assistance to the Industrial Development Corporation of Zimbabwe in the selection and transfer of technology for a sheet-glass investment project.

40. Assistance continued in the production of low-cost building materials and their use in low-cost housing. UNDP approved the financing of a second phase of a project successfully implemented in China on R + D in the utilization of fly ash for the production of special concrete. <sup>10/</sup> In Indonesia, two new model building materials production plants were set up, increasing the total of production units to six. <sup>11/</sup> The activities of the regional network on low-cost building materials, technologies and construction systems in Asia and the Pacific were strengthened in the fields of technology transfer and TCDC. In 1986, special attention was given to protection against earthquakes. An advisory mission was fielded to Mexico in early 1986 to advise the Government and to prepare a set of recommendations to strengthen the protection and safety measures for buildings damaged by earthquakes and other natural disasters. A meeting organized by UNIDO was held in California (United States of America) to review new rubber-based isolation technology for the protection of buildings against earthquakes.

41. Activities in the field of petrochemicals involved mainly the development of the main petrochemical downstream industries. A new era of dynamic development is foreseen for the \$1 billion petrochemical complex at Bahia Blanca (Argentina), as this UNDP/UNIDO project was extended into a third phase with a further commitment of \$1 million. <sup>12/</sup> The project has so far trained 500 persons in technical and managerial capacities, issued 400 research and technical reports and set up 60 new projects. Its services are being extended not only to other industrial areas in Latin America, notably in Brazil, but

<sup>10/</sup> ID/B/340, chap. III, para. 263.

<sup>11/</sup> IDB.2/10, chap. III, para. 297.

<sup>12/</sup> ID/B/300, chap. III, para. 252.

also to other continents on a TCDC basis. Books, publications and patents were also produced under the project and are gaining international recognition.

42. The second phase of the project on the development of the application of liquid natural rubber <sup>13/</sup> commenced in 1986, funded by a special-purpose contribution of \$2 million by the Government of the Federal Republic of Germany. In 1983, a highly efficient process was developed for the preparation of liquid natural rubber from field latex. By March 1985 liquid natural rubber was already in production at the pilot plant installed at the Institut de Recherches sur le Caoutchouc in Côte d'Ivoire. On the strength of the results of the R + D work performed, joint venture negotiations are being discussed between natural rubber-producing countries and major European chemical companies. This "pathfinder" project exemplifies technical co-operation, as it combines the TCDC concept, investment follow-up, the development of natural resources and the transfer of technology.

43. In Pakistan, a long-term development programme for synthetic fibres stimulated industry to use large quantities of polyester blended with cotton. Exports leaped from 5 per cent before project activity to 35 per cent, which is a milestone in the history of the development of the textile industry of Pakistan. Through a special-purpose contribution to IDF of \$430,000, the Government of Belgium will fund a new project for the establishment of a pilot plant for the recycling of solid plastic waste in China. If the results are favourable, China may construct 200 units for its own use and also export the units to other developing countries in Asia. In Yugoslavia, a project was implemented that aimed at creating capability for fundamental and applied research on the development of polyether synthesis and processing technology for polyurethanes. As a result, the Institute of Polyurethanes was established at the Institute of Chemical Engineering. A new project on the development and industrial application of polyurethanes will follow. In the Democratic People's Republic of Korea, research activities were initiated in the development of catalysts for the organic and inorganic chemical industries. Good quality, new catalysts have been developed to substitute imports.

44. The technical co-operation programme relating to the fertilizer industry, which included, *inter alia*, Bangladesh, China, Egypt, India and Pakistan, concentrated on the development of new fertilizer R + D

<sup>13/</sup> ID/B/340, chap. III, para. 290.

units and institutions and the organization of plant maintenance. The ninth Workshop on Fertilizer Plant Maintenance, sponsored by the Government of Austria, was held at Chemie Linz AG. The continuing objective of the pesticides programme is to promote the use of locally-available raw materials for the production and formulation of pesticides. Assistance was given to Burma in testing solvents produced in that country for their suitability in formulating pesticides. Consultancies and training in formulation technology were provided to the Pesticide Development Programme in India. In Egypt, most of the equipment for the establishment of a multi-purpose pesticide pilot plant was delivered and assistance was provided in the design of the buildings and the installation of the equipment. Assistance to China continued in advanced training in the bio-assay of new compounds for pesticidal activity. In the Republic of Korea, consultancies and training were provided in general and in aquatic toxicology within the framework of the establishment of a toxicology research centre. 14/

45. For the first time, UNIDO and the International Atomic Energy Agency (IAEA) jointly organized a four-week interregional training course on advanced analytical techniques, which was held at Seibersdorf (Austria). Topics of discussion were atomic absorption, X-ray fluorescence and neutron activation techniques in trace element analysis. Under the regional network for Asia on pesticides, UNIDO organized a project management committee meeting, held in the Philippines, consisting of representatives of member countries and the associated United Nations agencies. In association with FAO, UNIDO organized the second Regional Meeting on the Harmonization of Pesticide Registration Requirements. Industry, government authorities and private institutions were well represented at the latter meeting, which was also held in the Philippines.

46. Activities in the field of pharmaceuticals covered a broad spectrum. Several projects on industrial utilization of medicinal and aromatic plants reached the take-off stage, including the installation and start-up of pilot plants in Nepal, Turkey and the United Republic of Tanzania. 15/ These pilot plants, now operating in six countries, and each with a multi-functional capability, will enhance prospects for the indigenous development of process technologies. In Nepal, equipment

for production on a semi-commercial scale was installed and several essential oils and extracts from indigenous plants were processed. In Burkina Faso, the first phase of a project to prepare plant-derived pharmaceuticals was reaching completion. New projects commenced in 1985 in Madagascar and Viet Nam are well under way with equipment being installed on site. In Thailand, a project for the production of medicines based on the Thai traditional pharmacopoeia was approaching completion, when at least four plant-derived preparations will soon be ready for the marketing stage. Two preparatory projects for assistance in the essential oils industry were executed in India and Viet Nam.

47. Technical co-operation in the transfer of technology for the bulk production of essential synthetic drugs continued to be a major activity. A multi-purpose plant for the bulk production of 15 essential drugs was inaugurated in Cuba in 1985 and in 1986 transfer of technology for all the drugs was completed. 16/ A similar project is under implementation in the Islamic Republic of Iran. 17/ Both projects aim at enhancing national R + D capabilities to adapt and to develop technology for the bulk production of drugs. A project for the establishment of pharmaceutical screening systems for developing new pharmaceuticals was under implementation in the Republic of Korea. Such a project is appropriate to developing countries that have a well-established pharmaceutical industry - both in terms of bulk production and formulation of essential drugs - and that possess an R + D base.

48. A joint UNIDO/World Health Organization project achieved considerable increase in production capacity and in sales at the Royal Drugs Ltd. in Nepal. Surveys were prepared on the pharmaceutical industry in Venezuela and on the supply of blood products in ASEAN countries. Laboratory-scale technologies for the utilization of locally available raw materials for the production of steroids were introduced in Cuba. In Nicaragua, assistance was provided in the rationalization of pharmaceutical imports and in the development of management methods to increase local production; assistance was also rendered to the Universidad Nacional Autonoma de Nicaragua in setting up production facilities for intravenous fluids and in developing a quality control laboratory.

14/ Ibid., para. 279.

15/ IDB.2/10, chap. III, para. 310.

16/ Ibid., para. 311.

17/ ID/B/340, chap. III, para. 294.



49. The fourth meeting of the Advisory Panel on Preventive Medicine was held at Ottawa (Canada) to review the model programme for the production of vaccines in developing countries. <sup>18/</sup> The model programme was adopted at the meeting and published as the basic document of the UNIDO Programme on the Industrial Production of Biologicals (IPB). Preparatory work was carried out for a regional programme on biotechnology for Latin America and for a research programme for the recently established National Biotechnology Centre in Tunisia. A UNIDO mission reviewed prospects for the production of veterinary drugs and vaccines in the Southern African Development Co-ordination Conference region, and formulated concrete proposals.

50. As in the past, emphasis was placed on the development of biofuel and synthetic fuel technology. Support was given to programmes aimed at expanding the utilization of low-grade coals in Bulgaria, China, India, Poland and the Republic of Korea. Where large-scale projects continued. <sup>19/</sup> Implementation of projects to assist Chinese municipal authorities with waste disposal (municipal solid waste and sewage) proceeded. <sup>20/</sup> In the field of applied biotechnology, UNIDO continued to support research and development efforts being undertaken in the Philippines in industrial fermenter design, industrial enzymes production, citric acid manufacture, biomethanation, and alcohol production. <sup>21/</sup> With UNIDO funding, a surfactant was successfully tested that stabilizes blends of diesel fuel and alcohol for use in transportation and stationary power applications.

51. Two important projects involving high-technology were started in China. The Beijing Institute of Chemical Reagents was assisted in enhancing its technical capability in all aspects of R + D, manufacture and application of chemical reagents and fine chemicals, while the Beijing Specialty Gas Research and Development Centre was assisted in the production of specialty gases and their application in electronics, medicine and food industries. Both projects include the provision of sophisticated laboratory equipment and study tours to Japan and the United States of America.

52. New activities related to petroleum refining industries have started, resulting

from former project activities or from the annual Workshop on Petroleum Processing, Energy Management, Maintenance and Plant Inspection in Petroleum Refineries, such as a petroleum pricing study in Ghana and the provision of catalyst evaluation technology for fluid catalytic cracking in India.

53. Efforts continued in optimizing the use of existing plant capacities for the pulp and paper industry in developing countries, and care was taken to ensure the production of the basic chemicals essential to that subsector, namely, salt, caustic soda and chlorine. In the Islamic Republic of Iran, an analysis was carried out to determine the reasons for the failure of a pulp and paper mill to reach the designed capacity. Two paper machines for the production of hard tissue paper were started up in Viet Nam, thereby replacing imports valued at \$2 million annually. <sup>22/</sup> In Sri Lanka, a project to introduce a quality control system was under implementation in two paper mills. At four seminars held in Africa and Asia, pulp and paper makers were instructed on energy conservation in mills on how to use more waste paper as a fibrous raw material in paper making, and on the latest developments in pulping and chemical recovery methods for small mills.

54. Salt production in Kiribati <sup>23/</sup> will be increased from 500 to 15,000 tons per year as technical and financial plans are finalized for implementation. Opportunities for making salt, as a cottage industry, were identified for the Cook Islands and Vanuatu to supply local fishermen with low-cost sea-salt. Assistance was also given to the expanding sea-salt industry in Turkey to optimize four newly built installations through proper biological control and scientific management of salt crystallization. The production of artemia cysts for shrimp and trout feeding has been intensified in the 10-hectare salt ponds in Jamaica, which will provide additional income to a group of women involved in the production of salt and organized under the "Women's Bureau". <sup>23/</sup> In Africa, a century-old method of producing salt uses wood fuel to evaporate water from the brine and requires roughly 25 kilograms of wood to produce 1 kilogram of salt. In the Gambia, the Niger <sup>23/</sup> and Nigeria, small solar evaporation units have been erected to replace this traditional method and it is hoped that, with the help of UNIDO, these units will be more widely used by women in Central Africa.

<sup>18/</sup> IDB.2/10, chap. III, para. 313.

<sup>19/</sup> *Ibid.*, para. 315.

<sup>20/</sup> ID/B/340, chap. III, para. 276.

<sup>21/</sup> IDB.2/10, chap. III, para. 317.

<sup>22/</sup> *Ibid.*, para. 319.

<sup>23/</sup> ID/B/340, chap. III, para. 259.

55. Activities undertaken by UNIDO in the environment and chemical safety sector embraced a wide range of problems faced by developing countries. One specific area of concern for some developing countries is the problem of waste control and waste reduction. Thus, R + D continued in low-waste processing technologies, waste treatment technologies, utilization and recycling of wastes. Many countries are also concerned about the deterioration of the urban environment; projects and programmes related to the control of air, water and solid waste pollution continued, and control instrumentation and assistance in environmental planning and environmental impact assessment was provided. Furthermore, substantial training programmes were organized on the subject of environmental resource management and waste reduction/control technologies. Major chemical disasters, both in industrial and industrializing countries, have created a new awareness on the part of Governments and the public. As a result, Governments requested advisory services, with the aim of building up industrial and plant safety and emergency response systems. These activities generated inputs to the workshops and conferences organized or attended by UNIDO.

56. In 1986 a system for the integrated development of chemical industries was developed for use by decision makers in developing countries. The basic idea of the system is that optimal process and product development decisions can only be reached through an analysis of technological networks that integrate the processing of national resources. Computerization of the decision-making system in the integrated development of the chemical industry enables the adaptation of any development programme to changing situations in the world and regional economies. Transparency of objectives and constraints included in simulation scenarios give decision makers the opportunity to participate in the process of evaluation of alternative solutions. This system has met opportunely the requirements of the government authorities responsible for development programming in Algeria, Islamic Republic of Iran and Venezuela.

#### METALLURGICAL INDUSTRIES

57. In 1986, technical co-operation expenditures under the heading of metallurgical industries amounted to \$9.1 million. Some 91 per cent of the total implementation was financed from UNDP resources. A total of 150 projects were implemented or under implementation.

58. Metallurgical projects are showing an increasing tendency towards more sophistication, such as the production of electronic materials, magnetic materials and pure metals. Other important trends are the establishment of mini-steel plants that are appropriate to the market size of developing countries and the strengthening of the metal-mechanics sector, including foundry, forging, heat treatment, welding and finishing operations. UNIDO is also often approached to assist in the testing and processing of ferrous and non-ferrous minerals and ores and in the strengthening and/or establishment of metallurgical research and development laboratories, centres or units.

59. Thirty per cent of the technical co-operation projects were devoted to the non-ferrous metals industry, particularly the light non-ferrous metals. Twenty-five projects related to the development of the bauxite processing and aluminium producing industry were under implementation in 11 developing countries. They included projects of a sophisticated nature, such as the production of high purity aluminium <sup>24/</sup> and the testing of garnets for use as building materials in India, the experimental tube digestion of bauxite in a Chinese alumina plant, and the testing of alunite ores in the Islamic Republic of Iran. <sup>25/</sup> A large-scale project for establishing a laboratory for bauxite processing technology became operational in Viet Nam. Within the framework of the Joint UNIDO/Hungary Programme for International Co-operation in the Aluminium Industry, various activities were undertaken, including the preparation of a study on aluminium wire drawing and stranded cable production. In the heavy non-ferrous metals sector, field assistance was mainly related to the processing of copper ores e.g. the bacterial leaching of copper ores in Chile and Peru <sup>26/</sup> and the extraction of gold from copper processing mining residues in Mauritania.

60. Thirty-three per cent of the metallurgical industries projects under implementation in 1986 related to the development of the iron and steel industry and covered operational trouble-shooting missions, studies for the establishment of mini-steel plants and the introduction of computer-based managed maintenance systems in iron and steel and other metallurgical plants. A workshop on modern maintenance systems in basic industries was held at

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<sup>24/</sup> Ibid., para. 210 and IDB.2/10; chap. III, para. 237.

<sup>25/</sup> IDB.2/10, chap. III, para. 234.

<sup>26/</sup> Ibid., para. 239.

Kosice (Czechoslovakia) in June 1986. Apart from ongoing projects in Egypt and India, there are plans to establish such systems in Algeria, Mexico and in ASEAN countries on a regional basis. Diverse high-level technical assistance continued to be provided to the Zimbabwe Iron and Steel Company (ZISCOSTEEL), which is the leading iron and steel plant in south-east Africa. 27/

61. Projects in the foundry industry sector, aimed at ensuring the local production of necessary spare parts and agricultural implements and tools, amounted to about 20 per cent of implementation under the heading of metallurgical industries. These projects, mainly concerned with the establishment and/or strengthening of foundry development centres or metal production and processing development units, were implemented in Angola, Democratic Yemen, Ethiopia, India, Iran (Islamic Republic of), Mozambique, Nicaragua, Pakistan, Sierra Leone, Somalia, Sudan, Turkey, United Republic of Tanzania and Viet Nam.

62. Projects related to the strengthening and/or establishment of centres for metallurgical technology were also a priority area and accounted for about 17 per cent of implementation related to metallurgical industries. In Nigeria, the Government requested a second phase of the project Central Metallurgical Research and Development Centre, with an input of about \$10 million, including 60 per cent cost-sharing by the Government; preparatory assistance for the project was approved. Similar institution-building projects were under implementation in Cuba (pilot plant for the exploitation of metallic and non-metallic minerals), in Pakistan 28/ (assistance for the establishment of a multi-purpose ore beneficiation pilot plant), in Peru (Metallurgical Research Institute) and in Guinea (Centre for Maintenance and Repair of Industrial Equipment). 29/ Other projects were related to the strengthening of national capabilities in the development of the metallurgical industry, for example in the iron and steel industry of Mozambique. 30/ Technical assistance for the improvement of local capabilities in the evaluation, concentration and metallurgical beneficiation of ores and minerals was provided to a number of countries. This activity involved laboratory and pilot-scale test work

27/ Ibid., para. 230.

28/ Ibid., para. 243.

29/ Ibid., para. 248.

30/ Ibid., para. 231.

and mainly made use of the Pilot and Demonstration Plant for the Production of Sponge Iron, which was established in India 31/ with UNIDO assistance.

63. Attention was also given to projects with an environmental impact. A project report on resource recovery and utilization of wastes in metallurgical and other industries was prepared for China. Technical co-operation activities involving an environmentally sound method of utilizing bauxite residues for producing building materials were continued in India, on the basis of the successful implementation in China and Jamaica of the same method. 32/ The method was also further promoted at a workshop on bauxite waste tailings held at Kingston (Jamaica) in October 1986.

#### ENGINEERING INDUSTRIES

64. In 1986, technical co-operation expenditures under the heading of engineering industries amounted to \$14.6 million. Some 86 per cent of the total implementation was financed from UNDP resources. A total of 184 projects were implemented or under implementation.

65. Priority areas in the field of engineering industries were: industrial production; industrial technology; energy-related industrial technology; and the development of human resources. Technical co-operation activities covered: agricultural machinery and implements; electronic and electrical machinery and products; computer and computer-related equipment; metalworking and machine tools; land-based or water-borne transport equipment; measuring and control equipment; and energy-related equipment.

66. In the field of agricultural machinery and implements, the Engineering Industries Branch continued to emphasize the development of manufacturing capacities for agricultural tools and implements. A project in China dealing with agricultural machinery testing and technical services to industry was nearly completed in 1986. In Algeria, one project in stock inventory was completed and another project on the development of the agricultural machinery sector was being implemented jointly with FAO. In the Comoros, a preparatory assistance project was carried out to define a programme for the local manufacture of agricultural tools, while in Lesotho a

31/ Ibid., para. 225.

32/ Ibid., para. 241.

project for the manufacture of agricultural equipment was completed. In Togo, technical co-operation continued in the serial production of agricultural machinery and implements, including diversification and prototype development. In Burkina Faso, a project was initiated to strengthen two regional workshops that will provide repair and maintenance services for agricultural tractors and heavy equipment. A preparatory assistance project was carried out in Djibouti to identify problems concerning maintenance and repair at a mineral water plant. In Madagascar further assistance was given to local industries in establishing capabilities in maintenance and repair and the production of spare parts. 33/

67. Emphasis continued to be given to the upgrading and rehabilitation of existing industries covering equipment and machinery, plant engineering, maintenance and the production of spare parts. In Viet Nam, two large-scale projects for the rehabilitation of sugar and rice mills continued to be implemented. 34/ Assistance was provided to Romania in the utilization of technology for spraying ceramics and other materials for the rebuilding of worn-out parts for the engine and turbine industry. 35/ In Mali, besides maintenance, repair and spare part manufacturing activities for industrial and transport equipment, the serial production of manual water pumps continued at the rate of 1,200 pumps per year. 36/ The quality and price of the pumps have proven to be of great interest for local and export markets. Regional workshops and their ancillaries established earlier along the Senegal river 37/ were further strengthened by assistance in the operation and maintenance of motor-driven irrigation pumps.

68. In the area of electronic and electrical machinery, technical co-operation activities included high technology inputs, such as the application of fibre optics to energy conservation and industrial control; small computers and robots in manufacturing; computer systems and software engineering. With regard to electrical machinery and equipment, the Branch continued to assist the Government of Mexico, within the framework of a long-term

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33/ ID/B/320, chap. III, para. 275; ID/B/340, chap. III, para. 238.

34/ IDB.2/10, chap. III, para. 280.

35/ Ibid., para. 273.

36/ Ibid., para. 275.

37/ Ibid., para. 259.

project, in establishing laboratories that deal with high voltage equipment, turbines, generators and electrical motors. Short-term technical co-operation for the manufacture of dry batteries was extended to the Government of Egypt. In China, the qualification and surveillance laboratory established in 1983 for electrical and electronic consumer products has received further assistance in the form of a reliability and quality data bank for electronic products. 38/

69. A number of projects were being implemented in India. One of them, a project on semiconductor devices and electronic sub-systems for transportation, aims at increasing the operational efficiency of electric vehicles through the utilization of electronic systems for transportation. Highly qualified inputs in all four technical areas of the project - power electronics systems, power semiconductor devices, hybrid integrated circuits and monolithic integrated circuits - were provided to the Central Electronics Engineering Research Institute at Pilani. Another project, aimed at the establishment of an electronics service and training centre at Ramnagar 39/ began by assisting the Government in the development of an industrial base for contemporary production processes, and technologies in electronics, especially for printed circuit boards, sound components, testing and quality control. A third project related to the production of microprocessor-based agro and dairy instruments achieved a major breakthrough with the development of a fully engineered prototype of a cereal grain analyser.

70. Also in India, and within the framework of India-UNIDO-Bulgaria co-operation, a project assisted in fabricating and testing double-sided and multilayer through-hole printed circuit boards. A project in China continued to accelerate the introduction of microcomputers into industry. 40/

71. In Bulgaria, where favourable conditions have been created for introducing industrial robots into manufacturing processes, a project to assist and strengthen the automated production instrumentation centre was finalized. 41/ Also in Bulgaria, assistance continued to be provided in the development of a modular design concept for

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38/ ID/B/340, chap. III, para. 243.

39/ IDB.2/10, chap. III, para. 267.

40/ Ibid., para. 266.

41/ Ibid., para. 265.

electronic and optical devices <sup>35/</sup> and a project to promote advanced manufacturing and engineering methods using computer-aided design was completed on schedule. <sup>42/</sup>

72. In the Democratic People's Republic of Korea, activities of the large-scale project on the development of numerically controlled machine tools continued. <sup>43/</sup> The project is expected to attain the recently revised project outputs by the end of 1987. A project in Viet Nam aimed at the transfer of technology for the design, testing and pilot manufacture of high-voltage power capacitors is expected to create local capacities to master high-voltage capacitor technologies. With the objective of strengthening industrial design and development, a project is being implemented in Albania to develop micro-processor-computer-based process control systems and controllers. <sup>43/</sup> In Algeria, assistance to l'Entreprise Nationale d'Organisation et d'Information du Secteur de l'Industrie Lourde is expected to strengthen the capacity of that organization in the application of modern computerized techniques and fast-access data bases for the solution of a wide range of problems. A project involving systems design and the installation of a computerized industrial data base was started in Morocco.

73. Technical co-operation in the metalworking and machine tool sector concentrated on strengthening capabilities in design, tool engineering, production techniques and material engineering, with emphasis on repair and maintenance, expansion and rehabilitation of existing plants and upgrading of existing institutions. In India, assistance was given in the establishment and operation of a fatigue testing laboratory for the automotive industry. <sup>44/</sup> The preparatory assistance phase was completed for the establishment of a quality testing and service centre for the automotive ancillary and allied industries in Indonesia. <sup>44/</sup> In China, assistance started to the technical development centre for gears in the manufacturing and quality control of special gears. The development of tool and die production and engineering capabilities was expanded in Trinidad and Tobago and preparatory assistance for the establishment of an engineering and design centre and a tool centre was completed in Ethiopia. In the Democratic People's Republic of Korea the introduction of a systems' approach by computerized analysis was investigated under a project for the

design of mining machines (especially tunnelling machines). In Tunisia technical co-operation in the design and manufacture of jigs, fixtures, and prototypes was extended to the Centre Technique des Industries Mecaniques et Electriques/ Département Outillage. Also in Tunisia, a project designed to provide assistance in the fabrication of moulds for the production of plastic articles was completed. In Algeria assistance was rendered in the preparation of a project to strengthen the capabilities of the National Institute for Planning of Preventive Maintenance and Repair. In co-operation with the Government of India, an interregional workshop on precision engineering techniques and horology was organized at Bangalore (India) in June, at which 12 developing countries participated.

74. In the context of the United Nations Transport and Communications Decade, UNIDO has formulated a number of project proposals for Africa and for Asia and the Pacific that are under consideration. An interregional workshop on the development of railway rolling stock (wagons and coaches) was organized with the co-operation of the Government of India. In China, a project was initiated to upgrade the facilities for a locomotive test stand and to establish a performance acceptance inspectorate for local as well as imported locomotives. In co-operation with the Government of Norway, an interregional workshop on offshore drilling industries was organized for the benefit of developing countries.

75. In the field of energy, a large-scale project in Egypt continued to assist public and private industries in the promotion of the efficient use of energy. <sup>45/</sup> In Pakistan, a project dealing with energy saving in industry assisted the Government in developing and implementing an integrated energy saving programme. Advisory services were provided for the establishment of the Electric Energy Research Centre in Iraq. In Ethiopia, in addition to a project to develop a mini-hydropower generation plant for rural areas, <sup>46/</sup> preliminary assistance was provided in the utilization of solar energy in the resettlement areas based on use of photovoltaics. A project to develop a mini-hydropower programme in the Solomon Islands was implemented and the location of four additional mini-hydropower plants was recommended. <sup>46/</sup> The Hangzhou (China) Regional Centre for Small Hydropower, which deals with research and development and training (see also chap. III, para. 32), was

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<sup>42/</sup> *Ibid.*, para. 269.

<sup>43/</sup> *Ibid.*, para. 278.

<sup>44/</sup> *Ibid.*, para. 281.

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<sup>45/</sup> *Ibid.*, para. 287.

<sup>46/</sup> *Ibid.*, para. 289.

further strengthened through a number of training workshops.

76. In Jordan, the first large solar water heating system was locally manufactured and installed in a dairy company and in Madagascar, solar water heating systems were designed and installed for the provision of hot water in hospitals. 47/ The Government of Chile was assisted in the application of new digital protection techniques. In the Seychelles work was undertaken on a project dealing with the use of microcomputers in planning small electric power systems. In India, further assistance was given to the Indian Institute of Petroleum in the development of internal combustion engines using methanol as fuel. 45/

77. During 1986 the Engineering Industries Branch co-operated with various organizations in the United Nations system in the implementation of activities to introduce more advanced manufacturing technology into industrial production in developing countries. The Branch worked through joint technical working groups with the Food and Agriculture Organization of the United Nations, the International Labour Organisation, the International Maritime Organization, the United Nations Educational, Scientific and Cultural Organization and some of the economic commissions. It also continued to maintain contacts with the Union of African Railways, the Railway Union of Arab States and associations of engineering firms in selected industrialized and developing countries.

#### INDUSTRIAL PLANNING

78. In 1986, technical co-operation expenditures under the heading industrial planning amounted to \$6.5 million. Some 75 per cent of the total implementation was financed from UNDP resources. A total of 88 projects were implemented or under implementation, the largest portion of them in Africa, followed by Asia and the Pacific and Latin America.

79. UNIDO continued to assist African Governments in revising their industrial strategy and policy framework and improving the planning and management of the industrial sector, in the context of a difficult economic situation in the region and the need for Governments to undertake,

in co-operation with multilateral financial institutions, important economic policy reforms and structural adjustment programmes. The assistance of UNIDO consisted mainly in identifying priority industrial subsectors or branches that offer opportunities for the creation of competitive industries serving national and international markets; in formulating specific plans for the restructuring, development and organization of these priority subsectors or branches; in designing a coherent and efficient policy and institutional framework that would promote industrial investments and improve the investment climate; and in providing institutional support to planning organizations. Assistance of this kind was granted to Cameroon, Cape Verde, Côte d'Ivoire, Ghana, Mali, Senegal and Sierra Leone.

80. As in 1985, 48/ UNIDO organized national workshops on industrial strategy within the framework of the programme of the Industrial Development Decade for Africa. Participants in these workshops included representatives of ministries concerned with industrial development, of the business community and of financial and promotion institutions. Workshops of this type were held in 1986 in Burkina Faso, Madagascar and Zaire.

81. All countries in the Asian and the Pacific region, irrespective of the stage and level of their economic development, have recognized industrialization as a means of rapid socio-economic development. However, in nearly all countries, the objectives and targets of their industrial development plans and programmes could not be fully achieved, which has led to the need for reviewing the current industrialization process and strengthening the planning machinery for industrial development. Accordingly, technical co-operation in many countries of the Asian and Pacific region focused mainly on the formulation of plans and programmes for industrial development in the medium term and the promotion of inter- and intrasectoral linkages. Emphasis was also given to techno-economic studies for the identification of industrial subsectors with a higher development potential and comparative advantage. The need for a greater technological orientation and the establishment of an efficient industrial data system also received special attention. In those aspects, UNIDO assisted Bhutan, China, Maldives, Nepal, Pakistan, Papua New Guinea and Thailand.

47/ *Ibid.*, para. 288.

48/ *Ibid.*, para. 115.

82. Latin American countries have continued to be heavily affected by the consequences of their public debt, which have further accelerated negative trends in their economic and social situation. The majority of Latin American Governments are thus giving increased attention to the need for long-term industrial development programmes through indicative planning techniques, taking into account requirements for industrial restructuring and improvement of the technological level of their economies. Within that context, UNIDO has, in Central and South America, provided technical co-operation in planning techniques for the industrial sector and for selected industrial subsectors. Moreover, institutional support was rendered to planning organizations and entities engaged in formulating and implementing industrial policy. The co-operation covered areas that ranged from the collection and evaluation of industrial statistics and the organization of industrial surveys and their design, to the implementation of industrial policies to improve competitiveness and the performance of public and private enterprises.

83. UNIDO has also continued to assist Latin American countries in developing their capital goods programmes, particularly in Colombia, Mexico and Venezuela. The pragmatic orientation of these programmes has increased the importance of national engineering industries and their participation in the local market. This goal has been achieved through the design and application of modern incentive schemes, the mobilization and direction of the purchasing power of large national enterprises toward locally manufactured equipment and, finally, through the improved competitiveness of local producers by reorganizing production processes and enhancing technological levels.

#### INSTITUTIONAL INFRASTRUCTURE

84. In 1986, technical co-operation expenditures under the heading institutional infrastructure amounted to \$12.9 million. Some 86 per cent of the total implementation was financed from UNDP resources. A total of 152 projects in 75 developing countries were implemented or under implementation.

85. Technical co-operation was provided through co-ordinated and mutually supportive programmes in areas such as promotion and development of small- and medium-scale industries; rural industrial development; entrepreneurship development; special programmes in support of small- and medium-scale industries; institutions for

industrial research and for industrial information; and quality control, standardization and metrology.

86. The general trend in developing countries towards the development of small- and medium-scale industries was reflected in the growing demand for UNIDO assistance in this field. In general, such assistance followed an integrated approach, providing a comprehensive package of technical services and facilities to the small- and medium-scale industry sector. Technical co-operation varied according to the specific requirements of respective developing countries and involved activities such as policy and strategy formulation, establishment and strengthening of institutions and servicing facilities for small- and medium-scale industries and direct assistance to these types of industries.

87. The integrated approach to developing small- and medium-scale industries was applied twofold, namely, through co-ordinated assistance at the policy-making, institution-building and entrepreneurial levels, as well as through mutually supportive projects at the interregional, regional and national levels. A good illustration is the network of mutually supportive technical assistance inputs provided to the Pacific island countries. While a regional project provided assistance in the form of short-term expertise in selected technical fields to support and complement individual efforts for industrial development, <sup>49/</sup> assistance provided at the national level aimed at strengthening the institutional base for the promotion and development of small- and medium-scale industries. A project on enterprise promotion in the Solomon Islands, <sup>50/</sup> for example, provided technical, management and financial advice to potential entrepreneurs. The project also provided for planning and co-ordinating of the establishment of industrial infrastructure, including industrial estates and service industries, and for developing and conducting training programmes.

88. Similarly, under the sub-contracting programme, an integrated approach between a regional Arab programme for the development of sub-contracting <sup>51/</sup> and several national projects for the establishment of national sub-contracting exchanges is being successfully implemented. The regional Arab programme became fully operational in

<sup>49/</sup> *Ibid.*, paras. 77 and 130.

<sup>50/</sup> *Ibid.*, paras. 77 and 129.

<sup>51/</sup> *Ibid.*, para. 134; ID/B/340, chap. III, para. 137.



1986, covering Algeria, Egypt, Jordan, Morocco and Tunisia. The purpose of the programme is to design and develop all the instruments (technical, economic, commercial, legal, informatic) required for the setting up of national sub-contracting exchanges in each participating country with the long-term objective of developing an integrated Arab sub-contracting system and setting up an Arab network of national sub-contracting exchanges.

89. The aim of a project in Bahrain <sup>52/</sup> was to balance the industrial structure of the country through the diversification of its small- and medium-scale industries in order to compensate for declining oil resources and revenues. The Ministry of Development and Industry was provided with advice on formulating a sound policy to support the growth of the small- and medium-scale industries and on furnishing industrial extension services in all managerial and technological matters to small- and medium-scale industrial units. In order to modernize traditional facilities in the small-scale foundry sector, a centre was established in the UNIDO-assisted Small Industry Development Organization of Turkey at Ankara. The positive results achieved suggest that this type of assistance could be used as a model in other developing countries. Considerable activities continued in 1986 in support of the development of small- and medium-scale industries in least developed countries. An example is the project on handicraft and small-scale industry development (phase II) in Ethiopia, <sup>53/</sup> which continued to assist the Handicraft and Small Industry Development Agency (HASIDA) through experts and training, with emphasis in 1986 on establishing, equipping and running two pilot industrial co-operatives in the fields of textile weaving and sheet metal.

90. Intensive assistance in the field of quality control permits small- and medium-scale entrepreneurs to reach a higher level of productivity and thus promote their products on domestic and foreign markets. This, in turn enables some of the most dynamic industrialists to enter into sub-contracting agreements with larger industrial enterprises. Thus, in a number of countries, efforts were undertaken to establish co-operation between quality control and standards institutions and organizations dealing with the development of small- and medium-scale industries. Small- and medium-scale industries in Egypt that operate as feeder industries to the car manufacturing industry were assisted in defining the measures to be taken to

increase their share in the manufacturing of parts and components for the automotive industry sector. <sup>52/</sup> An interregional project aimed at encouraging the establishment of co-operation agreements between small- and medium-scale industries in four countries (Colombia, Egypt, Peru and Tunisia) and small industries in Italy in the engineering industry sector achieved tangible results in 1986. So far, more than 80 small- and medium-scale industries in the four developing countries and 65 Italian entrepreneurs have expressed their interest in becoming involved in such co-operation.

91. Efforts continued in 1986 to increase national capabilities for promoting small- and medium-scale industries in rural areas. Activities in that respect ranged from policy formulation for balanced regional development of selected rural regions, provision of preliminary assistance to improve credit guarantee schemes, identification and preparation of small-scale industrial project proposals, to the promotion and manufacturing of adapted agricultural tools and equipment for rural areas. Countries such as Argentina, the Comoros, Liberia and Madagascar <sup>54/</sup> have availed themselves of such services. Most of the activities in this field involved rational exploitation of locally available resources, in particular, by promoting small- and medium-scale industries that process agricultural products or provide inputs to agriculture.

92. Within the framework of entrepreneurship development, a major breakthrough was achieved in the Task Force on Management within the European Regional Programme for the fourth UNDP programming cycle. Participating countries have given top priority to a proposal by UNIDO to foster entrepreneurship among small- and medium-scale industries to ensure competitiveness and growth. Activities have been initiated to establish a network arrangement for the systematic development and dissemination of appropriate methodologies based on country-specific requirements. A new project in the Philippines includes innovative aspects such as institutionalizing a national coherent strategy and systematizing approaches to detect and direct entrepreneurial potential towards industrial initiatives; pilot programmes will be conducted by national agencies with specific mandates to develop self-employment opportunities for youth, women, people in rural areas and returning migrants. Similar efforts are being tried through inputs to ongoing small- and medium-scale industry projects in Jamaica, Mexico and Zimbabwe.

<sup>52/</sup> IDB.2/10, chap. III, para. 65.

<sup>53/</sup> Ibid., para. 127.

<sup>54/</sup> Ibid., ID/B/340, chap. III, para. 130.

93. Recognizing the important role played by the chambers of commerce and industry, federations of industry and manufacturers' associations in the industrial development process, UNIDO offered a number of developing countries technical assistance either in establishing such institutions or in strengthening their role in the industrialization process. Within the framework of the UNIDO programme for assistance to and participation in international industrial fairs, international co-operation and partnership agreements between industrial institutions and enterprises have been promoted, with the aim of increasing the developing countries' capabilities of exporting industrial products.

94. A pilot programme of technical assistance for the development of small- and medium-scale industries, based on the use of the "Analysis of Technological Complexity" (ACT) method developed by UNIDO, was launched in October 1986. The ACT package serves as a practical tool to carry out a technological diagnosis of existing enterprises and infrastructures, with particular reference to the mechanical and electrical industries (including the automotive and components industry); to generate portfolios of technical project proposals that are complementary to each other (for the benefit of investors, development banks and foreign partners); and to promote innovative forms of international industrial co-operation based on thorough technological analysis. UNIDO received requests from several developing countries (e.g. Algeria, Brazil and Tunisia) for technical co-operation projects based on ACT; these projects will be implemented in 1987. Several donor countries (e.g. France, Germany, Federal Republic of, and Italy) have also expressed an interest in this new programme.

95. In 1986, four large-scale projects continued to provide assistance to multi-branch industrial research institutions in Guyana, 55/ the Libyan Arab Jamahiriya, Mexico and the United Republic of Tanzania. 56/ Special efforts were made to strengthen the co-operation between those institutions and industrial enterprises in solving technical and technological problems. In the area of non-destructive testing, technical co-operation was provided to the Shanghai (China) Research Institute of Building Materials 56/ in developing the capabilities available in that country for the application of modern non-destructive testing techniques

55/ IDB.2/10, chap. III, paras. 137-138.

56/ Ibid., para. 137; ID/B/340, chap. III, para. 118.

and methods. Co-operation with the International Atomic Energy Agency (IAEA) continued in the implementation of the regional project in non-destructive testing in Latin America. 57/

96. Five technical co-operation projects (in Angola, the Democratic People's Republic of Korea, Nepal, Nigeria and Tunisia) were implemented in 1986 in the field of industrial information.

97. Realizing the importance of standardization, quality control and metrology for ensuring the compliability of manufactured products, both for internal and external markets, developing countries are making considerable efforts to establish new, or upgrade existing, institutions to cater to their pressing needs in this area. In 1986, 25 projects were implemented with a view to creating national metrological services and establishing nation-wide systems of standardization and quality control.

#### FACTORY ESTABLISHMENT AND MANAGEMENT

98. In 1986, technical co-operation expenditures under the heading of factory establishment and management amounted to \$5 million. Some 90 per cent of total implementation was financed from UNDP resources. A total of 54 projects were implemented or under implementation.

99. Technical co-operation showed a marked increase in 1986 as a result of increased awareness on the part of recipient countries of the need for more sophisticated equipment and more extensive programmes for developing local skills. Assistance to least developed countries, mainly to "ailing industries" in Africa in the form of activities of a diagnostic or rehabilitative nature, accounted for 41 per cent of implementation. There was an increased trend towards "umbrella"-type projects consisting of short-term specialized expertise. Considerable effort was devoted to the development and updating of project concepts.

100. In the area of industrial management, computers and management information systems, projects gained ground especially in the Latin American region. Under the new phase of the UNIDO/International Institute for Applied Systems Analysis project on computerized decision aids for

57/ ID/B/340, chap. III, para. 136; IDB.2/10, chap. III, para. 54.

industrial management, 58/ STRATEGEM 1 was used for training managers in 25 countries and three new computer games were developed. Under a project in Pakistan, 59/ assistance in corporate planning and analysis of the market potential of 14 chemical plants resulted in plans for joint ventures.

101. Assistance rendered to national energy-intensive industries in Sri Lanka resulted in a reduction in industrial energy consumption and in the establishment of the National Energy Management Centre. 60/ Under a project in the Republic of Korea, 60/ UNIDO and the United Nations Department of Technical Co-operation for Development co-operated in energy auditing in industrial enterprises, training local specialists and improving consultancy services. Under a project to promote regional co-operation in industrial energy conservation, in Europe 61/ a new round of sectoral meetings and training programmes took place, preceding further activities envisaged under the next phase of the project. Through links with other regions, experience gained under this project will be further disseminated. Urgent energy-related assistance was also provided to Haiti.

102. In the area of factory establishment, projects of a diagnostic and rehabilitative nature assisted public sector enterprises in Somalia 62/ and Uganda. Under a project involving assistance in industrial reactivation in Central America, 63/ the Central American Bank for Economic Integration began rehabilitation of some 30 companies, involving an investment of about \$100 million on a loan basis. A project for the comprehensive rehabilitation of several plants started in Nigeria.

103. In Peru, a project began in the identification of problems and the assessment of potential of certain industries with the aid of diagnostics at the plant and sectoral levels. The combination of such diagnostics at the sectoral and plant levels often leads to an immediate increase of the productivity in some plants and rehabilitation programmes in others. In Haiti,

in-depth diagnostics were carried out in connection with the property transfer and privatization plans of some of the State-owned industries in order to assess objectively their potential prior to negotiations with prospective partners. In some African countries, experts carried out in-depth management and financial diagnostic and rehabilitation studies and assisted in identifying and selecting partners for related joint ventures. 64/ The studies are also presented at meetings with potential donors.

104. In the area of industrial consultancy, based on the diagnostics and rehabilitation of existing plants, a new type of local consultancy team has been trained and is becoming active in Africa. 64/ Whereas previously local consultants were mainly involved in preparing financial studies for new plants and giving advice on accounting and management, on-the-spot involvement in operations now enables them to upgrade their skills in production management and the repair, maintenance and installation of new equipment, an objective inherent to all technical co-operation projects aimed at fostering development of local consultancy services and expertise. Efforts at the regional level have also been made, not only to achieve a multiplier effect but also to strengthen co-operation; however, due to complex project approval procedures, no substantial progress has been achieved.

105. In Somalia, 62/ the need to build up national consultancy, leading to the provision of technical and managerial services to industry and the improvement of efficiency and productivity, was identified. This need will be reflected in the next project phase that is planned to cover both the public and private sectors. Developing countries with centrally-planned economies have also shown interest in strengthening their local industrial consultancy services, particularly in specialized areas. In Egypt, short-term industrial consultancy services included providing computer assistance to a steel mill and advice on waste disposal and water treatment in selected plants and determining the feasibility of extracting and processing titanium from ilmenite.

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58/ IDB.2/10, chap. III, para. 158.

59/ Ibid., para. 156.

60/ Ibid., para. 153.

61/ Ibid., para. 152.

62/ Ibid., para. 149.

63/ Ibid., para. 147.

#### TRAINING

106. In 1986, expenditures for fellowships and training components in all technical co-operation projects implemented by UNIDO

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64/ Ibid., para. 146.

amounted to \$14.6 million. Of that total, \$9.8 million were spent on fellowships and study tours and \$4.8 million on group training activities and meetings. Technical co-operation expenditures under the heading of training, which received substantive backstopping from the Training Branch, amounted to \$5.4 million. Some 16 per cent of this implementation was financed from UNDP resources. A total of 183 projects were implemented or under implementation in 1986.

107. The UNIDO fellowship programme continued to respond to an important need of developing countries to have tailor-made training programmes for managerial and technical personnel of industrial projects. The number of individual training programmes initiated in 1986 was 1,598 compared with 1,725 in 1985. The number of placement arrangements by host countries was 2,501 in 1986 compared with 2,815 in 1985. Of these placements, 548 or some 22 per cent were arranged in developing countries. A total of 239 or 15 per cent of the candidates came from least developed countries and 151 or 9 per cent were female. The trend towards study tours for high-level industrial personnel continued.

108. Group training programmes were given a new dimension in 1986 by increasing the association of developing countries in the implementation of projects. This was achieved by using trainers from developing countries and by using former participants as resource persons. For example, the maintenance courses held in Cameroon and France were conducted with the assistance of national trainers from Cameroon. Another method used was to implement part of a programme in a developing country. This was the case in two courses on railroad maintenance: part of the course for French-speaking participants was held in Belgium and the other part in Côte d'Ivoire, while the two parts of the course for English-speaking participants were held in Kenya and England. The same method was applied to the quality control courses given in France, which were followed by missions to the field and the organization of follow-up seminars in Cameroon, Côte d'Ivoire and Senegal. A different type of approach encouraged follow-up on activities held in developing countries by exposing the participants to the same type of activities in developed countries. For example, a training programme held in Senegal with the Institut de technologie alimentaire on drying and refrigeration of fish products was followed by a study tour in France to provide the participants with a broader view of such operations.

109. Programme evaluations were used to obtain information on institutions in participants' home countries that would be

suitable for conducting group training programmes. In certain cases, programmes conducted in developing countries were also used to strengthen the institutions where the training took place by assisting them in designing and developing programmes and preparing training materials. The institutions also gained by the improvement of the capabilities of their staff, including the training of trainers. To ascertain follow-up possibilities and ensure multiplier effects, programmes were developed and implemented for former participants; similarly, evaluation missions were sent to host countries to assess the progress made.

110. In 1986, 19 training-infrastructure projects were implemented or were under implementation. Thirteen new projects were included in the UNDP country programmes for implementation during the period 1987-1991. In addition, some 30 project concepts and proposals for approval under various sources of finance were prepared.

111. In response to priorities set out in the UNDP regional programmes, a series of medium-term training programmes and actions were developed. Most of these were modular in nature, envisaged direct co-operation between private, public and co-operative enterprises and involved negotiations with industries and donor countries. The areas of energy management and industrial maintenance and repair received particular attention. The training needs of development finance institutions, small-scale industries and agro-industries were also given priority. Small-scale production units and their needs for entrepreneurial skills were considered particularly important because of their job-creating effect that favours youth employment. In this connection, special attention was given to upgrading the entrepreneurial skills of women. New concepts for the management of training activities within the forthcoming UNDP country programming cycle and for the training of trainers were tested. A number of project concepts and proposals were developed for the programme for the Industrial Development Decade for Africa (IDDA) and for the Afro-Asian Industrial Co-operation Meeting within the framework of the Industrial Development Decade for Africa and Economic and Technical Co-operation among Developing Countries, which was held at New Delhi (India) from 17 to 21 November 1986. The portfolio for the meeting emphasized twinning arrangements and network co-operation.

112. Regional projects continued to play an important role in the activities of the Training Branch, accounting for some 20 per cent of its projects. A clear trend, particularly in the African region, was the emphasis given to maintenance and repair.

Among the project concepts, there was a significant increase in activities responding to manpower needs with regard to new and emerging technologies. This was particularly true for the regions of the Americas, the Arab States, Asia and the Pacific and Europe. In all regions there was a growing interest in training related to the development of small-scale industries and their management.

113. The work of the Training Branch was expanded during the year under review by a policy decision to emphasize the training element in all UNIDO projects of a value above \$1 million. The Branch was given the responsibility of reviewing such projects, suggesting ways and means of emphasizing the training element, and backstopping this component of the projects. Thus in 1986, the Branch was actively involved in the designing of 20 large-scale projects. Such activity, which marks a significant broadening of the impact of the Training Branch on UNIDO technical co-operation programmes, is expected to increase in the future.

114. The increased emphasis on the importance of human resources development for industrialization led to the creation of a new unit that works on strategies, planning and methodologies in this field. The initiative was conceived as a new service to Governments, industries and other parts of the UNIDO Secretariat for use in formulating more efficient approaches to industrial development with the training of manpower as an integral part of that process. Research and development carried out by the unit led to the formulation of a new decision-support system for manpower planning and monitoring. The development of new concepts for increased use of simulation techniques on micro-computers for training in different fields was another result of this work. To strengthen the self-reliance of developing countries regarding the use and development of new and appropriate technologies, training projects in R + D fields of special interest were also designed. The effect and efficiency of training investments were analysed from several angles, and an activity on the pedagogical and didactic aspects of engineering training was organized.

#### FEASIBILITY STUDIES

115. In 1986, technical co-operation expenditures under the heading of feasibility studies amounted to \$5.7 million. Some 75 per cent of the total implementation was financed from UNDP. A total of 94 projects were implemented or under implementation.

116. In addition to the direct implementation of technical co-operation projects, co-operation with other branches in projects involving investment decisions has become an important aspect of the work of the Feasibility Studies Branch. For example, as a follow-up to well-prepared techno-economic feasibility studies, three large-scale UNDP-funded technical co-operation projects amounting to \$4.2 million were initiated for implementation by the technical branches of the Department of Industrial Operations.

117. The Feasibility Studies Branch has continued to promote in various ways the application of a standardized methodology for the preparation and evaluation of pre-investment studies, for instance, by means of assistance to ministries, development agencies, industrial banks etc. in strengthening of their project preparation capacities; supervision of pre-investment studies contracted to consultancy firms or individual consultants; organization of training programmes at the national, regional and interregional levels, including training on the application of the Computer Model for Feasibility Analysis and Reporting (COMFAR), which is a software package for financial analysis. 65/

118. In 1986, some 23 institution-building projects were being implemented, mostly of long-term nature, some of which were completed during the year. The principal objective of the projects, namely to strengthen national capabilities in the preparation and evaluation of projects, was largely met. Beneficiary countries included Bangladesh, Botswana, Burma, Congo, Ethiopia, Indonesia, Madagascar, Oman, Panama, Saudi Arabia, Sri Lanka, Zaire and Zambia.

119. Some 30 pre-feasibility and feasibility studies were implemented, dealing mainly with medium-scale light industries with the objective of encouraging the use of domestic raw materials and satisfying local demand. Beneficiary countries included Barbados, Benin, Burma, Chad, Indonesia, Jamaica, Mali, Panama and Zaire. These studies were carried out in close co-operation with the relevant technical branches of the Department of Industrial Operations. A good example of a techno-economic feasibility study that concentrated on rural development and self-sufficiency in food supplies was the study on fish processing that was undertaken for the Government of Barbados - an idea which originated at the investment promotion meeting for the Caribbean held in Barbados in October 1984. The study, which

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65/ ID/B/340, chap. III, para. 178.

was partly financed by a special-purpose contribution from the Federal Republic of Germany and partly by a contribution from the Government of Barbados, confirmed that the establishment of a seafood processing plant is a viable proposition that would benefit fishermen and consumers alike.

120. By the end of 1986, the Manual for the Preparation of Industrial Feasibility Studies (ID/206) had been translated into 15 languages; work on editions in four additional languages was in progress. Nearly 100,000 copies are in world-wide use. Preparatory work for the second edition of this important publication was initiated after financing was secured through a special-purpose contribution from the Federal Republic of Germany. Similar manuals that focus on medium and small-scale industries and small hydro-power stations are being prepared.

121. Donor countries have again contributed to UNIDO activities in the pre-investment field by supporting the establishment of the UNIDO Industrial Project Preparation Facility. This Facility is being financed by special-purpose contributions to the Industrial Development Fund: Austria, France, the Netherlands and Switzerland placed at the disposal of UNIDO \$60,000, \$220,000, 3 million Netherlands guilders and 500,000 Swiss francs, respectively. These additional funds will contribute to improvement in the quality of pre-investment studies and to the implementation of viable projects.

122. Nine group training programmes on industrial project preparation and evaluation and on the application of COMFAR were carried out in eight countries and attended by 194 participants. In addition, 19 group training programmes were carried out in 13 countries, which were attended by 314 participants, and financed within the framework of UNIDO-executed field projects. The total number of participants was 508,

the majority of whom were from African countries. In response to the acute need to upgrade national skills in the fields of project preparation and evaluation the number of group training programmes was significantly increased in 1986 as compared to previous years. For the second time, a Seminar on the Application of COMFAR was held in Cologne (Federal Republic of Germany), which was organized jointly by the Investment Promotion Service and the Feasibility Studies Branch. Unlike other training programmes, this seminar included participants mainly from consulting firms of industrialized countries and present and future users of COMFAR. As the project was financed entirely from contributions by the participants, it may be considered a good example of UNIDO co-operation with the private sector.

123. Staff members of the Feasibility Studies Branch were also invited by universities, professional associations, banks, private companies and consulting firms to present methodological concepts, including COMFAR. In most cases travel costs were borne by the beneficiary parties. In addition, the Branch provided information to a number of students for their dissertations.

124. The COMFAR software was licensed to 70 additional users, <sup>66/</sup> thus bringing the total number of users to 140. It was released in five dialogue and report languages, namely, English, French, German, Russian and Spanish. A version in Arabic is being developed. A COMFAR GRAFIX MODULE was added to the main system. It was designed to allow graphical presentation of the data obtained from the financial and economic schedules using the COMFAR main system. A cost-benefit analysis module will be available in 1987.

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<sup>66/</sup> IDB.2/10, chap. III, paras. 196-197.

## CHAPTER III. INDUSTRIAL PROMOTION

1. In 1986, through the reorganization of the Secretariat, activities relating to industrial investment, Consultations and development and transfer of technology were brought together into one Department with the former Negotiations Branch becoming the System of Consultations Division within that Department. This change has enabled the creation of interlinkages and synergy between three important promotional activities, which together could significantly contribute to the acceleration of international industrial and technological co-operation. The functioning of the three respective Divisions as a team proved effective during the Consultation on Agricultural Machinery, held at Belgrade (Yugoslavia) in September. Efforts were also initiated during the year to develop for various activities a programme approach through which actions to be undertaken by the respective Divisions could be identified and harmonized. These steps are intended to help develop a more integrated promotional approach and to enable the Department to function effectively as the promotional arm of UNIDO.

### SYSTEM OF CONSULTATIONS

2. Intra-Secretariat co-operation - intensified through the creation of the Department for Industrial Promotion, Consultations and Technology - led in 1986 to the introduction of innovations at Consultations such as the presentation of UNIDO activities related to investment promotion and the development of transfer of technology. The coverage of these activities and those related to the identification of technical co-operation opportunities during the Consultations is in the process of being systematized and made more effective.

3. The Secretariat had planned to hold in 1986 three of the six Consultations to be convened in the biennium 1986-1987 (see conclusion 1985/5 of the former Industrial Development Board, para. 3), but for practical and technical reasons the third Consultation on the pharmaceutical industry originally scheduled for November 1986 was rescheduled for October 1987.

4. The new Division prepared a programme of Consultations for 1988-1989 based on a theme of the linkage between agriculture and industry and in compliance with the agreement and recommendations adopted by

the Board at its second session (decision IDB.2/Dec.13, paras. (c), (d), and (f)).

5. Preliminary work was carried out in 1986 to enable the Board to reach a decision on the possible convening of Consultations in the 1988-1989 biennium on small- and medium-scale enterprises including co-operatives, the electronics industry, off-shore industries, phosphatic fertilizers and the pesticides industry.

### Consultations convened during 1986

6. The Fourth Consultation on the Iron and Steel Industry took place in Vienna from 9 to 13 June 1986. At that Consultation, the following topics were examined: the present situation and prospects for more integrated development of the iron and steel and capital goods sectors and other sectors; mastering of the technology and development of the iron and steel industry in developing countries; and the financial situation and perspectives of the iron and steel industry. Recommendations were formulated with respect to iron and steel policies, co-operation among developed and developing countries, co-operation among developing countries, UNIDO technical co-operation and protection of the environment. During the Consultation, opportunity was taken to inform participants of UNIDO activities in the iron and steel sector, as a result of which some 16 possibilities for UNIDO technical co-operation projects were identified. Of the 164 participants, 46 per cent were from industry and 29 per cent were from specialized governmental and non-governmental agencies.

7. The Third Consultation on the Agricultural Machinery Industry took place at Belgrade (Yugoslavia) from 29 September to 3 October 1986. The discussions focused on the perspectives of interregional co-operation in the agricultural machinery industry with emphasis on small- and medium-scale enterprises, and the strategies for an integrated development of agriculture with local production of irrigation hardware and other agricultural equipment by small- and medium-scale manufacturers. During the Consultation, opportunity was taken to inform participants of UNIDO activities in the agricultural machinery sector, as a result of which some 25 possibilities for UNIDO technical assistance were identified. In addition, as a result of a donation by a Yugoslav manufacturer, the Consultation

laid the base for the foundation of a UNIDO data bank of industrial designs and manufacturing specifications for a number of agricultural tools for the benefit of developing countries. Of the 161 participants, some 50 per cent were from industry and 34 per cent were from specialized governmental and non-governmental agencies.

Follow-up to the recommendations  
of earlier Consultations

8. Following up on recommendations related to the leather and leather products industry, emphasis was given in 1986 to the integrated development of this industry in selected African countries, including the promotion of an international hides and skins development scheme, the necessity for an appropriate governmental policy framework, the upgrading of skills through suitable training, and various forms of international co-operation including project proposals for technical co-operation. The regional meeting on the leather and leather products industry in Africa planned for 1986 at Alexandria (Egypt) had to be rescheduled for practical and technical reasons to 12 to 15 January 1987. Potential partners to industrial co-operation agreements as well as multilateral and bilateral financial and development institutions were attracted to this meeting.

9. Recommendations that emerged from the First Consultation on Industrial Financing were followed up by the study "Banks and specialized financial intermediaries in development" prepared by the Development Centre of the Organisation for Economic Co-operation and Development (OECD). The study was prepared in co-operation with the International Finance Corporation (IFC) and UNIDO and was published by OECD in October 1986.

10. Concerning the wood and wood products industry, a technical report that incorporates the use of light timber frames was prepared in close collaboration with the Department of Industrial Operations for use by officials in developing countries charged with drafting building codes. Such codes elaborate on testing requirements for native wood species, and define procedures for the preparation of span tables. Finance is being sought to enable the organization of a meeting on identification of existing facilities and availability of specialized research and development institutes in both developed and developing countries and on possibilities of co-operation between them. Work continued on current and new uses of wood in construction and on checklists for the elaboration of long-term collaboration arrangements

covering joint ventures, provision of know-how, training, management, marketing, shipping and transportation of wood products.

11. In other sectors, such as the food-processing industry, contact and co-operation were maintained with the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Conference on Trade and Development (UNCTAD). Groundwork was laid for agreements to be concluded with the Governments of China, Sweden and Switzerland for convening an expert group meeting on small hydropower plants early in 1987. In this connection, a pre-feasibility study was prepared on small hydropower plants and electrical power equipment manufacturing technologies.

12. In the fertilizer sector, the Government of Pakistan assisted in the financing of a regional workshop on UNIDO models of forms of contract for the construction of a fertilizer plant that was convened at Lahore (Pakistan) from 27 to 31 October 1986; of the 60 participants at the workshop, no less than 54 financed their own participation. In the field of petrochemicals, activities in 1986 included the expansion of the data base on petrochemicals, updating a directory of technological capabilities in developing countries, research and development strategy in the developing countries, and the development of downstream petrochemical industries, including the application of plastics in agriculture.

Preparations for Consultations  
scheduled for 1987

13. In 1986 preparations focused on the four Consultations to be convened in the following year namely, the first Consultation on the fisheries industry to be held at Gdansk (Poland) from 1 to 5 June, the second Consultation on the training of industrial manpower to be held in Paris (France) from 14 to 19 September, the third Consultation on the pharmaceutical industry to be held at Madrid (Spain) from 5 to 9 October, and the first Consultation on the non-ferrous metals industry to be held at Budapest (Hungary) from 30 November to 4 December.

14. In the fisheries industry sector, UNIDO prepared substantive inputs for a regional preparatory meeting in Latin America and the Caribbean. The meeting, hosted by the Government of Peru, and organized by UNIDO in co-operation with the Latin American Organization for the Development of Fisheries (OLDEPESCA) and FAO, was held at Lima from 27 to 30 May.



Substantive inputs were also prepared for a regional preparatory meeting organized by UNIDO and held at Dakar (Senegal) from 16 to 19 September 1986, with the co-operation of FAO and the Government of France. The UNIDO inputs covered, inter alia, an analysis of the modernization of tools required for fishing, including the fishing gear and equipment, the boats required for in-shore fishing, the manufacture of industrial fishing vessels, maintenance and ship repair facilities and issues related to standardization that included engine standardization for small fishing boats. Attention was also directed to the need to increase the value added of fish products through processing on an artisanal as well as on an industrial scale. The choice of suitable preservation and processing technologies and the appropriate refrigeration and infrastructure and low-cost cold chains was emphasized. The constraints presented by inadequate marketing arrangements for domestic and export markets and the improvement of marketing channels and systems were also considered.

15. As regards the training of industrial manpower, a high-level expert group meeting on the role of human resources development in industrial maintenance and in mastering technological change in industry was held in Paris from 13 to 16 January with a financial contribution from the Government of France. In order to analyse the special problems of Africa, 12 case studies prepared by African experts were presented at a regional expert group meeting on human resources development in industrial maintenance in Africa convened at Nairobi (Kenya) from 23 to 27 June 1986. The meeting was made possible by a financial contribution from the Government of the United Kingdom of Great Britain and Northern Ireland. A useful spin-off from this preparatory meeting - which was prepared in close co-operation with the UNIDO Industrial Training Branch - was that some 12 opportunities for technical co-operation projects for training of industrial manpower were identified through informal discussions with the African experts. Furthermore, in co-operation with the OECD Development Centre, a project for the preparation of four country case studies on in-service training in Africa was begun in 1986. The studies will not only constitute additional inputs to the second Consultation; they have also been designed to serve as a base for the construction of national in-plant training programmes in the countries concerned. Specific attention will also be given in the studies to the identification of possibilities for technical assistance to these countries from bilateral and multilateral sources.

16. In preparation for the first Consultation on the non-ferrous metals industry, the Division carried out a substantive analysis of the sector with outside assistance primarily based on country case studies prepared by national researchers from the countries concerned. Two papers, one on non-ferrous metals: prospects and development patterns, with special reference to Latin America and another on the development and restructuring of the non-ferrous metals industries, were prepared for presentation at a regional expert group meeting convened in collaboration with the Latin American Economic System (SELA) at Caracas (Venezuela) and held from 23 to 27 February 1987. Special attention has been given to alternative production techniques for the manufacture of copper, lead, zinc and tin in the developing countries and this work will form the basis of a global preparatory meeting that will be convened in May 1987.

17. Particularly significant activities in preparation for the third Consultation on the pharmaceutical industry were a case study on the employment and training of women in the pharmaceutical industry and an expert group meeting on medicinal plants and other issues related to that industry, convened in December 1986 in Vienna. The case study, which is expected to be a useful innovation, was carried out in response to the view expressed by a number of Member States that issues related to women and industrialization be considered in the Consultation process.

#### DEVELOPMENT AND TRANSFER OF TECHNOLOGY

18. The activities of the Division of Development and Transfer of Technology gathered further momentum in 1986, with the initiatives taken in earlier years beginning to yield concrete results. The primary objectives remained to assist developing countries in the selection, acquisition and development of technology, consistent with their particular conditions and capabilities, and also to prepare them for changes in the global technological scene by strengthening their technological capabilities in appropriate areas.

19. To meet these objectives, the work of the Division focused on the themes of advanced technologies, technologies for new and renewable sources of energy, and technology for rural and small industries. In trans-sectoral terms, attention was paid in particular to technology policy, technology acquisition, technological information and strengthening of technological capabilities

in general. Along with the intensification of activities during 1986, significant results were achieved with regard to: promotion of the establishment of the International Centre for Genetic Engineering and Biotechnology (ICGEB); regional co-operation activities in micro-electronics in the Latin American and Arab regions; activities relating to small hydropower; plant-level co-operation in the transfer of technology; and the formulation of proposals for reorientation of Industrial and Technological Information Bank (INTIB) activities. Initiatives were taken with regard to: promotion of the establishment of a Consultative Group on Solar Energy Research and Applications (COSERA); assessment of the implications of technological trends relating to expert systems for developing countries; the elaboration of biotechnology safety guidelines; and joint discussions with the Licensing Executive Society (LES) and Heads of Technology Transfer Registries.

20. Within its programme of assistance to developing countries in the formulation of their technology policies, UNIDO organized a national Seminar on Technology Transfer held at Antananarivo (Madagascar) in March. Among the recommendations that emerged from the Seminar was the call for the establishment of a national centre for industrial and technological research to co-ordinate research and development (R + D) and ensure that successful results are passed on to industry. The UNIDO Secretariat also assisted in the holding of national seminars on computer-aided design in Iraq and on information technology in Argentina.

21. A compendium of technology policies and plans of selected developing countries was published. At the end of 1986, studies were nearing completion on technology and market trends in information technology, biotechnology, telecommunications and solar photovoltaics. On technologies commercially available from developing countries, substantial information from India and Yugoslavia was collected and published. The information was also disseminated at the Afro-Asian Industrial Co-operation Meeting at New Delhi (India) in November.

22. A variety of activities was undertaken to promote international research co-operation and strengthen the technological capabilities of developing countries. In genetic engineering and biotechnology, some of these activities were directed towards building up national-level capability, while others related to specific subject areas, including the development of high-cellulose yeast species and R + D for producing high-protein content beverages from vegetables. An important aspect of these projects was the co-operative R + D between many prestigious groups, including the Massachusetts Institute of Technology

(USA), the Department of Food Technology of Korea University (Republic of Korea), the University of Minnesota (USA) and the Institute of Food Technology (Brazil). Activities in Kuwait were aimed at helping the formulation of a national programme in biotechnology and, with a similar aim, preparations were made for a national seminar to be held in Saudi Arabia in 1987.

23. The promotion of the establishment of the ICGEB reached a decisive stage with the appointment in June of Professor I. C. Gunsalus as Director and the agreement by the ICGEB Preparatory Committee on the interim programme of work to be executed as a project of UNIDO, with a budget of some \$18 million. The resources for the implementation of the interim programme began to flow in December 1986 and implementation by the UNIDO Secretariat was expected to gather speed from January 1987.

24. Biotechnology Safety Guidelines relating to research, manufacture and environment were examined, a study on the subject was published and a co-operative programme between UNIDO, World Health Organization (WHO) and United Nations Environment Programme (UNEP) was developed. The study was well received and was also noted positively by the Panel of Scientific Advisers and the Preparatory Committee for the ICGEB.

25. Activities relating to micro-electronics included assistance to Venezuela in the review of its programmes and preparations for a national workshop in Trinidad and Tobago. Strategies to promote software production and exports from developing countries were formulated.

26. A study on the potential and implications for developing countries of technological trends relating to expert systems was nearing completion in 1986. The possibility was also examined of whether an expert system for negotiations of technology contracts could be developed and made available to enterprises and industrial associations in developing countries. As regards new materials, studies were prepared on solar cell materials and materials developed as a result of outer space-related activities.

27. As a follow-up to the establishment of the Regional Network for Micro-electronics for Latin America and the Caribbean (REMLAC), UNIDO was asked by the United Nations Development Programme (UNDP) to implement a preparatory project for the development of a regional Latin American programme in micro-electronics. Project implementation will commence in early 1987. As a result of UNIDO/Economic and Social Commission for Western Asia (ESCWA) activities, a workshop on regional silicon

foundry and design centres was held in Sidi Bel Abbas (Algeria) in January 1986. A recommendation of the meeting concerned the carrying out of a feasibility study by UNIDO and ESCWA for a pilot silicon foundry and the training in the design of integrated circuits for personnel in the region. This recommendation is being followed up by UNIDO and ESCWA. UNDP has associated UNIDO and ESCWA in the development of a regional project that is under formulation for the next programming cycle. The Arab Fund for Social and Economic Development has also shown interest in co-operating with UNIDO in the implementation of some of the proposals emanating from the workshop.

28. Work related to solar energy technologies reached a turning point with the Workshop on the establishment of COSERA held in Vienna in December 1986. The Workshop, which was held as follow-up to a recommendation made at the International Forum on Technological Advances and Development, proposed that the Group might draw on the model of the Consultative Group on International Agricultural Research by bringing donors and recipient institutions together and that it should have a particular role in nurturing the inception of a solar energy industry in developing countries. The Workshop called upon UNIDO to pursue further actions and convene a meeting for the establishment of such a group as a means of enlarging international co-operation, enhancing the effectiveness of solar energy research in developing countries, and the commercialization of such research into industrial production.

29. The programme on plant-level co-operation for the transfer of technology to small- and medium-scale enterprises expanded in 1986 with a contribution by the Government of Poland to finance a new project, and implementation will begin in January 1987. Japan and the United States of America have also shown interest in contributing to the programme. Among the existing projects that continued to be implemented, one involving China, Netherlands, and Thailand reached the stage where 20 Thai companies were identified for matching as potential partners for enterprises in the Netherlands. Activities for identifying potential partners in China were expected to begin in early 1987.

30. Programmes related to the application of technologies for the rural poor continued to be implemented during the year under review. For example, a project for developing small-scale gari (fermented cassava) manufacturing equipment for Africa was implemented with a Nigerian company. An expert group meeting on industrial growing and processing of marine algae held at Riga (USSR) in August, resulted in several project concepts for international co-operation.

31. The promotion of small hydropower technology has reached the stage where substantial interregional co-operation is now being developed. In addition, the equipment manufacturing side of such technology is receiving increased attention as it is an area where developing countries can establish substantial capacity with locally available resources.

32. The Asia and Pacific Regional Network for Small Hydropower<sup>1/</sup> reached its full level of implementation in 1986, with 18 participating countries, including for the first time strong participation from the Pacific region. Its programme included promotional aspects of small hydropower technology, training, services, co-operative R + D, information exchange and consultancy. A small hydropower training and research centre, built at Hangzhou (China) and financed by the Government of China, is nearing completion. These facilities will be available for the future activities of the Asia and Pacific Regional Network for Small Hydropower. As a result of the success of the Network, funding has been assured for the Network's programme for the next five years, and it is intended that the Network be self-sustaining by 1991. A promotional programme involving co-operation between Arab and Latin American countries culminated in an agreement on the installation, with the assistance of Peru, of a small hydropower pilot plant in Morocco that will serve as a demonstration model for the Arab region.

33. Work on international co-operation related to marine industrial technologies continued. Discussions were held with a donor country on financing a global meeting on this subject in 1987.

34. In the field of technology acquisition, activities were intensified through: organization of training programmes on technology contract evaluation for the staff of the Nigerian Office of Industrial Property; organization or contribution to seminars and workshops on technology acquisition and contract negotiations in Cairo, Lagos, Lahore, Tehran and Warsaw; and preparation of training materials and guidelines on selected issues related to contract negotiations. The technological advisory service that provides advice at the time of negotiation of technology contracts was reoriented to include desk reviews, advice in conjunction with training workshops on technology contract negotiation and advice in connection with plant-level technological co-operation programmes. Senior Industrial Development Field Advisers (SIDFAs) and UNDP Resident Representatives were informed on the availability of the service and, as a

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<sup>1/</sup> IDB.2/10, chap. V, para. 168.

result, a number of countries expressed interest in or were already provided with advisory services.

35. Co-operation among developing countries in acquiring technology was strengthened under the Technological Information Exchange System (TIES). <sup>2/</sup> The yearly meeting of TIES member countries was held at Warsaw (Poland) in November 1986 where TIES was recognized as being instrumental in assisting the member countries not only in upgrading their negotiation capabilities but also in strengthening the role of national Technology Registries. That role has evolved from mere regulatory functions to deeper involvement in the formulation of national economic strategies and industrial technology policies as well as to a closer co-operation with the indigenous R + D sector in order to encourage adaptation of imported technologies, generate local alternative technologies and promote innovation at the national level. Participants in the Computerized Registry Information System (CORIS) <sup>3/</sup> had the opportunity during 1986 to assess and discuss its characteristics, both as a management tool for the Registries and for the exchange of information within TIES and within the national information systems. Another important milestone was the creation in 1986 of an ASEAN Technological Information Exchange System (ASTIS).

36. Co-operation with LES International was expanded through a UNIDO/LES meeting held in Vienna, in November 1986. Selected Heads of Transfer of Technology Offices of developing countries also attended the meeting, where subjects reviewed included licensing and technology transfer issues concerning biotechnology, computer software and small- and medium-scale enterprises in developed and developing countries.

37. The capabilities of developing countries in industrial information were strengthened through networking of Industrial and Technological Information Bank (INTIB) <sup>4/</sup> national focal points and nodes. Assistance and advice on technology transfer, acquisition and industrial technological information was provided to 10 African countries under the project on integrated assistance to the African Regional Centre for Technology (ARCT) located at Dakar (Senegal). An experiment to introduce on-line access to INTIB data bases using satellite transmission was provided to the Democratic People's Republic of Korea that resulted in new

requests from other countries for this type of assistance.

38. Activities with the United Nations Educational, Scientific and Cultural Organization (UNESCO) on a network of industrial energy information were intensified; UNIDO participated in the UNESCO Fourth Steering Committee Meeting at Beijing (China) in October 1986. Agreement was reached between the two organizations to co-operate further in the field of information activities concerning new and renewable sources of energy and energy conservation in industry.

39. The Industrial Inquiry Service <sup>5/</sup> received some 1,500 inquiries during 1986. In addition to regular replies to inquiries, supplementary replies were provided through the networking functions of INTIB nodes. Technological information profiles on mini-cement, mini-steel, mini-fertilizer and lime plants and a directory on planning institutions were prepared during the year. A directory on research and technological institutions dealing with non-ferrous metals neared completion in 1986. Some 10,000 external requests for documents and publications were processed during the year, and the monthly UNIDO Newsletter in English, French and Spanish was sent to more than 37,000 recipients; editions in Chinese and Russian were published in Beijing (China) and Moscow (USSR). The Industrial Development Abstracts <sup>6/</sup> data base now includes over 16,000 entries, of which 15,400 have been published. Monitors for current awareness in micro-electronics, genetic engineering and biotechnology and new materials continued to be published with continuing encouraging responses from the recipients.

40. Following a meeting of an advisory group of INTIB users in September 1985, further examination of the reorientation of INTIB was undertaken and a task force within the Division worked further on this issue. As a result, specific proposals were endorsed at the second meeting of the advisory group in October 1986. The idea underlying the reorientation is to facilitate the effective functioning of INTIB in the context of changing information needs and dynamic trends in the technology of information processing. <sup>7/</sup> The elements of reorientation include greater emphasis on the networking function of INTIB through INTIB nodes; equipping INTIB with modern data processing equipment and services; strengthening the capacity of INTIB to provide advisory services and support

<sup>2/</sup> Ibid., para. 162.

<sup>3/</sup> Ibid., para. 163.

<sup>4/</sup> Ibid., paras. 171-173.

<sup>5/</sup> Ibid., para. 176.

<sup>6/</sup> Ibid., para. 178.

<sup>7/</sup> IDB.2/9, para. 36.

national nodes and information services; and creating a new data base on technology suppliers. Other elements of reorientation include the preparation of sectoral dossiers; a review of the information activities within UNIDO so as to more effectively integrate such activities with INTIB; and a greater role for INTIB in a global network of industrial and technological information. At its second session, the Board in its decision IDB.2/Dec.14 endorsed the general approach proposed for the reorientation.

41. In addition to participation in the Administrative Committee on Co-ordination (ACC) Task Force on Science and Technology, representatives of the Secretariat attended intergovernmental or expert group meetings organized by the United Nations Centre for Science and Technology for Development, UNCTAD and UNESCO. Active co-operation was maintained with the Asia and Pacific Centre for Technology Transfer (APCTT) and ARCT. Relations at the working level continued to be maintained, in particular with the International Labour Organisation, the United Nations Centre for Science and Technology for Development and UNESCO.

#### INDUSTRIAL INVESTMENT PROGRAMME

42. The reorganization of the Secretariat of UNIDO had two significant repercussions on the Industrial Investment Programme: first, the Division was grouped within the same Department with two other Divisions having related functions that were previously located elsewhere in the Organization and second, two units were created within the Division with interconnected tasks: one task was oriented towards identifying the industrial investment and related needs of developing countries and the other was aimed at harnessing resources in industrialized countries so as to satisfy these needs. The World Bank/UNIDO Co-operative Programme continued to operate as the third unit within the Division.

43. The work of the Division is organized on a regional basis to strengthen co-operation with the Area Programmes Division, and should result in the streamlining of technical co-operation and industrial investment projects promotion within the Organization. Intra-Secretariat discussions have also been held with a view to eliminating duplication and overlapping of activities. Working relations with other international institutions engaged in similar work have been stepped up so that resources may be pooled for the greater benefit of developing countries. In this spirit, contacts were intensified with the European Economic Community (EEC), the

Centre for the Development of Industry of the African, Caribbean and Pacific Group of States and the EEC (CID ACP-EEC) and the African Project Development Facility and the Corporate Promotion and Syndications Department of the IFC. An office to promote export-oriented ventures in co-operation with UNIDO was established by the Industrial Trade Centre within the premises of the UNIDO Investment Promotion Service (IPS) in Zurich (Switzerland).

#### Industrial investment projects

44. As a result of contacts with public and private investment institutions and industrialists in developing countries, a total of 565 new industrial investment projects were identified and added to the UNIDO portfolio, which at the end of 1986 contained 2,398 active and pipeline industrial investment project proposals in 72 countries. Of these, 330 projects are located in sub-Saharan Africa. Many of these are rehabilitation and expansion projects, the number of which increased by about 12 per cent as compared to 1985.

45. With the aim of improving the quality of identified industrial investment projects, an interregional subsectoral programme for the identification and promotion of investment projects for the modernization and rationalization of iron and steel industries was implemented in co-operation with the IPS in Tokyo, the Japan Iron and Steel Federation and five major Japanese iron and steel industrial firms. Representatives from China, Egypt, Indonesia, and Thailand participated in the programme at which 17 investment projects were identified for promotion by UNIDO. Implementation began on the preparatory phase of a second similar subsectoral programme for the identification and promotion of investment projects for the production of equipment for renewable sources of energy in developing countries. Ethiopia, Pakistan, Somalia, Sudan and Thailand are participating in the programme.

46. Several activities were undertaken with the aim of strengthening relations of UNIDO with development finance institutions in developing countries. A workshop on the industrial financing activities of Islamic banks was held in Vienna in co-operation with the Islamic Development Bank. The workshop enabled Islamic banks to become acquainted with the range of UNIDO pre-investment activities aimed at promoting investment projects identification, formulation and financing.

47. A programme was developed for Poland to facilitate the preparation and promotion of joint ventures with foreign capital participation. Preparations began in 1986

for an investment promotion meeting within the framework of this programme, scheduled to take place in 1987 in Warsaw (Poland). Entrepreneurs from Council for Mutual Economic Assistance (CMEA) and OECD countries as well as from selected developing countries are being invited to participate in promoting Polish industrial investment projects.

48. A portfolio was compiled of 112 industrial investment project proposals and project ideas identified in nine Southern Africa Development Co-ordination Conference (SADCC) countries (Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, United Republic of Tanzania, Zambia, Zimbabwe). These projects were promoted and subsequently discussed during a regional investment promotion meeting that took place at Harare (Zimbabwe) from 3 to 7 November. Thirty additional investment project suggestions were presented by sponsors at the meeting. Over 1,000 individual discussions dealing with co-operation on specific projects took place between 150 project sponsors from the SADCC countries and 120 potential partners and representatives of finance institutions from 27 other countries. At the end of the meeting some 50 letters of intent were known to have been signed.

49. In 14 of the member States of the Economic Community of West African States, 224 industrial investment project proposals with a total investment cost of \$350 million were identified and subsequently promoted in order to prepare for the individual discussions which took place during the seventh Industrial Forum for West Africa, held from 1 to 4 December at Dakar (Senegal). This Forum was organized by UNIDO in co-operation with the EEC and the CID ACP-EEC. African project sponsors participating in the Forum totalled 210 and foreign potential partners came to 211. Some 30 letters of intent were reported as being signed during the Forum. Seminars on project financing and negotiation were held simultaneously during both of the above events.

50. A portfolio of 120 Chinese industrial investment project proposals was put together, the promotion of which will be followed by presentation of the portfolio for individual discussions during an investment promotion meeting to be held on the occasion of the Hannover Fair (Federal Republic of Germany) in April 1987. A workshop on project identification, preparation and promotion was also held at Beijing (China) in the year under review.

51. Also in the Asia region, under a technical co-operation project financed by UNDP, assistance was rendered to

Bangladesh for investment promotion in industries that involved the undertaking of considerable pre-investment activities in 1986. UNIDO, together with Bangladeshi sponsors identified and prepared 135 industrial investment projects. In 1986, UNIDO actively promoted these projects with foreign potential partners, prior to the individual discussions on specific projects between local sponsors and foreign entrepreneurs that were to take place during an investment promotion meeting at Dhaka (Bangladesh) in January 1987. These promotional activities included country presentation tours by three groups of senior government officials and private industrialists. The presentations took place in Austria, China, Czechoslovakia, Federal Republic of Germany, France, Japan, Republic of Korea, Singapore, Switzerland, United Kingdom of Great Britain and Northern Ireland, United States of America and Yugoslavia. Also in connection with this wide-reaching programme, an official from the Ministry of Industries of Bangladesh spent six months at UNIDO Headquarters, where he received practical on-the-job orientation. A programme of assistance - to be financed by UNDP and implemented in 1987 - was prepared for Indonesia in the field of industrial investment project promotion. The programme includes on-the-job orientation for national officials and the organization of an investor's forum. Assistance was granted to Viet Nam in redrafting that country's laws on foreign investment and the acquisition of technology.

52. Considerable work related to identification and promotion of investment projects took place in Latin America and the Caribbean during the year under review. Technical co-operation rendered included the identification and screening of industrial investment projects in Argentina and Bolivia, the initiation of a technical co-operation project aimed at developing a business environment conducive to foreign and local investment in Bolivia and the formulation of future technical co-operation activities in industrial investment project promotion for Ecuador, the Netherlands Antilles and Suriname. Assistance was also provided in the field of industrial investment to Chile, Colombia, Mexico, Paraguay and Uruguay.

#### Investment Promotion Service

53. During 1986, the Services in Cologne, New York, Paris, Tokyo, Vienna, Warsaw and Zurich concluded the promotion of 64 industrial investment projects for developing countries that had an estimated total investment cost of \$265.3 million. The Services organized 29 country presentation

meetings for the following countries: Antigua and Barbuda, Bangladesh, China, Colombia, Côte d'Ivoire, Cyprus, Dominica, Ethiopia, Fiji, Grenada, India, Indonesia, Malaysia, Philippines, Republic of Korea, Rwanda, St. Christopher and Nevis, St. Vincent and the Grenadines, Senegal, Sri Lanka, Thailand and Zimbabwe. During these meetings, the investment requirements of the developing countries in question were presented and information was given to banks, companies and industrial associations on investment conditions in those countries.

54. On-the-job orientation programmes for 23 investment promotion officials from Angola, Antigua and Barbuda, Bahamas, Bangladesh, China, Congo, Dominica, Egypt, Grenada, Guinea, India, Indonesia, Malawi, Republic of Korea, Rwanda, St. Christopher and Nevis, St. Vincent and the Grenadines, Sri Lanka, Thailand and Tunisia were carried out by the Services. In these programmes, the developing country officials not only familiarized themselves with the tools and techniques of investment promotion, but actively carried out promotional activities for their countries. This approach complemented two other items of promotional activity organized by the Services, namely the participation of potential partners in investment promotion meetings and the visits of industrialists with project sponsors in developing countries. The Services continue to form an integral part of the structure of the industrial investment programme and act as an important avenue for the flow of industrial investment promotion information that is vital to the developing countries and is of equal value to the industrial and banking community in their respective countries. These groups contain potential partners, especially from small- and medium-scale industries, who have expressed interest in participating in industrial investment projects in developing countries.

55. Agreements concluded in 1986 extended the Paris and Tokyo Services for three years and the Warsaw Service for an additional four-year period. An agreement was also concluded that provides for another year of the on-the-job orientation programme for investment promotion officials from developing countries at the Tokyo IPS. The IPS at Milan (Italy) is in the process of being established while an agreement with the Republic of Korea for an IPS at Seoul was about to be signed at the end of the year. Owing to financial constraints the New York office terminated its operation on 15 December 1986. However, an IPS was opened at Washington, D.C. in December 1986, with a view to improving co-operation with the World Bank, the International Finance Corporation, the Inter-American Development Bank and other intergovernmental and industrial organizations in that city.

#### Information systems

56. The Investment Promotion Information System (INPRIS) <sup>8/</sup> now contains over 8,800 records on industrial investment project proposals, potential partners, development finance institutions, investment-related institutions and project sponsors. INPRIS can be searched from remote terminals by the IPS, thereby enabling them access to the same up-to-date industrial investment information that is available at Headquarters. During the year, over 600 requests for information from INPRIS were received. About half the requests were for information on potential partners for projects in developing countries and nearly a third were for information on projects requiring foreign co-operation.

57. Further work has been carried out during 1986 on the development of the Project Profile Screening and Pre-Appraisal Information System (PROPSPIN). <sup>9/</sup> The system has been extended to include consideration of social and public services costs, repatriation of capital and earnings, bilateral agreements, taxation and fiscal and financial incentives. PROPSPIN has been used in the refinement of a portfolio of industrial investment projects to be set up in Brazil, particularly in the field of biotechnology.

58. One of the promotional tools used by the developing countries is a series of plant profiles entitled "How to start manufacturing industries - technological and investment perspectives". <sup>10/</sup> In 1986, profiles on a further 116 industrial plants were distributed to developing countries as a supplement to volume II of the series, bringing the total number of profiles to 288. The preparation of an additional 90 profiles for volume III has been initiated. Over 3,000 copies of each of two volumes, containing summaries of a total of 471 industrial investment project proposals in 29 developing countries have, up to the end of 1986, been distributed to potential partners. A new publication, entitled "Directory of Development Finance Institutions" (ID/344), allows entrepreneurs to select from among 340 international, regional and national development finance institutions. Collected information on sources of financing and on specific industrial financing continued to be disseminated to developing countries during the year and 27 issues of "Industrial Finance News" were prepared and distributed in 1986.

<sup>8/</sup> ID/B/320, chap. V, para. 29.  
ID/B/340, chap. V, para. 129.

<sup>9/</sup> ID/B/340, chap. V, para. 135.

<sup>10/</sup> Ibid., para. 138.

World Bank/UNIDO Co-operative  
Programme

59. An important development during the year concerning the World Bank/UNIDO Co-operative Programme was the decision to focus on a few selected areas where UNIDO has specialized staff skills that could be made available to the World Bank. The areas identified were: the promotion of foreign investment; institution building; and the development of industrial infrastructure especially related to small- and medium-scale industry. It was agreed to undertake technical co-operation projects on a cost-sharing basis, and to co-ordinate UNIDO country and industrial sector studies with World Bank activities in these areas. The agreed working arrangements and programme provided for between 40 and 48 work-weeks of UNIDO staff-time to assist in Bank-related activities in the selected areas.

60. UNIDO and the World Bank reviewed the industrial planning strategy in Cape Verde, Côte d'Ivoire, Guinea, Senegal and Togo, with a view to harmonizing the activities of

the two organizations in these countries where both are active. The Co-operative Programme provided financial and logistic support to a World Bank study on bagasse as a feedstock for pulp and paper. A UNIDO expert assisted a World Bank mission to develop a technical co-operation package for a credit line for small- and medium-scale industry in Mexico. Also, an agreement was reached that provided for UNIDO staff participation in World Bank missions to Pakistan, Peru, Sri Lanka and Togo to assist in studies related to small- and medium-scale industry development, the industrial sector in general and the textile industry.

61. The Co-operative Programme identified a number of new technical co-operation projects that may be funded by the Bank and executed by UNIDO. During the year, UNIDO signed new agreements for executing cost-sharing technical co-operation projects in Ghana, Honduras and Zambia. The Bank will fully finance projects in Somalia and Uganda to be executed by UNIDO; a similar arrangement is under negotiation for a project in Sudan.



## CHAPTER IV. SPECIAL THEMES

### INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA

1. In spite of the many constraints encountered at all levels during the year under review considerable progress was made in a number of countries in the region. Activities pertaining to the implementation phase (1985-1990) of the programme for the Industrial Development Decade for Africa (IDDA) were carried out and the activities of the preparatory phase (1982-1984) were consolidated. In view of the potential contribution of the industrial sector in the achievement of a lasting solution to the economic difficulties faced by the African countries the programme for the Decade continued to receive high priority in intergovernmental forums. The role of the programme for the Decade was recognized as being essential to the attainment of the objectives defined in Africa's Priority Programme for Economic Recovery (1986-1990) adopted by the Assembly of Heads of State and Government of the Organization of African Unity (OAU) at its twenty-first ordinary session in July 1985 and the United Nations Programme of Action for African Economic Recovery and Development (1986-1990) adopted by the General Assembly at its thirteenth special session (A/RES/S-13/2) in July 1986. The Secretariat actively participated in the preparation and elaboration of these two programmes, the time-frame of which coincides with the remaining period for IDDA and which, like the programme for IDDA, are based on the Lagos Plan of Action.

2. The limited resources available to UNIDO for IDDA continued to be a major obstacle to the full implementation of the programme. Apart from funding received from UNDP resources and from the Industrial Development Fund (IDF), a total of \$8.6 million was allocated for IDDA in the programme budget for the biennium 1986-1987. Those funds were later reduced to \$2.7 million, in view of the serious financial crisis faced by the Organization. That amount covered only the commitments incurred on a limited number of technical co-operation projects initiated within the framework of the programme. Owing to that situation, the Secretariat had to suspend the majority of projects developed for the utilization of the \$8.6 million and for which the respective Governments and organizations had already initiated the necessary implementation actions. The suspended projects related mainly to the provision of technical advisory services, the establishment of pilot demonstration plants, the training of industrial

manpower, investment promotion, the adjustment of industrial strategies and policies, and the promotion of intra-African industrial co-operation.

3. In 1986, the IDDA programme of national workshops and seminars on industrial policies and strategies was continued more vigorously with a view to assisting policy makers, planners, industrialists and private entrepreneurs to implement the programme of the Decade within the framework of the Lagos Plan of Action. These workshops and seminars, which were held in Central African Republic, Ethiopia, Madagascar and Zaire, enabled these countries to review their industrialization policies, strategies and plans and to realign them with the principles and priorities of the Decade and the OAU and United Nations programmes for Africa. As a result of these seminars, large-scale projects to be financed by UNDP were formulated in a number of countries.

4. The health sector continued to receive the importance it deserves, particularly in view of the drought and famine which Africa has witnessed in recent years. To that end, projects for the production of oral rehydration salts (Guinea) and vaccines (Cameroon) were awarded priority in the IDDA programme, despite financial constraints. Similarly, in the technical advisory services programme to African countries and organizations emphasis was laid on the areas of plant maintenance, rehabilitation and establishment, development of technological capabilities, and development of industrial manpower, energy resources and telecommunications industries.

5. The period under review witnessed continued activities for the promotion of intra-African industrial co-operation within the framework of IDDA, such as the second series of subregional meetings on that subject. Following on the revision of the programme for West Africa at a subregional meeting in Lomé (Togo) in late 1985, the programme for Central Africa was reviewed and adjusted at a meeting in Bujumbura (Burundi) in early 1986. However, lack of resources precluded holding the subregional meetings scheduled for 1986 for Eastern/Southern and Northern Africa. This notwithstanding, the information provided by participants in the subregional meetings for West and Central Africa and information obtained during preparations for the other meetings was utilized to promote the subregional programmes among investment and financial institutions. Furthermore, at the two investment promotion meetings held in

Africa in 1986, implementation of IDDA-related programmes continued to receive special attention (cf. chap. III, paras. 48-49). Co-operation was intensified in 1986 between UNIDO and African regional and subregional organizations, in particular the Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), Preferential Trade Area for Eastern and Southern African States (PTA), and Central African Customs and Economic Union (UDEAC), in the promotion of subregional industrial co-operation and integration.

6. In Africa's Priority Programme for Economic Recovery (1986-1990) and the United Nations Programme of Action for African Economic Recovery and Development (1986-1990) priority is accorded to the attainment of food self-sufficiency. Consequently in implementing the Decade programme UNIDO continued to give great emphasis to the development and rehabilitation of agro- and agro-based industries as well as to the provision of the factor inputs required to enhance food and agricultural production. Special emphasis was placed on the development of small- and medium-scale industries and domestic entrepreneurial capabilities.

7. At the Eighth Conference of African Ministers of Industry and the preceding meeting of intergovernmental experts, progress made in the industrial development of African countries was reviewed. Discussions focused on implementation of the programme of IDDA and the role of industry in the economic recovery and development of Africa. The Conference of African Ministers decided on measures to be taken at the national, regional/subregional and international levels to accelerate the implementation of the programme for the Decade and the OAU and United Nations programmes for Africa. The Conference called for the proclamation of a second Industrial Development Decade for Africa (1990-2000). A number of wide-ranging recommendations are contained in the comprehensive resolution adopted by the Conference. The Conference also decided to convene a special session in 1987 at which the African common position for the second session of the General Conference of UNIDO will be adopted.

#### ASSISTANCE TO THE LEAST DEVELOPED COUNTRIES

8. In 1986, the programme and project development activities of UNIDO related to the least developed countries focused on contributing to the UNDP country

programming exercise, and on identifying and developing new projects. Following contacts established in 1985, UNIDO was involved in preparing country programmes in 11 of the 22 least developed countries that completed the exercise in the course of the year. It anticipates being called upon to provide similar assistance in the nine countries where country programmes have still to be formulated.

9. In developing projects, UNIDO continued to explore alternative sources of funding. Securement of funds from sources other than IPF is of particular significance to the smaller least developed countries whose IPFs are invariably limited and entirely devoted to the development of agriculture and physical infrastructure.

10. Project formulation missions are a major feature of project development work: 15 missions were fielded in 1986. These efforts were supplemented by inputs on the part of Headquarters and field staff, particularly the Senior Industrial Development Field Advisers. As a result, project approvals for 1986 totalled \$18.6 million. This compares favourably with the previous year's figure of \$20.5 million, when it is recalled that 1986 was the last year of a UNDP country programming cycle. Statistics for 1986 project approvals and expenditures by country and source of funds are given in appendix G.

11. As in previous years, technical co-operation was devoted mainly to: manpower development; promotion of small industries, utilizing locally available resources; preparation of pre-feasibility and feasibility studies; and industrial planning and programming. Particular attention was devoted to industrial rehabilitation and to the integration of women in industrial development.

12. Numerous industrial rehabilitation projects were executed or formulated in Burkina Faso, Comoros, Djibouti, Guinea-Bissau, Haiti, Lesotho, Mali, Nepal, Niger, Sierra Leone and United Republic of Tanzania. The growing demand for assistance in this area derives from earlier industrial policies. Furthermore, rising energy prices in the 1970s and 1980s coupled with declining foreign earnings and static levels of development assistance have led to a severe shortage of foreign exchange in all least developed countries. For want of funds to purchase spare parts or essential imported inputs, many factories in the least developed countries have had to close down or operate at only a fraction of installed capacity. Under such circumstances, UNIDO assistance in rehabilitating and increasing efficiency in existing plants takes on particular significance.

INDUSTRIAL CO-OPERATION AMONG  
DEVELOPING COUNTRIES

13. The mechanism of technical and economic co-operation among developing countries in the field of industrial development received particular focus in 1986 as an important instrument for the implementation of the IDDA programme. A major activity undertaken in this respect was the organization of the Afro-Asian Industrial Co-operation Meeting within the Framework of IDDA and ECDC, which was held at New Delhi (India) from 17 to 21 November 1986. The meeting was attended by 199 senior government officials and executives from industrial enterprises from 38 countries in both continents; 26 representatives from nine regional and international organizations and financial institutions also participated. The focus of the meeting was on reaching agreements on specific projects to be implemented at bilateral and multilateral levels. Approximately 300 bilateral and 20 inter-regional projects were examined and recommended for implementation; numerous agreements on co-operation between institutions, firms, corporations and associations were concluded.

14. UNIDO continued to organize Solidarity Ministerial Meetings in favour of the least developed countries in Africa. A Solidarity Ministerial Meeting was held in Bamako (Mali) from 30 September to 3 October 1986. Delegates from 14 developing countries discussed 18 co-operation project proposals that resulted in numerous bilateral agreements, including a donation from China of a 120 kVA generator for installation at the Bamako Shortwave Broadcasting Centre. Preparations were under way for the holding of a similar meeting in Cape Verde in 1987. Efforts also continued to assist follow-up activities to previous Solidarity Ministerial Meetings. For example, Yugoslav experts undertook, with UNIDO support, a techno-economic study for the establishment of a tannery in Burkina Faso. Specific areas for follow-up were agreed upon with the Government of Burundi as a sequel to a Solidarity Ministerial Meeting held at Bujumbura in 1985.

15. In Asia, the status of follow-up to a Solidarity Ministerial Meeting held at Kathmandu in 1982 was reviewed with the Nepalese authorities and an agreement was reached on joint follow-up action.

16. A Round-table Ministerial Meeting on Co-operation among Developing Countries in the Agricultural Machinery Industry took place at Buenos Aires (Argentina) from 3 to 7 November 1986. Entrepreneurs from both public and private sectors took an active

part in the meeting. Concrete business discussions ranged from exchange of technological information to joint ventures with buy-back arrangements.

17. Other ECDC/TCDC activities carried out during 1986 included the following: an ad-hoc expert group meeting on modalities to ensure a permanent flow of information aimed at strengthening TCDC in building materials and construction industries was held at Zagreb with the co-operation of the Government of Yugoslavia, in April 1986; a workshop and demonstration on appropriate technology and equipment for the food-processing industry was held at Novi Sad (Yugoslavia) in May 1986 for the benefit of African, Asian and Arab developing countries; a workshop for co-operation among developing countries in the field of cement, lime and related industries was prepared during 1986 for implementation with the Government of Thailand in February 1987; preparations were undertaken for a workshop-cum-study tour for co-operation among Pacific and Caribbean island countries in the development of small- and medium-scale agro-industries; preparations were made for organizing the Meeting for Promotion of Joint Ventures among Islamic Countries, to be held at Istanbul (Turkey) in June 1987; officials from the National Council on the Role of Filipino Women visited China to study practical measures for improving the participation and capabilities of women in the industrial planning and development process; a study tour to China of Yugoslav experts in the field of agro-industry was organized; and a representative of PTA undertook a study tour to the secretariats of ECOWAS, the Commission of the Cartagena Agreement (JUNAC) and the Association of South-East Asian Nations.

18. An inventory of Brazilian industrial capabilities in small- and medium-scale industries was elaborated. It provides detailed information on individual enterprises with technological experiences and achievements that could be transferred to other developing countries.

19. Guidelines for the establishment of multinational production enterprises in developing countries were finalized and will be presented for review to a working group in 1987. The programme for promoting enterprise-to-enterprise co-operation among developing countries was continued in 1986 and preparations were under way to hold a working group at which sectoral co-operative arrangements will be considered. As previously agreed upon at a high-level meeting of the parties concerned, UNIDO contributed to the financing of the preparation of a feasibility study to be carried out by experts from Argentina, Brazil, Paraguay and Uruguay on the viability of the establishment of a

co-operative system for the production, processing and commercialization of milk and milk products.

20. In 1986, UNIDO contributed to and participated in: a meeting of the TCDC Focal Points of the Organizations of the United Nations Development System, convened in New York by UNDP; a meeting of the Advisory Committee for the Research Programme on South-South Co-operation convened at Ljubljana (Yugoslavia) by the Research Centre for Co-operation with Developing Countries; the High-level Meeting on Economic Co-operation among Developing Countries convened at Cairo (Egypt) by the Group of 77 and the Intergovernmental TCDC Programming Exercise organized by UNDP and the Government of China in Beijing.

#### INTEGRATION OF WOMEN IN INDUSTRIAL DEVELOPMENT

21. In May 1986, as part of the reorganization of the Secretariat, a unit to promote the integration of women into industrial development was established within the Department for Programme and Project Development. The new unit is a reflection of the importance given to the industrial sector in the Nairobi Forward-looking Strategies for the Advancement of Women and of the recognition by the Board of the crucial role of the programme. The substantive increase in 1986 in financial support for the programme through direct trust fund contributions also confirmed the significance which Member States attach to the advancement of women in industry. Such contributions were received from the Women-in-Development Fund (Australia) and from the Governments of the Netherlands and Norway for both research and technical assistance projects. In an effort to further publicize the goals and achievements of the programme, accounts of UNIDO activities for the integration of women appeared in several issues of the UNIDO Newsletter.

22. Technical co-operation projects specifically designed to upgrade the capabilities of women and to improve technologies traditionally used by women continued to be formulated and implemented during 1986. Further efforts were also made to increase the involvement of women at all levels in UNIDO technical co-operation activities. These efforts received new impetus through the Guidelines on the integration of women in UNIDO technical co-operation projects and in industrial studies programmes and research (UNIDO/PC.31/Rev.1/Add.1) that were issued in March. The Guidelines are expected to

lead to a greater participation of women in technical co-operation projects particularly in those related to small-scale industry/rural industrial development and agro-industries. During 1986, 137 women participated in in-plant and other group training programmes organized by UNIDO and 151 women were awarded fellowships and participated in study tours.

23. The sectoral analysis of women in agro-industries that was initiated in 1985 was continued in 1986 with an analysis of the participation of women in the fisheries industry carried out in conjunction with a survey of the fisheries industrial system prepared by the Sectoral Studies Branch. Three country case studies were initiated during the year on the basis of which a synthesis paper will be prepared and presented to the first Consultation on the fisheries industry in June 1987. Within the framework of preparations for the third Consultation on the pharmaceutical industry a country case study was undertaken on women in the pharmaceutical sector. The potential role of women in human resource development for industry will be investigated in country case studies that were started in 1986 and deal with the situation prevailing in Nepal, Sri Lanka and Zimbabwe.

24. A data base on women in industry was established in 1986 with the goal to overcome the dearth of statistical data and information on women in industry that hampers consideration of the question of integration of women in the activities of UNIDO. The data base comprises information on over 100 countries and some 900 reports and publications, as well as addresses of national, international, intergovernmental and non-governmental organizations dealing with issues on women in development.

25. UNIDO field staff participated in the sixth session of the United Nations International Research and Training Institute for the Advancement of Women Board of Trustees held at Santo Domingo (Dominican Republic), the International Seminar on Women in Agriculture and Rural Development in Asia held at Huangxian (China) and organized by FAO, and the Sixth Ordinary Congress of the Pan-African Women's Organization held at Luanda (Angola).

26. The number of female Professional staff members in UNIDO at the end of 1986 was 81 as compared to 78 at the end of 1985. Women now represent 17.7 per cent of all Professional staff of UNIDO compared to 17 per cent in 1985 (details of employment of women in the Secretariat are provided in chapter VII). One woman SIDFA and 26 women JPOs represented UNIDO in the field during 1986 (in 1985: 1 and 21 respectively), and 105 female experts served on projects as compared to 50 in 1985.

## CHAPTER V. APPRAISAL AND EVALUATION

1. The newly-established Project Appraisal Section started functioning late in 1986 with the purpose of appraising complete draft project proposals prior to their submission either to the Project Review Committee for UNIDO-managed funds, or to the United Nations Development Programme (UNDP) for projects financed under the indicative planning figure and UNDP special programme resources and special measures. The Section is to work closely with staff concerned with project development and design to ensure compliance with programme criteria and design standards and thus improve the overall quality of project documents.

2. By the end of the year, the Project Appraisal Section - with the support of the Evaluation Staff - had appraised six project proposals with a value of over \$400,000 each, and had reviewed the design and technical aspects of 36 smaller project proposals prior to their submission to the Project Review Committee. In addition, the Project Appraisal Section, at the request of the officers responsible for project development, had provided advice on the design of several specific projects at an early stage of their development. It is planned that the Project Appraisal Section will be considering approximately 700 projects in 1987.

3. On the basis of this short experience, it is foreseen that the design of UNIDO project proposals will increasingly be of a quality which will speed up approval, facilitate implementation and allow for a more effective evaluation. To that end discussions will continue to be held of project proposals with the officers responsible for their development.

4. 1986 was a year of change and adjustment for the evaluation activities of UNIDO. In the course of the reorganization of the Secretariat the Evaluation Staff became part of the Office of the Director-General. It was entrusted with the planning, co-ordination and implementation of all evaluation work within UNIDO and with providing advice to the Director-General in related matters. Important progress was made in harmonizing the reporting and internal evaluation systems within the United Nations family, substantive work was done on the thematic evaluation of rural small-scale industrial enterprises, and planning and methodological work was begun on evaluation of internal programmes and other Headquarters activities.

5. In 1986 the UNIDO self-evaluation report system for projects operated alongside the experimental revised UNDP system. The UNIDO system enabled a continued feedback to backstopping officers and evaluation staff on project results in order to facilitate related management decisions. In October 1986 the Inter-Agency Working Group on Evaluation decided to adopt most of the major features of the UNIDO system as a basis of the revised UNDP Progress/Internal Evaluation Reporting System. These features, which will be integrated in a single annual progress and self-evaluation report to be prepared for each major project, aim at the following:

- (a) The report should be prepared as a basis for the annual tripartite review;
- (b) The report should provide the minimal core requirements of the tripartite monitoring and evaluation system;
- (c) The report should be designed so that it provides feedback from Headquarters to the field;
- (d) The report should also be prepared by Governments in the case of direct execution;
- (e) Responsibility for managing and following up compliance with these reporting requirements lies with the executing agency.

The new report will form the basis of a single, harmonized Progress/Internal Evaluation Reporting System to be used by the organizations and agencies of the United Nations system by early 1987. The same reporting system should be followed as well for non-UNDP financed projects.

6. In 1986, 131 project self-evaluation reports (PERs) were prepared under the present UNIDO self-evaluation system. An analysis of these PERs - representing around 75 per cent of all operational major UNIDO projects - showed that some 50 per cent of these PERs were used as the main background paper for tripartite reviews. The overall quality and usefulness of the reporting and evaluation exercise were considered to be within the range of acceptable, good or excellent in over 75 per cent of the projects evaluated. Recommendations made by the Evaluation Staff to backstopping officers on project

design, issues for tripartite reviews and possible remedial action were accepted in some 80 per cent of the cases. It is expected that with the introduction of the harmonized system these statistics will continue to show improvements.

7. Tripartite in-depth evaluations constitute another element of the basic structure of the UNIDO technical co-operation evaluation system. Some 30 UNIDO-implemented projects were subject to an in-depth evaluation in 1986 and UNIDO was represented directly in 25 of these. The Evaluation Staff participated on behalf of UNIDO in eight evaluations that took place in Brazil, Burma, Ethiopia (2 projects), Rwanda, Sri Lanka, Turkey, and Zaire.

8. The expansion of evaluation activities to include group training programmes continued during 1986. Twenty PERs for group training programmes were prepared. Methodology for in-depth evaluation of those programmes had to be developed since they require an ex-post type of exercise that is different from that applied to ongoing traditional technical co-operation projects. During 1986, the Evaluation Staff completed an in-depth evaluation of

a series of group training projects on furniture and joinery industries, financed by the Government of Finland. The methodology evolved will be used for evaluations of other group training programmes to be conducted during 1987.

9. The desk phase of a thematic evaluation of technical co-operation activities on rural small-scale industrial enterprises was completed. The study was carried out in conjunction with UNDP, the International Labour Organisation and the Government of the Netherlands.

10. In 1986, the Evaluation Staff conducted nine workshops on project design and evaluation. Five were held at Headquarters and four in the field - Burma, Ethiopia, Sri Lanka, Yugoslavia - with a total participation of 44 Headquarters staff, 98 government officials and 57 United Nations field personnel. During the year the Evaluation Staff was involved to varying extents in at least 120 project designs and appraisals. Although appraisal activities and related workshops were formally transferred to the new Project Review and Appraisal Division, the Evaluation Staff continues to be engaged in these activities.

## CHAPTER VI. CO-ORDINATION, FIELD AND LIAISON ACTIVITIES AND PUBLIC INFORMATION

### INTER-AGENCY PROGRAMME CO-ORDINATION

1. Co-ordination between UNIDO and other United Nations organizations and specialized agencies at the multilateral policy-making level was implemented through participation in the United Nations General Assembly, the Economic and Social Council, the Administrative Committee on Co-ordination (ACC) and the Committee for Programme and Co-ordination (CPC). This responsibility was assumed by the Geneva and New York liaison offices.

2. At the bilateral inter-agency level, priority was given to drawing up new, formal relationship agreements that would constitute a framework for co-operation between the new UNIDO and each of the specialized agencies of the United Nations system. Indeed, the conversion of UNIDO into a specialized agency entailed the obligation to conclude not only these new relationship agreements with other specialized agencies but also new working arrangements with the other United Nations organizations. To conform with the guidelines established by the General Conference, the agreements should provide for: "(a) exchange of information on ongoing and planned activities; (b) co-ordination and co-operation, including joint action, in the planning and implementation of technical assistance programmes, studies, research and other activities; (c) reciprocal representation in meetings of appropriate bodies; and (d) minimizing duplication of activities or programmes." (GC.1/Dec.41, annex.)

3. Draft relationship agreements between the new UNIDO and the International Labour Organisation (ILO), Food and Agriculture Organization of the United Nations (FAO), United Nations Educational, Scientific and Cultural Organization (UNESCO), World Health Organization (WHO), International Telecommunication Union (ITU) and International Atomic Energy Agency (IAEA) were prepared and negotiated. They will be submitted in 1987 and 1988 to the Industrial Development Board for its approval. Draft working arrangements are under negotiation and finalization with the United Nations Regional Economic Commissions, United Nations Conference on Trade and Development (UNCTAD), United Nations Volunteers (UNV), International Fund for Agricultural Development (IFAD), International Trade Centre UNCTAD/GATT (ITC) and, as required, with the other funds, centres and units of the United Nations.

4. During the period under review, UNIDO continued collaboration and consultation with the specialized agencies and other United Nations organizations through reciprocal headquarters visits, notably with the Economic and Social Commission for Asia and the Pacific (ESCAP), Economic Commission for Africa (ECA), Economic and Social Commission for Western Asia (ESCWA), UNCTAD, United Nations Environment Programme (UNEP), World Food Council (WFC), ILO, FAO, WHO, IFAD, and ITC. UNIDO was represented at the UNEP Department of Environmental Matters meeting at Nairobi (Kenya) in November and at the OAU (Organization for African Unity)/ECA/United Nations meeting in Addis Ababa (Ethiopia) in March.

5. UNIDO continued close, project-oriented co-operation with ITC. A Memorandum of Understanding was signed in January 1986 between UNIDO and ITC specifying co-operation between the UNIDO Investment Promotion Service in Zurich and the ITC Export Management Advisory Unit. The Intersecretariat Programme Meeting also took place in January 1986. Similarly, co-operation with FAO and WHO was increasingly oriented towards technical assistance projects. Further efforts were made to identify projects that would lend themselves to joint implementation with other agencies.

6. In addition to the above meetings, co-ordination at the working level was intensified through exchange of information on research, study programmes and operational projects; development of co-operative programmes, including exchange of comments on medium-term plans and programme budgets; visits by staff to each other's secretariat to discuss joint activities and technical matters; joint programming and project formulation missions, reciprocal briefing and debriefing of project personnel.

### RELATIONS WITH GOVERNMENTS AND INTERGOVERNMENTAL ORGANIZATIONS

7. In 1986, the Secretariat continued to maintain contacts with those States that have signed but not ratified the Constitution of UNIDO to ensure their ratification. Contacts were also made with other countries that are interested in becoming Member States of UNIDO, but have not signed the Constitution, to accede to it. In 1986, 13 more countries became

Member States of UNIDO, with the result that UNIDO had, at 31 December, 146 Member States.

8. Throughout the year, the Secretariat once again sought support from Member States for the Industrial Development Fund (IDF). Pledges for 1987 were made during the Pledging Conference for the Industrial Development Fund for 1987 held at Vienna on 22 October 1986. Several countries also announced their pledges during the United Nations Pledging Conference for Development Activities held in New York on 13 and 14 November 1986. The pledges made on both occasions amounted to \$12.9 million.

9. The Secretariat continued to pursue its activities relating to joint programmes and similar co-operation agreements that have been established between UNIDO and a number of countries for co-operation in specific areas in the interest of developing countries. A number of joint committees set up to monitor these activities met during the year: Joint UNIDO/Hungary Committee at Vienna (February), Joint UNIDO/Romania Committee at Bucharest (April), Joint UNIDO/USSR Working Group at Vienna (May), Joint UNIDO/Turkey Committee at Ankara (June), Joint UNIDO/Czechoslovakia Committee at Pilsen (November) and Joint UNIDO/Poland Committee at Vienna (December). The Joint UNIDO/Council for Mutual Economic Assistance (CMEA) Working Group held its annual meeting at Vienna in May, adapting its work programmes for 1987-1988.

10. Memoranda of Understanding were signed with the Government of Poland and the State Committee for Science and Technology of the Union of Soviet Socialist Republics; these memoranda, which further strengthen co-operation between UNIDO and its Member States, provide for joint activities for the benefit of the developing countries in their industrialization endeavours. Agreements were also concluded with the Governments of France and the Netherlands for similar purposes.

11. During the year, efforts continued to develop further co-operation with inter-governmental organizations. Working Arrangements were signed with the Arab Industrial Development Organization (AIDO), the Economic Community of Central African States (ECCAC), the Commission of the Cartagena Agreement (JUNAC) and the Latin American Energy Organization (OLADE). Areas of co-operation with the Andean Development Corporation (ADC) were also identified.

12. Intergovernmental organizations that had concluded agreements with the former UNIDO were reviewed and evaluated with a view to identifying their future participation in the work of the Industrial Development Board and the General

Conference. Requests to conclude appropriate agreements that had been received from a number of intergovernmental organizations were examined.

13. The Secretariat continued its efforts to enhance the role of national committees for UNIDO and to encourage Member States that had not done so to establish such committees. In 1986 two more Member States, Sri Lanka and Guinea Bissau, established National Committees for UNIDO, bringing the total of such committees to 72.

14. During 1986, external relations activities included preparing for and following up on visits of high-level officials of Member States and of governmental and intergovernmental organizations to UNIDO Headquarters as well as visits of the Director-General to Member States, whether as an official guest or when participating in meetings. External relations activities also encompassed protocol matters.

#### CO-OPERATION WITH NON-GOVERNMENTAL ORGANIZATIONS AND INDUSTRIAL ENTERPRISES

15. The Section for Co-operation with Non-governmental Organizations and Industrial Enterprises assumed greater responsibility during 1986 as UNIDO renewed its endeavours to increase the involvement of private and public industrial enterprises in its activities. The results were very encouraging: enterprises from Eastern and Western Europe contributed to specific activities in both cash and kind. Others provided experts free of charge for specific projects, and some East European enterprises pledged a portion of their voluntary contributions in convertible currency.

16. Among those enterprises which responded in this manner were enterprises such as the Société des Eaux Minérales de Vittel (France), Nobel Chematur AB (Sweden), Farmitalia (Italy), the Bechtel Group (United States of America), the Metallurgical Project Consulting and Engineering Company and the Central Union of Work Co-operatives (both of Poland), Agrober (Hungary) and the Central Co-operative Union (Bulgaria).

17. Several enterprises provided technical advice to developing countries on the development and rehabilitation of their industries. In 1986 a number of joint missions were carried out by UNIDO and those enterprises. In several cases the enterprises bore all expenses, including those of UNIDO. Furthermore, UNIDO and the Centre for the Promotion of Imports (Netherlands) carried out a joint fact-finding mission to India to investigate



possibilities for transferring technology from India to the Netherlands. UNIDO anticipates increased "reverse transfer" of this kind in several developing countries.

18. During 1986, a number of other specific projects and activities were undertaken in co-operation with national and international organizations and industrial enterprises. For example, a Workshop on Technical and Economic Co-operation between Latin American and Arab Countries in the Food-Processing Industry was held at Barcelona (Spain) in July 1986. It resulted in two important Latin American and Arab regional bodies signing an agreement to co-operate in the food-processing sector. At the request of the Group of 77, an Expert Group Meeting on Consulting Services in Developing Countries in the Field of Building Materials and Construction Industry was held at Havana (Cuba) in November 1986. In co-operation with the World Export-Processing Zone Association (WEPZA) and the Government of Panama, a Workshop on Management of Export-Processing Zones was organized at Panama City for Caribbean countries in December 1986. Special emphasis was placed on the role of industrial co-operatives in industrial development, in particular with respect to rural and small- and medium-scale industries engaged in food processing. A survey was made of industrial co-operatives in selected African countries with a view to promoting bilateral projects between those co-operatives and counterpart organizations in developed countries.

19. In order to increase further the involvement of industrial enterprises in UNIDO technical co-operation programmes and to encourage bilateral co-operation among the enterprises themselves, UNIDO established a computerized roster of companies and industrial organizations interested in co-operating with the Organization. Programmes for joint projects and activities with UNIDO were discussed at the annual joint committee

meetings held with: the International Organization for Standardization; the Polish Central Union of Work Co-operatives; the Association of African Development Finance Institutions; the University of Grenoble and the University of Delft.

20. Following the conversion of UNIDO into a specialized agency, the Section undertook an in-depth review of all non-governmental organizations having consultative status with the former UNIDO and invited them to apply for consultative status in accordance with the new Constitution and guidelines adopted by the General Conference. At its second session, in October 1986, the Industrial Development Board granted such status to 73 non-governmental organizations, thus enabling them to participate in the work of the Board and the Conference in accordance with the rules of procedure of those organs.

#### FIELD ADVISER AND JUNIOR PROFESSIONAL OFFICER PROGRAMMES

21. The Governing Council of UNDP, in decision 86/50, allocated \$9.6 million to the Senior Industrial Development Field Adviser (SIDFA) programme for 1987-1989 and requested the Administrator to undertake, jointly with UNIDO, a review of the SIDFA programme. This review was carried out in the latter part of 1986. Taking into account the results of the review, the UNDP and UNIDO secretariats will submit further proposals on the SIDFA programme to their governing bodies in 1987 to facilitate the allocation of funds to support the SIDFA programme in subsequent years.

22. At the end of 1986, 28 SIDFAs and one project co-ordinator, acting as a SIDFA, were on board. One new SIDFA was recruited and one was reassigned to UNIDO Headquarters. The distribution of SIDFA posts is shown in the following table:

Distribution of SIDFA posts  
(By region and source of funds)

Region	Source of funds									Total		
	UNDP			Regular budget			Voluntary contributions					
	1984	1985	1986	1984	1985	1986	1984	1985	1986	1984	1985	1986
Africa	7	7	6	5	5	5	-	-	1	12	12	12
Asia and the Pacific	6	6	6	2	2	2	2	2	1	10	10	9
Latin America	5	5	5	2	2	2	-	-	-	7	7	7
Arab States	1	1	1	-	-	-	-	-	-	1	1	1
Europe	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	19	19	18	9	9	9	2	2	2	30	30	29

23. In the course of 1986 two additional voluntary contributions to the SIDFA programme, from Austria and the Federal Republic of Germany, were received by UNIDO. The voluntary contributions, in combination with funds that became available to UNDP through savings in 1986 and through substantial contributions by Indonesia and Zaire, will make it possible to finance 35 SIDFA posts in 1987.

24. The donor Governments to the UNIDO Junior Professional Officer (JPO) programme (Belgium, Denmark, Finland, Germany, Federal Republic of, Italy, Japan, Netherlands, Norway, Sweden and Switzerland) continued their support in 1986. The Government of Italy sponsored eight additional JPOs and the Government of the Netherlands continued to finance six JPOs from developing countries. During 1986, 76 JPOs were at work for varying lengths of time. Twenty-four new JPOs were recruited, including two from developing countries. A total of 73 JPOs were in the field in 1986, 32 in countries with resident SIDFAs, 28 in countries covered by a SIDFA and 13 in countries without SIDFA coverage.

25. Two training courses, attended by 23 JPOs and donor country representatives, were conducted in June and November. Two mid-assignment review meetings for 24 JPOs took place in April and October.

26. A regional meeting for JPOs assigned to Latin America and the Caribbean was held at Lima (Peru) in January. Seventeen JPOs, several staff members from UNIDO and the SIDFA in Peru attended. Another JPO regional meeting was held at St. Thomas, United States Virgin Islands, in June. Five JPOs and the SIDFA in Barbados attended. The JPOs undertook missions to consult with their non-resident SIDFAs and travelled within their countries of assignment to monitor projects outside the capitals. They also attended seminars and regional and national meetings as observers on behalf of UNIDO when Headquarters staff could not participate owing to financial constraints.

27. SIDFAs and JPOs report regularly to Headquarters on the UNIDO programme of technical co-operation, providing information also on the development plans and programmes of their countries of assignment, bilateral and multilateral programmes of assistance and alternative sources of financing. Some 250 reports were received during the year. An analysis was made of the access by SIDFAs and JPOs to computer facilities in their field offices, and a format for computerized reporting is being developed and will be tested on a trial basis in one or two offices during 1987.

28. In 1986, 20 staff members from UNDP headquarters and 43 from UNDP field offices visited UNIDO. Among them were 34 Resident Representatives/Co-ordinators, five Deputy Resident Representatives, three Programme Officers and one Administrative Assistant. The SIDFA and JPO Support Services Section continues to play an active co-ordination role in strengthening the interaction between UNIDO and UNDP.

#### PUBLIC RELATIONS AND INFORMATION

29. Following the conversion of UNIDO into a specialized agency of the United Nations system on 1 January 1986, the name of the section for public information was changed to Public Relations and Information Section. The addition of "public relations" implied a broader, more active approach that would involve assessing public perception of the Organization, image-building and forming a constituency of support among key decision makers and decision influencers in Member States. An important initial task was to develop a public relations and information strategy that would promote the new and the traditional activities of UNIDO.

30. Public relations efforts emphasized the distinctions between UNIDO and the United Nations system as a whole, particularly the way in which the Organization is financed by Member States and controlled by its policy-making bodies. A regional approach to building support within Member States was adopted, concentrating initially on North America. Activities included background papers, information notes, the press launching of Industry and Development: Global Report 1986, a new flyer on IDF called "Financing with a difference" and a general information brochure, What Is UNIDO?

31. To provide a more comprehensive basis for assessing public perceptions of the Organization, media monitoring was increased. The results of this monitoring were disseminated to senior staff through the weekly UNIDO Press Review. Preparations were completed for UNIDO participation in a global media monitoring service organized by the Division of Economic and Social Information of the United Nations Secretariat.

32. Information activities were refocused to support the Section's public relations work in general and to promote a distinctive image of the Organization as a unique implementing agency in the field of technical co-operation. Closer working

relationships were established with the Department of Industrial Operations, giving regular access to experts and projects for publicity purposes. The UNIDO Investment Promotion Service and the information outlets of the United Nations and its specialized agencies were better utilized as were the usual media services.

33. The Section's computerized mailing list was expanded and a major review instituted with a view to increasing its effectiveness as a tool for minimizing mailing costs.

34. Regular public information activities for UNIDO included missions covering UNIDO field projects; press conferences and media interviews; briefings for journalists, government officials and visiting groups; preparation 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. A series of illustrated success stories on UNIDO projects was in preparation. As in 1985, special emphasis was devoted to the promotion and popularization of the Industrial Development Decade for Africa.

35. Written and, increasingly, audio-visual coverage were provided in the working languages of the Organization for all major UNIDO meetings during 1986, including the sessions of the Industrial Development Board and the Programme and Budget Committee (Vienna); the regular and special sessions of the Preparatory Committee on the Establishment of the International Centre for Genetic Engineering and Biotechnology (Vienna); the interregional meeting for the preparation of the Second Consultation on the Training of Industrial Manpower (Paris); the Fourth Consultation on the Iron and Steel Industry (Vienna); the Meeting of Inter-Governmental Experts of the Whole on Industrialization in Africa and the Eighth Conference of African Ministers of Industry (Bujumbura); and the Third Consultation on the Agricultural Machinery Industry (Belgrade).

36. On a system-wide basis and with a view to increasing inter-agency co-operation, staff of the Public Relations and Information Section actively participated in the work of the 1986 Editorial Committee Meeting of the World Newspaper Supplement (New York) and the thirteenth regular session of the Joint United Nations Information Committee (Geneva).

37. In the audio-visual area, the Section mounted 15 exhibitions for UNIDO and the United Nations and provided radio, film, video and photographic services for

dissemination throughout the world and for broadcast in Arabic, English, French and Spanish. It also catered to the needs of the United Nations units in Vienna and provided audio-visual coverage of major United Nations meetings.

#### NEW YORK LIAISON

38. In 1986 the UNIDO Liaison Office in New York continued to serve as the main link between UNIDO Headquarters and United Nations Headquarters. It provided support to representatives from UNIDO Headquarters during the special session of the General Assembly on the critical economic situation in Africa. During the forty-first session of the General Assembly it provided representation and services, particularly with regard to the portion of agenda item 110 that dealt with re-negotiating repayment of the loan made by the United Nations to UNIDO; to agenda item 38, which dealt with the report of the Group of High-level Intergovernmental Experts to Review the Efficiency of the Administrative and Financial Functioning of the United Nations; and to other items of interest to UNIDO that had been allocated to the Second and Fifth Committees.

39. The Liaison Office also provided representation at, coverage of, and reportage on some 120 intergovernmental and inter-agency meetings, which took place in New York or elsewhere, including those of the Economic and Social Council, the thirty-third session of the Governing Council of UNDP, ACC and its subsidiary bodies, the reconvened special session of the Commission on Transnational Corporations, the twentieth session of CPC, the eighth session of the Intergovernmental Committee on Science and Technology for Development, and the United Nations Pledging Conference for Development Activities.

40. The 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 150 project proposals and projects.

41. In association with the National Science Foundation (NSF) of the United States of America, the Applied Technological Council of California and UNDP, the Office organized and helped conduct a global seminar on base isolation for seismic construction. The seminar which

took place at San Francisco from 12 to 18 March 1986, was attended by over 200 participants, from the United States and from 15 developing countries. Also in association with NSF and with Computech Engineering Services of California, the Office initiated and helped organize and conduct an NSF/UNDP/UNIDO workshop on bridge building for 55 participants from the United States and Latin America. The workshop took place at Washington, D.C., from 17 to 21 November 1986. The Office also organized the fourth meeting of the Panel of Scientific Advisers for the International Centre for Genetic Engineering and Biotechnology, which took place in New York from 17 to 19 May 1986.

42. Contacts were maintained with several companies and institutions in the United States and Canada to discuss the possibility of their supplying high level expertise at short notice and to advise on the identification and selection of training institutions and equipment supplies.

43. During 1986, five graduate students from different universities (Columbia University, New York University, Stanford University and Université catholique de Louvain) benefited from training programmes on the activities of UNIDO arranged by the Liaison Office.

44. The Office continued to be the focal point for enquiries from North and South America related to industrial development. It received approximately 5,000 enquiries on UNIDO activities. Information and documentation were provided to Permanent Missions to the United Nations in New York as well as to industry, libraries, research organizations, government agencies, technical experts and academic institutions.

#### GENEVA LIAISON

45. The most vital of the functions performed by the UNIDO Liaison Office in Geneva relate to representing the parent body at international conferences, meetings, workshops, seminars etc., undertaking inter-agency consultations, providing assistance to permanent missions of developing countries accredited to UNIDO, and generally projecting the viewpoint of UNIDO, particularly among members of industry and educational institutions.

46. In 1986, the Liaison Office actively participated in 35 meetings with a view to

providing information about the nature and scope of the mandated activities of UNIDO, thereby ensuring that the work programmes of UNIDO and other organizations in the system are complemented and not duplicated. Among those meetings were the two sessions of the Governing Body of ILO, the Executive Committee of WHO, the Second General Meeting with the Secretariat of the Organization of Islamic Conferences, the UNCTAD Committee on Transfer of Technology, the ILO Petroleum Committee, the joint ECE/FAO Timber Committee, the ILO Iron and Steel Committee, the International Tropical Timber Council and various meetings of the Consultative Committee on Substantive Questions (Programme Matters). The Liaison Office provided the usual assistance in the debate and discussions in the meetings of ACC, CPC and the Economic and Social Council at Geneva.

47. More emphasis was placed on promoting a dialogue with the other international organizations based at Geneva, fostering exchange of information and documentation, negotiating joint programmes and projects and providing administrative and practical support in common undertakings. In this context, the contacts of the Liaison Office with organizations such as the Economic Commission for Europe, Office of the United Nations Disaster Relief Co-ordinator, ITC, ITU were particularly significant.

48. Close relations were maintained with the 19 diplomatic missions of developing countries accredited to UNIDO and based at Geneva. Their requests serviced by the Liaison Office related mainly to advice on projects for technical assistance, high-level visits to UNIDO Headquarters and the provision of information and documentation, particularly prior to the second session of the Industrial Development Board and the resumed second session of the Programme and Budget Committee.

49. As in the past, there was a considerable number of requests from non-governmental organizations, private enterprises, educational institutions and individuals for an expanding range of information. Such requests were dealt with as efficiently as possible, considering the constraints imposed by the human and financial resources currently available.

50. Various matters of importance and interest to UNIDO, identified through careful and regular screening of information obtained by the Liaison Office, were brought to the attention of UNIDO Headquarters for consideration and possible follow-up.

## CHAPTER VII. GENERAL ADMINISTRATION

### STAFFING

1. The Personnel Services Division continued during 1986 to recruit and manage the Secretariat staff of the Organization and to administer its internationally- and locally-recruited project personnel. The total number of persons administered at UNIDO Headquarters and in the field on 31 December 1986 was 2,368, compared with 2,393 on 31 December 1985.

2. The year 1986 was marked by the restructuring of the UNIDO Secretariat and redeployment of staff. The Organization also faced serious financial constraints which required a close examination of staff resources to ensure that the priority programmes and activities of UNIDO were not disrupted. In carrying out the necessary changes, Personnel Services made every effort to maintain harmonious staff/management relations, taking into consideration the impact on staff morale caused by the financial situation of UNIDO. Consultations with staff were carried out mainly through the Joint Advisory Committee but also through formal and informal communications at all levels.

3. Personnel Services continued to participate in inter-agency meetings of the United Nations common system such as the International Civil Service Commission (ICSC) and its technical bodies and the Consultative Committee on Administrative Questions. Issues related to ICSC and the United Nations Joint Staff Pension Fund were reported on in documents IDB.2/30 and IDB.2/28 respectively, and submitted to the

Industrial Development Board at its second session. At its 24th session in July 1986, ICSC approved common job classification standards for General Service and Manual Worker staff, which were subsequently implemented by UNIDO.

4. Table 1 below gives the composition of the staff of the UNIDO Secretariat as at 31 December 1986 according to category and sex, and with comparable figures for 1985.

### Recruitment

5. On 31 December 1986, there were 66 vacant Professional posts under various stages of recruitment (1985: 42). Of these, seven were language posts for which recruitment is undertaken in conjunction with United Nations Headquarters. Within the Professional and higher categories, 66 staff members were recruited (1985: 78) and 64 left the Organization (1985: 67). Within the General Service and Manual Worker categories, 67 fixed-term appointments were made and 37 staff members were reassigned within UNIDO (1985: 90 and 56 respectively). Altogether, 118 staff members in these categories left the organization (1985: 70).

6. Until 28 February 1986, UNIDO continued to recruit conference servicing staff for all conferences and meetings organized by UNIDO and the United Nations units in Vienna as well as for those meetings held in Vienna but organized by United Nations Headquarters and other intergovernmental organizations; staff were also recruited for some

Table 1

Composition of the UNIDO Secretariat a/

Category	As at 31 December 1985		As at 31 December 1986	
	Male	Female	Male	Female
P-5 and above	136)	5)	137)	5)
P-1 to P-4	245)381	73)78	244)381	77)82
General Service	195	653	186	633
Manual Worker	135	5	108	5
Language teachers	2	5	2	5
Subtotal	713	741	677	725
TOTAL	1,454		1,402	

a/ Figures include 20 interregional and special technical advisers attached to UNIDO Headquarters but not short-term staff or Senior Industrial Development Field Advisers (with the exception of three staff members temporarily serving in the latter capacity).

international conferences organized by the Austrian Government. Upon the transfer of the Meetings Planning and Servicing Unit to the United Nations Office at Vienna (UNOV), that Office took over the recruitment of interpreters and certain clerical conference servicing staff, while UNIDO remained responsible for the recruitment of translators, pool typists and other clerical support staff for conferences. As a result, the number of short-term contracts issued by the Personnel Services Division for conferences was 880 (1985:2,002). During the same period, 148 short-term contracts were issued for secretariat staff (1985:188). In addition, a total of 307 contracts with consultants and individual contractors were issued for the provision of outside expertise and professional services in the Secretariat (1985: 443).

#### Employment of women

7. During 1986, 14 women were recruited on fixed-term appointments and 2 women were promoted from the General Service to the Professional category. The total number of separations was 12, leaving a total of 82 women Professionals, or 17.7 per cent of the total number of Professional staff (463); of these, 59 (16.4 per cent) were in posts subject to geographical distribution. Despite a slight improvement over the past five years, only 5.8 per cent of the candidates in the roster are women. If this proportion is to be increased, the co-operation of Member States in nominating qualified women candidates is essential.

#### Personnel management

8. The Personnel Administration Section is concerned with the implementation of staff regulations and staff rules relating to the benefits and entitlements of staff members as well as to their contractual status. In accordance with Article 26.2 of the Constitution of UNIDO and decision IDB.1/Dec.17 of the Industrial Development Board, the staff regulations of the United Nations as at 31 December 1985, *mutatis mutandis*, are being applied until such time as the General Conference approves the staff regulations of UNIDO as a specialized agency. Draft staff regulations were submitted to the Industrial Development Board at its second session (IDB.2/4).

9. During the year, the Staff Training Unit offered 22 courses in a range of subjects that included supervision, inter-personal relations, financing systems, data processing and word processing. A series of information exchange briefings concerned with specific substantive areas was launched and will be continued in 1987. The Language Training Unit continued to provide training in six official languages; in the autumn

1986 semester, 998 students (staff members, dependants and members of permanent missions) were enrolled in 75 classes. Language proficiency examinations were administered twice, and competitive language examinations for editors, interpreters and translators were organized on a number of occasions.

10. Appropriate administrative bodies were established to deal with Pension Fund matters and compensation claims. In collaboration with the International Atomic Energy Agency and the United Nations Office at Vienna, a pre-retirement seminar was organized.

#### Technical co-operation personnel administration

11. At 31 December 1986 the Technical Co-operation Personnel Administration Unit was administering 601 international experts, four Regional Advisers, 10 Senior Industrial Development Field Advisers, 17 Professional staff employed in the offices of the Investment Promotion Services in seven countries and 162 national experts; it was also administering 197 locally-recruited General Service staff attached to field projects, the total number recruited during the year being 133. The Unit carried out a review of service and living conditions in field duty stations, with a view to proposing appropriate adjustments for consideration by the International Civil Service Commission.

#### PROJECT PERSONNEL

12. In 1986 a total of 1,992 appointments of project personnel were processed by the Project Personnel Recruitment Branch (364 more than in 1985). A total of 760 experts appointments were extended (774 in 1985). Of the appointees, 658 (33 per cent) served under regular staff member appointments (including 23 associate experts), 1,016 (51 per cent) under special service agreements, 318 (16 per cent) under reimbursable loan agreements (including large Trust Fund projects); and 194 (9.7 per cent) were national professional project personnel.

13. Among the appointees were 105 female experts representing 5.3 per cent (45, or 3 per cent in 1985).

14. The total of expert services comprising new appointments, extensions and periods of appointments carried over from the previous year amounted to 8,156.1 work months (8,872.4 in 1985). In terms of expenditure this represents 43.1 per cent of the implementation of UNIDO's technical co-operation (46.9 per cent in 1985).

15. The average duration of all appointments was 3.2 work months; thus the trend of recent years to shorter missions continued. In fact, 45 per cent of all appointments were for one month or less, averaging 0.66 months each. While there are certainly good reasons for this development, further reductions in the duration of consultant missions could become disadvantageous for the very purpose of technical co-operation and should not be encouraged. The time needed for travel, essential administrative preparations, briefing/debriefing, arrangements and movements in the field would become disproportional to the time left for actual professional work expected from the expert. The quality of such missions would suffer and national authorities would be disappointed if a mission essentially results in a written report without sufficient contacts and exchange of views. In addition, short missions are administratively costly for the executing agency and for the project budget due to the high proportion of travel expenses.

16. The average lead time of 3.3 months (excluding special cases of delayed fielding of over 15 months) between establishment of a post for recruitment and fielding of an expert showed a slight improvement over previous years. Existing procedures concerning submission of experts to, and their selection by Governments entail delays and deserve further review. The scarcity of good experts, particularly in high-technology areas, the declining value of

dollar remunerations and long fielding times imposed by heavily committed top consultants counteract the many efforts undertaken to improve the lead time.

17. With 194 appointees - or 9.7 per cent of the individual experts recruited in this period - national professional project personnel continues to represent an important and growing component of many projects. UNIDO participates in common system efforts to reach coherent and equitable standards regarding remuneration as well as conditions of service of this type of personnel.

18. The Technical Assistance Recruitment and Fellowship Office in Geneva, with two outposted UNIDO professional interviewing officers and one outposted UNIDO recruitment officer at Cairo, identified and interviewed potential candidates for UNIDO programmes and projects in a number of European and North African (Egypt and Tunisia) countries. Recruitment missions were also sent to Gabon and Niger.

19. The geographical distribution of experts appointed in 1986 is listed in table 1 of appendix D. Table 2 of the same appendix contains the cumulative list of experts by country of origin recruited since 1971.

20. The pattern of recruitment by regional groups of countries is shown in table 2 below.

Table 2  
Distribution of experts by regional groups of countries  
(1 January to 31 December 1986)

	Number of experts					
	UNIDO roster <u>a/</u>	Percentage of roster <u>a/</u>	Submitted to Government	Selected by Government <u>b/</u>	Appointed <u>d/</u>	Percentage of appointments
Developing countries <u>c/</u>	4,190	30	367	592	486 <u>d/</u>	24
List B countries <u>e/</u>	7,571	54	1,266	1,450	1,027	52
List D countries <u>f/</u>	2,181	16	292	602	479	24
	13,942	100	1,925	2,644	1,992	100

a/ As of 31 December 1986, excluding roster candidates for Secretariat posts only (3,192).

b/ Including government nominees.

c/ States in lists A and C of annex I to the UNIDO Constitution plus Albania, Cyprus, Greece, Malta, Portugal, Romania and Turkey.

d/ Including appointment of 194 national professional experts.

e/ States in list B of annex I to the UNIDO Constitution, excluding Cyprus, Greece, Malta, Portugal and Turkey.

f/ States in list D of annex I to the UNIDO Constitution, excluding Romania.

21. The UNIDO roster presently contains 13,942 names of candidates from 143 Member States for project personnel posts. Female experts on the roster for project activities currently amount to 413, i.e. 3 per cent.

#### PURCHASE AND CONTRACT SERVICE

22. During the year under review Purchase and Contract Service (PAC) was again able to increase its deliveries which reached a record level of \$39.6 million (1985: \$34.4), whereof \$27.5 million for equipment and \$12.1 million for contracts. This new record level was attained although the number of purchase orders issued and contracts awarded was somewhat lower than in 1985.

23. Equipment purchased and services contracted for chemicals, agro-industrial, metallurgical and engineering projects continued to account for the largest share of the technical co-operation programmes of UNIDO and represented approximately 74 per cent of the above-mentioned total.

24. Whereas efforts to increase the participation of developing countries' manufacturers and consulting engineering organizations in the supply of equipment and provision of services were intensified, the results did not, all in all, meet the expectations.

25. Purchase and Contract Service continued to acquire equipment, materials and supplies and secure consulting and technical services for the Department of Administration (particularly for the operation, maintenance and repair of the Vienna International Centre complex) and the United Nations offices at Vienna. These activities involved a total expenditure of \$9.9 million, whereof \$5.3 million for equipment and \$4.6 million for services.

26. Transfer-of-title documents were finalized for 115 different projects and the total value of the equipment transferred to developing countries reached an all-time high record of \$15,260,336.

27. Sixty-four insurance claims were filed with the underwriters; the cases settled were 45 with reimbursements to UNIDO totalling nearly \$0.17 million.

28. At the request of PAC the UNIDO Property Survey Board reviewed more than 100 cases whereof 96 were decided upon.

#### CONFERENCE SERVICES

29. During 1986 UNIDO continued providing conference services to United Nations entities established in Vienna. Extensive discussions were held between representatives of the United Nations, IAEA and UNIDO in October 1985, but there was no agreement concerning the need for the immediate establishment of a unified conference service as proposed by the Secretary-General.

30. The adoption of the programme and budget 1986-1987 (UNIDO/GC.1/10/Rev.1) by the General Conference at its first session implied that the conference servicing requirements and facilities of the Vienna-based organizations would be analysed systematically in a comprehensive study to be carried out jointly by IAEA, United Nations and UNIDO, to be submitted to policy-making organs in 1987 so that conclusions could be reflected in the respective 1988-1989 programme budgets. It was also the understanding that the United Nations would continue, in the interim, to provide to UNIDO the translators and supporting staff financed in section 29C of the programme budget and UNIDO would operate the translation and documents service on behalf of UNIDO and the United Nations. An agreement was subsequently reached between UNIDO and the United Nations that all salary and staff-related costs of the Languages and Documentation Division would be apportioned between UNIDO and the United Nations on the basis of actual services rendered to each organization.

31. The programme budgets for 1986-1987, as adopted by the General Assembly of the United Nations and the General Conference of UNIDO also implied the establishment of a joint United Nations/UNIDO meetings and interpretation service to be operated by the United Nations. The General Assembly at its fortieth session approved the establishment of 16 additional permanent posts for the purpose of forming a nucleus of regular interpretation services to service meetings at the Vienna International Centre. It is planned to fill some of those posts by the end of 1987.



32. The translation and interpretation services provided for both UNIDO and the United Nations are illustrated by tables 3 and 4 below.

Table 3

Translation services provided by the  
UNIDO Languages and Documentation  
Division, 1985 and 1986  
(in thousands of words translated)

Organizations served	1985	1986
UNIDO	10,540 <u>a/</u>	8,485
United Nations	16,012 <u>b/</u>	10,811 <u>c/</u>

a/ Includes 772,000 words for the first session of the General Conference, plus 1,270,000 words for the first session of the Industrial Development Board.

b/ Includes 2,602,000 words for the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women held at Nairobi (Kenya); and 1,812,000 words for the seventh United Nations Congress on the Prevention of Crime and the Treatment of Offenders held at Milan (Italy).

c/ Includes 1,580,000 words for the United Nations Conference on the Law of Treaties.

Table 4

Interpretation services provided by  
Meetings Planning and Interpretation  
Service (UNOV) in 1985 and 1986  
(interpreter-days)

Organizations served	1985	1986
UNIDO	2,427 <u>a/</u>	649
United Nations	4,676 <u>b/</u>	3,193

a/ Includes 400 interpreter-days for the first session of the General Conference of UNIDO plus 347 interpreter-days for the first session of the Industrial Development Board.

b/ Includes 1,192 interpreter-days for the United Nations World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, held at Nairobi (Kenya).

33. During 1986 a total of 1,481 half-day meetings with and without interpretation

were serviced by the Meetings Planning and Interpretation Service. (A detailed breakdown is shown in table 5 below.)

34. The distribution of work in the Editorial Control Section in 1986, with comparable figures for 1985, is shown in table 6 below.

35. Within the Publications Section the Printing Unit during 1986 processed 10,246 manuscript pages and issued 10,832 printed pages, totalling 49 sales and non-sales publications and major documents, as well as 916 forms and other artwork. This reflected a reduction over 1985 as a result of financial stringencies. Those stringencies were also reflected in a reduction over 1985 of the number of documents processed by the Documents Control Unit, which totalled 2,685,611 in 1986.

#### COMMON SERVICES

36. When UNIDO assumed the status of a specialized agency on 1 January 1986, the distribution of the common services that were allocated under the terms of the 1977 "Memorandum of Understanding" remained unchanged. UNIDO continued therefore to be responsible for buildings management, catering services and language services.

37. There was, however, a redistribution of the services shared between UNIDO and the United Nations units. In accordance with an agreement signed in October 1985 between the Secretary-General of the United Nations and the Director-General of UNIDO, the UNIDO Communications, Archives and Records Unit was split and the communication services - i.e. telephone, telex, mail operations (including messenger service) - were transferred to the United Nations. Communications services would be operated by the United Nations, which would provide services to UNIDO on a cost-sharing basis. It was also agreed that UNIDO would continue to provide to UNOV on a cost-sharing basis limited archives and record services, inventory control services, travel and transportation services, purchase and contract services and language training. The United Nations would assume responsibility for the operation of its vehicles and would establish its own Committee on Contracts. Detailed financial procedures for these services were agreed upon in May 1986.

38. Beyond the day-to-day services, the 1986 work programme of the General Services Division focused mainly on revising and streamlining work schedules and procedures in an effort to maintain a sufficient standard of services within the reduced financial resources available.

Table 5

Conferences and meetings with and without interpretation services  
by Meetings Planning and Interpretation Service, UNOV

Conferences/ meetings held	Number of half-day meetings					
	UNIDO			United Nations		
	With interpre- tation	Without interpre- tation	Total	With interpre- tation	Without interpre- tation	Total
In Vienna	55	270	325 <u>a/</u>	419	353	772 <u>b/</u>
Elsewhere	160	224	384	-	-	-
<b>TOTAL</b>	<b>215</b>	<b>494</b>	<b>709</b>	<b>419</b>	<b>353</b>	<b>772</b>

a/ UNIDO meetings include 27 meetings with interpretation, 18 meetings without interpretation held in connection with the second session of the Programme and Budget Committee, Vienna, 12 - 16 May, and the second session of the Industrial Development Board, 13 - 23 October 1986.

b/ United Nations meetings include 106 meetings with interpretation, 125 meetings without interpretation held in connection with the United Nations Conference on the Law of Treaties between States and International Organizations or between Interregional Organizations, Vienna, 18 February - 21 March; International Conference for the Immediate Independence of Namibia, Vienna, 7 - 11 July 1986 and the Interregional Meeting of Heads of National Drug Law Enforcement Agencies, Vienna, 28 July - 1 August 1986.

Table 6

Editing of manuscripts and servicing of meetings,  
1985 and 1986

Year	Editing of manuscripts <u>a/</u> (by thousands of words edited)			Servicing of meetings <u>b/</u> (in number of days)				
	UNIDO			Non-UNIDO	Total	UNIDO	Non-UNIDO	Total
	English	French	Total					
1985	3,288	104	3,392	2,895	6,287	22	60	82
			(54%)	(46%)	(100%)	(27%)	(73%)	(100%)
1986	2,604	430	3,034	2,298	5,332	10	33	43
			(57%)	(43%)	(100%)	(23%)	(77%)	(100%)

a/ Including revision and typing in camera-ready form.

b/ To edit in-session and post-session documents.

## CHAPTER VIII. SOURCES OF FUNDS

### A. FINANCING OF TECHNICAL CO-OPERATION ACTIVITIES

1. As in the past, technical co-operation for the benefit of the developing countries dominated the activities of UNIDO. Sound planning, initiation and development of the programmes and projects for technical co-operation continue to form the basis for financing and building up the activities of the Organization. The creation of the Area Programmes Division and its close link with the Studies and Research Division allows sharper country focus in programme development and implementation in the interest of the developing countries. The central co-ordinating role entrusted to the Area Programmes Division could lead to improvement of programmes and projects not only in quantitative terms, but more importantly in qualitative terms.

2. In 1986 the indicative planning figures (IPFs) of the United Nations Development Programme (UNDP) continued to be the major source of funds for technical co-operation. Other sources of financing included the Special Industrial Services (SIS) programme of UNDP, the Industrial Development Fund (IDF), the UNIDO regular programme of technical co-operation and the Industrial Development Decade for Africa (IDDA) both within the regular budget, Trust Funds (TF) and self-financing arrangements by developing countries, the United Nations Fund for Drug Abuse Control (UNFDAC) and the United Nations Capital Development Fund (UNCDF).

#### UNDP INDICATIVE PLANNING FIGURE AND COST SHARING

3. The UNDP indicative planning figure (IPF) continued to be the largest source from which UNIDO technical co-operation activities were financed. The resource outlook for UNDP improved, with total pledges for 1986 voluntary contributions to UNDP amounting to \$774 million. However, the programming level was maintained at 55 per cent of the illustrative IPF for the third cycle (1982-1986). This meant a programming level (authorized budget level) of \$568 million with an expenditure of \$564 million for 1986. The year 1986 being the last year of the third UNDP programming cycle (1982-1986), the major part of activities related to the country programme development for the fourth UNDP programming cycle (1987-1991) have been completed during the reporting period. Main tasks

for UNIDO in 1987 and thereafter are implementation of these programmes, i.e. project development and implementation and programming activities under the continuous programming process.

4. Between June 1985 and June 1986, 49 country programmes were approved under the fourth cycle (1987-1991). UNIDO was designated executing agency for 268 projects amounting to \$221.9 million (see appendix E, table 1). These projects account for 18.6 per cent of the total programme for the fourth cycle.

#### SPECIAL INDUSTRIAL SERVICES PROGRAMME

5. The Special Industrial Services (SIS) programme was established in 1965 to respond to specific short-term, unforeseen requests of an urgent nature relating to industrial development. The programme, which is executed through the use of short-term, high-level advisory services and missions, is financed by UNDP and administered by UNIDO. The level of SIS resources for a given five-year programme cycle is determined by the Governing Council of UNDP. Since the start of the programme, the following amounts (\$ millions) have been allocated:

<u>1966-</u> <u>1971</u>	<u>1972-</u> <u>1976</u>	<u>1977-</u> <u>1981</u>	<u>1982-</u> <u>1986</u>	<u>1987-</u> <u>1991</u>
17.4	14.3	17.2	13.95	15.0 (tentative)

The allocation for 1982-1986 was limited to \$13.95 million because of the restriction imposed on all UNDP programmes. The annual average therefore was \$2.79 million.

6. In view of the relevance and impact of SIS projects, as recognized by recipient Governments and Resident Representatives, the number of requests for SIS assistance has increased. However, as in the past, shortage of resources has forced UNIDO to adopt a cautious policy with regard to the financing of projects from this source of funds. In programming SIS resources, efforts were made to ensure a reasonable geographical distribution of funds during the current cycle, while trying to meet, by priority, the requirements of those countries which were the most in need of such assistance. Cumulative approvals during the third cycle (1982-1986) and approvals in 1986 are shown in tables 1 and 2 below.

Table 1

Cumulative SIS approvals during the third  
country programming cycle by region  
(1 January 1982 to 31 December 1986)

Geographical area	\$ million	Percentage of all approvals
Africa <u>a/</u>	5.36	36.4
Americas	4.08	27.7
Arab States (African Arab States) <u>b/</u>	2.03 (1.12)	13.8 (7.6)
Asia and the Pacific	3.14	21.3
Europe	1.25	8.4
TOTAL	14.74	100.0

a/ Includes African Arab States.

b/ Deducted since already included under Africa.

Table 2

SIS approvals 1 January - 31 December 1985,  
by region

Region	\$ million	Percentage of all approvals
Africa <u>a/</u>	0.58	29.1
Americas	0.56	28.2
Arab States (African Arab States) <u>b/</u>	0.38 (0.19)	19.1 (9.5)
Asia and the Pacific	0.47	23.6
Europe	0.19	9.5
TOTAL	1.99	100.0

a/ Includes African Arab States.

b/ Deducted since already included under Africa.

7. Assistance under the SIS programme in 1986 covered a wide variety of activities with a total of 304 projects related mainly to agro-industries, chemical industries, metallurgical and engineering industries. The distribution of SIS expenditures during the third programming cycle (1982-1986) by field of activity is given in table 3 below.

8. The UNDP evaluation mission carried out at the end of 1985 1/ concluded that,

1/ IDB.2/10, chap. II, para. 17.

thanks to the SIS programme, more projects concerned with short-term, urgent and unforeseen industrial needs have been approved than would otherwise have been the case. The SIS projects were found to be cost-effective and they exerted a substantial impact within a relatively short period. The programme could be used where and when it was most needed, since the allocations were not tied to regions or countries. The SIS programme was found to be particularly important to the industrial sector insofar as it provided assistance to private industries to a larger extent than the country programmes. On the basis of the positive results of the evaluation, the Governing Council of UNDP decided to continue financing the programme during the fourth cycle (1987-1991) and allocated to UNIDO for that purpose \$15 million to be distributed in equal annual instalments throughout the cycle.

#### TRUST FUNDS AND SELF-FINANCING ARRANGEMENTS

9. Promising results have been achieved in the development of technical co-operation projects financed under trust funds and self-financing arrangements. Since its inception in August 1986, the newly-created Special Trust Fund Projects Section initiated a programme of direct support to industries in developing countries, with particular emphasis on performance improvement, rehabilitation and maintenance, and human resource development at all levels. A number of plants that needed technical or managerial assistance were identified. Simultaneously, arrangements were made with companies both in centrally planned and market economy countries in the public and the private sectors that have the capacity to supply, through UNIDO, the required expertise and technical know-how, often under very favourable terms. This approach was welcomed by industry because it enables UNIDO to respond promptly in tackling problems such as capacity under-utilization, to provide assistance in productivity and performance improvement, rehabilitation and maintenance, expansion and installation of new facilities, and to give direct support to industries in both the public and the private sectors in the developing countries.

10. One example in this area was the negotiation of a large-scale technical co-operation project for assistance to the Sokoto Cement Company in northern Nigeria that involved the provision of 43 experts under a trust fund agreement valued at \$4.7 million. Similarly, in the Yemen Arab Republic, UNIDO provided assistance to the Amran Cement Company under that type of agreement.

Table 3

SIS expenditures during third programming cycle  
1 January 1982 - 31 December 1986

Field of activity	\$ thousand	Percentage of all expenditures
Agro-based industries	3,011	20.9
Chemical industries	4,344	30.1
Metallurgical industries	2,461	17.0
Engineering industries	1,724	11.9
Industrial planning	437	3.0
Institutional infrastructure	761	5.3
Factory establishment and management	779	5.4
Industrial training	25	0.2
Feasibility studies	599	4.1
Regional and country studies	100	0.7
Industrial statistics and industrial development survey	25	0.2
Development and transfer of technology	116	0.8
Others	58	0.4
TOTAL	14,440	100.0

11. While there is a sustained interest by recipient Governments and other entities to finance technical co-operation projects under trust fund agreements, there are inherent difficulties in projecting the timing and the level of the inflow of those funds. A reappraisal of projects under such arrangements, which continued in 1986, resulted in downward budget revisions that led to a substantial reduction of the approval figures for 1986 for projects to be implemented under trust fund agreements. Consequently, while new projects approved in 1986 under this source of funds amounted to \$25.9 million, the net approval figure shows \$11.2 million. In future years, however, the resources from trust funds and self-financing arrangements are expected to grow both in terms of new projects and net approval figures.

## INDUSTRIAL DEVELOPMENT FUND

12. Pledges to the Industrial Development Fund (IDF) in 1986 increased to \$17.76 million (from \$14.5 million in 1985). The breakdown by the various segments of the Fund is: general-purpose convertible \$1.84 million; general-purpose non-convertible dollar equivalent: \$1.67 million; special-purpose convertible \$13.64 million; and special-purpose non-convertible dollar equivalent: \$0.61 million.

13. The increase in pledges was partly due to exchange rate fluctuations. The continuing decrease in the general-purpose convertible segment of the Fund is a major cause of concern because this small segment of the Fund is the one that allows for speedy and flexible programming in line

with the guidelines established by the Industrial Development Board. The upward trend in contributions to the special-purpose segment of the Fund was sustained in 1986. Most of the regular special-purpose donors to IDF maintained or increased their pledges.

14. Despite the limited resources available under the general convertible pool, the Organization continued its efforts to programme IDF resources according to the nine priority areas endorsed by the Board. Net approvals in 1986 amounted to \$12.99 million (excluding programme support costs). The distribution of approvals by region is given in table 4 below.

Table 4

## IDF approvals in 1986, by region

Region	\$ million	Percentage of approvals
Africa <sup>a/</sup>	2.52	19.4
Americas	0.65	5.0
Arab States (African Arab States) <sup>b/</sup>	(0.15)	(1.1)
Asia and The Pacific	1.79	13.8
Europe	0.05	0.4
Global	3.14	24.2
Interregional	4.53	34.9
TOTAL	12.97	100.0

<sup>a/</sup> Includes African Arab States.

<sup>b/</sup> Deducted since already included under Africa.

TECHNICAL CO-OPERATION - REGULAR  
BUDGET ALLOCATIONS

Regular programme of technical  
co-operation

15. The previous Industrial Development Board, at its nineteenth session, considered and approved the proposal submitted by the Executive Director of the former UNIDO (ID/B/335), suggesting allocations for the biennium 1986-1987 under the UNIDO regular programme of technical co-operation amounting to \$6,610,600 (Board conclusion 1985/8). After transferring two components of the programme, namely the Regional Advisory Services and the Short-term Advisory Services (interregional advisers) to the UNIDO regular budget, as a result of the conversion of UNIDO into a specialized agency, the proposed tentative allocation for the biennium 1986-1987 was revised. In December 1985 the General Conference 2/ approved an appropriation for the regular programme of technical co-operation of \$6,258,600 (adjusted at the rate of US\$1 = AS 17.70) for the 1986-1987 biennium.

16. Due to budgetary constraints, the allocations for the regular programme were considerably reduced by the Board at its second session, 3/ as follows:

	<u>Appropriation (in US\$)</u>	<u>Revised allocation (in US\$)</u>	<u>Decrease in % from original appropriation</u>
Regular programme (excluding IDDA)	6,258,600	2,458,600	60.7

17. The UNIDO regular programme of technical co-operation continued to provide an additional source of finance for industrial manpower development through individual fellowships, group training and the establishment and strengthening of training facilities in developing countries. Further emphasis was put on special needs of the least developed countries, on co-operation among developing countries and on consultations with Governments.

18. In programming the available resources under the regular programme, every effort was made to achieve an equitable

2/ Decision GC.1/Dec.26 approving the programme and budget 1986-1987 as reflected in document UNIDO/GC.1/10/Rev.1.

3/ See IDB.2/CRP.5 and Board decision IDB.2/Dec.5.

geographical distribution, especially taking into consideration the needs of African and least developed countries.

Allocation for IDDA

19. In December 1985, the General Conference appropriated \$8.6 million (not subject to revaluation) under the regular budget 1986-1987 for the implementation of the Industrial Development Decade for Africa (IDDA), established by the United Nations General Assembly in its resolution 35/66B of December 1980. Due to budgetary constraints the allocations for IDDA within the regular budget were considerably reduced by the Board at its second session, 3/ as follows:

	<u>Appropriation (in US\$)</u>	<u>Revised allocation (in US\$)</u>	<u>Decrease in % from original appropriation</u>
IDDA	8,600,000	2,700,000	68.6

20. As a result of the above, projects that had already been approved, but for which no binding commitments had been made, were suspended or cancelled. Efforts are being made to secure voluntary contributions which will enable the implementation of the Decade programme to continue.

PROGRAMME SUPPORT COSTS

21. In 1986, the question of programme support costs was again discussed at two sessions of the Consultative Committee on Administrative Questions (Financial and Budgetary Questions) (CCAQ (FB)) of the Administrative Committee on Co-ordination. At its September session, the CCAQ (FB) took note of decision 86/49 entitled "Ex post facto report on agency support costs" adopted by the Governing Council of UNDP at its thirty-third session. In that decision, the Governing Council had requested the Administrator to review the impact of fluctuating exchange rates on the support-cost earnings of the agencies covered by flexibility arrangements and to make recommendations thereon at its thirty-fourth session. It had further requested the Administrator to continue to submit an ex post facto report on agency support costs on a biennial basis. 4/

22. Under the methodology developed by UNIDO for identifying support costs, distribution of direct and indirect costs of the substantive activities and the percentage relationship of these costs to

4/ ACC/1986/12.

technical assistance delivery for the last five years are as shown in table 5 below. The costs related to 1986 are estimates based on the methodology developed prior to the restructuring of the Secretariat. It is anticipated that the methodology will be updated during 1987 to better reflect the real direct and indirect costs of the substantive activities. The updated methodology would also take into account the impact of the exchange rate fluctuations on the support cost calculation. In an attempt to provide a review of the impact of exchange rate fluctuations and using 1985 as a base year, the following example clearly indicates that support costs as a percentage of technical assistance delivery decreased in 1986. The average exchange rate in 1985 was US\$1 = AS 20.7 as compared to the 1986 rate of US\$1 = AS 15.3. When 1985 and 1986 support costs are compared at the 1986 exchange rate, support costs in 1985 would be 36.7 per cent of technical assistance delivery as compared to the 1986 rate of 31.4 per cent.

23. In 1986, the level of technical assistance delivery increased by 5.4 per cent over the 1985 level resulting in the total cost as a percentage of delivery increasing to 31.4 per cent. As pointed out on previous occasions, 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 5.

#### B. REGULAR BUDGET

24. Activities other than technical co-operation projects were financed from appropriations from the regular budget for UNIDO. As a result of the conversion of UNIDO to a specialized agency, proposed estimates for 1986-1987 for general expenses, including the general operating

costs of the Vienna International Centre, were included in the programme budget 1986-1987 as approved by the General Conference for the Organization. 5/

25. The General Conference, in its decision GC.1/Dec.26, provided appropriations of \$154,752,547 less estimated income of \$42,045,743 resulting in a net appropriation of \$112,706,804 for the biennium 1986-1987.

26. During 1986, the actual exchange rate varied from the \$1 = AS 17.70 assumed in the appropriation to \$1 = AS 14.20. The average exchange rate for the year 1986 was \$1 = AS 15.32. The estimated loss on adverse currency exchange for the period 1 January 1986 to 31 December 1986 was \$5.1 million and for 1987 a loss of \$16.6 million is projected (based on actual expenditures 1 January 1987 to 28 February 1987 and a rate of exchange of \$1 = AS 12.00 for 1 March 1987 to 31 December 1987) making a total estimated loss on exchange of \$21.7 million for the 1986-1987 biennium. Consequently, the Director-General proposed to alleviate the serious financial situation by reduced expenditures in the programme of work amounting to \$15,239,800 for the biennium 1986-1987. 6/

27. In addition, UNIDO experienced serious cash flow problems in 1986 as a result of delayed receipt and withholding of contributions from Member States.

28. In order to assure the financial viability of UNIDO as a specialized agency, the General Assembly of the United Nations resolved to finance a loan of up to \$24 million in the first year of operation of UNIDO (resolution 40/253A). UNIDO made use of this facility up to the level of \$16 million. The terms of repayment were negotiated and rescheduled to begin in 1988.

5/ UNIDO/GC.1/10/Rev.1.

6/ PBC.3/CRP.11.

Table 5

Programme support costs  
(in thousands of US dollars)

	1982	1983	1984	1985	1986
Support costs					
Indirect	6,294	5,855	6,029	6,695	6,191
Direct	17,322	18,478	17,824	18,928	25,128
TOTAL	23,616	24,333	23,853	25,623	31,319
Technical assistance delivery	91,900	78,000	87,200	94,500	99,600
Support costs as a percentage of technical assistance delivery	25.7	31.2	27.4	27.1	31.4

## STATISTICAL ANNEX

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TABLE 1. EXPENDITURES, 1972 to 1987  
(In millions of US dollars)

	Actual							Estimated
	1972-1976	1977-1981	1982	1983	1984	1985	1986	1987
Technical co-operation programmes	141.8	334.4	91.9	78.0	87.2	94.5	99.6	100.0
United Nations regular programme / UNIDO regular budget	8.7	15.2	3.1	4.0	3.7	9.0	3.8 a)	1.2
UNDP/IPF and cash counterpart	98.7	229.9	64.2	46.2	54.4	58.6	67.9	68.0
UNDP/SIS	14.3	17.2	3.1	3.0	1.8	2.7	3.8	3.0
UNDP/Special programme resources and special measures	3.1	5.3	0.9	1.0	0.5	0.3	0.4	0.2
UNDP-administred trust funds	-	3.4	3.1	2.7	3.6	1.9	1.6	1.7
Other trust funds	6.2	17.9	5.3	6.5	7.9	8.3	6.7	9.0 b)
UNIDF/IDF	10.8	41.9	11.6	13.1	14.6	10.9	13.2	14.0
UNFDAC	-	-	-	-	0.1	1.5	0.6	1.0
Non-UNIDO funds	-	3.6	0.6	1.5	0.6	1.3	1.6	1.9
Headquarters	100.5	202.4	45.4	50.3	47.7	49.3	65.5	85.2
Regular budget	85.2	160.7	35.6	39.8	37.4	38.1	48.9	66.0
Overheads	15.3	41.7	9.8	10.5	10.3	11.2	16.6	19.2
Total expenditure	242.3	536.8	137.3	128.3	134.9	143.8	165.1	185.2
Technical co-operation programmes as percentage of total expenditure	58.5%	62.3%	66.9%	60.8%	64.6%	65.7%	60.3%	54.0%

a) Includes regular programme and Industrial Development Decade for Africa (see appendix C)

b) Figures are tentative only since contributions to trust funds are made on an ad hoc basis and cannot be accurately estimated.

c) United Nations Fund for Drug Abuse Control.

TABLE 2. TECHNICAL CO-OPERATION PROGRAMMES: PROJECT BUDGET APPROVALS AND EXPENDITURES, 1972 TO 1987  
(In millions of US dollars)

	Actual					Estimated		
	1972-76	1977-81	1982	1983	1984	1985	1986	1987
A. All sources of funds								
1. Residual value of projects brought forward	37.4	72.8	136.4	153.7	164.8	181.0	162.2	155.9
2. Value of project budgets approved in the year (net)	177.2	398.0	109.2	89.1	103.4	75.6	93.3	128.8
3. Total of approved projects under implementation	214.6	470.8	245.6	242.8	268.2	256.6	255.5	284.7
4. Expenditures in the year	141.8	334.4	91.9	78.0	87.2	94.4	99.6	100.0
5. Residual value of projects carried forward	72.8	136.4	153.7	164.8	181.0	162.2	155.9	184.7
B. United Nations regular programme (a) / UNIDO regular budget								
1. Residual value of projects brought forward	-	-	-	2.7	-	3.5	-	1.2
2. Value of project budgets approved in the year (net)	8.7	15.2	5.8	1.3	7.2	5.5	5.0	-
3. Total of approved projects under implementation	8.7	15.2	5.8	4.0	7.2	9.0	5.0	1.2
4. Expenditures in the year	8.7	15.2	3.1	4.0	3.7	9.0	3.8	1.2
5. Residual value of projects carried forward	-	-	2.7	-	3.5	-	1.2	-
C. UNDP/IPF and cash counterpart								
1. Residual value of projects brought forward	29.7	593.8	105.8	118.2	115.5	114.9	108.4	99.3
2. Value of project budgets approved in the year (net)	128.8	275.9	76.6	43.5	53.8	52.1	58.8	85.0
3. Total of approved projects under implementation	158.5	335.7	182.4	161.7	169.3	167.0	167.2	184.3
4. Expenditures in the year	98.7	229.9	64.2	46.2	54.4	58.6	67.9	68.0
5. Residual value of projects carried forward	59.8	105.8	118.2	115.5	114.9	108.4	99.3	116.3
D. UNDP/SIS (b)								
1. Residual value of projects brought forward	5.3	5.8	2.8	5.0	2.4	2.8	4.9	3.1
2. Value of project budgets approved in the year (net)	14.8	14.2	5.3	0.4	2.2	4.8	2.0	4.5
3. Total of approved projects under implementation	20.1	20.0	8.1	5.4	4.6	7.6	6.9	7.6
4. Expenditures in the year	14.3	17.2	3.1	3.0	1.8	2.7	3.8	3.0
5. Residual value of projects carried forward	5.8	2.8	5.0	2.4	2.8	4.9	3.1	4.6

E. UNDP/Special programme resources and special measures								
1. Residual value of projects brought forward	-	1.7	0.9	0.7	1.0	0.6	0.6	0.3
2. Value of project budgets approved in the year (net)	4.8	4.5	0.7	1.3	0.1	0.3	0.1	-
3. Total of approved projects under implementation	4.8	6.2	1.6	2.0	1.1	0.9	0.7	0.3
4. Expenditures in the year	3.1	5.3	0.9	1.0	0.5	0.3	0.4	0.2
5. Residual value of projects carried forward	1.7	0.9	0.7	1.0	0.6	0.6	0.3	0.1
F. UNDP-administered trust funds (c)								
1. Residual value of projects brought forward	-	-	4.7	2.9	2.7	6.3	2.4	1.5
2. Value of project budgets approved in the year (net)	-	8.1	1.3	2.5	7.2	(2.0)	0.7	0.5
3. Total of approved projects under implementation	-	8.1	6.0	5.4	9.9	4.3	3.1	2.0
4. Expenditures in the year	-	3.4	3.1	2.7	3.6	1.9	1.6	1.7
5. Residual value of projects carried forward	-	4.7	2.9	2.7	6.3	2.4	1.5	0.3
G. Other trust funds (d)								
1. Residual value of projects brought forward	0.4	1.3	5.7	5.4	21.9	34.2	24.2	28.7
2. Value of project budgets approved in the year (net)	7.1	22.3	5.0	23.0	20.2	(1.7)	11.2	11.0
3. Total of approved projects under implementation	7.5	23.6	10.7	28.4	42.1	32.5	35.4	39.7
4. Expenditures in the year	6.2	17.9	5.3	6.5	7.9	8.3	8.7	9.0
5. Residual value of projects carried forward	1.3	5.7	5.4	21.9	34.2	24.2	28.7	30.7
H. UNIDF (e) / IDF								
1. Residual value of projects brought forward	2.0	4.2	14.6	17.1	19.4	18.0	17.8	17.6
2. Value of project budgets approved in the year (net)	13.0	52.3	14.1	15.4	11.2	12.7	13.0	18.0
3. Total of approved projects under implementation	15.0	56.5	28.7	32.5	30.6	28.7	30.8	33.6
4. Expenditures in the year	10.8	41.9	11.6	13.1	14.6	10.9	13.2	14.0
5. Residual value of projects carried forward	4.2	14.6	17.1	19.4	18.0	17.8	17.6	19.6
I. UNFDAC								
1. Residual value of projects brought forward	-	-	-	-	-	0.6	0.1	0.3
2. Value of project budgets approved in the year (net)	-	-	-	-	0.7	1.0	0.8	1.3
3. Total of approved projects under implementation	-	-	-	-	0.7	1.6	0.9	1.6
4. Expenditures in the year	-	-	-	-	0.1	1.5	0.6	1.0
5. Residual value of projects carried forward	-	-	-	-	0.6	0.1	0.3	0.6

J. Non-UNIDO funds (f)

1. Residual value of projects brought forward	-	-	1.9	1.7	1.9	2.1	3.8	3.9
2. Value of project budgets approved in the year (net)	-	5.5	0.4	1.7	0.8	2.9	1.7	1.5
3. Total of approved projects under implementation	-	5.5	2.3	3.4	2.7	5.0	5.5	5.4
4. Expenditures in the year	-	3.6	0.6	1.5	0.6	1.2	1.6	1.9
5. Residual value of projects carried forward	-	1.9	1.7	1.9	2.1	3.8	3.9	3.5

- (a) Excludes the value of projects approved but not implemented within the year (prior to 1978) or within the biennium (after 1977), as appropriate.
- (b) Includes SIS Trust Funds prior to 1973.
- (c) 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.
- (d) 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.
- (e) Includes UNIDO General Trust Fund.
- (f) Include projects executed by other agencies for which UNIDO is the associated or co-operating agency.

TABLE 3A. TECHNICAL CO-OPERATION ACTIVITIES: PROJECTS APPROVED IN 1985 AND 1986, 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)	
----- 1985 -----							
United Nations regular programme	154	8958	58	148	(910)	(6)	8048 a)
UNDP/IPF and cash counterpart	138	36766	266	550	15373	27	52139
UNDP/SIS	133	5131	38	181	(284)	(1)	4847
UNDP/Special programme resources and special measures	3	342	114	19	(70)	(3)	272
UNDP-administered trust funds	2	179	89	22	(2179)	(99)	(2000)
Other trust funds	45	2781	61	88	(4512)	(51)	(1731)
UNIDF	171	14444	84	409	(1792)	(4)	12652
UNFDAC	1	1019	1019	1	(10)	(10)	1009
Non-UNIDO funds	19	2833	149	16	111	6	2944
TOTAL	666	72453	108	1434	5727	4	78180
----- 1986 -----							
UNIDO regular budget	234	5063 b)	22	46	(97)	(2)	4966
UNDP/IPF and cash counterpart	126	46871	372	571	11983	21	58854
UNDP/SIS	77	2453	32	167	(461)	(3)	1992
UNDP/Special programme resources and special measures	-	-	-	18	53	3	53
UNDP-administered trust funds	3	640	213	20	54	3	694
Other trust funds	32	25877	809	81	(14646)	(181)	11231
IDF	201	13524	67	286	(535)	(2)	12989
UNFDAC	1	821	821	1			821
Non-UNIDO funds	15	1944	130	27	(220)	(8)	1724
TOTAL	689	97193	141	1217	(3869)	(3)	93324

a) From the United Nations regular programme, \$2.6 million lapsed at the end of the biennium 1984-1985 and were subject to re-approval in 1986-1987.

b) Includes 47 projects valued at \$0.524 million approved in 1985, but not implemented until 1986.

TABLE 3B. TECHNICAL CO-OPERATION ACTIVITIES: COMPARISON OF THE VALUE OF PROJECTS AS AT 31 DECEMBER 1985 AND AS AT 31 DECEMBER 1986, BY SOURCE OF FUNDS.

	Number of projects		Total value of projects (\$000)		Average value of projects (\$000)	
	1985	1986	1985	1986	1985	1986
United Nations regular programme/UNIDO regular budget	341	234	15294 a)	4966	44	21
UNDP/IPF and cash counterpart	749	758	424432	440984	566	582
UNDP/SIS	333	304	12657	11160	38	37
UNDP/Special programme resources and special measures	25	21	4867	4317	194	206
UNDP-administered trust funds	28	28	15437	15868	551	567
Other trust funds	144	143	53003	60620	368	424
UNIDF/IDF	671	669	66144	68972	98	103
UNFDAC	2	3	1663	2483	831	828
Non-UNIDO funds	47	54	8139	10258	173	190
<b>TOTAL b)</b>	<b>2340</b>	<b>2214</b>	<b>601636</b>	<b>619628</b>	<b>257</b>	<b>280</b>

a) From the United Nations regular programme, \$ 2.6 million lapsed at the end of the biennium 1984-1985 and were subject to re-approval in 1986-1987.

b) The following is a breakdown by status of projects:

	Number of projects		Total value of projects (\$000)	
	1985	1986	1985	1986
New and ongoing	1498	1400	475985	460052
Operationally completed	239	280	35434	76531
Financially completed	603	534	90217	83045
<b>TOTAL</b>	<b>2340</b>	<b>2214</b>	<b>601636</b>	<b>619628</b>

TABLE 4. EXPENDITURES ON TECHNICAL CO-OPERATION ACTIVITIES IN 1985 AND 1986,  
BY SOURCE OF FUNDS AND PROJECT COMPONENT.

Source of funds	Project personnel		Subcontracts \$000	Fellowships and training \$000	Equipment \$000	Miscellaneous expenses \$000	Total \$000
	Number of experts' work-months a)	\$000					
----- 1985 -----							
United Nations regular programme	411.4	3813	2198	1991	750	279	9031
UNDP/IPF and cash counterpart	4173.7	26132	5868	6700	18697	1209	58606
UNDP/SIS	185.7	1402	681	274	266	63	2688
UNDP/Special programme resources and special measures	37.5	217	--	56	34	7	314
UNDP-administered trust funds	30.1	264	1284	52	270	18	1888
Other trust funds	3073.8	7412	36	212	471	101	8232
UNIDF	497.0	3922	1184	3828	1548	456	10938
UNFDAC	39.4	298	549	4	535	117	1503
Non-UNIDO funds	109.2	830	39	376	13	12	1270
TOTAL	8557.8	44290	11839	13493	22584	2262	94468
----- 1986 -----							
UNIDO regular budget	163.3	1450	643	851	646	163	3753
UNDP/IPF and cash counterpart	4520.0	27086	7776	7856	23569	1555	67842
UNDP/SIS	341.4	2590	373	345	474	106	3888
UNDP/Special programme resources and special measures	37.8	210	0	60	95	6	371
UNDP-administered trust funds	14.2	240	685	199	468	10	1602
Other trust funds	2377.5	5908	64	292	297	131	6692
IDF	529.3	4264	2413	4402	1646	478	13203
UNFDAC	69.4	286	97	14	178	44	619
Non-UNIDO funds	103.2	846	84	558	133	9	1630
TOTAL	8156.1	42880	12135	14577	27506	2502	99600

a) Categories are as follows:

	Work-months
International experts and consultants	6954.4
Operational assistance experts	2.2
National experts	1199.5
TOTAL	8156.1

TABLE 5. EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES IN 1986, BY SOURCE OF FUNDS AND DEPARTMENT/COMPONENT UNIT

Department/component unit	Regular budget	UNDP/IPF and cash counter-part	UNDP/SIS	UNDP/Special programmes and special measures	UNDP/administered trust funds	Other trust funds	IDF	UNFDAC	Non-UNIDO funds	Total
Executive Direction and Management	178	-	-	-	-	19	13	-	-	210
Programme and Project Development	586	222	77	-	-	378	523	-	-	1786
Industrial Promotion, Consultation and Technology										
Industrial Investment	74	436	-	-	-	907	2270	-	5	3692
System of Consultations	-	-	-	-	-	-	120	-	-	120
Development and Transfer of Technology	175	143	35	-	-	216	136	-	145	850
Subtotal	249	579	35	-	-	1123	2526	-	150	4662
Industrial Operations										
Agro-based Industries	235	5270	1141	65	(94)	146	1264	619	192	8838
Chemical Industries	389	15609	1076	17	965	3736	2670	-	389	24851
Metallurgical Industries	72	8336	377	4	(34)	66	315	-	-	9136
Engineering Industries	352	12565	468	-	383	126	589	-	98	14581
Industrial Planning	366	4758	148	130	-	547	218	-	317	6484
Institutional Infrastructure	141	11016	225	19	203	295	591	-	359	12849
Factory Establishment and Management	43	4384	188	125	-	-	216	-	50	5006
Industrial Training	977	844	-	11	179	-	3399	-	-	5410
Feasibility Studies	72	4254	153	-	-	256	857	-	75	5667
Subtotal	2647	67036	3776	371	1602	5172	10119	619	1480	92822
External Relations, Public Information, Language and Documentation Services	65	-	-	-	-	-	-	-	-	65
Other	28	5	-	-	-	-	22	-	-	55
TOTAL	3753	67842	3888	371	1602	6692	13203	619	1630	99600



TABLE 6. EXPENDITURE ON TECHNICAL CO-OPERATION ACTIVITIES in 1986 AND 1987, BY DEPARTMENT/COMPONENT UNIT AND GEOGRAPHICAL AREA

Department/component unit	Actual 1986							Estimated	
	Africa a)	The Americas	Arab States b)	Asia and the Pacific	Europe	Global and interregional	Total	1987	
Executive Direction and Management	210	-	-	-	-	-	210	-	
Programme and Project Development	641	129	11	(6)	384	-	1786	2095	
Industrial Promotion, Consultation and Technology									
Industrial investment	215	698	3	(3)	316	-	3692	3312	
System of consultations	57	-	1	(1)	32	-	120	-	
Development and transfer of technology	202	-	176	-	119	21	850	4181	
Subtotal	474	698	180	(4)	467	21	4662	7493	
Industrial Operations									
Agro-based industries	2204	2576	888	(684)	3464	207	8838	8600	
Chemical Industries	7894	1443	5166	(4743)	12228	1088	24851	24180	
Metallurgical Industries	3318	1208	1067	(914)	4245	196	9136	8890	
Engineering Industries	3306	843	1061	(476)	9070	584	14581	14188	
Industrial Planning	4362	1252	504	(343)	383	128	6484	6310	
Institutional Infrastructure	6690	1684	1521	(644)	2733	621	12849	12503	
Factory Establishment and Management	2264	183	692	(572)	2128	231	5006	4875	
Industrial Training	1586	289	134	(23)	164	134	5410	5265	
Feasibility Studies	2730	241	656	(96)	1779	17	5667	5515	
Subtotal	34354	9719	11689	-	36194	3206	92822	90326	
External Relations, Public Information, Language and Documentation Services	56	3	-	-	6	3	65	86	
Other	8	1	4	-	22	-	55	-	
TOTAL	35743	10550	11884	(8505)	37073	3230	99600	100000	

a) Includes figures related to country projects in African Arab States.

b) 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".

TABLE 7. EXPENDITURES ON TECHNICAL CO-OPERATION ACTIVITIES, BY GEOGRAPHICAL AREA, 1980 TO 1987.  
(In thousands of US dollars)

Area	Actual							Estimated
	1980	1981	1982	1983	1984	1985	1986	1987
<b>Africa</b>								
Country projects	24108	32756	29137	25683	25300	31431	31674	32000
Regional projects	1469	1589	1828	1773	4713	5791	4069	4000
<b>Subtotal</b>	<b>25575</b>	<b>34345</b>	<b>30965</b>	<b>27456</b>	<b>30013</b>	<b>37222</b>	<b>35743</b>	<b>36000</b>
<b>The Americas</b>								
Country projects	8782	9477	9601	9168	7987	11082	9402	9500
Regional projects	920	855	1141	877	1013	936	1148	1000
<b>Subtotal</b>	<b>9702</b>	<b>10332</b>	<b>10742</b>	<b>10045</b>	<b>9000</b>	<b>12018</b>	<b>10550</b>	<b>10500</b>
<b>Arab States</b>								
Country projects	9315	11355	10726	11274	11807	11448	11153	11000
Regional projects	405	456	997	593	1104	532	731	1000
Country projects (African Arab States)	(5602)	(6803)	(6581)	(7030)	(8806)	(9123)	(8505)	(8500)
<b>Subtotal</b>	<b>4118</b>	<b>5008</b>	<b>5142</b>	<b>4837</b>	<b>4105</b>	<b>2857</b>	<b>3379</b>	<b>3500</b>
<b>Asia and the Pacific</b>								
Country projects	22097	27185	32658	23599	29795	29313	35419	35500
Regional projects	1131	1539	1034	1062	1437	1088	1654	1500
<b>Subtotal</b>	<b>23228</b>	<b>28724</b>	<b>33692</b>	<b>24661</b>	<b>31232</b>	<b>30401</b>	<b>37073</b>	<b>37000</b>
<b>Europe</b>								
Country projects	5804	3487	3241	2513	3609	3047	3022	2300
Regional projects	16	46	410	248	49	39	208	200
<b>Subtotal</b>	<b>5820</b>	<b>3533</b>	<b>3651</b>	<b>2761</b>	<b>3658</b>	<b>3086</b>	<b>3230</b>	<b>2500</b>
<b>Global and interregional projects</b>	<b>7837</b>	<b>6701</b>	<b>7687</b>	<b>8259</b>	<b>9183</b>	<b>8884</b>	<b>9625</b>	<b>10500</b>
<b>TOTAL</b>	<b>76280</b>	<b>88643</b>	<b>91879</b>	<b>78019</b>	<b>87191</b>	<b>94468</b>	<b>99600</b>	<b>100000</b>

a) Includes African Arab States.  
b) Figures deducted since already included under "Africa".

TABLE 8. TECHNICAL CO-OPERATION ACTIVITIES: PROJECT EXPENDITURE IN 1986  
(In thousands of US dollars)

	Africa a)	The Americas	Arab States b)	Asia and the Pacific	Europe	Global and Interregional	Total
----- A. By source of funds and geographical area -----							
Regular budget	2763	89	286 (258)	211	51	611	3753
UNDP/IPF and cash counterpart	23090	6498	6278 (3978)	33128	2756	70	67842
UNDP/SIS	1391	1016	636 (372)	875	342	-	3888
UNDP/Special programme resources and special measures	292	-	- -	68	-	11	371
UNDP-administred trust funds	1355	34	23 (23)	34	-	179	1602
Other trust funds	4235	1048	4011 (3717)	526	-	589	6692
IDF	2160	827	502 (157)	1627	81	8163	13203
UNFDAC	-	619	- -	-	-	-	619
Non-UNIDO funds	457	419	148 -	604	-	2	1630
<b>TOTAL</b>	<b>35743</b>	<b>10550</b>	<b>11884 (8505)</b>	<b>37073</b>	<b>3230</b>	<b>9625</b>	<b>99600</b>
----- B. By project component and geographical area -----							
Project personnel	20309	5445	8478 (6033)	10654	989	3038	42880
Subcontracts	3563	865	127 (114)	5488	481	1725	12135
Fellowships and training	2655	1360	585 (252)	5560	738	3931	14577
Equipment	8192	2502	2515 (2001)	14810	950	538	27506
Miscellaneous	1024	378	179 (105)	561	72	393	2502
<b>TOTAL</b>	<b>35743</b>	<b>10550</b>	<b>11884 (8505)</b>	<b>37073</b>	<b>3230</b>	<b>9625</b>	<b>99600</b>

a) Includes figures related to country projects in African Arab States.

b) 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".



External relations, public information,  
language and documentation services

External relations	1550	-	-	64	1614
Public relations and information	474	-	-	65	539
Secretariat of policy-making organs	374	-	-	2	376
Languages and documentation	5591	-	-	253	5844
Office of the Deputy Director-General	240	-	-	11	251
	<u>8229</u>	<u>-</u>	<u>-</u>	<u>395</u>	<u>8624</u>
<b>Subtotal</b>					
Administration					
Administrative management service	441	-	-	1634	2075
Personnel services	2560	1	-	382	2943
Financial services	2935	-	-	46	2981
General services	5091	20	-	11180	16291
Purchase and contract service	1480	-	-	7	1487
Electronic data processing and office automation	809	-	-	825	1634
Office of the Deputy Director-General	66	-	-	113	179
	<u>13382</u>	<u>21</u>	<u>-</u>	<u>14187</u>	<u>27590</u>
<b>Subtotal</b>					
<b>Total</b>	<u>55095</u>	<u>891</u>	<u>91</u>	<u>17116</u>	<u>73193</u>
Other income					<u>7691</u>
<b>GRAND TOTAL</b>					<u>65502</u>

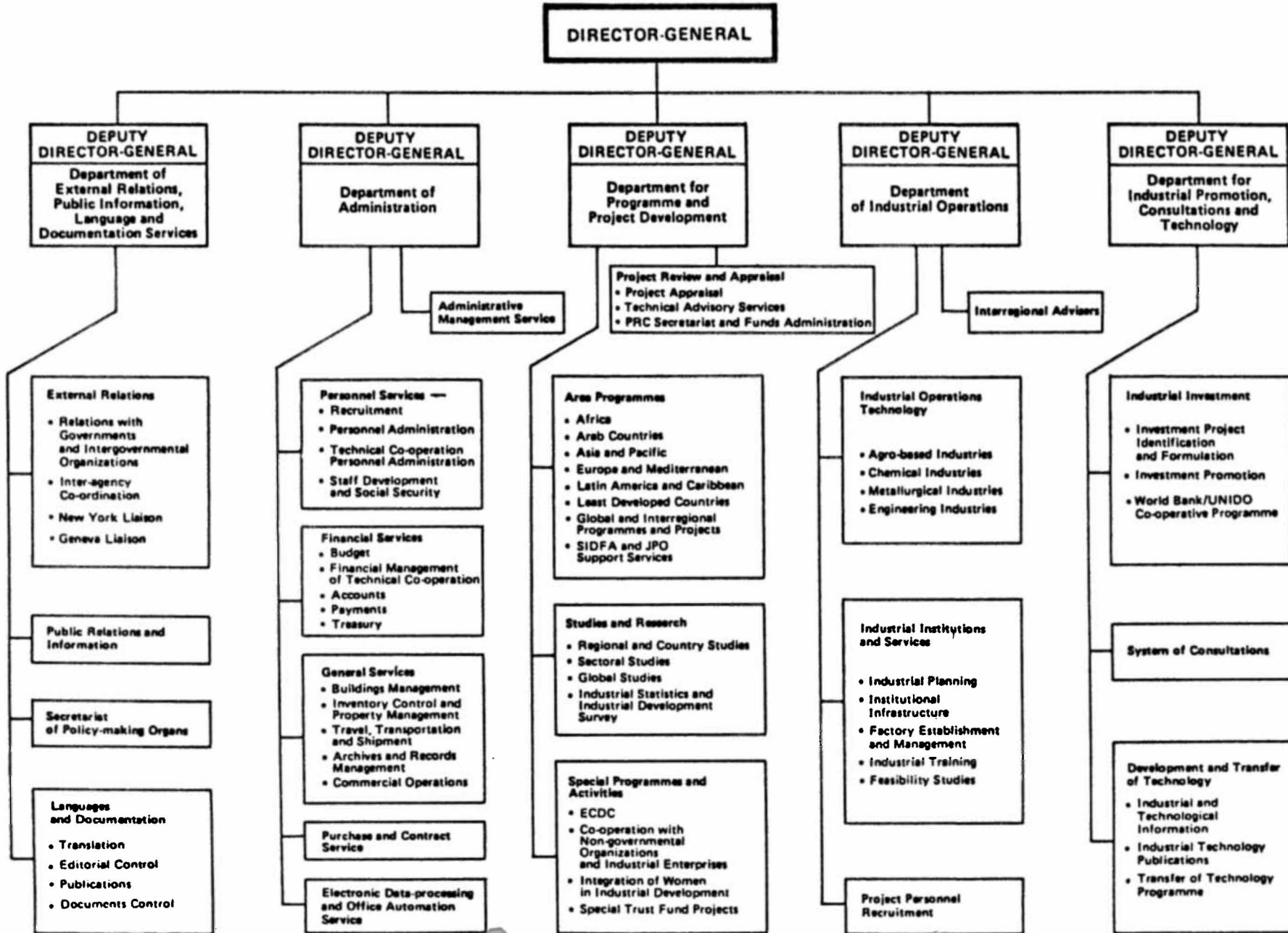
a) Expenditures for technical co-operation (IDDA and the regular programme) excluded.

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UNIDO ORGANIZATION CHART



## APPENDIX B

EXPERT GROUP MEETINGS, SYMPOSIA, SEMINARS, WORKSHOPS, COURSES AND  
OTHER MEETINGS OF A NON-TRAINING CHARACTER HELD DURING 1986

Date		Place
OFFICE OF THE DIRECTOR-GENERAL		
8-10 January	Subregional follow-up meeting on the initial integrated industrial promotion programme within the framework of the Industrial Development Decade for Africa	Bujumbura Burundi
12-16 May	Programme and Budget Committee, second session	Vienna Austria
10-15 September	Meeting of intergovernmental experts of the whole on industrialization in Africa	Bujumbura Burundi
13-23 October	Industrial Development Board, second session	Vienna Austria
14 October	Programme and Budget Committee, resumed second session	Vienna Austria
DEPARTMENT FOR PROGRAMME AND PROJECT DEVELOPMENT		
<u>Area Programmes Division</u>		
6-11 January	Seminar on technical advisory services on prospects for the manufacture of telecommunications equipment in Africa	Harare Zimbabwe
<u>Studies and Research Division</u>		
7-9 July	ECLAC/UNIDO third expert group meeting on capital goods industries in Latin America and the Caribbean	Santiago de Chile Chile
28 July - 2 August	Eighth international conference on input-output techniques	Sapporo Japan
17-21 November	UNIDO/ESCAP technical working group on production and use of machine tools in the engineering industry of ESCAP developing countries	Singapore
<u>Special Programmes and Activities Division</u>		
2-4 April	<u>Ad hoc</u> expert group meeting on modalities to ensure a permanent flow of information aimed at strengthening economic co-operation among developing countries in the field of building materials and construction industries	Zagreb Yugoslavia
13-17 May	Workshop and demonstration and appropriate technology and equipment for the food-processing industry	Novi Sad Yugoslavia
7-9 July	Workshop on technical and economic co-operation between Latin American and Arab countries in the food-processing industry	Barcelona Spain



Date		Place
30 September - 3 October	Solidarity ministerial meeting for the co-operation in the industrial development of the Republic of Mali	Bamako Mali
3-7 November	Round-table ministerial meeting on co-operation among developing countries in the agricultural machinery industry	Buenos Aires Argentina
11-14 November	Expert group meeting on consulting services in developing countries in the field of building materials and construction industry	Havana Cuba
17-21 November	Afro-Asian industrial co-operation meeting within the framework of the Industrial Development Decade for Africa and of economic and technical co-operation among developing countries	New Delhi India
1-5 December	Workshop on management of export processing zones <u>a/</u>	Panama City Panama
DEPARTMENT OF INDUSTRIAL OPERATIONS		
<u>Industrial Operations Technology Division</u>		
16-18 July	Project management committee meeting of the regional network on pesticides for Asia and the Pacific	Manila Philippines
17-21 November	Workshop on development of wooden bridge construction in Latin America and the Caribbean	Washington D.C. United States of America
<u>Industrial Institutions and Services Division</u>		
10-15 March	Expert group meeting on energy auditing	Pilsen Czechoslovakia
17-21 March	Second regional technical meeting of project on "European co-operation on industrial energy conservation".	Vienna Austria
8-12 September	Sectoral complex group meeting on energy conservation in chemistry-alumina industries	Bucharest Romania
DEPARTMENT FOR INDUSTRIAL PROMOTION, CONSULTATIONS AND TECHNOLOGY		
<u>Industrial Investment Division</u>		
3 April	Country presentation meeting - Bangladesh	Vienna Austria
4 April	Country presentation meeting - Bangladesh	Zurich Switzerland
8 April	Country presentation meeting - Bangladesh	Tokyo Japan

a/ Organized jointly with Industrial Institutions and Services Division.

Date		Place
9 April	Country presentation meeting - Rwanda	Cologne Federal Republic of Germany
9-11 April	Country presentation meeting - Bangladesh	Paris France
10-16 April	Country presentations for China, India, Indonesia, Korea, Malaysia, Philippines, Sri Lanka, and Thailand at Hannover Fair	Hannover Federal Republic of Germany
16-18 April	Country presentation meeting - China (Fujian province)	Vienna Austria
17-19 April	Country presentation meeting - Indonesia	Warsaw Poland
25 April	Country presentation meeting - Sri Lanka	Zurich Switzerland
15 May	Country presentation meeting - Colombia	Paris France
15 May	Country presentation meeting - Colombia	Vienna Austria
26-28 May	Country presentation meeting - Côte d'Ivoire	Cologne Federal Republic of Germany
16-20 June	Workshop on industrial financing activities of Islamic banks	Vienna Austria
15-18 July	Country presentation meeting - Grenada	New York United States of America
15-18 July	Country presentation meeting - St. Vincent and Grenadines	New York United States of America
2-7 August	Country presentation meeting - Ethiopia	Cologne Federal Republic of Germany
20-25 August	Country presentation meeting - China (Fujian province)	Cologne Federal Republic of Germany
3-7 September	Country presentation meeting - Bangladesh, China and selected African countries (partners for progress)	Berlin (West)
3-7 September	Country presentation meeting - St. Kitts and Nevis	San Juan Puerto Rico
3-7 September	Country presentation meeting - Dominica	San Juan Puerto Rico
4 September	Country presentation meeting - Sri Lanka	Tokyo Japan
17-24 September	Country presentation meeting - India	Paris France

Date		Place
21-26 September	Country presentation meeting - Dominica	New York United States of America
21-26 September	Country presentation meeting - Antigua and Barbuda	New York United States of America
29 September	Country presentation meeting - Fiji Islands	Cologne Federal Republic of Germany
9 October	Country presentation meeting - Zimbabwe	Tokyo Japan
21-22 October	Country presentation meeting - China	Cologne Federal Republic of Germany
3-7 November	Regional investment promotion meeting for SADCC countries	Harare Zimbabwe
3-28 November	Programme for identification and promotion of industrial investment projects related to one specific industry sector (modernization/rationalization of iron and steel industries and related branches) (Tokyo phase)	Tokyo Japan
11 November	Country presentation meeting - Senegal	Tokyo Japan
17-20 November	Country presentation meeting - St. Vincent and Grenadines	Miami United States of America
1-4 December	Seventh industrial forum for West Africa	Dakar Senegal
1-5 December	Programme for identification and promotion of industrial investment projects related to one specific industry sector (modernization/rationalization of iron and steel industries and related branches) (Vienna phase)	Vienna Austria
4 December	Country presentation meeting - Cyprus	Zurich Switzerland
<u>System of Consultations Division</u>		
13-16 January	High-level expert group meeting in preparation of the second Consultation on the training of industrial manpower, organized in co-operation with the French Government	Paris France
26-28 May	Expert group meeting on measures to stimulate co-operation between the co-operatives of developed and the more industrialized developing countries and the food-processing industry in developing countries	Vienna Austria
27-30 May	Regional meeting for Latin America and the Caribbean in preparation of the first Consultation on the fisheries industry	Lima Peru

Date		Place
9-13 June	Fourth Consultation on the Iron and Steel Industry	Vienna Austria
23-27 June	Regional expert group meeting on human resources development in industrial maintenance in Africa preparatory to the second Consultation on the training of industrial manpower	Nairobi Kenya
16-19 September	Regional meeting for Africa, in preparation of the first Consultation on the fisheries industry	Dakar Senegal
29 September - 3 October	Third Consultation on the Agricultural Machinery Industry	Belgrade Yugoslavia
27-31 October	First regional workshop on UNIDO model forms of contract for the construction of a fertilizer plant	Lahore Pakistan
10-12 December	Expert group meeting on medicinal plants and other issues	Vienna Austria
<u>Development and Transfer of Technology Division</u>		
4-8 August	Expert group meeting on the utilization of marine algae (seaweed) for human food and animal fodder, in agriculture and in industry	Riga Union of Soviet Socialist Republics
1-3 October	Advisory group of Industrial and Technological Information Bank (INTIB), second meeting	Vienna Austria
21-25 October	Technical advisory group of the Asia-Pacific regional network for small hydropower	Penang Malaysia
5-7 November	UNIDO/Licensing Executive Society (LES) international meeting	Vienna Austria
10-13 November	Eleventh Technological Information Exchange System (TIES) meeting	Warsaw Poland
17-21 November	Joint International Federation for Documentation (FID)/Commission for Asia and Oceania (CAO)/UNIDO workshop on the transfer of technological information to industry	Bangkok Thailand
8-10 December	Workshop on the establishment of a consultative group on solar energy research and applications	Vienna Austria

## APPENDIX C

TECHNICAL CO-OPERATION - REGULAR BUDGET ALLOCATIONS FOR THE  
BIENNIUM 1986-1987 AND DELIVERIES IN 1986

Component	Revised allocation for the biennium 1986-1987 <sup>a/</sup> (\$000)	Delivery in 1986 (\$000)
<b>A. REGULAR PROGRAMME OF TECHNICAL CO-OPERATION (RP)</b>		
Training of developing countries' personnel in various industrial fields		
Individual fellowships	261.0	332.1
Group training programmes	417.4	211.3
Establishment and strengthening of training facilities in developing countries	296.8	60.3
Special activities for the least developed among the developing countries	1,149.7	1,017.8
Co-operation among developing countries	289.3	233.9
Consultation with Governments	44.4	36.1
TOTAL - RP	2,458.6 =====	1,891.5 =====
<b>B. INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA (IDDA)</b>		
Technical advisory services	760.3	354.6
Establishment of pilot and demonstration plants	564.6	402.9
Human resources development and related activities	603.6	336.3
Industrial institutional infrastructure	363.1	389.3
Follow-up to subregional and other programmes	181.4	208.1
Preparation of industrial studies	158.8	21.4
Promotion of the Decade	68.2	148.6
TOTAL - IDDA	2,700.0 =====	1,861.2 =====

a/ In the light of the current financial situation of UNIDO, allocations for the regular programme - as contained in the Programme and Budget (UNIDO/GC.1/10/Rev.1) and approved by the General Conference in decision GC.1/Dec.26 - were adjusted downwards in October 1986 (see IDB.2/CRP.5 and Industrial Development Board decision IDB.2/Dec.5)

## APPENDIX D

## GEOGRAPHICAL DISTRIBUTION OF EXPERTS

(Listed in descending order)

Table 1

1 January to 31 December 1986

Country	Number of appointments	Country	Number of appointments
Poland	311	Morocco	6
United Kingdom	178	Pakistan	6
United States of America	168	Togo	6
France	165	Jamaica	5
Germany, Federal Republic of	84	Malaysia	5
India	74	Turkey	5
Hungary	61	Bolivia	4
Austria	60	Cameroon	4
Belgium	50	China	4
Italy	50	Ecuador	4
Peru	44	Iran (Islamic Republic of)	4
Czechoslovakia	37	Israel	4
Mexico	36	Republic of Korea	4
Netherlands	36	Tunisia	4
Sweden	35	Cuba	3
USSR	32	El Salvador	3
Philippines	27	Greece	3
Yugoslavia	25	Guatemala	3
Brazil	23	Panama	3
Spain	23	Senegal	3
Australia	22	Uruguay	3
Bulgaria	22	Ethiopia	2
Canada	22	Jordan	2
Venezuela	22	Lebanon	2
Chile	21	Madagascar	2
Egypt	21	Nicaragua	2
Japan	20	Thailand	2
Ireland	19	Uganda	2
Denmark	18	Zimbabwe	2
Argentina	16	Antigua and Barbuda	1
Portugal	16	Costa Rica	1
Algeria	15	Cyprus	1
Finland	15	Democratic People's Republic of Korea	1
Zaire	14	Ghana	1
Norway	13	Guinea	1
Switzerland	13	Guyana	1
Côte d'Ivoire	12	Liberia	1
Bangladesh	9	Libyan Arab Jamahiriya	1
Indonesia	9	Mauritius	1
Sri Lanka	9	Nepal	1
German Democratic Republic	8	Sierra Leone	1
Romania	8	Syrian Arab Republic	1
New Zealand	7	United Republic of Tanzania	1
Colombia	6		
		TOTAL (87 countries)	1,992

Table 2  
1971 - 1986

Country	Number of appointments	Country	Number of appointments
United Kingdom	1,796	Bolivia	20
Poland	1,243	Ethiopia	20
United States of America	1,212	China	18
France	1,097	Ecuador	18
India	884	Jamaica	18
Germany, Federal Republic of	796	Malaysia	18
Austria	488	Mali	18
Belgium	441	Stateless	17
Sweden	430	Greece	16
Italy	379	Cameroon	14
Hungary	344	Iran (Islamic Republic of)	14
Egypt	324	El Salvador	13
Netherlands	318	Iraq	13
Yugoslavia	300	Togo	13
Argentina	241	Jordan	11
Spain	235	Sudan	11
Denmark	222	Mauritius	10
USSR	218	Nicaragua	10
Canada	197	Nigeria	10
Czechoslovakia	195	Panama	10
Switzerland	180	Cuba	8
Finland	160	Ghana	8
Chile	158	Haiti	8
Japan	154	Niger	8
Australia	149	Zimbabwe	8
Norway	143	Lebanon	7
Romania	139	Guatemala	6
Brazil	131	Liberia	5
Israel	117	Madagascar	5
Mexico	112	Benin	4
Ireland	106	Kenya	4
Peru	105	Thailand	4
Philippines	97	United Republic of Tanzania	4
Sri Lanka	95	Malta	3
Bulgaria	80	Rwanda	3
Pakistan	79	Viet Nam	3
New Zealand	73	Barbados	2
Portugal	66	Burma	2
Venezuela	50	Byelorussian SSR	2
Algeria	39	Costa Rica	2
Colombia	38	Guyana	2
Bangladesh	35	Honduras	2
Turkey	34	Libyan Arab Jamahiriya	2
German Democratic Republic	33	Mauritania	2
Tunisia	31	Nepal	2
Zaire	29	Paraguay	2
Côte d'Ivoire	28	Sierra Leone	2
Indonesia	27	Uganda	2
Republic of Korea	27	Antigua and Barbuda	1
Syrian Arab Republic	27	Cyprus	1
Senegal	23	Democratic People's Republic of Korea	1
Uruguay	22	Guinea	1
Morocco	21	Zambia	1
		TOTAL (105 countries)	14,377 <u>a/</u>

a/ Total of appointments includes repeated separate appointments and reassignments of the same expert to other projects.

## APPENDIX E

## UNIDO INVOLVEMENT IN UNDP COUNTRY PROGRAMMES

Table 1

UNIDO share of UNDP country programmes approved by the  
Governing Council of UNDP, June 1985 to June 1986

(By geographical area)

Geographical area	Number of countries for which programmes have been approved	Total IPF allocations ----- (in millions of US\$)	Total amount programmed (in millions of US\$)	Allocations for UNIDO projects -----	UNIDO share of amount programmed (percentage)	Number of projects	
						Ongoing	New
Africa	7	177.42	301.23	22.26	7.39	12	16
The Americas	15	65.83	95.16	11.81	12.41	5	33
Arab States <u>a/</u>	3	42.70	109.03	8.64	7.92	5	7
(African Arab States) <u>b/</u>	(2)	(38.30)	(67.55)	(5.57)	(8.25)	(3)	(5)
Asia and the Pacific	21	692.77	739.52	177.29	23.97	53	109
Europe	5	14.83	13.46	7.43	55.20	7	29
TOTAL	49	955.25	1,190.85	221.86	18.63	79	189

a/ Includes African Arab States.

b/ Figures deducted since already included under both "Africa" and "Arab States".

Table 2

UNIDO share of UNDP country programmes approved by the  
Governing Council of UNDP, June 1985 to June 1986

(By substantive branches of UNIDO)

UNIDO substantive branches	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
Industrial Investment	-	6	1,970	0.89	2	4	-
Agro-based Industries	12	36	38,640	17.42	13	26	9
Chemical Industries	27	51	67,810	30.56	16	51	11
Metallurgical Industries	4	13	17,180	7.74	5	10	2
Engineering Industries	16	34	53,900	24.30	10	30	10
Industrial Planning	-	5	4,130	1.86	1	2	2
Institutional Infrastructure	12	22	20,000	9.01	8	21	5
Factory Establishment and Management	3	6	5,670	2.56	4	2	3
Industrial Training	-	10	4,440	2.00	2	7	1
Feasibility Studies	5	6	8,120	3.66	3	5	3
TOTAL	79	189	221,860	100.00	64	158	46



Table 3

Comparison of country programmes approved during June 1985 - June 1986  
for the fourth cycle with programmes of the same countries  
in the third cycle (1982-1986) a/

(By geographical area)

Geographical area (Number of country programmes)	Third cycle (1982-1986)				Fourth cycle (June 1985 - June 1986)			
	UNIDO projects				UNIDO projects			
	IPF ----(in millions of US\$)----	Amount programmed	Total value	Percentage share of amount programmed	IPF ----(in millions of US\$)----	Amount programmed	Total value	Percentage share of amount programmed
Africa (7) <u>b/</u>	149.41	182.28	29.88	16.39	177.42	301.23	22.26	7.39
The Americas (11) <u>c/</u>	60.12	81.52	15.95	19.57	62.59	90.99	11.40	12.53
Arab States (3) <u>d/</u>	40.15	91.17	7.06	7.74	42.70	109.03	8.64	7.92
(African Arab States (2)) <u>e/</u>	(34.65)	(48.40)	(5.62)	(11.62)	(38.30)	(67.55)	(5.57)	(8.25)
Asia and the Pacific (20) <u>f/</u>	548.23	790.48	154.28	19.52	634.47	652.10	164.20	25.18
Europe (5) <u>g/</u>	14.01	20.58	5.17	25.12	14.83	13.46	7.43	55.20
TOTAL (44)	777.27	1,117.63	206.72	18.50	893.71	1,099.26	207.95	18.95

a/ Excluded from the comparison are the following 5 countries:

The Americas: Anguilla, Aruba and St. Helena (first country programme in the fourth cycle); Suriname (no country programme in the third cycle).

Asia and the Pacific: Indonesia (because of the time-frame of the second (1979-1981) and third (1985-1989) country programmes which overlap the second, third and fourth programming cycle, it is difficult to make a comparison. The UNIDO share for Indonesia was 51.31 per cent in the second country programme and 14.97 per cent in the third country programme.

b/ The 7 countries in Africa comprise: Ethiopia, Mauritania, Rwanda, Seychelles, Somalia, Tunisia and Zimbabwe.

c/ The 11 countries and territories in the Americas comprise: Barbados, Belize, Cayman Islands, Cuba, Ecuador, El Salvador, Jamaica, Netherlands Antilles, Nicaragua, Paraguay and Peru.

d/ The 3 Arab States comprise: Saudi Arabia, Somalia and Tunisia.

e/ The 2 African Arab States comprise: Somalia and Tunisia (relevant figures are deducted since they are already included under both "Africa" and "Arab States").

f/ The 20 countries in Asia and the Pacific comprise: Bangladesh, Bhutan, China, Cook Islands, Fiji, India, Kiribati, Lao People's Democratic Republic, Mongolia, Nepal, Niue, Papua New Guinea, Philippines, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Viet Nam.

g/ The 5 countries in Europe comprise: Bulgaria, Hungary, Malta, Poland and Yugoslavia.

## APPENDIX F

MAJOR STUDIES, REPORTS AND SERIES PUBLICATIONS  
ISSUED BY UNIDO IN 1986 a/

SYMBOL	TITLE	LANGUAGE
ID/SER.H/2	Guidelines for project evaluations	C
ID/SER.M/16*	Industry and development No. 16	E S
ID/SER.M/17*	Industry and development No. 17	E
ID/SER.M/18*	Industry and development No. 18	E
ID/206	Manual for the preparation of industrial feasibility studies	A
ID/250	Development and transfer of technology series No. 13. Fertilizer manual	F S
ID/290*	World non-electrical machinery industry	S
ID/300	Manual on production management of small and medium furniture manufacturing firms in developing countries	F
ID/309*	Regional industrial co-operation: Experiences and perspective of ASEAN and the Andean pact	E S
ID/315	Manual on documentation and information systems for furniture and joinery plants in developing countries	F S
ID/325/Add.1*	Input-output tables for developing countries, Volume II	E
ID/328	Handbook of industrial statistics 1984	C
ID/330	Popular manual for wooden house construction	F S
ID/334*	International comparative advantage in manufacturing: Changing profiles of resources and trade	E
ID/340 (ID/WG.448/6)	Third Consultation on the Petrochemical Industry, Vienna, Austria, 2-6 December 1985. Report	A C E F R S
ID/341* (UNIDO/LIB/SER.B/60)	Industrial development abstracts Nos. 14801-15100	E (F/R/S introduction)
ID/342*	Handbook of industrial statistics/ Manuel de statistiques industrielles 1986	E/F
ID/343*	Industry and development Global Report 1986	E
ID/344*	Directory of development finance institutions	E/F/S
ID/345 (ID/WG.458/17)	Fourth Consultation on the Iron and Steel Industry, Vienna, Austria, 9-13 June 1986. Report	A C E F R S

a/ Sales publications are indicated by an asterisk in the "Symbol" column.

## APPENDIX G

UNIDO TECHNICAL ASSISTANCE TO THE LEAST DEVELOPED COUNTRIES,  
1 JANUARY TO 31 DECEMBER 1986

Table 1  
Delivery, by country and source of funds a/  
(In US dollars)

Region/country	UNDP/IPF	SIS	Regular budget	UNIDF	Other sources	Total
<b>Africa</b>						
Benin	60,844	81,977	24,232	60,353	-	227,406
Botswana	139,289	50,378	2,214	-	-	191,881
Burkina Faso	72,333	34,061	322,669	23,720	-	452,783
Burundi	455,212	4,272	-	(226)	(6,719)	452,539
Cape Verde	232,900	2,510	39,347	-	-	274,757
Central African Republic	-	-	25,549	-	-	25,549
Chad	403,180	-	-	-	-	403,180
Comoros	-	6,404	28,840	-	73,008	108,252
Equatorial Guinea	-	-	27,531	-	-	27,531
Ethiopia	3,513,473	142,466	188,253	52,590	64,585	3,961,367
Gambia	4,150	2,233	26,081	(10,586)	13,634	35,512
Guinea	756,878	23,817	30,116	20,321	1,637	832,769
Guinea-Bissau	-	-	-	43,759	-	43,759
Lesotho	227,425	73,790	27,386	(1,963)	25,804	352,442
Malawi	33,548	-	24,536	-	125,678	183,762
Mali	535,508	31,427	69,360	166,993	31,489	834,777
Niger	235,519	88,894	18,900	-	36,536	379,849
Rwanda	196,113	20,616	104,438	-	-	321,167
Sao Tome and Principe	-	-	8,715	-	8,538	17,253
Sierra Leone	511,019	111,344	-	-	54,854	677,217
Togo	215,914	54,221	26,770	(2,222)	478,224	772,907
Uganda	329,877	-	-	15,000	-	344,877
United Republic of Tanzania	357,136	29,762	122,388	253,562	79,620	842,468
Subtotal	8,280,318	758,172	1,117,325	621,301	986,888	11,764,004
<b>Americas</b>						
Haïti	36,783	-	-	10,937	-	47,720
<b>Arab States</b>						
Democratic Yemen	157,303	34,350	28,843	5,850	-	226,346
Djibouti	-	11,870	33,203	10,494	-	55,567
Somalia	508,896	66,902	62,189	114,729	27,409	780,125
Sudan	58,791	17,553	21,653	1,884	168,469	268,350
Yemen	1,221	8,306	-	-	95,022	104,549
Subtotal	726,211	138,981	145,888	132,957	290,900	1,434,937
<b>Asia and the Pacific</b>						
Afghanistan	1,630	4,899	17,794	-	-	24,323
Bangladesh	2,219,313	-	1,548	(103,672)	(140,370)	1,976,819
Bhutan	285,242	-	39,894	-	64,831	389,967
Lao People's Democratic Republic	255,910	-	-	-	-	255,910
Maldives	30,879	-	-	-	-	30,879
Nepal	743,772	-	-	16,339	3,008	763,119
Samoa	-	-	-	-	-	-
Vanuatu	-	-	-	-	-	-
Subtotal	3,536,746	4,899	59,236	(87,333)	(72,531)	3,441,017
Regional, interregional and global projects especially designed for LDCs	198	-	241,433	39,933	43,000	324,564
Total	12,580,256	902,052	1,563,882	717,795	1,248,257	17,012,242

a/ 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.

Table 2  
New project approvals, by country and source of funds a/  
(In US dollars)

Region/country	UNDP/IPF	SIS	Regular budget	UNIDF	Other sources	Total
<b>Africa</b>						
Benin	57,000	75,000	32,500	19,000	-	183,500
Botswana	-	-	2,084	-	-	2,084
Burkina Faso	82,600	-	645,948	54,000	-	782,548
Burundi	310,200	-	52,000	-	-	362,200
Cape Verde	-	-	101,700	-	-	101,700
Central African Republic	-	43,500	21,000	-	-	64,500
Chad	730,000	-	-	-	-	730,000
Comoros	-	11,600	33,000	-	22,450	67,050
Equatorial Guinea	-	-	31,500	-	-	31,500
Ethiopia	-	-	253,900	102,145	-	356,045
Gambia	42,000	-	33,500	-	-	75,500
Guinea	-	-	34,500	13,221	-	47,721
Guinea-Bissau	-	117,950	110,400	12,430	-	240,780
Lesotho	110,250	-	28,000	-	-	138,250
Malawi	-	-	9,650	-	-	9,650
Mali	-	-	90,000	-	-	90,000
Niger	1,376,260	-	15,500	-	-	1,391,760
Rwanda	-	-	131,988	25,100	-	157,088
Sao Tome and Principe	-	-	19,226	-	-	19,226
Sierra Leone	307,747	-	-	-	-	307,747
Togo	-	-	34,500	50,023	-	84,523
Uganda	-	-	91,000	-	3,463,720 b/	3,554,720
United Republic of Tanzania	-	-	279,194	1,141,404	-	1,420,598
Subtotal	3,016,057	248,050	2,051,090	1,417,323	3,486,170	10,218,690
<b>Americas</b>						
Haïti	32,500	38,000	-	-	-	70,500
<b>Arab States</b>						
Democratic Yemen	69,000	12,900	-	-	-	81,900
Djibouti	-	13,042	34,330	10,494	-	57,866
Somalia	89,000	24,500	181,945	52,500	40,400	388,345
Sudan	368,800	10,000	30,000	-	-	408,800
Yemen	-	11,000	8,300	-	198,654	217,954
Subtotal	526,800	71,442	254,575	62,994	239,054	1,154,865
<b>Asia and the Pacific</b>						
Afghanistan	-	-	-	-	-	-
Bangladesh	756,775	-	-	-	-	756,775
Bhutan	-	-	32,650	-	-	32,650
Lao People's Democratic Republic	-	-	11,350	-	-	11,350
Maldives	127,000	-	-	-	-	127,000
Nepal	2,973,550	-	-	-	-	2,973,550
Samoa	-	-	-	-	-	-
Vanuatu	-	-	-	-	-	-
Subtotal	3,857,325	-	44,000	-	-	3,901,325
Regional, interregional and global projects especially designed for LDCs	-	-	233,211	92,312	46,937	372,460
<b>Total</b>	<b>7,432,682</b>	<b>357,492</b>	<b>2,582,876</b>	<b>1,572,629</b>	<b>3,772,161</b>	<b>15,717,840</b>

a/ 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.

b/ Includes partial approval of a multi-fund project for which the UNDP portion was still pending at the end of 1986.

Table 3

Total project approvals (new projects, plus additional allocations to ongoing projects minus cancellations) a/  
(In US dollars)

Region/country	UNDP/IPF	SIS	Regular budget	UNIDF	Other sources	Total
<b>Africa</b>						
Benin	47,566	75,000	32,500	19,700	-	174,766
Botswana	123,868	8,795	2,084	-	(5,804)	128,943
Burkina Faso	83,278	-	645,947	54,000	-	783,225
Burundi	347,248	-	52,000	(63,801)	(171,170)	164,277
Cape Verde	(29,557)	(16,614)	101,700	-	-	55,529
Central African Republic	-	43,500	46,548	-	-	90,048
Chad	1,827,869	-	-	-	-	1,827,869
Comoros	-	11,600	31,117	-	68,070	110,787
Equatorial Guinea	-	-	31,500	-	-	31,500
Ethiopia	438,913	(396)	269,457	104,829	15,220	828,023
Gambia	42,000	-	33,500	-	10,000	85,500
Guinea	(94,489)	(60,168)	34,500	13,221	(8,835)	(115,771)
Guinea-Bissau	-	120,543	110,400	14,054	-	244,997
Lesotho	137,572	-	28,000	(4,132)	(38,483)	122,957
Malawi	(500)	-	9,650	-	28,868	38,018
Mali	214,615	-	94,574	31,678	92,619	433,486
Niger	1,343,397	-	15,500	-	(20,394)	1,338,503
Rwanda	18,473	1,002	112,885	25,100	-	157,460
Sao Tome and Principe	-	-	9,344	-	-	9,344
Sierra Leone	306,994	20,414	-	-	1,339	328,747
Togo	329,673	-	34,500	50,023	140,846	555,042
Uganda	54,898	(4,837)	91,000	(7,150)	3,463,720	3,597,631
United Republic of Tanzania	76,622	(3,845)	279,193	1,128,182	(25,486)	1,454,666
Subtotal	5,268,440	194,994	2,065,899	1,365,704	3,550,510	12,445,547
<b>Americas</b>						
Haiti	34,714	38,000	-	10,000	(4,231)	78,483
<b>Arab States</b>						
Democratic Yemen	49,935	19,300	(83,568)	(483)	-	(14,816)
Djibouti	-	13,042	34,330	10,494	-	57,866
Somalia	264,629	25,617	167,886	53,488	31,348	542,968
Sudan	379,058	4,239	30,000	6,150	71,681	491,128
Yemen	(24,040)	11,000	8,300	-	198,654	193,914
Subtotal	669,582	73,198	156,948	69,649	301,683	1,271,060
<b>Asia and the Pacific</b>						
Afghanistan	-	(824)	(17,498)	-	-	18,322
Bangladesh	967,307	-	(452)	-	61,740	1,028,595
Bhutan	43,477	(2,395)	48,537	-	81,000	170,619
Lao People's Democratic Republic	(169,309)	-	11,350	-	-	(157,959)
Maldives	127,000	-	-	-	-	127,000
Nepal	3,175,736	-	-	-	(655)	3,175,081
Samoa	-	-	(8,250)	-	-	(8,250)
Vanuatu	158,053	1,450	-	-	58,976	100,527
Subtotal	4,302,264	(1,769)	33,687	-	83,109	4,417,291
<b>Regional, interregional and global projects especially designed for LDCs</b>						
	(1,394)	-	267,051	49,705	46,937	362,299
<b>Total</b>	<b>10,273,606</b>	<b>304,423</b>	<b>2,523,585</b>	<b>1,495,058</b>	<b>3,978,008</b>	<b>18,574,680</b>

a/ 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.

## APPENDIX H

## INDUSTRIAL DEVELOPMENT FUND

Table 1

UNIDF/IDF statement of pledges and receipts since 1978, as at 31 December 1986

(In US dollars)

Country/Organization	Debit (credit) balances brought forward from UNIDF	IDF pledges for			Collections in 1986	Exchange adjustments	Unpaid balance (Advance payments)
		1986	1987	1988 and future years			
<b>General-purpose convertible</b>							
Afghanistan	1,500	1,500	-	-	1,500	-	1,500
Angola	10,000	-	-	-	10,000	-	-
Argentina	150,000	-	-	-	133,990	-	16,010
Austria	-	57,143	70,423	-	70,423	(13,280)	70,423
Bahrain	5,000	-	-	-	5,000	-	-
Bangladesh	-	2,420	2,420	3,161	8,001	-	-
Barbados	-	20,000	-	-	20,000	-	-
Bhutan	-	1,450	-	-	1,450	-	-
Bolivia	2,000	14,313	1,000	-	13,313	-	4,000
Brazil	15,000	15,000	15,000	-	15,000	-	30,000
Cameroon	-	-	2,985	-	-	(55)	3,040
Chile	-	10,000	10,000	-	10,000	-	10,000
Colombia	1,465	5,700	-	-	6,183	-	982
Congo	11,426	-	-	-	2,796	-	8,630
Costa Rica	8,080	10,000	-	-	6,302	-	11,778
Cyprus	-	1,852	2,335	-	2,016	(164)	2,335
Democratic People's Republic of Korea	-	21,186	22,321	-	21,186	-	22,321
Democratic Yemen	-	4,400	-	-	-	-	4,400
Dominica	-	1,852	-	-	1,840	12	-
Ecuador	5,440	6,500	6,500	-	1,500	-	16,940
Egypt	-	-	2,000	-	-	-	2,000
Ethiopia	-	1,111	-	-	1,111	-	-
Fiji	-	1,009	-	-	-	36	973
Greece	36,000	-	-	-	36,000	-	-
Guatemala	-	10,000	10,000	-	-	-	20,000
Guyana	723	1,184	-	-	1,184	25	698
Honduras	-	1,000	-	-	1,000	-	-
India	500,000	250,000	250,000	-	750,000	-	250,000
Indonesia	-	50,000	-	-	50,000	-	-
Iraq	161,291	-	-	-	-	-	161,291
Jamaica	4,000	-	4,000	-	4,000	-	4,000
Kenya	10,000	14,110	-	-	-	-	24,110
Kuwait	-	75,000	75,000	-	-	-	150,000
Lao People's Democratic Republic	1,500	1,500	-	-	1,500	-	1,500
Lesotho	1,308	-	-	-	-	159	1,149
Luxembourg	-	7,392	9,524	-	6,863	529	9,524
Madagascar	-	1,661	-	-	1,385	276	-
Malawi	-	3,321	2,051	-	3,148	173	2,051
Malaysia	450	20,000	20,000	-	20,450	-	20,000
Mali	2,611	-	-	-	-	(429)	3,040
Mauritius	-	699	759	-	-	(60)	1,518
Mexico	4,503	15,000	-	-	4,503	-	15,000
Morocco	5,037	5,000	-	-	-	(658)	10,695
Mozambique	4,925	-	-	-	-	(138)	5,063
Nepal	-	700	700	-	1,400	-	-
Nigeria	50,000	-	-	-	-	-	50,000
Oman	12,000	12,000	-	-	12,000	-	12,000
Panama	-	2,000	2,000	-	2,000	-	2,000
Papua New Guinea	-	12,871	-	-	-	(462)	13,333
Paraguay	30,000	-	-	-	-	-	30,000
Peru	25,000	-	-	-	5,000	-	20,000
Philippines	6,006	10,000	-	-	5,108	-	10,898
Portugal	-	15,000	15,000	-	30,000	-	-

Table 1 (continued)

Country/Organization	Debit (credit) balances brought forward from UNIDF	IDF pledges for			Collections in 1986	Exchange adjustments	Unpaid balance (Advance payments)
		1986	1987	1988 and future years			
<b>General-purpose convertible (continued)</b>							
Republic of Korea	-	28,000	28,000	-	28,000	-	28,000
Rwanda	-	4,000	400	-	4,000	-	400
Saudi Arabia	-	1,000,000	-	-	-	-	1,000,000
Senegal	29,113	2,000	2,000	-	-	-	33,113
Sierra Leone	94	1,321	-	-	1,415	-	-
Somalia	2,467	-	-	-	-	-	2,467
Sri Lanka	-	3,000	-	-	-	-	3,000
Sudan	81,484	-	-	-	-	-	81,484
Suriname	2,000	-	-	-	-	-	2,000
Swaziland	1,532	1,498	-	-	2,020	(792)	1,802
Syrian Arab Republic	5,372	-	-	-	5,372	-	-
Thailand	-	19,925	-	-	20,424	(499)	-
Togo	3,917	1,493	1,506	-	4,345	(469)	3,040
Trinidad and Tobago	8,375	13,400	-	-	16,750	(1,675)	6,700
Tunisia	-	24,220	22,105	-	-	2,115	44,210
Uganda	-	3,000	3,000	-	-	-	6,000
United Republic of Tanzania	-	1,212	-	-	500	712	-
Venezuela	-	11,467	-	-	11,467	-	-
Zaire	3,000	3,000	-	-	-	-	6,000
Zambia	517	2,342	-	-	2,342	330	187
Zimbabwe	-	7,879	9,175	-	7,879	-	9,175
Non-governmental organizations	-	30,000	-	-	30,000	-	-
Subtotal	1,203,136	1,841,631	590,204	3,161	1,401,666	(14,314)	2,250,780
<b>General-purpose non-convertible</b>							
Bhutan	1,320	-	-	-	1,320	-	-
Bulgaria	-	100,000	101,626	-	106,270	(6,270)	101,626
China	-	109,718	108,401	-	109,718	-	108,401
Cuba	-	23,890	26,482	-	24,419	(529)	26,482
Egypt	72,492	-	-	-	72,492	-	-
German Democratic Republic	-	121,600	150,495	-	138,182	(18,087)	152,000
Hungary	-	84,211	92,879	-	88,456	(4,245)	92,879
India	-	250,000	250,000	-	250,000	-	250,000
Mongolia	-	2,162	-	-	2,181	(19)	-
Pakistan	-	72,327	67,967	-	67,967	4,360	67,967
Poland	-	137,931	132,653	-	137,931	-	132,653
Turkey	6,011	-	-	-	-	1,523	4,488
Union of Soviet Socialist Republics	-	654,450	736,377	-	694,444	(34,611)	730,994
Viet Nam	1,000	-	-	-	1,000	-	-
Yugoslavia	1,053	116,505	203,046	-	107,562	27,427	185,615
Subtotal	81,876	1,672,794	1,869,926	-	1,801,942	(30,451)	1,853,105
Total general-purpose	1,285,012	3,514,425	2,460,130	3,161	3,203,608	(44,765)	4,103,885
<b>Special-purpose convertible</b>							
Australia	(68,815)	212,716	-	-	166,523	-	(22,622)
Austria	(121,788)	894,435	89,643	-	838,340	-	23,950
Belgium	(480,520)	373,124	236,735	193,230	-	-	322,569
China	(289,639)	225,019	14,690	-	270,000	-	(319,930)
Côte d'Ivoire	108,765	-	-	-	-	-	108,765
Democratic Yemen	(2,474)	2,474	-	-	-	-	-
Denmark	-	5,028	-	-	-	-	5,028
Egypt	(190,893)	268,866	131,069	-	-	-	209,042

Table 1 (continued)

Country/Organization	Debit (credit) balances brought forward from UNIDF	IDF pledges for			Collections in 1986	Exchange adjustments	Unpaid balance (Advance payments)
		1986	1987	1988 and future years			
<b>Special-purpose convertible (continued)</b>							
Finland	(259,801)	580,433	-	-	260,696	-	59,936
France	(817,302)	1,181,044	-	-	1,692,308	-	(1,328,566)
German Democratic Republic	(95,802)	-	-	-	96,129	-	(191,931)
Germany, Federal Republic of	(1,429,443)	4,447,535	3,590,082	2,161,312	3,734,737	-	5,034,749
Hungary	5,597	281	-	-	-	-	5,878
India	79,685	220,425	31,414	-	550,000	-	(218,476)
Italy	(597,640)	1,858,172	1,815,078	653,083	5,317,268	-	(1,588,575)
Japan	(662,483)	1,348,835	360,642	-	635,950	-	411,044
Malta	31,628	-	-	-	-	-	31,628
Netherlands	(292,528)	289,758	96,050	-	160,000	-	(66,720)
Norway	(282)	-	-	-	-	-	(282)
Spain	(38,245)	47,605	-	-	-	-	9,360
Sweden	72,067	405,189	-	-	-	-	477,256
Switzerland	(1,608,536)	461,791	328,262	592,753	366,870	-	(592,600)
United Kingdom	(150,310)	685,681	32,020	-	532,600	-	34,791
Yugoslavia	(1,041)	-	-	-	-	-	(1,041)
<b>Non-governmental organizations</b>							
African Institute for Higher Technical Training and Research (Kenya)	1,253	49	-	-	-	-	1,302
Arab Industrial Development Organization	(19,877)	20,001	-	-	(20,000)	-	20,124
Banque Ouest Africaine De Developpement (BOAD) (Togo)	-	2,800	-	-	2,800	-	-
Egyptian Iron and Steel Company	(10,576)	10,576	-	-	-	-	-
Kuwait Institute for Higher Technical Training and Research	(48,229)	74,394	-	-	-	-	26,165
Nobel Chematur (Sweden)	-	3,390	5,650	-	9,040	-	-
S.G. Des Eaux Minerales De Vittel (France)	-	19,260	7,524	-	25,554	-	1,230
<b>Subtotal</b>	<b>(6,887,229)</b>	<b>13,638,881</b>	<b>6,738,859</b>	<b>3,600,378</b>	<b>14,638,815</b>	<b>-</b>	<b>2,452,074</b>
<b>Special-purpose non-convertible</b>							
Bulgaria	-	-	10,640	-	-	-	10,640
China	(295,203)	-	-	-	-	-	(295,203)
Czechoslovakia	(230,514)	174,928	-	-	179,372	-	(234,958)
German Democratic Republic	(399,396)	-	-	-	363,636	-	(763,032)
Hungary	(48,283)	80,874	8,715	-	55,285	-	(13,979)
India	(194,500)	29,880	-	-	250,000	-	(414,620)
Poland	40,985	110,173	101,616	267,610	29,940	-	490,444
Turkey	(210,369)	197,945	3,937	-	219,719	-	(228,206)
Yugoslavia	(298,897)	-	-	-	-	-	(298,897)
<b>Non-governmental organizations</b>							
Central Union of Workers Co-operatives (Poland)	(19,868)	-	-	-	-	-	(19,868)
Egyptian Iron and Steel Company	(26,747)	16,413	-	-	-	-	(10,334)
<b>Subtotal</b>	<b>(1,682,792)</b>	<b>610,213</b>	<b>124,908</b>	<b>267,610</b>	<b>1,097,952</b>	<b>-</b>	<b>(1,778,013)</b>
<b>Total special-purpose</b>	<b>(8,570,021)</b>	<b>14,249,094</b>	<b>6,863,767</b>	<b>3,867,988</b>	<b>15,736,767</b>	<b>-</b>	<b>674,061</b>
<b>GRAND TOTAL</b>	<b>(7,285,009)</b>	<b>17,763,519</b>	<b>9,323,897</b>	<b>3,871,149</b>	<b>18,940,375</b>	<b>(44,765)</b>	<b>4,777,946</b>



Table 2

Status of resources of the Industrial Development Fund as at 31 December 1986

(In thousands of US dollars)

	Convertible		Non-convertible	Total
	General purpose	Special purpose		
<b>Income</b>				
Balance from UNIDF a/	3,897	-	1,573	5,470
Pledges, 1986 and future	2,435	23,978	4,546	30,959
Interest and other income	<u>1,337</u>	<u>1,899</u>	<u>(116)</u>	<u>3,120</u>
TOTAL INCOME	7,669	25,877	6,003	39,549
<b>Approvals</b>				
<b>Projects</b>				
Expenditure, 1986	2,326	8,490	2,387	13,203
Commitments, 1987 and future	56	3,822	84	3,962
Not yet implemented	<u>3,079</u>	<u>8,922</u>	<u>1,592</u>	<u>13,593</u>
Subtotal	5,461	21,234	4,063	30,758
<b>Support costs, 1986</b>				
General purpose convertible	303	-	-	303
Special purpose convertible	-	1,035	-	1,035
Non-convertible b/	<u>295</u>	<u>14</u>	<u>-</u>	<u>309</u>
Subtotal	598	1,049	-	1,647
<b>Reserve for support costs, 1987 and future</b>				
General purpose convertible	408	-	-	408
Special purpose convertible	-	1,688	-	1,688
Non-convertible b/	<u>212</u>	<u>7</u>	<u>-</u>	<u>219</u>
Subtotal	<u>620</u>	<u>1,695</u>	<u>-</u>	<u>2,315</u>
TOTAL APPROVALS	6,679	23,978	4,063	34,720
Subtotal	990	1,899	1,940	4,829
Operational reserve	<u>(550)</u>	<u>-</u>	<u>-</u>	<u>(550)</u>
PROGRAMMABLE BALANCE	440	1,899	1,940	4,279
<b>Cash position</b>				
Total income	7,669	25,877	6,003	39,549
Uncollected	<u>2,273</u>	<u>2,452</u>	<u>75</u>	<u>4,800</u>
Received	5,396	23,425	5,928	34,749
<b>Disbursements, 1986</b>				
(including support costs)	<u>2,150</u>	<u>7,683</u>	<u>1,223</u>	<u>11,056</u>
Subtotal	3,246	15,742	4,705	23,693
<b>Unliquidated obligations, 1985 and prior</b>				
	<u>134</u>	<u>281</u>	<u>94</u>	<u>509</u>
CASH BALANCE	3,380	16,023	47,99	24,202
<b>Unliquidated obligations, 1986 and prior</b>				
	909	2,137	1,258	4,304
Commitments, 1987 and future	56	3,822	84	3,962
<b>Reserve for support costs, 1987 and future</b>				
	620	1,695	-	2,315
Operational reserve	<u>550</u>	<u>-</u>	<u>-</u>	<u>550</u>
COMMITMENTS	2,135	7,654	1,342	11,131
UNCOMMITTED CASH BALANCE	1,245	8,369	3,457	13,071

a/ Includes late pledges to UNIDF.

b/ Support costs for projects financed from non-convertible currencies are normally charged to the general convertible segment. However, some donors have agreed that support costs on such projects financed by them should be charged to their convertible contributions.

Table 3

Cumulative list of projects approved for financing under UNIDF/IDF,  
classified according to priority area, as at 31 December 1986

UNIDF/IDF priority area	Number of projects	Convertible (excluding overheads) (in US dollars)	Non- convertible US dollar equivalent	Total (in US dollars)	Percentages	
					Desirable alloca- tion <u>a/</u>	Actual alloca- tion
Special measures for industrial development of the least developed countries	90	7,554,370	2,056,944	9,611,314	10	8.3
Transfer and adaptation of technology and development of appro- priate technology and industrial information	256	21,978,000	1,227,106	23,205,106	10	20.1
Economic and technical co-operation among developing countries	78	4,144,648	1,506,009	5,650,657	9	5.0
Group training and strengthening industrial training institutions in developing countries	406	18,937,640	13,396,740	32,334,380	10	28.0
Industrial institu- tional infrastructure	63	4,698,956	428,305	5,127,261	10	4.4
Industries processing local natural re- sources including export-oriented industries	95	9,637,865	533,791	10,171,656	12	8.8
Industries satisfying basic needs and support to rural industries	60	5,597,991	209,414	5,807,405	8	5.0
Promotional activities	150	19,385,906	1,170,435	20,556,341	8	18.0
Other activities	52	2,658,914	184,902	2,843,816	5	2.4
<b>TOTAL</b>	<b>1,250</b>	<b>94,594,290</b>	<b>20,713,646</b>	<b>115,307,936</b>	<b>82</b>	<b>100.0</b>

a/ The key to the resource allocations is as follows:

	<u>Percentages</u>
Resources available to finance projects	82
Programme support and administration	13
Transfer to reserves	5
	<u>100</u>

## APPENDIX I

## GROUP TRAINING AND FELLOWSHIPS IN 1986

Table 1  
In-plant group training programmes in 1986

Field of study	Type of programme			Host country	Number of participants			
	National	Regional	Inter-regional		Least developed countries	Female	African participants	All developing countries
Synthetic fibres	-	-	x	Austria	2	1	2	12
Plastics technology	-	-	x	Austria	6	3	4	21
Mould making	-	-	x	Austria	1	-	1	6
Cotton textile industry	-	x	-	Belgium	7	-	12	13
Maintenance - small/medium ships	-	-	x	Belgium	7	-	14	16
Maintenance - railway	-	x	-	Belgium	6	-	14	14
Diesel engines	-	-	x	China	8	-	12	15
Agricultural machinery	-	-	x	China	5	-	9	14
Diesel engines	-	-	x	Czechoslovakia	3	-	6	18
Furniture industry	-	x	-	Ethiopia	4	1	9	9
Maintenance - refrigeration equipment	-	x	-	France	11	-	20	20
Maintenance - biomedical electronic equipment	-	-	x	Hungary	2	1	3	13
Quality control - pharmaceutical industry	-	x	-	India	2	3	-	13
Production management	-	-	x	Japan	2	-	2	12
Training of trainers - foundry industry	-	-	x	Poland	3	-	2	11
Dyes and chemicals	-	x	-	Switzerland	1	4	-	12
Iron and steel industry	-	-	x	Turkey	1	-	3	12
Beet sugar industry	-	-	x	Turkey	1	-	4	7
Small-scale foundry operations	-	-	x	Turkey	7	-	10	12
Cement industry	-	-	x	Turkey	5	-	6	14
Maintenance and repair - railway	-	x	-	United Kingdom	6	-	15	15
Rice processing	-	-	x	USSR	3	2	6	15
Grain milling and storage	-	-	x	USSR	5	2	5	15
Fertilizer industry	-	-	x	USSR	1	-	3	15
Metalworking industry	-	-	x	USSR	4	-	5	14
Electric welding <sup>a/</sup>	-	-	x	USSR	8	-	13	35
Iron and steel <sup>a/</sup>	-	-	x	USSR	11	-	13	33
TOTAL					122	17	193	406

<sup>a/</sup> Two programmes carried out in 1986.

Table 2  
Other group training programmes in 1986

Field of study	Type of programme				Number of participants			
	National	Regional	Inter- regional	Host country	Least developed countries	Female	African participants	All developing countries
Advance analytical techniques in trace element analysis	-	-	x	Austria	1	6	6	21
Fertilizer plant maintenance	-	-	x	Austria	-	-	3	12
Didactic methods	-	-	x	Austria	1	-	10	18
Energy auditing	-	x	-	Belgium	-	1	-	8
Pollution and waste treatment in textiles	-	x	-	Belgium	8	-	13	13
Management - air/water pollution	-	-	x	Belgium	3	13	4	23
Project preparation, evaluation and financing	x	-	-	Benin	27	3	27	27
Cotton knitgoods	x	-	-	Brazil	-	-	-	20
Industrial maintenance	x	-	-	Cameroon	-	-	14	14
COMFAR seminar	x	-	-	Cape Verde	6	-	6	6
Tanning extract utilization	-	x	-	Costa Rica	-	-	-	22
Energy conservation - building materials industry	-	x	-	Czechoslovakia	-	3	-	14
Energy conservation - iron and steel industry	-	x	-	Czechoslovakia	-	9	-	34
Maintenance systems in basic industries	-	-	x	Czechoslovakia	-	-	4	14
Project preparation, evaluation and financing	-	x	-	Fiji	-	-	-	16
Energy saving - fertilizer industry	-	-	x	France	-	2	-	20
Management - quality control	-	x	-	France	-	-	10	10
Training of trainers - development banks	-	x	-	France	6	3	17	18
Industrial maintenance	-	-	x	France	8	-	19	23
Pesticide formulation	-	-	x	German Democratic Republic	5	3	6	19
Industrial planning	-	-	x	German Democratic Republic	12	5	14	24
Printing industry	-	-	x	German Democratic Republic	7	1	9	19
Energy conservation - building materials industry	-	x	-	Germany, Federal Republic of	-	3	-	13
Energy conservation - waste energies and energy supply	-	x	-	Germany, Federal Republic of	-	2	-	14
Energy conservation - waste energies and energy supply	-	x	-	Hungary	-	3	-	15
Energy conservation - alumina industry	-	x	-	Hungary	-	2	-	10
Metallurgical industries	-	x	-	Hungary	13	-	22	22

Table 2 (continued)

Field of study	Type of programme			Host country	Number of participants			
	National	Regional	Inter-regional		Least developed countries	Female	African participants	All developing countries
Project preparation, evaluation and financing	x	-	-	India	-	-	-	31
Precision engineering techniques and horology	-	-	x	India	5	-	14	24
Railway rolling stock (wagon, coach), design, development and manufacture	-	-	x	India	4	1	8	26
Packaging	-	-	x	Italy	1	7	1	19
Management - industrial co-operatives	x	-	x	Italy	-	-	-	12
Industrial planning	-	-	x	Japan	2	2	3	10
Offshore drilling industries	-	-	x	Norway	1	1	3	17
Management - export processing zones	-	-	x	Panama	1	-	-	53
Harmonization of pesticide registration requirements	-	x	-	Philippines	1	6	-	16
Small business consultancy	-	-	x	Philippines	13	-	6	13
Energy management	-	-	x	Philippines	16	1	10	18
Project preparation, evaluation and financing	-	-	x	Poland	3	8	8	27
Technology acquisition and project preparation	-	-	x	Poland	6	2	8	23
Medicinal herbs	-	-	x	Romania	10	2	14	15
Project preparation, evaluation and financing	-	x	-	Saudi Arabia	-	-	-	14
Food technology	x	-	-	Senegal	4	1	12	12
Energy conservation - food processing industries	-	x	-	Sweden/ Denmark	-	3	-	14
Project preparation, evaluation and financing	-	x	-	Thailand	-	8	-	20
Energy saving - cement industry	-	-	x	Turkey	2	-	2	9
Industrial planning - theory and practice	-	-	x	USSR	8	1	16	17
Management - human resources development	-	-	x	USSR	2	2	5	13
Project preparation, evaluation and financing	x	-	-	Venezuela	-	10	-	30
Energy conservation - food processing industries	-	x	-	Yugoslavia	-	6	-	29
TOTAL					176 <u>a/</u>	120 <u>a/</u>	294 <u>a/</u>	931 <u>a/</u>

a/ These figures do not include participants in training activities organized within the framework of UNIDO-executed field projects.

Table 3

Number of fellowships and study tours started in 1986,  
by nationality/home area, country or territory

Nationality/home area, country or territory	Number of individuals placed									
	UNDP			Regular programme			Other programmes			Total
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
AFRICA a/										
Angola	2	1	3	-	-	-	-	-	-	3
Benin	-	-	-	-	-	-	2	-	2	2
Botswana	1	-	1	-	-	-	-	-	-	1
Burkina Faso	-	-	-	-	-	-	3	1	4	4
Burundi	9	-	9	-	-	-	-	-	-	9
Cameroon	2	-	2	-	-	-	-	-	-	2
Cape Verde	-	-	-	-	-	-	1	-	1	1
Central African Republic	1	-	1	-	-	-	-	-	-	1
Chad	1	-	1	-	-	-	-	-	-	1
Congo	-	-	-	2	-	2	-	-	-	2
Côte d'Ivoire	5	-	5	-	-	-	-	-	-	5
Ethiopia	49	6	55	4	-	4	3	-	3	62
Gambia	-	-	-	-	-	-	4	4	8	8
Ghana	-	-	-	-	-	-	1	-	1	1
Guinea	19	-	19	-	-	-	2	-	2	21
Guinea-Bissau	-	-	-	1	-	1	2	-	2	3
Kenya	7	-	7	1	-	1	3	-	3	11
Lesotho	4	-	4	-	-	-	-	-	-	4
Liberia	1	-	1	1	-	1	1	-	1	3
Madagascar	4	3	7	-	-	-	-	-	-	7
Malawi	3	-	3	1	-	1	-	-	-	4
Mali	-	-	-	-	-	-	2	-	2	2
Mauritius	-	-	-	-	-	-	1	-	1	1
Mozambique	8	2	10	-	-	-	3	-	3	13
Niger	21	-	21	-	-	-	2	-	2	23
Nigeria	13	2	15	-	-	-	-	-	-	15
Rwanda	4	-	4	-	-	-	-	-	-	4
Senegal	2	-	2	4	-	4	1	-	1	7
Seychelles	-	-	-	1	-	1	-	-	-	1
Sierra Leone	1	-	1	-	-	-	3	-	3	4
Swaziland	1	-	1	-	-	-	-	-	-	1
Togo	1	-	1	-	-	-	2	-	2	3
Uganda	7	-	7	-	-	-	-	-	-	7
United Republic of Tanzania	8	-	8	3	1	4	-	-	-	12
Zaire	10	-	10	-	-	-	-	-	-	10
Zambia	3	2	5	-	-	-	-	-	-	5
Zimbabwe	3	1	4	-	-	-	6	-	6	10
<b>Total-Africa</b>	<b>190</b>	<b>17</b>	<b>207</b>	<b>18</b>	<b>1</b>	<b>19</b>	<b>42</b>	<b>5</b>	<b>47</b>	<b>273</b>

Table 3 (continued)

Nationality/home area, country or territory	Number of individuals placed									Total
	UNDP			Regular programme			Other programmes			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
<b>AMERICAS</b>										
Argentina	37	1	38	1	-	1	-	-	-	39
Barbados	-	-	-	1	-	1	-	-	-	1
Bolivia	1	-	1	-	-	-	-	-	-	1
Brazil	6	6	12	-	-	-	2	-	2	14
Chile	17	-	17	1	-	1	-	-	-	18
Costa Rica	-	-	-	1	-	1	-	-	-	1
Cuba	19	5	24	2	-	2	-	-	-	26
Ecuador	1	-	1	-	-	-	-	-	-	1
El Salvador	1	-	1	-	1	1	-	-	-	2
Guyana	-	-	-	-	-	-	4	1	5	5
Honduras	1	2	3	-	-	-	-	-	-	3
Jamaica	4	4	8	-	-	-	-	-	-	8
Mexico	27	1	28	-	-	-	1	-	1	29
Montserrat	2	1	3	-	-	-	-	-	-	3
Nicaragua	-	2	2	3	-	3	1	-	1	6
Panama	1	-	1	-	-	-	-	-	-	1
Paraguay	1	-	1	-	-	-	-	-	-	1
Peru	3	-	3	-	-	-	1	-	1	4
Uruguay	5	1	6	-	-	-	-	-	-	6
Venezuela	7	2	9	-	-	-	-	-	-	9
<b>Total-Americas</b>	<b>133</b>	<b>25</b>	<b>158</b>	<b>9</b>	<b>1</b>	<b>10</b>	<b>9</b>	<b>1</b>	<b>10</b>	<b>178</b>
<b>ARAB STATES</b>										
Algeria	14	-	14	-	-	-	-	-	-	14
Bahrain	2	-	2	-	-	-	-	-	-	2
Democratic Yemen	6	-	6	1	-	1	-	-	-	7
Egypt	43	2	45	-	-	-	2	-	2	47
Iraq	-	-	-	-	-	-	2	-	2	2
Jordan	1	-	1	-	-	-	2	-	2	3
Lebanon	-	-	-	-	-	-	1	-	1	1
Morocco	1	-	1	-	-	-	1	-	1	2
Sudan	1	-	1	7	1	8	1	-	1	10
Syrian Arab Republic	2	-	2	-	-	-	-	-	-	2
Tunisia	8	-	8	-	-	-	1	-	1	9
<b>Total-Arab States</b>	<b>78</b>	<b>2</b>	<b>80</b>	<b>8</b>	<b>1</b>	<b>9</b>	<b>10</b>	<b>-</b>	<b>10</b>	<b>99</b>

Table 3 (continued)

Nationality/home area, country or territory	Number of individuals placed									
	UNDP			Regular programme			Other programmes			Total
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
ASIA AND THE PACIFIC										
Afghanistan	3	-	3	-	-	-	-	-	-	3
Bangladesh	20	-	20	1	-	1	-	-	-	21
Bhutan	6	-	6	1	-	1	-	-	-	7
Burma	3	-	3	-	-	-	-	-	-	3
China	72	15	87	2	2	4	30	8	38	129
Democratic People's Republic of Korea	19	-	19	6	-	6	2	-	2	27
Fiji	-	-	-	-	-	-	1	-	1	1
Hong Kong	4	-	4	3	-	3	-	-	-	7
India	183	4	187	2	-	2	5	-	5	194
Indonesia	11	2	13	-	-	-	-	-	-	13
Iran (Islamic Republic of)	6	1	7	-	-	-	-	-	-	7
Malaysia	19	-	19	-	-	-	-	-	-	19
Mongolia	6	4	10	-	-	-	2	-	2	12
Nepal	14	1	15	-	-	-	-	-	-	15
Pakistan	24	-	24	-	-	-	-	-	-	24
Philippines	12	9	21	-	1	1	1	-	1	23
Republic of Korea	44	3	47	-	-	-	-	-	-	47
Solomon Islands	-	-	-	1	-	1	-	-	-	1
Sri Lanka	40	4	44	-	-	-	2	2	4	48
Thailand	13	1	14	5	-	5	-	-	-	19
Tonga	4	-	4	-	-	-	-	-	-	4
Viet Nam	54	6	60	2	-	2	-	-	-	62
Total-Asia and the Pacific	557	50	607	23	3	26	43	10	53	686
EUROPE										
Albania	8	-	8	-	-	-	-	-	-	8
Bulgaria	69	8	77	4	-	4	19	1	20	101
Cyprus	4	1	5	-	-	-	-	-	-	5
Czechoslovakia	64	4	68	-	-	-	-	-	-	68
Greece	3	1	4	-	-	-	-	-	-	4
Hungary	32	1	33	-	-	-	-	-	-	33
Malta	3	-	3	-	-	-	-	-	-	3
Poland	22	8	30	1	-	1	-	-	-	31
Portugal	5	4	9	1	-	1	-	-	-	10
Romania	38	4	42	-	-	-	2	-	2	44
Turkey	24	1	25	-	-	-	-	-	-	25
Yugoslavia	28	2	30	-	-	-	-	-	-	30
Total-Europe	300	34	334	6	0	6	21	1	22	362
GRAND TOTAL	1,258	128	1,386	64	6	70	125	17	142	1,598 <u>b/</u>

a/ African Arab States (Algeria, Egypt, Morocco, Sudan, Tunisia) included under "Arab States".

b/ Including 151 females; 239 individuals from least developed countries; 355 individuals from African countries (including African Arab States).



Table 4

Fellowships and study tours started in 1986, by country,  
geographical area or territory of study a/, b/

Country/geographical area/ territory of study	Number of individuals placed			Total
	UNDP	Regular programme	Other programmes	
Algeria	1	-	-	1
Argentina	4	-	-	4
Australia	25	-	1	26
Austria	102	-	15	117
Austria (UNIDO Headquarters)	83	4	17	104
Bahrain	2	-	-	2
Belgium	65	3	3	71
Brazil	32	1	6	39
Bulgaria	11	1	-	12
Cameroon	5	-	-	5
Canada	26	-	-	26
Chile	1	-	-	1
China	12	-	-	12
Colombia	4	-	-	4
Costa Rica	1	-	1	2
Côte d'Ivoire	5	-	-	5
Cuba	4	-	1	5
Czechoslovakia	37	-	3	40
Democratic Yemen	3	-	-	3
Denmark	27	-	-	27
Dominican Republic	4	-	-	4
Egypt	11	5	3	19
Finland	29	-	-	29
France	108	5	10	123
Gabon	1	-	-	1
German Democratic Republic	27	-	-	27
Germany, Federal Republic of	275	7	25	307
Ghana	1	-	-	1
Greece	1	-	-	1
Hong Kong	10	5	-	15
Hungary	51	-	-	51
India	70	1	8	79
Indonesia	8	-	-	8
Ireland	15	5	1	21
Italy	64	-	14	78
Jamaica	5	-	1	6
Japan	81	1	19	101
Jordan	2	-	-	2
Kenya	10	-	-	10
Kuwait	-	-	1	1
Liechtenstein	2	-	-	2
Malaysia	6	-	-	6
Mauritius	5	-	-	5
Mexico	15	-	1	16
Morocco	20	5	-	25

Table 4 (continued)

Country/geographical area/ territory of study	Number of individuals placed			Total
	UNDP	Regular programme	Other programmes	
Netherlands	46	1	10	57
Niger	12	-	-	12
Nigeria	1	-	-	1
Norway	10	-	3	13
Oman	2	-	-	2
Pakistan	11	-	-	11
Panama	1	-	-	1
Peru	1	1	-	2
Philippines	40	-	1	41
Poland	25	3	3	31
Portugal	1	-	-	1
Puerto Rico	3	-	-	3
Republic of Korea	21	-	-	21
Romania	2	-	-	2
Senegal	5	-	23	28
Singapore	9	-	-	9
Spain	28	3	1	32
Sri Lanka	4	-	-	4
Sweden	44	-	2	46
Switzerland	63	-	15	78
Thailand	42	-	-	42
Tokelau	2	-	-	2
Trinidad and Tobago	1	-	-	1
Tunisia	4	-	3	7
Turkey	3	-	-	3
Union of Soviet Socialist Republics	14	4	2	20
United Kingdom	255	6	29	290
United Republic of Tanzania	2	-	-	2
United States of America	210	7	31	248
Uruguay	1	-	-	1
Venezuela	1	-	-	1
Yugoslavia	25	4	-	29
Zaire	3	-	-	3
Zimbabwe	13	-	-	13
<b>TOTAL</b>	<b>2,176</b>	<b>72</b>	<b>253</b>	<b>2,501</b>

a/ 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.

b/ Of these placements 548 or 21.9 per cent were arranged in developing countries, thus contributing to technical co-operation among developing countries.



